2017 ANNUAL REPORT

AMYRIS®

Dear Amyris Shareholders,

We are executing well and have strong momentum in our business with a clear focus on improving the health of our planet by delivering No Compromise™ products and disrupting markets. These products offer high-performance solutions to our partners' supply chain needs in a world where more and more consumers are demanding better performing, sustainable products delivered by responsible companies.

Our strong performance is enabling the world's leading companies in our target markets to grow sustainably and deliver consumers the best performing products to meet their needs.

We are delivering industry-leading growth and profitability in markets where we have an advantaged position. We've had 100% commercial success with each product we've developed, scaled and commercialized over the last four years. This is unprecedented in our industry and continues to reflect the advantaged business model we've developed in collaboration with our partners. The following three characteristics are driving our collaboration selection criteria and underpinning our product revenue growth momentum:

- Products where the chemistry is complicated and can be better done through biology and fermentation — we deliver natural, better performing products through a sustainable process.
- Products where we can deliver a 30% or better cost advantage than the average current sources.
- Markets that are experiencing growth at 2X gross domestic product (GDP) or better.

In the first half of 2017, we made the decision to monetize one of our lower margin molecules, farnesene, in certain fields of use while retaining any associated royalties. This led to discussions with our partners and ultimately, we made the decision to license farnesene to Royal DSM for use in two of these fields. During the discussions with DSM, we also made the decision to sell to DSM our Brotas manufacturing facility, which was purpose built for farnesene production for fuels — a business we're no longer active in. Prior to that, we had been making a variety of products at this plant for which it was not designed to handle. This was not cost effective and had a negative impact on our operating margins. We have now exited bulk commodity manufacturing and plan to continue to review our business to remove products with less attractive margins. In addition, following the sale of our Brotas production facility, we continue to have a strategic supply relationship with DSM and access to proven contract manufacturers to ensure no disruption in supplying our customers while simultaneously being able to significantly improve our margins.

We also executed several key collaboration partnership agreements with DSM. Overall, these transactions significantly improved our gross margin performance and transitioned our business to profitable growth. Several of these agreements involve key collaboration partnerships on vitamins and nutrition products for animal and human health. This will continue to be one of the strongest growth areas of our business following our entry into the vitamin E market.

We have now simplified our business and are focused on delivering strong, profitable growth across our three core markets — Health & Wellness, Clean Skin Care, and Flavor & Fragrance Pure Ingredients. These are large growing global markets where we have the technology, partnerships and the product portfolio to disrupt. We believe that delivering No Compromise products will further accelerate a transition to sustainable consumption throughout the world. We are leading this transition in our core markets. We believe our focus on sustainable products that deliver the best performance in their class to consumers was the right first priority. Investing in building this capability has enabled us to create significant distance from our competitors. Our competitors will require significant investment well beyond their current levels to deliver the level of revenue we are now attaining. We continue to believe that doing right for the consumer and our partners with a relentless pursuit of enabling sustainable growth while making better performing products is the right path to long-term profitability.

Our performance in 2017 was supported by our ability to deliver innovative products meeting the needs of our core markets. Our advantaged technology and differentiated product portfolio enabled us to exceed expectations with revenue of $143.4 million. This represented a cumulative aggregate revenue growth rate from 2015 – 2017 of 105% and has resulted in Amyris having one of the highest revenue growth rates among small-capitalization companies.

2017 Highlights

- Delivered $143.4 million in revenue, up 113% over the prior year.
- Achieved positive cash flow for Q4 2017.
- Reduced debt significantly year over year by over $60 million.
- Launched two new products — a fragrance and a skin care active.
- Hired a chief operating officer who is already impacting manufacturing and operating efficiencies.
- Improved cost of goods sold and margin with further improvement anticipated.

2017 was a year of solid execution that enabled Amyris to be a sustainable business positioned for profitable growth. We've simplified our business and are focused on executing where we have product and technology leadership. This has led to solid results.

- We delivered our best revenue year to date since exiting the fuels business with Performance Health and Wellness representing about $77 million of our revenue. This core market alone has delivered a cumulative aggregate growth rate of 716% from 2015 – 2017 and we expect continued strong growth through 2022.
- Our Clean Skin Care business delivered our second strongest growth. In this market our Biossance consumer brand has become one of the fastest growing independent skin care brands in North America. We delivered over 650% growth in retail consumer sales in 2017 and are running at over 300% so far in 2018.
- Our gross margin is expanding at 3X our revenue. We are expecting continued strong growth through 2022 and beyond and have this well underpinned by customer agreements in each of our core markets. And, we are expecting continued strong expansion of our gross margin into 2018 as a result of product mix and the impact of our strategic partnership with DSM.

- Our ability to develop and manufacture new products has improved and become more efficient. For 2017 we set production records in both October and November and the fourth quarter of 2017 was our best production period on record when it comes to manufacturing efficiency.

We are very pleased and grateful to be partnered with the market leaders in each of our core markets and we all share a common belief — the planet deserves better and we can do better for all. I would like to thank our partners, investors, and hard-working employees for helping make a difference and empowering Amyris to deliver on its goal that one day soon, all products will be made our way.

Best Regards,

John G. Melo
President and Chief Executive Officer

FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. These forward-looking statements include, but are not limited to, statements concerning our business growth and profitability, future revenue and margin growth and reduction in cost of goods sold, our competitive advantage, our impact on our partners' growth and sustainable consumption globally, and similar matters. The words "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those anticipated or implied in the forward-looking statements, including, without limitation, the risks set forth in Part 1, Item 1A, "Risk Factors" of our enclosed Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and in our other filings with the Securities and Exchange Commission. We do not assume any obligation to update any forward-looking statements, except as required by law.

Dear Amyris stockholder:

You are cordially invited to attend our 2018 Annual Meeting of Stockholders to be held on Tuesday, May 22, 2018 at 2:00 p.m. Pacific Time at our headquarters located at 5885 Hollis Street, Suite 100, Emeryville, California 94608. You can find directions to our headquarters on our company website at https://amyris.com/contact-us/.

The accompanying Notice of Annual Meeting of Stockholders and Proxy Statement describe the matters to be voted on at the meeting.

Whether or not you plan to attend the annual meeting, please vote as soon as possible. You may vote over the Internet, by telephone, or by mailing a completed proxy card or voting instruction form. Voting by any of these methods will ensure that you are represented at the annual meeting.

On behalf of the Board of Directors, I want to thank you for your continued support of Amyris. We look forward to seeing you at the meeting.

John Melo
President and Chief Executive Officer

Emeryville, California
April 27, 2018

YOUR VOTE IS IMPORTANT

You are cordially invited to attend the meeting in person. Whether or not you expect to attend the meeting, please vote as soon as possible in order to ensure your representation at the meeting. You may submit your proxy and voting instructions over the Internet, by telephone, or by completing, signing, dating and returning the accompanying proxy card or voting instruction form as promptly as possible. If your shares are held of record by a broker, bank or other custodian, nominee, trustee or fiduciary (an "Intermediary") and you have not given your Intermediary specific voting instructions, your Intermediary will NOT be able to vote your shares with respect to most of the proposals, including the election of directors. If you do not provide voting instructions over the Internet, by telephone, or by returning a completed, signed and dated proxy card or voting instruction form, your shares will not be voted with respect to those matters. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by an Intermediary and you wish to vote at the meeting, you must obtain a proxy issued in your name from that Intermediary.

AMYRIS, INC.
5885 Hollis Street, Suite 100
Emeryville, California 94608

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

To Be Held May 22, 2018

The 2018 Annual Meeting of Stockholders of Amyris, Inc. will be held on Tuesday, May 22, 2018 at 2:00 p.m. Pacific Time at our headquarters located at 5885 Hollis Street, Suite 100, Emeryville, California 94608 for the following purposes:

1. To elect the four Class II directors nominated by our Board of Directors and named herein to serve on the Board for a three-year term;
2. To ratify the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018;
3. To approve amendments to our 2010 Equity Incentive Plan to (i) increase the number of shares of our common stock available for grant and issuance thereunder by 9,000,000 shares and (ii) increase the annual per-participant award limit thereunder to 4,000,000 shares;
4. To approve an amendment to our 2010 Employee Stock Purchase Plan to increase the maximum number of shares of our common stock that may be issued over the term of the plan by 1,000,000 shares;
5. To approve the issuance to John Melo, our President and Chief Executive Officer, under our 2010 Equity Incentive Plan of (i) a stock option to purchase 3,250,000 shares of our common stock, such award being subject to performance-based vesting conditions as described herein, and (ii) a restricted stock unit award for 700,000 shares of our common stock, such award being subject to time-based vesting in four equal annual installments with an initial vesting date of July 1, 2019.
6. To approve certain anti-dilution provisions in, and the issuance of shares of our common stock upon the exercise of, warrants issued in securities offerings completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d); and
7. To act upon such other matters as may properly come before the annual meeting or any adjournments or postponements thereof.

These items of business are more fully described in the Proxy Statement accompanying this Notice of Annual Meeting of Stockholders. The Board of Directors has fixed the record date for the annual meeting as March 29, 2018. Only stockholders of record at the close of business on the record date may vote at the meeting or at any adjournment thereof. A list of stockholders eligible to vote at the meeting will be available for review for any purpose relating to the meeting during our regular business hours at our headquarters at 5885 Hollis Street, Suite 100, Emeryville, California 94608 for the ten days prior to the meeting.

You are cordially invited to attend the meeting in person. Whether or not you expect to attend the meeting, please vote as soon as possible in order to ensure your representation at the meeting. You may submit your proxy and voting instructions over the Internet, by telephone, or by completing, signing, dating and returning the accompanying proxy card or voting instruction form as promptly as possible. If your shares are held of record by an Intermediary and you have not given your Intermediary specific voting instructions, your Intermediary will NOT be able to vote your shares with respect to most of the proposals, including the election of directors. If you do not provide voting instructions over the Internet, by telephone, or by returning a completed, signed and dated proxy card or voting instruction form, your shares will not be voted with respect to those matters. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by an Intermediary and you wish to vote at the meeting, you must obtain a proxy issued in your name from that Intermediary.

BY ORDER OF THE BOARD,

Nicole Kelsey
General Counsel and Secretary

Emeryville, California
April 27, 2018

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AMYRIS, INC.

PROXY STATEMENT
2018 ANNUAL MEETING OF STOCKHOLDERS

These proxy materials are provided in connection with the solicitation of proxies by the Board of Directors (the "Board") of Amyris, Inc., a Delaware corporation (referred to as "Amyris", the "company", "we", "us", or "our"), for our 2018 Annual Meeting of Stockholders to be held at 2:00 p.m. Pacific Time on Tuesday, May 22, 2018, at our principal executive offices, and for any adjournments or postponements of the annual meeting. These proxy materials were first sent on or about April 27, 2018 to stockholders entitled to vote at the annual meeting.

Information Regarding Solicitation and Voting

Our principal executive offices are located at 5885 Hollis Street, Suite 100, Emeryville, California 94608, and our telephone number is (510) 450-0761. This Proxy Statement contains important information for you to consider when deciding how to vote on the matters brought before the meeting. Please read it carefully.

We will bear the expense of soliciting proxies. In addition to these proxy materials, our directors and employees (who will receive no compensation in addition to their regular salaries) may solicit proxies in person, by telephone or by email. We will reimburse Intermediaries for reasonable charges and expenses incurred in forwarding solicitation materials to their clients.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be held on May 22, 2018

The Securities and Exchange Commission's "Notice and Access" rule provides that companies must include in their mailed proxy materials instructions as to how stockholders can access Amyris's annual report and proxy statement and other soliciting materials on the Internet, a listing of matters to be considered at the relevant stockholder meeting, and instructions as to how shares can be voted. Since we are mailing full sets of proxy materials for the 2018 annual meeting to our stockholders, as permitted by SEC proxy rules, we are including the information required by the Notice and Access rule in this Proxy Statement and in the accompanying Notice of Annual Meeting of Stockholders and proxy card, and we are not distributing a separate Notice of Internet Availability of Proxy Materials.

The proxy materials, including this Proxy Statement and our annual report to stockholders, and a means to vote your shares are available at http://www.allianceproxy.com/Amyris/2018. You will need to enter the 12-digit control number located on the proxy card accompanying this Proxy Statement in order to view the materials and vote.

Questions and Answers

Who can vote at the meeting?

The Board set March 29, 2018, as the record date for the meeting. If you owned shares of our common stock as of the close of business on March 29, 2018, you may attend and vote your shares at the meeting. Each stockholder is entitled to one vote for each share of common stock held on all matters to be voted on. As of March 29, 2018, there were 45,845,314 shares of our common stock outstanding and entitled to vote (as reflected in the records of our stock transfer agent).

What is the quorum requirement for the meeting?

The holders of a majority of our outstanding shares of common stock as of the record date must be present in person or represented by proxy at the meeting in order for there to be a quorum, which is required to hold the meeting and conduct business. If there is no quorum, the holders of a majority of the shares present at the meeting may adjourn the meeting to another date.

You will be counted as present at the meeting if you are present and entitled to vote in person at the meeting or you have properly submitted a proxy card or voting instruction form, or voted by telephone or over the Internet. Both abstentions and broker non-votes (as described below) are counted for the purpose of determining the presence of a quorum.

As of the record date of March 29, 2018, there were 45,845,314 shares of our common stock outstanding and entitled to vote (as reflected in the records of our stock transfer agent), which means that holders of 22,922,658 shares of our common stock must be present in person or by proxy for there to be a quorum.

What proposals will be voted on at the meeting?

There are six proposals scheduled to be voted on at the meeting:

- **Proposal 1 —** Election of the four Class II directors nominated by the Board and named herein to serve on the Board for a three-year term.
- **Proposal 2 —** Ratification of the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018.
- **Proposal 3 —** Approval of amendments to our 2010 Equity Incentive Plan to (i) increase the number of shares of our common stock available for grant and issuance thereunder by 9,000,000 shares and (ii) increase the annual per-participant award limit thereunder to 4,000,000 shares.
- **Proposal 4 —** Approval of an amendment to our 2010 Employee Stock Purchase Plan to increase the maximum number of shares of our common stock that may be issued over the term of the plan by 1,000,000 shares;
- **Proposal 5 —** Approval of the issuance to John Melo, our President and Chief Executive Officer, under our 2010 Equity Incentive Plan of (i) a stock option to purchase 3,250,000 shares of our common stock, such award being subject to performance-based vesting conditions as described herein, and (ii) a restricted stock unit award for 700,000 shares of our common stock, such award being subject to time-based vesting in four equal annual installments with an initial vesting date of July 1, 2019 (such awards collectively referred to herein as the "CEO Equity Awards").
- **Proposal 6 —** Approval of certain anti-dilution provisions in, and the issuance of shares of our common stock upon the exercise of, warrants issued in securities offerings completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d).

No appraisal or dissenters' rights exist for any action proposed to be taken at the meeting. We will also consider any other business that properly comes before the meeting. As of the date of this Proxy Statement, we are not aware of any other matters to be submitted for consideration at the meeting. If any other matters are properly brought before the meeting, the persons named in the enclosed proxy card or voting instruction form will vote the shares they represent using their best judgment.

How does the Board recommend I vote on the proposals?

The Board recommends that you vote:

- FOR each of the director nominees named in this Proxy Statement;
- FOR the ratification of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018;
- FOR the amendments to our 2010 Equity Incentive Plan;
- FOR the amendment to our 2010 Employee Stock Purchase Plan;
- FOR the approval of the CEO Equity Awards; and
- FOR the approval of the anti-dilution provisions in, and the issuance of shares of our common stock upon the exercise of, warrants issued in securities offerings completed in August 2017.

How do I vote my shares in person at the meeting?

If your shares of Amyris common stock are registered directly in your name with our stock transfer agent, EQ Shareowner Services (formerly Wells Fargo Shareowner Services), you are considered to be the stockholder of record with respect to those shares. As the stockholder of record, you have the right to vote in person at the meeting.

If your shares are held in a brokerage account or by another Intermediary, you are considered the beneficial owner of shares held in street name. As the beneficial owner, you are also invited to attend the meeting. However, since a beneficial owner is not the stockholder of record, you may not vote these shares in person at the meeting unless you obtain a "legal proxy" from the Intermediary (usually your broker) that is the record holder of the shares, giving you the right to vote the shares at the meeting. The meeting will be held on Tuesday, May 22, 2018 at 2:00 p.m. Pacific Time at our headquarters located at 5885 Hollis Street, Suite 100, Emeryville, California 94608. You can find directions to our headquarters on our company website at https://amyris.com/contact-us/.

How can I vote my shares without attending the meeting?

Whether you hold shares directly as a registered stockholder of record or beneficially in street name, you may vote without attending the meeting. You may vote by granting a proxy or, for shares held beneficially in street name, by submitting voting instructions to your broker, bank or other Intermediary. In most cases, you will be able to do this by using the Internet, by telephone or by mail.

- **Voting by Internet or telephone.** You may submit your proxy over the Internet or by telephone by following the instructions for Internet or telephone voting provided with your proxy materials and on your proxy card or voting instruction form.

- **Voting by mail.** You may submit your proxy by mail by completing, signing, dating and returning your proxy card or, for shares held beneficially in street name, by following the voting instructions included by your broker or other Intermediary. If you provide specific voting instructions, your shares will be voted as you have instructed.

What happens if I do not give specific voting instructions?

If you are a stockholder of record and you either indicate when voting on the Internet or by telephone that you wish to vote as recommended by the Board, or you sign and return a proxy card without giving specific voting instructions, then the proxy holders will vote your shares in the manner recommended by the Board on all matters presented in this Proxy Statement and as the proxy holders may determine in their discretion with respect to any other matters properly presented for a vote at the meeting.

If you are a beneficial owner of shares held in street name and do not provide the Intermediary that holds your shares with specific voting instructions, under stock market rules, the Intermediary that holds your shares may generally vote at its discretion only on routine matters and cannot vote on non-routine matters. If the Intermediary that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, the Intermediary will inform the inspector of election that it does not have the authority to vote on this matter with respect to your shares. This is generally referred to as a "broker non-vote." For purposes of voting on non-routine matters, broker non-votes will not be counted as votes cast on such matters and, therefore, will not affect the outcome of Proposal 1 (which requires a plurality of votes properly cast in person or by proxy), or Proposals 3, 4, 5 or 6 (which require a majority of votes properly cast in person or by proxy).

Which proposals are considered "routine" and which are considered "non-routine"?

The ratification of the appointment of KPMG LLP as our independent registered public accounting firm for 2018 (Proposal 2) is considered a "routine" matter under applicable rules. None of the other proposals are considered "routine" matters. An Intermediary cannot vote without instructions on "non-routine" matters, and therefore we expect there to be broker non-votes on Proposal 1, Proposal 3, Proposal 4, Proposal 5 and Proposal 6.

How are votes counted?

Votes will be counted by the inspector of election appointed for the meeting. The inspector of election will separately count "For" and "Withhold" votes and any broker non-votes in the election of directors (Proposal 1). With respect to the other proposals, the inspector of election will separately count "For" and "Against" votes, abstentions and, other than with respect to Proposal 2, which is considered a "routine" matter under applicable rules, any broker non-votes. Abstentions will be counted toward the vote totals for Proposals 2, 3, 4, 5 (solely with respect to the Bylaw Standard described below) and 6 and will have the same effect as an "Against" vote. Broker non-votes will not count toward the vote totals for Proposals 1, 3, 4, 5 and 6.

What is the vote required to approve each of the Board's proposals?

- **Proposal 1 — Election of the Board's four nominees for director.** The affirmative vote of a plurality, or the largest number, of the shares of our common stock present in person or by proxy at the annual meeting and entitled to vote is required for the election of the directors. This means that the four director nominees who receive the highest number of "For" votes (among votes properly cast in person or by proxy) will be elected to the board. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

- **Proposal 2 — Ratification of the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018.** This proposal must receive a "For" vote from the holders of a majority of the shares of our common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as an "Against" vote for this proposal.

- **Proposal 3 — Approval of amendments to our 2010 Equity Incentive Plan to (i) increase the number of shares of our common stock available for grant and issuance thereunder by 9,000,000 shares and (ii) increase the annual per-participant award limit thereunder to 4,000,000 shares.** This proposal must receive a "For" vote from the holders of a majority of the shares of our common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as an "Against" vote for this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

- **Proposal 4 — Approval of an amendment to our 2010 Employee Stock Purchase Plan to increase the maximum number of shares of our common stock that may be issued over the term of the plan by 1,000,000 shares.** This proposal must receive a "For" vote from the holders of a majority of the shares of our common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as an "Against" vote for this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

- **Proposal 5 — Approval of CEO Equity Awards.** This proposal must receive a "For" vote from (i) the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy (the "Bylaws Standard") and (ii) a majority of the total votes of shares of our common stock not owned, directly or indirectly, by John Melo cast in person or by proxy at the annual meeting (the "Disinterested Standard"). Abstentions will be counted toward the vote total for this proposal for purposes of the Bylaws Standard (but not the Disinterested Standard) and will have the same effect as an "Against" vote for this proposal under the Bylaws Standard. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

- **Proposal 6 — Approval of certain anti-dilution provisions in, and the issuance of shares of our common stock upon the exercise of, warrants issued in securities offerings completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d).** This proposal must receive a "For" vote from the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as an "Against" vote for this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

How can I revoke my proxy and change my vote after I return my proxy card?

You may revoke your proxy and change your vote at any time before the final vote at the meeting. If you are a stockholder of record, you may do this by signing and submitting a new proxy card with a later date, by using the Internet or voting by telephone (either of which must be completed by 11:59 p.m. Pacific Time on May 21, 2018 — your latest telephone or Internet proxy is counted), or by attending the meeting and voting in person. Attending the meeting alone will not revoke your proxy unless you specifically request that your proxy be revoked. If you hold shares through an Intermediary, you must contact that Intermediary directly to revoke any prior voting instructions.

How can I find out the voting results of the meeting?

The preliminary voting results will be announced at the meeting. The final voting results will be reported in a Current Report on Form 8-K, which we expect to file with the SEC within four business days after the meeting. If final voting results are not available within four business days after the meeting, we intend to file a Current Report on Form 8-K reporting the preliminary voting results within that period, and subsequently report the final voting results in an amendment to the Current Report on Form 8-K within four business days after the final voting results are known to us.

Forward-Looking Statements

This Proxy Statement contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934. These statements may be identified by their use of such words as "expects," "anticipates," "intends," "hopes," "believes," "could," "may," "will," "projects" and "estimates," and other similar expressions, but these words are not the exclusive means of identifying such statements. We caution that a variety of factors, including but not limited to the following, could cause our results to differ materially from those expressed or implied in our forward-looking statements: our cash position and ability to fund our operations; difficulties in predicting future revenues and financial results; the potential loss of, or inability to secure relationships with, key distributors, customers or partners; our limited operating history and lack of revenues generated from the sale of our renewable products; our inability to decrease costs to enable sales of our products at competitive prices; delays in production and commercialization of products due to technical, operational, cost and counterparty challenges; challenges in developing a customer base in markets with established and sophisticated competitors; currency exchange rate and commodity price fluctuations; changes in regulatory schemes governing genetically modified organisms and renewable chemicals; and other risks detailed from time to time in filings we make with the SEC, including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. Except as required by law, we assume no obligation to update any forward-looking information that is included in this Proxy Statement.

Proposal 1 —
Election of Directors

General

Under our certificate of incorporation and bylaws, the number of authorized Amyris directors has been fixed at 12 and the Board is divided into the following three classes with staggered three-year terms:

- Class I directors, whose term will expire at the annual meeting of stockholders to be held in 2020;
- Class II directors, whose term will expire at this annual meeting of stockholders and who are nominated for re-election; and
- Class III directors, whose term will expire at the annual meeting of stockholders to be held in 2019.

In accordance with our certificate of incorporation, the Board has assigned each member of the Board to one of the three classes, with the number of directors in each class divided as equally as reasonably possible. As of the date of this Proxy Statement, there are four Class I seats, four Class II seats, and four Class III seats constituting the 12 seats on the Board.

Stockholders are being asked to vote for the four Class II nominees listed below to serve until our 2021 Annual Meeting of Stockholders and until each such director's successor has been elected and qualified, or until each such director's earlier death, resignation or removal. The nominees are all current directors of Amyris.

Vote Required and Board Recommendation

Directors are elected by a plurality of the votes properly cast in person or by proxy. This means that the four Class II nominees receiving the highest number of affirmative (i.e., "For") votes will be elected. At the annual meeting, proxies cannot be voted for a greater number of persons than the four nominees named in this Proposal 1 and stockholders cannot cumulate votes in the election of directors. Shares represented by executed proxies will be voted by the proxy holders, if authority to do so is not withheld for any or all of the nominees, "For" the election of the four nominees named below. If any nominee is unable or declines to serve as a director at the time of the meeting, the proxies will be voted for a nominee, if any, designated by the Board to fill the vacancy. As of the date of this Proxy Statement, the Board is not aware that any nominee up for election is unable or will decline to serve as a director. If you hold shares through a bank, broker or other Intermediary of record, you must instruct your bank, broker or other Intermediary of record how to vote so that your vote can be counted on this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

The Board recommends a vote "FOR" each nominee.

Business Experience and Qualifications of Directors

The following tables and biographies set forth information for each nominee for election at the annual meeting and for each director of Amyris whose term of office will continue after the annual meeting:

Nominees for Class II Directors for a Term Expiring in 2021

Name	Age	Amyris Offices and Positions
Philip Eykerman	49	Director
Frank Kung, Ph.D.	69	Director
John Melo	52	Director, President and Chief Executive Officer
R. Neil Williams	65	Director, Chair of Audit Committee

Philip Eykerman has been a member of the Board since May 2017. Mr. Eykerman has served as the Executive Vice-President, Corporate Strategy & Acquisitions of Koninklijke DSM N.V. (together with its affiliates, "DSM"), an entity with which Amyris has a commercial and financial relationship and which is an owner of greater than five percent of the company's outstanding common stock, since 2011. In this role, he is responsible for corporate and business group strategy development, budgeting and planning, improvement programs, and all M&A activities. In 2015, he was also appointed as a member of the DSM Executive Committee and at present is responsible for the Pharmaceuticals as well as DSM Food Specialties activities. Next to these roles within DSM, he is also a Supervisory Board member of DSM Sinochem Pharmaceuticals (DSM/Sinochem JV), and a Supervisory Board member of ChemicaInvest (DSM/CVC JV), and previously served as a member of the Supervisory Board of Patheon N.V. from March 2014 to August 2017. Before joining DSM, Mr. Eykerman worked for 14 years at McKinsey & Company of which the last 9 years as a Partner and leader of McKinsey's Chemicals Practice in the Benelux and France. He holds a master degree in Chemical Engineering from the KU Leuven (Belgium) and in Refinery Engineering from the Institut Francais du Pétrole (France). Mr. Eykerman's experience in corporate strategy, mergers and acquisitions and operations enables him to provide insight to the Board regarding potential new opportunities for Amyris.

Dr. Frank Kung has been a member of the Board since November 2017. Dr. Kung is a founding member of Vivo Capital LLC ("Vivo"), a healthcare focused investment firm founded in 1996 in Palo Alto, California, which is an owner of greater than five percent of the company's outstanding common stock. Dr. Kung started his career in the biotechnology industry in 1979 when he joined Cetus Corporation. He later co-founded Cetus Immune Corporation in 1981, which was acquired by its parent company in 1983. In 1984 he co-founded Genelabs Technologies, Inc. where he served as Chairman and CEO until 1995. During his tenure in Genelabs, he brought the company public in 1991, and built it to a 175 employee international biotech company with operations in the United States, Belgium, Singapore, Switzerland and Taiwan. Dr. Kung holds a Bachelor of Science degree in chemistry from the National Tsing Hua University in Taiwan, and a Doctor of Philosophy degree in molecular biology and a Master of Business Administration degree from the University of California, Berkeley. Dr. Kung currently serves on the board of directors of a number of emerging healthcare and biotechnology companies. Dr. Kung's experience in healthcare and biotechnology and investing in companies enables him to provide the Board and management with guidance regarding the company's business strategy and access to financial markets.

John Melo has nearly three decades of combined experience as an entrepreneur and thought leader in the global fuels industry and technology innovation. Mr. Melo has served as our Chief Executive Officer and a director since January 2007 and as our President since June 2008. Before joining Amyris, Mr. Melo served in various senior executive positions at BP Plc (formerly British Petroleum), one of the world's largest energy firms, from 1997 to 2006, most recently as President of U.S. Fuels Operations from 2004 until December 2006, and previously as Chief Information Officer of the refining and marketing segment from 2001 to 2003, Senior Advisor for e-business strategy to Lord Browne, BP Chief Executive, from 2000 to 2001, and Director of Global Brand Development from 1999 to 2000. Before joining BP, Mr. Melo was with Ernst & Young, an accounting firm, from 1996 to 1997, and a member of the management teams of several startup companies, including Computer Aided Services, a management systems integration company, and Alldata Corporation, a provider of automobile repair software to the automotive service industry. Mr. Melo currently serves on the board of directors of Renmatix, Inc., and on the board of the Industrial action of Bio and also on the board of the California Life Sciences Association. Mr. Melo was formerly an appointed member to the U.S. section of the U.S.-Brazil CEO Forum. Mr. Melo's experience as a senior executive at one of the world's largest energy companies provides critical leadership in shaping strategic direction and business transactions, and in building teams to drive innovation.

R. Neil Williams has been a member of the Board since 2013. Mr. Williams served as Executive Vice President and Chief Financial Officer of Intuit Inc. from January 2008 through January 2018. In such position he was responsible for all financial aspects of Intuit, including corporate strategy and business development, investor relations, financial operations and real estate. Before joining Intuit, Mr. Williams was the Executive Vice President and Chief Financial Officer for Visa U.S.A., Inc. In that role, he led all financial functions for Visa U.S.A., Inc. and its subsidiaries, including financial planning, business planning and financial monitoring. Mr. Williams concurrently served as Chief Financial Officer for Inovant LLC, Visa's global information technology organization, responsible for global transactions processing and technology development. His previous banking experience includes senior financial positions at commercial banks in the Southern and Midwest regions of the United States. Since March 2012, Mr. Williams has also served as a board member and chair of the audit committee of RingCentral, Inc. He joined the board and audit committee of Oportun, Inc. in November 2017. Mr. Williams is a certified public accountant and received his Bachelor's degree in business administration from the University of Southern Mississippi. Mr. Williams' expertise in accounting, finance and management enables him to provide important insight and guidance to our management team and Board and to serve as chair of our Audit Committee.

Incumbent Class III Directors with a Term Expiring in 2019

Name	Age	Amyris Offices and Positions
John Doerr	65	Director, Chair of Nominating and Governance Committee
Christoph Goppelsroeder	59	Director
Christophe Vuillez	54	Director
Patrick Yang, Ph.D.	69	Director, Member of Leadership Development and Compensation Committee

John Doerr has been a member of the Board since May 2006. Mr. Doerr has been Chairman at Kleiner Perkins Caufield & Byers ("KPCB"), a venture capital firm, since 1980. Mr. Doerr currently serves on the board of directors of Google Inc., as well as on the boards of directors of numerous private companies. Mr. Doerr holds a Bachelor of Science and a Master of Science in Electrical Engineering and Computer Science degrees from Rice University and a Master of Business Administration degree from Harvard University. Mr. Doerr's global business leadership as general partner of KPCB, as well as his outside board experience as director of several public and private companies, enables him to provide valuable insight and guidance to our management team and the Board.

Christoph Goppelsroeder has been a member of the Board since November 2017. Mr. Goppelsroeder has served as the President and CEO of DSM Nutritional Products Ltd. since 2013 and is a member of the DSM Executive Committee. Mr. Goppelsroeder has previously worked at Boston Consulting, Syngenta in its seed care business unit, and F. Hoffman-La Roche in its fine chemicals and vitamins division until the acquisition of such division by DSM in 2003. Mr. Goppelsroeder holds a degree in engineering from the Swiss Federal Institute of Technology and a Master of Business Administration degree from Insead, Fontainebleau. Mr. Goppelsroeder's experience in the health and nutrition market enables him to provide the Board with critical insight into a potential growth area of the company's business.

Christophe Vuillez has been a member of the Board since November 2016. Mr. Vuillez is a Senior Vice President, and the Head of Strategy, Development and Research of the Refining & Chemicals division of Total S.A., one of the world's largest energy companies (together with its affiliates, "Total"), and an entity with which Amyris has a commercial and financial relationship and which is an owner of greater than five percent of the company's outstanding common stock. Mr. Vuillez has piloted a number of M&A projects for the Refining & Chemicals division, and he has also been a longstanding member of the supervisory committee for Total's venture capital activities. Mr. Vuillez has nearly 30 years of international experience in the various stages of diverse technological, industrial and corporate development and strategy: from leading and managing applied R&D in the aerospace industry, managing the construction and operation of complex industrial facilities in the oil and gas industry, to holding different executive positions throughout the growth and development of a French telecom from being a startup through its becoming a major player in the industry. Mr. Vuillez holds an advanced degree in aerospace science and technologies from the Ecole Supérieure de l'Aéronautique et de l'Espace in Toulouse, France, which he obtained after graduating from the prestigious French Ecole Polytechnique. Mr. Vuillez brings deep knowledge and significant experience in the areas of early stage growth companies, corporate development and strategy and industrial production facilities, which enables him to make a strategic contribution to the Board and provide guidance to the management team in these areas.

Dr. Patrick Yang has been a member of the Board since July 2014. Dr. Yang has served as Executive Vice President and Senior Advisor to the CEO of Juno Therapeutics, Inc., a biopharmaceutical company focused on developing innovative cellular immunotherapies for the treatment of cancer, since November 2017. From January 2010 through March 2013, Dr. Yang served as Executive Vice President and Global Head of Technical Operations for F. Hoffmann-La Roche Ltd. ("Roche"), where he was responsible for Roche's pharmaceutical and biotech manufacturing operations, process development, quality, regulatory, supply management and distribution functions. Before joining Roche, Dr. Yang worked for Genentech Inc., where he most recently served as Executive Vice President of Product Operations, and was responsible for manufacturing, process development, quality, regulatory affairs and distribution functions. Prior to joining Genentech Inc., Dr. Yang worked for Merck & Co., where he held several leadership roles including Vice President of Asia/Pacific Manufacturing Operations and Vice President of Supply Chain Management. He also previously worked at General Electric Co. and Life Systems, Inc. Dr. Yang currently serves on the boards of directors of Andeavor (formerly Tesoro Corporation), Codexis, Inc. and PharmaEssentia Corporation, and previously served on the board of directors of Celladon Corporation from March 2014 until May 2015. Dr. Yang's experience with the biotechnology industry and operations has enabled him to provide insight and guidance to our management team and the Board.

Incumbent Class I Directors with a Term Expiring in 2020

Name	Age	Amyris Offices and Positions
Geoffrey Duyk, M.D., Ph.D.	57	Director, Interim Chair of the Board and Member of Audit Committee
Carole Piwnica	59	Director, Chair of Leadership Development and Compensation Committee and Member of Nominating and Governance Committee
Fernando de Castro Reinach, Ph.D.	60	Director, Member of Audit Committee
His Highness Sheikh Abdullah bin Khalifa Al Thani	57	Director

Dr. Geoffrey Duyk has been a member of the Board since May 2012 and has served as the interim Chair of the Board since May 2014. Dr. Duyk previously served on the Board from May 2006 to May 2011. Dr. Duyk is a partner of Circularis Partners LP. Previously, Dr. Duyk served as a partner and managing director of TPG Alternative & Renewable Technologies (together with its affiliates, "TPG") from 2004 to 2017. Prior to TPG, he served on the board of directors and was President of Research and Development at Exelixis, Inc., a biopharmaceutical company focusing on drug discovery, from 1996 to 2003. Prior to Exelixis, Dr. Duyk was Vice President of Genomics and one of the founding scientific staff at Millennium Pharmaceuticals, from 1993 to 1996. Before that, Dr. Duyk was an Assistant Professor at Harvard Medical School in the Department of Genetics and Assistant Investigator of the Howard Hughes Medical Institute. Dr. Duyk currently serves on the boards of directors of: Elevance Renewable Sciences; Inocucor Technologies, Inc.; and reGen Holdings Limited as well as on the non-profit Case Western Reserve University Board of Trustees and The American Society of Human Genetics board of directors. Dr. Duyk is also a member of the Institute Board of Directors of the Moffitt Cancer Center where he chairs the Research and Development committee. Dr. Duyk serves as a member of Scientific Advisory Boards for Bayer CropSciences, HudsonAlpha, and Lawrence Berkeley National Laboratory (DOE). He served on the board of directors of Beta Renewables from 2011 to 2017, EPIRUS Biopharmaceuticals, Inc. from July 2014 to July 2016, Galleon Pharmaceuticals, Inc. from 2007 to 2016, Genomatica, Inc. from 2012 to 2017, Karas Pharmaceuticals, Inc. from 2010 to 2015, The Wesleyan University Board of Trustees from 2008 to June 2014, Aerie Pharmaceuticals from August 2005 to June 2017, and DNAnexus, Inc. from 2011 to 2017. Dr. Duyk is currently a Board Observer of Anuvia Planet Nutrients; DNAnexus and Genomatica. Dr. Duyk holds a Bachelor of Arts degree in Biology from Wesleyan University and Doctor of Philosophy and Medicine degrees from Case Western Reserve University. Dr. Duyk's experience with the biotechnology industry enables him to provide insight and guidance to our management team and Board.

Carole Piwnica has been a member of the Board since September 2009. Ms. Piwnica has been Director of NAXOS UK, a consulting firm advising private equity, since January 2008. Previously, Ms. Piwnica served as a director, from 1996 to 2006, and Vice-Chairman of Governmental Affairs, from 2000 to 2006, of Tate & Lyle Plc, a European food and agricultural ingredients company. She was a chairman of Amylum Group, a European food ingredient company and affiliate of Tate & Lyle Plc, from 1996 to 2000. Ms. Piwnica was a member of the board of directors of Aviva plc, a British insurance company, from May 2003 to December 2011, a member of the Biotech Advisory Council of Monsanto from May 2006 to October 2009, a member of the board of directors of Dairy Crest from 2007 until 2010, a member of the board of directors of Toepfer Gmbh from 1996 until 2010 and a member of the board of directors of Louis

Delhaize (retail, Belgium) from 2010 until 2013. In 2010, Ms. Piwnica was appointed as a member of the boards of Eutelsat (satellites, France) and Sanofi (pharmaceuticals, France). In 2014, she was appointed as a member of the board of Rothschild (financial services, France). Ms. Piwnica holds a Law degree from the Université Libre de Bruxelles and a Master of Laws degree from New York University. She has also been a member of the bar association of the state of New York, USA since 1985 and was a member of the bar association of Paris, France from 1988 until 2013. Based on her multinational corporate leadership experience and extensive legal and corporate governance experience, Ms. Piwnica contributes guidance to the management team and the Board in leadership of multinational agricultural processing businesses and on legal and corporate governance obligations and best practices.

Dr. Fernando de Castro Reinach has been a member of the Board since September 2008. Dr. Reinach has been a managing partner of Pitanga Fund, a venture capital fund based in Brazil, since May 2011. From 2001 to May 2010, Dr. Reinach was a general partner at Votorantim Novos Negócios Ltda. Before joining Votorantim, he was involved in the creation of two companies, Genomic Engenharia Molecular Ltda., a molecular diagnostic laboratory, and .ComDominio S/A, a datacenter company. Dr. Reinach holds a Bachelor of Science degree in biology from the University of São Paulo and a Doctor of Philosophy degree in Cell and Molecular Biology from Cornell University Medical College. Dr. Reinach's experience with Brazilian business practices enables him to provide important insight and guidance to our management team and Board and to assist management with establishing and developing operations in Brazil.

His Highness Sheikh Abdullah bin Khalifa Al Thani ("HH") has been a member of the Board since March 2012. HH has served as Special Advisor to the Emir of Qatar since his appointment in April 2007, and was Prime Minister of Qatar from October 1996 to April 2007. HH has served as chairman of the board of directors of Qatar Investment and Projects Development Holding Company, a Qatari investment group, since March 2011 and as chairman of the board of directors of Specialized International Services (SIS) Qatar, a business investment company, since October 2011. HH graduated from the Royal Military Academy Sandhurst. HH brings to the Board and our management team extensive experience in project development and investment, and his international stature and resources provide us with potential additional opportunities to build and finance our business.

Arrangements Concerning Selection of Directors

In February 2012, pursuant to a Letter Agreement (the "Letter Agreement") entered into in connection with the sale of our common stock to certain investors including Biolding Investment SA ("Biolding"), Naxyris S.A., an investment vehicle owned by Naxos Capital Partners SCA Sicar ("Naxyris"), and Maxwell (Mauritius) Pte Ltd ("Maxwell"), we agreed to appoint, and to use reasonable efforts consistent with the Board's fiduciary duties to cause the re-nomination by the Board in the future of:

- One person designated by Biolding to serve as a member of the Board. Pursuant to the Letter Agreement, Biolding (an affiliate of HH) designated HH to serve as the Biolding representative on the Board. Biolding's designation rights terminate upon a sale of Amyris or Biolding holding less than 173,010 shares of our common stock. As of March 31, 2018, Biolding beneficially owned 518,022 shares of our common stock, representing approximately 1.1% of our outstanding common stock (this includes the assumed exercise of certain warrants held by Biolding).

- One person designated by Naxyris to serve as a member of the Board. Pursuant to the Letter Agreement, Naxyris designated Ms. Piwnica (who was already on the Board) to serve as the Naxyris representative on the Board. Naxyris' designation rights terminate upon a sale of Amyris or Naxyris holding less than 115,340 shares of our common stock. As of March 31, 2018, Naxyris beneficially owned 1,460,299 shares of our common stock, representing approximately 3.2% of our outstanding common stock (this includes the assumed exercise of certain warrants held by Naxyris). Ms. Piwnica is Director of NAXOS UK, a consulting firm advising private equity and an affiliate of Naxos Capital Partners SCA Sicar, which owns Naxyris, and receives compensation and benefits from NAXOS UK pursuant to its standard compensation policies and practices.

- One person designated by Maxwell to serve as a member of the Board. Pursuant to the Letter Agreement, Maxwell initially designated Dr. Nam-Hai Chua to serve as the Maxwell representative on the Board and, following Dr. Chua's resignation from the Board effective June 7, 2015, Maxwell designated Abraham Klaeijsen to serve as the Maxwell representative on the Board and he was appointed on June 7, 2015. Mr. Klaeijsen subsequently resigned from the Board on November 2, 2017 and as of March 31, 2018, Maxwell has not designated his replacement. Maxwell's designation rights terminate upon a sale of Amyris or Maxwell holding less than 173,010 shares of our common stock. As of March 31, 2018, Maxwell beneficially owned 5,370,644 shares of our common stock, representing approximately 11.2% of our outstanding common stock (this includes the assumed conversion and exercise of certain convertible promissory notes and warrants, respectively, held by Maxwell, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and Management").

Mr. Vuillez was designated to serve on the Board by Total pursuant to a letter agreement between Amyris and Total. In June 2010, we issued 7,101,548 shares of our Series D preferred stock to Total that converted into 643,401 shares of our common stock upon the completion of our initial public offering in September 2010. In connection with such equity investment, we agreed to appoint a person designated by Total to serve as a member of the Board, and to use reasonable efforts consistent with the Board's fiduciary duties to cause the director designated by Total to be re-nominated by the Board in the future. Pursuant to the letter agreement, Total initially designated Philippe Boisseau to serve as the Total representative on the Board and, following Mr. Boisseau's resignation from the Board on October 31, 2016, Total designated Mr. Vuillez to serve as the Total representative on the Board and he was appointed on November 3, 2016. Total's designation rights terminate upon the earlier of Total holding less than 321,700 shares of our common stock or a sale of Amyris. As of March 31, 2018, Total beneficially owned 8,946,701 shares of our common stock, representing approximately 17.7% of our outstanding common stock (this includes the assumed conversion and exercise of certain convertible promissory notes and warrants, respectively, held by Total, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and Management"). Mr. Vuillez is an employee of Total and receives compensation and benefits from Total pursuant to its standard compensation policies and practices.

Pursuant to a Stockholder Agreement entered into in May 2017, and subsequently amended and restated in August 2017, in connection with the sale of our Series B 17.38% Convertible Preferred Stock and warrants to DSM (the "DSM Stockholder Agreement"), we agreed to appoint, and to use reasonable efforts consistent with the Board's fiduciary duties to cause the re-nomination by the Board in the future of, two persons designated by DSM to serve as members of the Board. Pursuant to the DSM Stockholder Agreement, DSM initially designated Mr. Eykerman to serve as a DSM representative on the Board and, following the amendment and restatement of the DSM Stockholder Agreement in August 2017, DSM designated Mr. Goppelsroeder to serve as the second DSM representative on the Board. DSM's designation rights terminate, with respect to one designee, at such time as DSM beneficially owns less than 10% of our outstanding common stock and, with respect to both designees, at such time as DSM beneficially owns less than 4.5% of our outstanding common stock. As of March 31, 2018, DSM beneficially owned 16,621,192 shares of our common stock, representing approximately 30.9% of our outstanding common stock (this includes the assumed exercise of certain warrants held by DSM, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and Management"). Messrs. Eykerman and Goppelsroeder are employees of DSM and receive compensation and benefits from DSM pursuant to its standard compensation policies and practices.

In August 2017, pursuant to a Stockholder Agreement (the "Vivo Stockholder Agreement") entered into in connection with the sale of our common stock, Series D Convertible Preferred Stock and warrants to Vivo, we agreed to appoint, and to use reasonable efforts consistent with the Board's fiduciary duties to cause the re-nomination by the Board in the future of, one person designated by Vivo to serve as a member of the Board. Pursuant to the Vivo Stockholder Agreement, Vivo designated Dr. Kung to serve as the Vivo representative on the Board. Vivo's designation rights terminate at such time as Vivo beneficially owns less than 4.5% of our outstanding common stock. As of March 31, 2018, Vivo beneficially owned 4,774,534 shares of our common stock, representing 9.99% of our outstanding common stock (this includes the assumed conversion and exercise of certain shares of preferred stock and warrants, respectively, held by Vivo, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and

Management"). Dr. Kung is a founding member of Vivo and receives compensation and benefits from Vivo pursuant to its standard compensation policies and practices.

Mr. Doerr and Dr. Duyk were initially designated to serve on the Board by KPCB and TPG, respectively, pursuant to a voting agreement as most recently amended and restated on June 21, 2010 (Dr. Duyk resigned from the Board in May 2011 and was re-appointed to the Board in May 2012). As of the date of this Proxy Statement, notwithstanding the expiration of the voting agreement upon completion of our initial public offering in September 2010, Mr. Doerr and Dr. Duyk continue to serve on the Board and we expect each of them to continue to serve as a director until his resignation or until his successor is duly elected by the holders of our common stock. Mr. Doerr receives compensation and benefits from KPCB pursuant to its standard compensation policies and practices.

Independence of Directors

Under the corporate governance rules of The NASDAQ Stock Market ("NASDAQ"), a majority of the members of the Board must qualify as "independent," as affirmatively determined by the Board. The Board and the Nominating and Governance Committee of the Board consult with our legal counsel to ensure that the Board's determinations are consistent with all relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in the applicable NASDAQ rules. The NASDAQ criteria include various objective standards and a subjective test. A member of the Board is not considered independent under the objective standards if, for example, he or she is, or at any time during the past three years was, employed by Amyris, he or she received compensation (other than standard compensation for Board service) in excess of $120,000 during a period of twelve months within the past three years, or he or she is an executive officer of any organization to which Amyris made, or from which the Amyris received, payments for property or services (other than payments arising solely from investments in our securities or payments under non-discretionary charitable contribution matching programs) in the current or any of the past three fiscal years that exceed 5% of the recipient's gross revenues for that year, or $200,000, whichever is more.

The subjective test under the NASDAQ rules for director independence requires that each independent director not have a relationship which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. The subjective evaluation of director independence by the Board was made in the context of the objective standards referenced above. In making independence determinations, the Board generally considers commercial, financial and professional services, and other transactions and relationships between Amyris and each director and his or her family members and affiliated entities.

Based on such criteria, the Board determined that (i) Mr. Melo is not independent because he is an Amyris employee, (ii) Mr. Vuillez is not independent because he is an employee of Total (with which we have a joint venture arrangement and commercial and financial relationships, as described below under the Section titled "Transactions with Related Persons"), and (iii) Messrs. Eykerman and Goppelsroeder are not independent because they are each employees of DSM (with which we have a commercial and financial relationship, as described below under the Section titled "Transactions with Related Persons").

For each of the directors other than Messrs. Melo, Vuillez, Eykerman and Goppelsroeder, the Board determined that none of the transactions or other relationships of such directors (and their respective family members and affiliated entities) with Amyris, our executive officers and our independent registered public accounting firm exceeded NASDAQ objective standards and none would otherwise interfere with the exercise of independent judgment in carrying out his or her responsibilities as a director. The following is a description of these relationships:

- Mr. Doerr is a manager of the general partners of entities affiliated with KPCB Holdings, Inc. As of March 31, 2018, KPCB Holdings, Inc., as nominee for entities affiliated with KPCB, held 278,882 shares of our common stock, which represented approximately 0.6% of our outstanding common stock. In addition, Mr. Doerr indirectly owns all of the membership interests in Foris Ventures, LLC ("Foris"), which beneficially owned 4,612,773 shares of our common stock as of March 31, 2018, representing 9.99% of our outstanding common stock (this includes the assumed conversion and exercise of certain shares of preferred stock, convertible promissory notes and warrants, respectively, held by Foris, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and Management").

- Ms. Piwnica was designated to serve as a director by Naxyris. As of March 31, 2018, Naxyris beneficially owned 1,460,299 shares of our common stock, representing approximately 3.2% of our outstanding common stock (this includes the assumed exercise of certain warrants held by Naxyris).
- Dr. Reinach is the sole director of Sualk Capital Ltd ("Sualk"), which purchased shares of our common stock in private placement offerings during 2012. As of March 31, 2018, Sualk beneficially owned 11,360 shares of our common stock.
- HH indirectly owns, and was designated to serve as a director by, Biolding. As of March 31, 2018, Biolding beneficially owned 518,022 shares of our common stock, representing approximately 1.1% of our outstanding common stock (this includes the assumed exercise of certain warrants held by Biolding).
- Dr. Kung is a founding member of Vivo and a voting member of the general partner of entities affiliated with Vivo which purchased our common stock, Series D Convertible Preferred Stock and warrants in August 2017, and was designated to serve as a director by Vivo. As of March 31, 2018, Vivo beneficially owned 4,774,534 shares of our common stock, representing 9.99% of our outstanding common stock (this includes the assumed conversion and exercise of certain shares of preferred stock and warrants, respectively, held by Vivo, as described below under the Section titled "Security Ownership of Certain Beneficial Owners and Management").

Consistent with these considerations, after a review of all relevant transactions and relationships between each director, any of his or her family members and affiliated entities, Amyris, our executive officers and our independent registered public accounting firm, the Board affirmatively determined that a majority of the Board is comprised of independent directors, and that the following directors are independent: John Doerr, Geoffrey Duyk, Frank Kung, Carole Piwnica, Fernando de Castro Reinach, HH, R. Neil Williams and Patrick Yang.

Board Leadership Structure

The Board is composed of our Chief Executive Officer, John Melo, and eleven non-management directors. Geoffrey Duyk, one of our independent directors, currently serves the principal Board leadership role as the Board's interim Chair. The Board expects to appoint an independent director as permanent Chair. The Board does not have any policy that the Chair must necessarily be separate from the chief executive officer, but the Board appointed Dr. Duyk as interim Chairman in May 2014 until a permanent Chair could be identified. Dr. Duyk's (and his successor's) responsibilities as Board Chair include working with management to develop agendas for Board meetings, calling special meetings of the Board, presiding at executive sessions of independent Board members, gathering input from Board members on chief executive officer performance and providing feedback to the Chief Executive Officer, gathering input from Board members after meetings and through an annual self-assessment process and communicating feedback to the Board and the Chief Executive Officer, as appropriate, and serving as Chief Executive Officer in the absence of another designated Chief Executive Officer. The Board believes that having an independent Chair helps reinforce the Board's independence from management in its oversight of our business and affairs. In addition, the Board believes that this structure helps to create an environment that is conducive to objective evaluation and oversight of management's performance and related compensation, increasing management accountability and improving the ability of the Board to monitor whether management's actions are in our best interests and those of our stockholders. Further, this structure permits our Chief Executive Officer to focus on the management of our day-to-day operations. Accordingly, we believe our current Board leadership structure contributes to the effectiveness of the Board as a whole and, as a result, is the most appropriate structure for us at the present time.

Role of the Board in Risk Oversight

We consider risk as part of our regular evaluation of business strategy and decisions. Assessing and managing risk is the responsibility of our management, which establishes and maintains risk management processes, including prioritization processes, action plans and mitigation measures, designed to balance the risk and benefit of opportunities and strategies. It is management's responsibility to anticipate, identify and communicate risks to the Board and/or its committees. The Board as a whole oversees our risk management systems and processes, as implemented by management and the Board's committees. As part of its oversight role, the Board has established an enterprise risk management process that involves management discussions with and updates to members of the Audit Committee regarding enterprise risk prioritization and mitigation. In addition, the Board uses its committees to assist in its risk oversight function as follows:

- The Audit Committee has responsibility for overseeing our financial controls and risk and legal and regulatory matters.
- The Leadership Development and Compensation Committee is responsible for oversight of risk associated with our compensation programs and plans.
- The Nominating and Governance Committee is responsible for oversight of Board processes and corporate governance related risks.

The Board receives regular reports from committee Chairs regarding the committees' activities. In addition, discussions with the Board regarding our strategic plans and objectives, business results, financial condition, compensation programs, strategic transactions, and other business discussed with the Board include discussions of the risks associated with the particular item under consideration.

Meetings of the Board and Committees

During 2017, the Board held seven meetings, and its three standing committees (the Audit Committee, Leadership Development and Compensation Committee and Nominating and Governance Committee) collectively held 20 meetings. Of such meetings, the Audit Committee held twelve meetings, the Leadership Development and Compensation Committee held six meetings and the Nominating and Governance Committee held two meetings. With the exception of HH, each incumbent director attended at least 75% of the meetings of the Board and of the committees on which such director served that were held during the period that such director served in 2017. The Board's policy is that directors are encouraged to attend our annual meetings of stockholders. One director attended our 2017 annual meeting of stockholders.

The following table provides membership and meeting information for the Board and its committees in 2017:

Member of the Board in 2017	Board	Audit Committee	Leadership Development and Compensation Committee	Nominating and Governance Committee
John Doerr(1)	X		X	Chair
Geoffrey Duyk, M.D., Ph.D.	Chair	X		
Philip Eykerman(2)	X			
Margaret Georgiadis(3)	X			
Christoph Goppelsroeder(4)	X			
Abraham (Bram) Klaeijsen(5)	X			
Frank Kung, Ph.D.(6)	X			
John Melo	X			
Carole Piwnica	X		Chair	X
Fernando de Castro Reinach, Ph.D.	X	X		
HH Sheikh Abdullah bin Khalifa Al Thani(7)	X			
Christophe Vuillez	X			
R. Neil Williams	X	Chair		
Patrick Yang, Ph.D.(8)	X		X	
Total meetings in 2017(9)	***7***	***12***	***6***	***2***

(1) Mr. Doerr resigned from the Leadership Development and Compensation Committee effective May 19, 2017.

(2) Mr. Eykerman was appointed to the Board on May 18, 2017.

(3) Ms. Georgiadis resigned from the Board effective March 16, 2017.

(4) Mr. Goppelsroeder was appointed to the Board on November 2, 2017.

(5) Mr. Klaeijsen resigned from the Board effective November 2, 2017.

(6) Dr. Kung was appointed to the Board on November 2, 2017.

(7) HH attended 0 of 7 Board meetings held during 2017.

(8) Dr. Yang was appointed to the Leadership Development and Compensation Committee on May 18, 2017.

(9) Includes one concurrent meeting of the Board and the Leadership Development and Compensation Committee.

Committees of the Board

The Board has established an Audit Committee, a Leadership Development and Compensation Committee, and a Nominating and Governance Committee, each as described below. Members are appointed by the Board to serve on these committees until their resignations or until otherwise determined by the Board.

Audit Committee

The Audit Committee was established by the Board in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934 (the "Exchange Act"), and assists the Board in fulfilling the Board's oversight of our accounting and system of internal controls, the quality and integrity of our financial reports, and the retention, independence and performance of our independent registered public accounting firm.

Under NASDAQ rules, we must have an audit committee of at least three members, each of whom must be independent as defined under the rules and regulations of NASDAQ and the Securities and Exchange Commission (the "SEC"). Our Audit Committee is currently composed of three directors: Mr. Williams and Drs. Duyk and Reinach. Mr. Williams is the Chair of the Audit Committee. The composition of the Audit Committee meets the requirements for independence under current NASDAQ and SEC rules and regulations. The Board has determined that each member of the Audit Committee is independent (as defined in the relevant NASDAQ and SEC rules and regulations), and is financially literate and able to read and understand fundamental financial statements, including a company's balance sheet, income statement and cash flow statement. In addition, the Board has determined that Mr. Williams is an "audit committee financial expert" as defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Securities Act of 1933, as amended (the "Securities Act"), with employment experience in finance and accounting and other comparable experience that results in his financial sophistication. Being an "audit committee financial expert" does not impose on Mr. Williams any duties, obligations or liabilities that are greater than are generally imposed on him as a member of the Audit Committee and the Board. The Board has adopted a written charter for our Audit Committee that is posted on our company website at http://investors.amyris.com/corporate-governance.cfm.

The Audit Committee performs, among others, the following functions:

- oversees our accounting and financial reporting processes and audits of our consolidated financial statements;
- oversees our relationship with our independent auditors, including appointing or changing our independent auditors and ensuring their independence;
- reviews and approves the audit and permissible non-audit services to be provided to us by our independent auditors;
- facilitates communication among our independent auditors, our financial and senior management, and the Board; and

- monitors the periodic reviews of the adequacy of our accounting and financial reporting processes and systems of internal control that are conducted by our independent auditors and our financial and senior management.

In addition, the Audit Committee generally reviews and approves any proposed transaction between Amyris and any related party, establishes procedures for the receipt, retention and treatment of complaints received by Amyris regarding accounting, internal accounting controls or auditing matters, and for the confidential, anonymous submission by Amyris employees of their concerns regarding suspected violations of laws, governmental rules or regulations, accounting, internal accounting controls or auditing matters, or company policies (including the administration of our whistleblower policy), and oversees the review of any complaints and submissions received through the complaint and anonymous reporting procedures.

Leadership Development and Compensation Committee

Under NASDAQ rules, compensation of the executive officers of a company must be determined, or recommended to the Board for determination, either by independent directors constituting a majority of the Board's independent directors in a vote in which only independent directors participate, or by a compensation committee composed solely of independent directors. Amyris has established the Leadership Development and Compensation Committee for such matters, which is currently composed of two directors: Ms. Piwnica and Dr. Yang. Ms. Piwnica is the Chair of the Leadership Development and Compensation Committee. The Board, after consideration of all factors specifically relevant to determining whether either Ms. Piwnica or Dr. Yang has a relationship to Amyris that is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to, (i) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by Amyris to such director and (ii) whether such director is affiliated with Amyris, has determined that each member of the Leadership Development and Compensation Committee is independent (as defined in the relevant NASDAQ and SEC rules and regulations). The Board has adopted a written charter for our Leadership Development and Compensation Committee that is posted on our company website at http://investors.amyris.com/corporate-governance.cfm.

The purpose of the Leadership Development and Compensation Committee is to provide guidance and periodic monitoring for all of our compensation, benefit, perquisite and equity programs. The Leadership Development and Compensation Committee, through delegation from the Board, has principal responsibility to evaluate, recommend, approve and review executive officer and director compensation arrangements, plans, policies and programs maintained by Amyris and to administer our cash-based and equity-based compensation plans, and may also make recommendations to the Board regarding the Board's remaining responsibilities relating to executive compensation. The Leadership Development and Compensation Committee discharges the responsibilities of the Board relating to compensation of our executive officers, and, among other things:

- reviews and approves the compensation of our executive officers;
- reviews and recommends to the Board the compensation of our non-employee directors;
- reviews and approves the terms of any compensation agreements with our executive officers;
- administers our stock and equity incentive plans;
- reviews and makes recommendations to the Board with respect to incentive compensation and equity incentive plans; and
- establishes and reviews our overall compensation strategy.

The Leadership Development and Compensation Committee also reviews the Compensation Discussion and Analysis section of our Proxy Statement and recommends to the Board whether it be included in the Proxy Statement, has responsibility for the review of our pay ratio disclosure, and prepares a report of the Leadership Development and Compensation Committee for inclusion in our Proxy Statement in accordance with SEC rules. The Leadership Development and Compensation Committee has authority to form and delegate authority to subcommittees, as appropriate.

The Board has established a Management Committee for Employee Equity Awards ("MCEA"), consisting of our Chief Human Resources Officer and our Chief Executive Officer. The MCEA may grant equity awards to employees who are not officers (as that term is defined in Section 16 of the Exchange Act and Rule 16a-1 promulgated under the Exchange Act) of Amyris, provided that the MCEA is only authorized to grant equity awards that meet grant guidelines approved by the Board or Leadership Development and Compensation Committee. These guidelines set forth, among other things, any limit imposed by the Board or Leadership Development and Compensation Committee on the total number of shares of our common stock that may be subject to equity awards granted to employees by the MCEA, and any requirements as to the size of an award based on the seniority of an employee or other factors.

Under its charter, the Leadership Development and Compensation Committee has the authority, at Amyris' expense, to retain legal and other consultants, accountants, experts and compensation or other advisors of its choice to assist the Leadership Development and Compensation Committee in connection with its functions. During the past fiscal year, the Leadership Development and Compensation Committee engaged Compensia, Inc. ("Compensia") as its compensation consultant. Compensia also served as the Committee's compensation consultant from 2012 through 2016. Compensia provided the following services during 2017 (or in connection with 2017 compensation):

- reviewed and provided recommendations on the composition of Amyris's compensation peer group, and provided compensation data relating to executives at the selected peer group companies;
- conducted a review of the total compensation arrangements for all executive officers of Amyris;
- provided advice on executive officers' compensation, including composition of compensation for base salary, short-term incentive (cash bonus) plan and long-term incentive (equity) plans;
- provided advice on executive officers' cash bonus plan;
- assisted with executive equity program design, including analysis of equity mix, aggregate share usage and target grant levels;
- provided advice and recommendations regarding executive perquisites and Amyris's executive severance plan;
- provided advice and recommendations on compensation elements of newly-hired executives;
- updated the Leadership Development and Compensation Committee on emerging trends/best practices and regulatory requirements in the area of executive and director compensation, including equity and cash compensation;
- provided advice and recommendations regarding certain non-executive employee equity grants; and
- assisted with the analysis related to our pay ratio disclosure.

The Leadership Development and Compensation Committee determined that Compensia did not have any relationships with Amyris or any of its officers or directors or any conflicts of interest that would impair Compensia's independence.

The Human Resources, Finance and Legal departments of Amyris work with our Chief Executive Officer to design and develop new compensation programs applicable to our executive officers and non-employee directors, to recommend changes to existing compensation programs, to recommend financial and other performance targets to be achieved under those programs, to prepare analyses of financial data, to prepare peer group compensation comparisons and other committee briefing materials, and to implement the decisions of the Leadership Development and Compensation Committee. Members of these departments and our Chief Executive Officer also meet separately with Compensia to convey information on proposals that management may make to the Leadership Development and Compensation Committee, as well as to allow Compensia to collect information about Amyris to develop its recommendations. In addition, our Chief Executive Officer conducts reviews of the performance and compensation of our other executive officers, and based on these reviews and input from Compensia and our Human Resources department, makes recommendations regarding executive compensation (other than his own) directly to the Leadership Development and Compensation Committee.

For the Chief Executive Officer's compensation, the Chief Human Resources Officer works directly with the Chair of the Leadership Development and Compensation Committee, as well as Compensia and the Human Resources, Finance and Legal departments of Amyris, to design, develop, recommend to the Leadership Development and Compensation Committee and implement the above compensation analyses and programs, as well as review the performance of the Chief Executive Officer. None of our executive officers participated in the determinations or deliberations of the Leadership Development and Compensation Committee regarding the amount of any component of his or her own 2017 compensation.

Nominating and Governance Committee

Under NASDAQ rules, director nominees must be selected, or recommended for the Board's selection, either by independent directors constituting a majority of the Board's independent directors in a vote in which only independent directors participate, or by a nominations committee composed solely of independent directors. Amyris has established the Nominating and Governance Committee for such matters, which is currently composed of two directors: Mr. Doerr and Ms. Piwnica. Mr. Doerr is the Chair of the Nominating and Governance Committee. The Board has determined that each member of the Nominating and Governance Committee is independent (as defined in the relevant NASDAQ and SEC rules and regulations). The Board has adopted a written charter for our Nominating and Governance Committee that is posted on our company website at http://investors.amyris.com/corporate-governance.cfm.

The purpose of the Nominating and Governance Committee is to ensure that the Board is properly constituted to meet its fiduciary obligations to stockholders and Amyris, and to assist the Board with respect to corporate governance matters, including:

- identifying, considering and nominating candidates for membership on the Board;
- developing, recommending and periodically reviewing corporate governance guidelines and policies for Amyris (including our Corporate Governance Principles, Code of Business Conduct and Ethics and Insider Trading Policy); and
- advising the Board on corporate governance and Board performance matters, including recommendations regarding the structure and composition of the Board and Board committees.

The Nominating and Governance Committee also monitors the size, leadership and committee structure and composition of the Board and makes any recommendations for changes to the Board, reviews our narrative disclosures in SEC filings regarding the director nomination process, Board leadership structure and risk oversight by the Board, considers and approves any requested waivers under our Code of Business Conduct and Ethics, reviews and makes recommendations to the Board regarding formal procedures for stockholder communications with members of the Board, reviews with the Chief Executive Officer and Board leadership the succession plans for senior management positions, and oversees an annual self-assessment process for the Board.

Director Nomination Process

In carrying out its duties to consider and nominate candidates for membership on the Board, the Nominating and Governance Committee considers a mix of perspectives, qualities and skills that would contribute to the overall corporate goals and objectives of Amyris and to the effectiveness of the Board. The Nominating and Governance Committee's goal is to nominate directors who will provide a balance of industry, business and technical knowledge, experience and capability. To this end, the Nominating and Governance Committee considers a variety of characteristics for director candidates, including demonstrated ability to exercise sound business judgment, relevant industry or business experience, understanding of and experience with issues and requirements facing public companies, excellence and a record of professional achievement in the candidate's field, relevant technical knowledge or aptitude, having sufficient time and energy to devote to the affairs of Amyris, independence for purposes of compliance with NASDAQ and SEC rules and regulations, as applicable, and commitment to rigorously represent the long-term interests of our stockholders. Although the Nominating and Governance Committee uses these and other criteria to evaluate potential nominees, we have no stated minimum criteria for nominees. While we do not have a formal policy with regard to the consideration of diversity in identifying director nominees, the Nominating and Governance Committee strives to nominate directors with a variety of complementary skills and experience so that, as a group, the Board will possess the appropriate talent, skills and experience to oversee our business.

The Nominating and Governance Committee generally uses the following processes for identifying and evaluating nominees for director:

- In the case of incumbent directors, the Nominating and Governance Committee reviews the director's overall service to Amyris during such director's term, including performance, effectiveness, participation and independence.

- In seeking to identify new director candidates, the Nominating and Governance Committee may use its network of contacts to compile a list of potential candidates and may also engage, if deemed appropriate, a professional search firm. The Nominating and Governance Committee would conduct any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating and Governance Committee would then meet to discuss and consider the candidates' qualifications and select nominees for recommendation to the Board by majority vote.

The Nominating and Governance Committee will consider director candidates recommended by stockholders and will use the same criteria to evaluate all candidates. We have not received a recommendation for a director nominee for the 2018 annual meeting from a stockholder or stockholders. Stockholders who wish to recommend individuals for consideration by the Nominating and Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation to the Nominating and Governance Committee at the following address: Chair of the Nominating and Governance Committee c/o Secretary of Amyris, Inc. at 5885 Hollis Street, Suite 100, Emeryville, California 94608, at least 120 days prior to the anniversary date of the mailing of our Proxy Statement for the last annual meeting of stockholders, which for our 2019 annual meeting of stockholders is a deadline of December 28, 2018. Submissions must include the full name of the proposed nominee, a description of the proposed nominee's business experience and directorships for at least the previous five years, complete biographical information, a description of the proposed nominee's qualifications as a director and a representation that the nominating stockholder is a beneficial or record owner of our common stock. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

Stockholder Nominations

Stockholders who wish to nominate persons directly for election to the Board at an annual meeting of stockholders must meet the deadlines and other requirements set forth in our bylaws and the rules and regulations of the SEC. As provided in our certificate of incorporation, subject to the rights of the holders of any series of preferred stock, any vacancy occurring in the Board can generally be filled only by the affirmative vote of a majority of the directors then in office. The director appointed to fill the vacancy will hold office for a term expiring at the annual meeting of stockholders at which the term of office of the class to which the director has been assigned expires and until such director's successor shall have been duly elected and qualified, or until such director's earlier death, resignation or removal.

Stockholder Communications with Directors

The Board has established a process by which stockholders may communicate with the Board or any of its members, including the Chairman of the Board, or to the independent directors generally. Stockholders and other interested parties who wish to communicate with the Board or any of the directors may do so by sending written communications addressed to the Secretary of Amyris at 5885 Hollis Street, Suite 100, Emeryville, California 94608. The Board has directed that all communications will be compiled by the Secretary and submitted to the Board or the selected group of directors or individual directors on a periodic basis. These communications will be reviewed by our Secretary, who will determine whether they should be presented to the Board. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications (such as advertisements and solicitations). The screening procedure has been approved by a majority of the non-management directors of the Board. Directors may at any time request that we forward to them immediately all communications received by us for the Board. All communications directed to the Audit Committee in accordance with the procedures described above that relate to accounting, internal accounting controls or auditing matters involving Amyris will be promptly and directly forwarded to all members of the Audit Committee.

Proposal 2 —
Ratification of Appointment of Independent Registered Public Accounting Firm

General

On March 22, 2018, the Board, upon the recommendation of the Audit Committee, selected KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018, and has further directed that management submit the selection of such independent registered public accounting firm for ratification by our stockholders at the annual meeting. KPMG LLP has been engaged as our independent registered public accounting firm since June 2017. We expect representatives of KPMG LLP to be present at the annual meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither our bylaws nor other governing documents or applicable law require stockholder ratification of the selection of our independent registered public accounting firm. However, we are submitting the selection of KPMG LLP to our stockholders for ratification as a matter of good corporate practice. If our stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain KPMG LLP. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if they determine that such a change would be in the best interests of Amyris and our stockholders.

On June 9, 2017, PricewaterhouseCoopers LLP notified us that it declined to stand for re-election as our independent registered public accounting firm for the 2017 fiscal year. The Audit Committee conducted a competitive process to determine our independent registered public accounting firm for the 2017 fiscal year and on June 28, 2017, with the approval of the Audit Committee, we appointed KPMG LLP to serve as our independent registered public accounting firm for the 2017 fiscal year.

PricewaterhouseCoopers LLP's audit reports on our consolidated financial statements for the fiscal years ended December 31, 2016 and 2015 contained no adverse opinion or disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principles, except that PricewaterhouseCoopers LLP's reports for the fiscal years ended December 31, 2016, and December 31, 2015 included an explanatory paragraph indicating that there was substantial doubt about our ability to continue as a going concern.

During our fiscal years ending December 31, 2016 and December 31, 2015, and the subsequent interim period through June 9, 2017, (i) there were no "disagreements" (within the meaning set forth in Item 304(a)(1)(iv) of Regulation S-K) with PricewaterhouseCoopers LLP on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to PricewaterhouseCoopers LLP's satisfaction, would have caused PricewaterhouseCoopers LLP to make reference to the subject matter of the disagreements in their reports on our consolidated financial statements for such years; and (ii) there were no "reportable events" (within the meaning set forth in Item 304(a)(1)(v) of Regulation S-K).

In addition, during our fiscal years ending December 31, 2016 and December 31, 2015, and the subsequent interim period through June 28, 2017, neither Amyris nor any person on its behalf consulted with KPMG LLP with respect to either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on our financial statements, and neither a written report was provided to us nor oral advice was provided that KPMG LLP concluded was an important factor considered by us in reaching a decision as to the accounting, auditing or financial reporting issue; or (ii) any matter that was either the subject of a "disagreement" or a "reportable event" as such terms are described in Items 304(a)(1)(iv) or 304(a)(1)(v), respectively, of Regulation S-K.

Vote Required and Board Recommendation

Ratification of the selection of KPMG LLP requires the affirmative vote of the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as "Against" votes for this proposal. Shares represented by executed proxies that do not indicate a vote "For," "Against" or "Abstain" will be voted by the proxy holders "For" this proposal.

The Board recommends a vote "FOR" this Proposal 2

Independent Registered Public Accounting Firm Fee Information

KPMG LLP has served as our principal accountant for the audit of our annual financial statements and for the review of our unaudited financial statements included in our Quarterly Reports on Form 10-Q since June 28, 2017. During fiscal year 2016 and for the period from January 1, 2017 through June 9, 2017, PricewaterhouseCoopers LLP served in such role. The following tables set forth the aggregate fees billed or to be billed to us by KPMG LLP and PricewaterhouseCoopers LLP, respectively, for services performed for the fiscal years ended December 31, 2017 and December 31, 2016 during their respective tenures as our independent registered public accounting firm (in thousands):

KPMG LLP

	Fiscal Year ended December 31,	
Fee Category	**2017**	**2016**
Audit Fees	$2,029	$ —
Audit-Related Fees	—	—
Tax Fees	—	—
All Other Fees	—	—
Total Fees	$2,029	$ —

The "Audit Fees" category includes aggregate fees billed in the relevant fiscal year for professional services rendered for the audit of our annual financial statements and for the review of our unaudited financial statements included in our Quarterly Reports on Form 10-Q, and for services that are normally provided in connection with statutory and regulatory filings or engagements for those fiscal years. We did not incur any fees in this category with respect to KPMG LLP for the fiscal year ended December 31, 2016.

The "Audit-Related Fees" category includes aggregate fees billed in the relevant fiscal year for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and that are not reported under the "Audit Fees" category. We did not incur any fees in this category with respect to KPMG LLP for the fiscal years ended December 31, 2017 or 2016.

The "Tax Fees" category includes aggregate fees billed in the relevant fiscal year for professional services rendered with respect to tax compliance, tax advice and tax planning. We did not incur any fees in this category with respect to KPMG LLP for the fiscal years ended December 31, 2017 or 2016.

The "All Other Fees" category includes aggregate fees billed in the relevant fiscal year for products and services other than those reported under the other categories described above. We did not incur any fees in this category with respect to KPMG LLP for the fiscal years ended December 31, 2017 or 2016.

PricewaterhouseCoopers LLP

	Fiscal Year ended December 31,	
Fee Category	**2017**	**2016**
Audit Fees	$ 833	$1,692
Audit-Related Fees	270	—
Tax Fees	—	10
All Other Fees	—	—
Total Fees	$1,103	$1,702

The "Audit Fees" category includes aggregate fees billed in the relevant fiscal year for professional services rendered for the audit of our annual financial statements and for the review of our unaudited financial statements included in our Quarterly Reports on Form 10-Q, and for services that are normally provided in connection with statutory and regulatory filings or engagements for those fiscal years.

The “Audit-Related Fees” category includes aggregate fees billed in the relevant fiscal year for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and that are not reported under the “Audit Fees” category. The Audit-Related Fees above include fees billed in the fiscal year ended December 31, 2017 for attest services that are not required by statute or regulation. We did not incur any fees in this category with respect to PricewaterhouseCoopers LLP in the fiscal year ended December 31, 2016.

The “Tax Fees” category includes aggregate fees billed in the relevant fiscal year for professional services rendered with respect to tax compliance, tax advice and tax planning. We did not incur any fees in this category with respect to PricewaterhouseCoopers LLP in the fiscal year ended December 31, 2017.

The “All Other Fees” category includes aggregate fees billed in the relevant fiscal year for products and services other than those reported under the other categories described above. We did not incur any fees in this category with respect to PricewaterhouseCoopers LLP in the fiscal years ended December 31, 2017 or 2016.

Audit Committee Pre-Approval of Services Performed by our Independent Registered Public Accounting Firm

The Audit Committee’s charter requires it to approve all fees and other compensation paid to, and pre-approve all audit and non-audit services performed by, the company’s independent registered public accounting firm. The Audit Committee charter permits the Audit Committee to delegate pre-approval authority to one or more members of the Audit Committee, provided that any pre-approval decision is reported to the Audit Committee at its next scheduled meeting. The Audit Committee has delegated such pre-approval authority to the Chair of the Audit Committee.

In determining whether to approve audit and non-audit services to be performed by our independent registered public accounting firm, the Audit Committee takes into consideration the fees to be paid for such services and whether such fees would affect the independence of the accounting firm in performing its audit function. In addition, when determining whether to approve non-audit services to be performed by our independent registered public accounting firm, the Audit Committee considers whether the performance of such services is compatible with maintaining the independence of the accounting firm in performing its audit function, and confirms that the non-audit services will not include the prohibited activities set forth in Section 201 of the Sarbanes-Oxley Act of 2002. Except for the services described above under “Audit-Related Fees,” “Tax Fees” and “All Other Fees” (each of which was pre-approved by the Audit Committee in accordance with its policy), no non-audit services were provided by Amyris’s independent registered public accounting firm in 2017 or 2016.

All fees paid to, and all services provided by, our independent registered public accounting firm during fiscal years 2017 and 2016 were pre-approved by the Audit Committee in accordance with the pre-approval procedures described above.

Report of the Audit Committee*

The Audit Committee has reviewed and discussed with management our audited consolidated financial statements for the fiscal year ended December 31, 2017. The Audit Committee has also discussed with KPMG LLP, our independent registered public accounting firm, the matters required to be discussed by Public Company Accounting Oversight Board Auditing Standard No. 1301 (Communications with Audit Committees), as amended.

The Audit Committee has received and reviewed the written disclosures and the letter from KPMG LLP required by applicable requirements of the Public Company Accounting Oversight Board regarding KPMG LLP's communications with the Audit Committee concerning independence, and has discussed with KPMG LLP its independence.

Based on the review and discussions referred to above, the Audit Committee recommended to the Board that the audited consolidated financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 for filing with the Securities and Exchange Commission.

Amyris, Inc. Audit Committee of the Board

R. Neil Williams (Chair)
Geoffrey Duyk
Fernando Reinach

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* *The material in this report is not "soliciting material," is not deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Amyris under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.*

Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan

General

Our 2010 Equity Incentive Plan (the "2010 EIP") allows us to grant equity awards (including stock options and restricted stock units) to our employees, officers and directors. The purpose of the 2010 EIP is to provide incentives to attract, retain and motivate persons whose present and potential contributions are important to the success of Amyris by offering them an opportunity to participate in the company's future performance through the grant of awards.

We believe our success is due to our highly talented employee base and that future success depends on the ability to attract and retain high caliber personnel. Our headquarters is based in the San Francisco Bay Area where we must compete with many companies for a limited pool of talented people. The Board, the Leadership Development and Compensation Committee of the Board (the "LDCC") and company management all believe that equity compensation is essential to maintaining a balanced and competitive compensation program, has been integral to the company's success in the past and is vital to its ability to achieve strong performance in the future.

On April 11, 2018, the Board approved amendments to the 2010 EIP, subject to approval by our stockholders at our 2018 annual meeting. We are seeking stockholder approval to amend the 2010 EIP to (i) increase the number of shares of our common stock available for grant and issuance thereunder by 9,000,000 shares and (ii) increase the annual per-participant award limit thereunder from 66,666 shares (133,333 shares for new employees in the calendar year in which they commence their employment) to 4,000,000 shares for all participants. As described in more detail below, pursuant to his offer letter and subject to prior stockholder approval of an increase to the annual per-participant award limit under the 2010 EIP, we agreed to grant our chief operating officer, Eduardo Alvarez, an award of 250,000 restricted stock units. A portion of such restricted stock unit award is contingent on stockholder approval of an increase to the annual per-participant award limit under the 2010 EIP. In addition, as described below in "Proposal 5 — Approval of CEO Equity Awards," the LDCC has granted John Melo, our President and Chief Executive Officer, certain equity awards subject to stockholder approval of this Proposal 3 and Proposal 5.

As of March 31, 2018, options to purchase 1,283,020 shares and restricted stock units representing the right to receive 706,697 shares of our common stock were outstanding under the 2010 EIP, and 2,446,802 shares of our common stock remained available for future awards that may be granted under the 2010 EIP. Pursuant to its terms, the number of shares available for grant and issuance under the 2010 EIP is increased automatically on the first day of each calendar year during the term of the 2010 EIP by the lesser of (i) five percent of our shares outstanding on the immediately preceding December 31 and (ii) a number determined by Board or the LDCC, in its discretion. Please refer to the "Equity Compensation Plan Information" section of this Proxy Statement for additional information regarding the outstanding awards and shares available for future issuance under the 2010 EIP. If Proposal 3 is approved, 11,446,802 shares of our common stock will be available for future grant under the 2010 EIP, as amended, plus any such future automatic increases.

Purpose of the Amendments to the 2010 Equity Incentive Plan

We believe the ability to grant competitive equity awards is a necessary and powerful recruiting and retention tool for us to obtain the quality personnel we need to grow our business. After carefully forecasting our anticipated growth, hiring plans and retention strategy, we believe that the current shares available for grant under the 2010 EIP are insufficient to meet our near-term needs. If we are unable to offer competitive equity packages to retain and hire employees, this could significantly harm our plans for growth and adversely affect our ability to operate our business. In addition, if we are unable to grant competitive equity awards, we may be required to offer additional cash-based incentives to replace equity as a means of competing for talent.

The Board believes that increases in the number of shares of our common stock available for grant and issuance under the 2010 EIP and in the annual per-participant award limit are advisable to enable the company to continue to grant equity-based awards at competitive levels required to attract, motivate and retain key executives and employees in our industry. We believe that without an increase in the shares available for grant and issuance under the 2010 EIP and in the annual per-participant award limit, we would need to reduce our equity award targets, and that such a decrease could adversely affect our ability to recruit and retain employees.

On June 5, 2017, we filed a Certificate of Amendment of the Restated Certificate of Incorporation with the Secretary of State of Delaware to effect a fifteen-to-one reverse stock split of the shares of our common stock, effective as of the close of business, Eastern Time, on June 5, 2017 (the "Reverse Stock Split"). Our stockholders approved the Reverse Stock Split at our 2017 Annual Meeting of Stockholders held on May 23, 2017. Pursuant to Section 2.6 of the 2010 EIP, upon a change in the number of outstanding shares of our common stock by a reverse stock split, then, among other things, (a) the number of shares of common stock reserved for issuance and future grant under the 2010 EIP set forth in Section 2.1 and 2.4 thereof, (b) the maximum number of shares that may be issued as incentive stock options ("ISOs") set forth in Section 2.5 of the 2010 EIP and (c) the maximum number of shares that may be issued to an individual or to a new employee in any one calendar year set forth in Section 3 of the 2010 EIP, shall be proportionately adjusted. As a result, certain amounts in Sections 2.1, 2.5 and 3 of the 2010 EIP have been updated to reflect the Reverse Stock Split (which amounts in Sections 2.1 and 3 would be subsequently increased by the proposed amendments as described above).

If approved by stockholders, the amended 2010 EIP will be effective on the date of stockholder approval. We intend to register the additional shares authorized under the amended 2010 EIP under the Securities Act. If our stockholders do not approve the amendments to the 2010 EIP, (i) the shares available for grant and issuance under the 2010 EIP will not increase by 9,000,000 (but may be subject to automatic increase as described above) and (ii) the annual per-participant award limit will not increase.

Our named executive officers and directors have an interest in this proposal by virtue of their being eligible to receive equity awards under the Amended 2010 EIP. See "Awards to Officers and Directors" below for more information.

Vote Required and Board Recommendation

This proposal must receive a "For" vote from the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as "Against" votes for this proposal. Shares represented by executed proxies that do not indicate a vote "For," "Against" or "Abstain" will be voted by the proxy holders "For" this proposal. If you own shares through a bank, broker or other Intermediary, you must instruct your bank, broker or other Intermediary how to vote in order for them to vote your shares so that your vote can be counted on this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

The Board recommends a vote "FOR" this Proposal 3

Description of the Amended 2010 Equity Incentive Plan

The following is a summary of the principal features of the 2010 EIP, including the proposed amendments in this Proposal 3 (as so amended, the "Amended 2010 EIP"). This summary, however, does not purport to be a complete description of all of the provisions of the Amended 2010 EIP. It is qualified in its entirety by reference to the full text of the Amended 2010 EIP, a copy of which is attached hereto as **Appendix A**.

Background

The Board adopted the 2010 EIP on June 21, 2010, and our stockholders subsequently approved the 2010 EIP on July 9, 2010. The 2010 EIP became effective on the date the registration statement for our initial public offering was declared effective by the SEC (September 27, 2010) and will terminate in 2020. The 2010 EIP provides for the grant of ISOs intended to qualify for favorable tax treatment under Section 422 of the U.S. Internal Revenue Code (the "Code") for their recipients, non-statutory stock options ("NSOs"), restricted stock awards, stock bonuses, stock appreciation rights, restricted stock units and performance awards, as described below.

Administration

The Amended 2010 EIP is administered by the LDCC, all of the members of which are non-employee directors under applicable federal securities laws and outside directors (with respect to awards granted prior to November 2, 2017) as defined under applicable federal tax laws. The LDCC acts as the plan administrator and has the authority to construe and interpret the plan, grant awards, determine the terms and conditions of awards and make all other determinations necessary or advisable for the administration of the plan (subject to the limitations set forth in the Amended 2010 EIP).

Share Reserve

We initially reserved 280,000 shares of our common stock for issuance under the Amended 2010 EIP plus:

- all shares of our common stock reserved under our 2005 Stock Option/Stock Issuance Plan that were not issued or subject to outstanding grants as of the completion of our initial public offering;
- any shares issuable upon exercise of options that were granted under our 2005 Stock Option/ Stock Issuance Plan that cease to be subject to such stock options; and
- any shares of our common stock issued under our 2005 Stock Option/Stock Issuance Plan that are forfeited or repurchased by us at the original purchase price.

The number of shares available for grant and issuance under the Amended 2010 EIP is subject to increase on January 1 of each of calendar year by an amount equal to the lesser of (1) five percent of our shares outstanding on the immediately preceding December 31 and (2) a number of shares as may be determined by the Board or LDCC in their discretion. As a result of this provision, effective January 1, 2011, an additional 146,158 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on the December 31, 2010, effective January 1, 2012, an additional 153,108 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2011, effective January 1, 2013, an additional 229,032 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2012, effective January 1, 2014, an additional 255,542 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2013, effective January 1, 2015, an additional 264,072 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2014, effective January 1, 2016, an additional 686,780 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2015, effective January 1, 2017, an additional 548,214 shares were reserved under the 2010 EIP, representing approximately 3% of our shares outstanding on December 31, 2016, and effective January 1, 2018, an additional 2,281,871 shares were reserved under the 2010 EIP, representing approximately 5% of our shares outstanding on December 31, 2017.

As of March 31, 2018, the number of shares available for grant and issuance under the 2010 EIP is 2,446,802. Subject to stockholder approval as requested pursuant to this Proposal 3, an additional 9,000,000 shares will become available for grant and issuance under the 2010 EIP, plus any future automatic increases as described above.

In addition, shares will again be available for grant and issuance under the Amended 2010 EIP that are:

- subject to issuance upon exercise of an option or stock appreciation right granted under the Amended 2010 EIP and that cease to be subject to such award for any reason other than the award's exercise;
- subject to an award granted under the Amended 2010 EIP and that are subsequently forfeited or repurchased by us at the original issue price;
- surrendered pursuant to an exchange program; or
- subject to an award granted under the Amended 2010 EIP that otherwise terminates without shares being issued.

Equity Awards

The Amended 2010 EIP permits us to grant the following types of awards:

Stock Options. The Amended 2010 EIP provides for the grant of ISOs and NSOs. ISOs may be granted only to our employees or employees of our subsidiaries. NSOs may be granted to employees, officers, non-employee directors, consultants and other independent advisors who provide services to us or any of our subsidiaries. We are able to issue no more than 2,000,000 shares pursuant to the grant of ISOs under the Amended 2010 EIP. The LDCC determines the terms of each option award, provided that ISOs are subject to statutory limitations. The LDCC also determines the exercise price for a stock option, provided that the exercise price of an option may not be less than 100% (or 110% in the case of recipients of ISOs who hold more than 10% of our stock on the option grant date) of the fair market value of our common stock on the date of grant.

Options granted under the Amended 2010 EIP vest at the rate specified by the LDCC and such vesting schedule is set forth in the stock option agreement to which such stock option grant relates. Generally, the LDCC determines the term of stock options granted under the Amended 2010 EIP, up to a term of ten years (or five years in the case of ISOs granted to 10% stockholders).

After the option holder ceases to provide services to us, he or she is able to exercise his or her vested option for the period of time stated in the stock option agreement to which such option relates, up to a maximum of five years from the date of termination. Generally, if termination is due to death or disability, the vested option will remain exercisable for 12 months. If an option holder is terminated for cause (as defined in the Amended 2010 EIP), then the option holder's options will expire on the option holder's termination date or at such later time and on such conditions as determined by the LDCC. In all other cases, the vested option will generally remain exercisable for three months. However, an option may not be exercised later than its expiration date.

Restricted Stock Awards. A restricted stock award is an offer by us to sell shares of our common stock subject to restrictions that the LDCC may impose. These restrictions may be based on completion of a specified period of service with us or upon the achievement of performance goals during a performance period. The LDCC determines the price of a restricted stock award. Unless otherwise set forth in the award agreement, vesting will cease on the date the participant no longer provides services to us, and at that time unvested shares will be forfeited to us or subject to repurchase by us.

Stock Bonus Awards. A stock bonus is an award of shares of our common stock for past or future services to us. Stock bonuses can be granted as additional compensation for performance and, therefore, are issued in exchange for cash. The LDCC determines the number of shares to be issued as stock bonus and any restrictions on those shares. These restrictions may be based on completion of a specified period of service with us or upon the achievement of performance goals during a performance period. Unless otherwise set forth in the award agreement, vesting ceases on the date the participant no longer provides services to us, and at that time unvested shares will be forfeited to us or are subject to repurchase by us.

Stock Appreciation Rights. Stock appreciation rights provide for a payment, or payments, in cash or shares of our common stock to the holder based upon the difference between the fair market value of our common stock on the date of exercise and the stated exercise price of the stock appreciation right. Stock appreciation rights may vest based on time or achievement of performance goals.

Restricted Stock Units. Restricted stock units represent the right to receive shares of our common stock at a specified date in the future, subject to forfeiture of such right due to termination of employment or failure to achieve specified performance goals. If the restricted stock unit has not been forfeited, then on the date specified in the restricted stock unit agreement we will deliver to the holder of the restricted stock unit shares of our common stock, cash or a combination of our common stock and cash as specified in the applicable restricted stock unit agreement.

Performance Awards. A performance award is an award of a cash bonus or a bonus denominated in shares that is subject to performance factors. The award of performance shares may be settled in cash or by issuance of those shares (which may consist of restricted stock).

Performance Criteria

The LDCC may establish performance goals by selecting from one or more of the following performance criteria: (1) profit before tax; (2) billings; (3) revenue; (4) net revenue; (5) earnings (which may include earnings before interest and taxes, earnings before taxes, and net earnings); (6) operating income; (7) operating margin; (8) operating profit; (9) controllable operating profit, or net operating profit; (10) net profit; (11) gross margin; (12) operating expenses or operating expenses as a percentage of revenue; (13) net income; (14) earnings per share; (15) total stockholder return; (16) market share; (17) return on assets or net assets; (18) our stock price; (19) growth in stockholder value relative to a pre-determined index; (20) return on equity; (21) return on invested capital; (22) cash flow (including free cash flow or operating cash flows); (23) cash conversion cycle; (24) economic value added; (25) individual confidential business objectives; (26) contract awards or backlog; (27) overhead or other expense reduction; (28) credit rating; (29) strategic plan development and implementation; (30) succession plan development and implementation; (31) improvement in workforce diversity; (32) customer indicators; (33) new product invention or innovation; (34) attainment of research and development milestones; (35) improvements in productivity; and (36) attainment of objective operating goals and employee metrics. The LDCC may in its sole discretion, in recognition of unusual or non-recurring items such as acquisition-related activities or changes in applicable accounting rules, provide for one or more equitable adjustments (based on objective standards) to the performance criteria to preserve the committee's original intent regarding such criteria at the time of the initial award grant.

Change in Control

If we undergo a Corporate Transaction (as defined in the Amended 2010 EIP), the Amended 2010 EIP provides that the successor company (if any) may assume, convert, replace or substitute outstanding awards. Outstanding awards that are not so assumed, converted, replaced or substituted will have their vesting accelerate and become exercisable in full (unless otherwise set forth in the applicable award agreement).

Transferability of Awards

Unless the LDCC provides otherwise, the Amended 2010 EIP does not allow for the transfer of awards, other than by will or the laws of descent and distribution, and generally only the recipient of an award may exercise it during his or her lifetime. The LDCC has discretion to determine and implement award transfer programs to give participants the opportunity to transfer any outstanding awards to a financial institution or other person or entity approved by the LDCC. As part of such a program, the LDCC has the authority to amend any terms of awards included in the program, including the expiration date, post-expiration exercise period, vesting and forfeiture conditions, permitted payment methods, and adjustments in the event of capitalization changes and other similar events.

Eligibility

The individuals eligible to participate in the Amended 2010 EIP include employees, officers, directors, consultants, independent contractors and advisors of Amyris or any parent or subsidiary of ours, provided the consultants, independent contractors, advisors and directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction.

Payment for Purchase of Shares of our Common Stock

Payment for shares of our common stock purchased pursuant to the Amended 2010 EIP may be made in cash or by check or, where expressly approved by the LDCC and where permitted by law (and to the extent not otherwise set forth in the applicable award agreement): (1) by cancellation of indebtedness; (2) by surrender of shares; (3) by waiver of compensation due or accrued for services rendered; (4) through a broker-assisted sale or other cashless exercise program; (5) by any combination of the foregoing; or (6) by any other method permitted by law and approved by the LDCC.

Limit on Awards

Under the Amended 2010 EIP, during any calendar year, no participant is eligible to receive more than 4,000,000 shares of our common stock pursuant to the grant of awards.

Amendment and Termination

The Board is permitted to amend or terminate the Amended 2010 EIP at any time, subject to stockholder approval where required. Unless terminated earlier in accordance with its terms, the Amended 2010 EIP will terminate ten years from June 21, 2010, the date the 2010 EIP was adopted by the Board, or June 21, 2020.

Awards to Officers and Directors

Members of our Board and our named executive officers have an interest in this proposal because they are eligible to receive awards under the Amended 2010 EIP. Please refer to the "Executive Compensation" and "Director Compensation" sections of this Proxy Statement for additional information regarding the awards granted to our named executive officers and directors under the 2010 EIP.

In June 2017, certain equity awards granted to Mr. Melo in November 2015 that, when aggregated with other equity awards granted to Mr. Melo in 2015, inadvertently exceeded the annual per-participant award limit contained in the 2010 EIP were voided. Please refer to the "Executive Compensation — Compensation Discussion and Analysis" and "Executive Compensation — Outstanding Equity Awards as of December 31, 2017" sections of this Proxy Statement for more information regarding the voided awards.

In addition, pursuant to an offer letter, dated October 5, 2017, between the company and Eduardo Alvarez, the company's chief operating officer, the company agreed, subject to the prior approval by the Board and the company's stockholders, and implementation, of an amendment to the 2010 EIP to increase the maximum number of shares that any employee may receive in any calendar year under the 2010 EIP pursuant to the grant of awards to at least 250,000 shares, to grant Mr. Alvarez an award of 250,000 restricted stock units (the "RSU Award") on or before the earlier of (i) July 1, 2018 and (ii) the company entering into a definitive agreement relating to a proposed change of control (as defined in the company's Executive Severance Plan (the "Severance Plan")) (such earlier date, the "RSU Award Deadline"). The RSU Award, if granted, would fully vest on October 1, 2019. In the event that the number of shares authorized under the 2010 EIP is insufficient to enable the company to grant the full RSU Award to Mr. Alvarez on or before the RSU Award Deadline, then the company will grant to Mr. Alvarez a cash-based incentive award (the "Cash-Based Award") designed to provide him with a cash payment on October 1, 2019 (the "Date of Determination") equal to the value Mr. Alvarez would have been entitled to receive if the full RSU Award had been granted, less the value of any portion of the RSU Award granted to Mr. Alvarez on or prior to the RSU Award Deadline, in each case measured as of the Date of Determination, which Cash-Based Award would fully vest on the Date of Determination; provided, that if Mr. Alvarez's employment terminates in circumstances entitling him to severance benefits under the Severance Plan (whether before or after a change of control) (a "Qualifying Termination"), then upon such Qualifying Termination the vesting of the RSU Award would be automatically accelerated in full and the forfeiture provisions and/or company right of repurchase of the RSU Award would automatically lapse accordingly, with the amount of the Cash-Based Award, if any, shall be determined as of the date of the Qualifying Termination (with the Date of Determination deemed to be the date of such Qualifying Termination for such purpose). For more information regarding the Severance Plan, please refer to the "Executive Compensation — Compensation Discussion and Analysis" and "Executive Compensation — Potential Payments upon Termination and upon Termination Following a Change in Control" sections of this Proxy Statement. If Proposal 3 is not approved, the company will be unable to grant Mr. Alvarez the full RSU Award under the 2010 EIP.

Please see "Proposal 5 — Approval of CEO Equity Awards" below for information regarding certain equity awards proposed to be granted to Mr. Melo under the Amended 2010 EIP (the "CEO Equity Awards"), subject to stockholder approval of this Proposal 3 and Proposal 5.

It is not possible to determine the benefits that will be received by participants in the Amended 2010 EIP, including our named executive officers and our non-employee directors, in the future because all grants are made in the discretion of the Board or LDCC. With the exception of the RSU Award for Mr. Alvarez and the CEO Equity Awards for Mr. Melo as described above and in Proposal 5, neither the Board nor the LDCC have approved any awards that are conditioned upon stockholder approval of the proposed amendments to the 2010 EIP.

U.S. Federal Income Tax Consequences

The information set forth below is only a summary and does not purport to be complete. The information is based upon current federal income tax rules and therefore is subject to change when those rules change. Because the tax consequences to any participant may depend on his or her particular situation, each participant should consult his or her tax adviser regarding the federal, state, local, and other tax consequences of the grant or exercise of an award or the disposition of stock acquired under an award. The Amended 2010 EIP is not qualified under the provisions of Section 401(a) of the Code and is not subject to any of the provisions of the Employee Retirement Income Security Act of 1974. Our ability to realize the benefit of any tax deductions described below depends on our generation of taxable income and the recognition of the deductions are subject to the requirement that the amounts constitute an ordinary and necessary business expense for us and are reasonable in amount, the limitation on the deduction of executive compensation under Section 162(m) of the Code ("Section 162(m)"), and the timely satisfaction of our tax reporting obligations.

Non-statutory Stock Options

Generally, there is no taxation upon the grant of an NSO. On exercise, an option holder will recognize ordinary income equal to the excess, if any, of the fair market value on the date of exercise of the stock option over the exercise price. If the option holder is employed by us or one of our affiliates, that income will be subject to withholding taxes. The option holder's tax basis in those shares will be equal to their fair market value on the date of exercise of the stock option, and the option holder's capital gain holding period for those shares will begin on that date.

Subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of our tax reporting obligations, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the option holder.

Incentive Stock Options

The Amended 2010 EIP provides for the grant of stock options that qualify as incentive stock options, as defined in Section 422 of the Code. Under the Code, an option holder generally is not subject to ordinary income tax upon the grant or exercise of an ISO. If the option holder holds a share of common stock received on exercise of an ISO for more than two years from the date the stock option was granted and more than one year from the date the stock option was exercised (the "required holding period"), the difference, if any, between the amount realized on a sale or other taxable disposition of that share of common stock and the holder's tax basis in that share will be long-term capital gain or loss.

If, however, an option holder disposes of a share of common stock received on exercise of an ISO before the end of the required holding period (a "disqualifying disposition"), the option holder generally will recognize ordinary income in the year of the disqualifying disposition equal to the excess, if any, of the fair market value of the share of common stock on the date the ISO was exercised over the exercise price. However, if the sales proceeds are less than the fair market value of the share of common stock on the date of exercise of the stock option, the amount of ordinary income recognized by the option holder will not exceed the gain, if any, recognized on the sale. If the amount realized on a disqualifying disposition exceeds the fair market value of the share of common stock on the date of exercise of the stock option, that excess will be short-term or long-term capital gain, depending on whether the holding period for the share exceeds one year.

The amount by which the fair market value of a share of stock received on exercise of an ISO exceeds the exercise price of that stock option generally will be an adjustment included in the option holder's alternative minimum taxable income for the year in which the stock option is exercised. If, however, there is a disqualifying disposition of the share of common stock in the year in which the stock option is exercised, there will be no adjustment for alternative minimum tax purposes with respect to that share. In computing alternative minimum taxable income, the tax basis of a share received on exercise of an ISO is increased by the amount of the adjustment with respect to that share of common stock for alternative minimum tax purposes in the year the stock option is exercised.

We are not allowed an income tax deduction with respect to the grant or exercise of an ISO or the disposition of a share of common stock received on exercise of an ISO that is disposed of after the required holding period. If there is a disqualifying disposition of a share of common stock, however, we are allowed a deduction in an amount equal to the ordinary income includible in income by the option holder, subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of our tax reporting obligations.

Restricted Stock Unit Awards

Generally, a participant that is granted restricted stock units that are structured to comply with the requirements of Section 409A of the Code or an exemption from Section 409A will recognize ordinary income at the time the stock is delivered equal to the excess, if any, of the fair market value of the shares of our common stock received over any amount paid by the participant in exchange for the shares.

To comply with the requirements of Section 409A of the Code, the shares of our common stock underlying restricted stock units may generally be delivered only upon one of the following events: a fixed calendar date (or dates), the participant's separation from service, death or disability, or a change in control. If delivery occurs on another date, unless the restricted stock units otherwise comply with or qualify for an exemption from the requirements of Section 409A of the Code, the participant will owe a 20% federal tax plus interest on any taxes owed, in addition to the ordinary income tax described above.

The participant's basis for determining gain or loss upon the disposition of shares received under restricted stock units will be the amount paid for such shares plus any ordinary income recognized when the shares of common stock are delivered.

Subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of our tax reporting obligations, we will generally be entitled to a tax deduction equal to the taxable ordinary income recognized by the participant.

Restricted Stock Awards

Generally, a participant will recognize ordinary income at the time restricted stock is received equal to the excess, if any, of the fair market value of the stock received over any amount paid by the participant in exchange for the stock. If, however, the stock is not vested when it is received (e.g., the participant is required to work for us for a period of time to transfer or sell the stock), the participant generally will not recognize income until the stock vests, at which time the participant will recognize ordinary income equal to the excess, if any, of the fair market value of the stock on the date it vests over any amount paid by the participant in exchange for the stock. A participant may, however, file an election with the Internal Revenue Service within 30 days following his or her receipt of the restricted stock to recognize ordinary income as of the date the participant receives the restricted stock equal to the excess, if any, of the fair market value of the restricted stock on the date the stock is granted over any amount paid by the participant for the stock.

The participant's basis for the determining gain or loss upon the subsequent disposition of restricted stock will be the amount paid for such shares plus any ordinary income recognized either when the restricted stock is received or when it vests.

Subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of our tax reporting obligations, we will generally be entitled to a tax deduction equal to the taxable ordinary income recognized by the participant.

Stock Appreciation Rights

Generally, there is no taxation upon the grant of a stock appreciation right. On exercise, a participant will recognize ordinary income equal to the fair market value of the stock or cash received upon such exercise.

Subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of our tax reporting obligations, we will generally be entitled to a tax deduction equal to the taxable ordinary income recognized by the participant.

Section 162 Limitations on Tax Deductibility of Compensation Expense

Section 162(m) generally limits the amount a public company can deduct in any one year for compensation paid to certain executive officers in excess of $1 million. Recent changes to Section 162(m) passed in connection with the Tax Cuts and Jobs Act repealed exceptions to the Section 162(m) deductibility limit that were previously available for "qualified performance-based compensation," including awards granted under the 2010 EIP, effective for taxable years after December 31, 2017. As a result, any compensation paid to certain of our executive officers in excess of $1 million will be non-deductible unless it qualifies for transition relief afforded to compensation payable pursuant to certain binding arrangements in effect on November 2, 2017. We believe that compensation expense incurred in respect of our stock options granted prior to November 2, 2017, and restricted stock units granted prior to April 1, 2015, will continue to be deductible pursuant to this transition rule. However, because of uncertainties in the interpretation and implementation of the changes to Section 162(m), including the scope of the transition relief, we can offer no assurance of such deductibility. All other compensation in excess of $1 million paid to certain executive officers, including equity awards under the 2010 EIP, will not be deductible.

The LDCC continues to seek to balance the cost and benefit of tax deductibility with our executive compensation goals designed to promote long-term stockholder interests, and reserves discretion to approve or modify equity grants under the 2010 EIP that are non-deductible when it believes that such payments are appropriate to attract and retain executive talent. Accordingly, we expect that a portion of our future equity awards to executive officers will not be deductible under Section 162(m).

Proposal 4 — Approval of Amendment to the Amyris, Inc. 2010 Employee Stock Purchase Plan

General

Our 2010 Employee Stock Purchase Plan (the "2010 ESPP") is designed to enable eligible employees to purchase shares of our common stock at a discount on periodic purchase dates through accumulated payroll deductions. The purpose of the 2010 ESPP is to enhance such employees' sense of participation in the affairs of the company, and to provide an incentive for continued employment.

As discussed above, we believe our success is due to our highly talented employee base and that our future success depends on the ability to attract and retain high caliber personnel. The 2010 ESPP is designed to more closely align the interests of our employees with those of our stockholders by encouraging employees to invest in our common stock, and to help our employees share in the company's success through the appreciation in value of such purchased stock. The 2010 ESPP, together with the 2010 EIP, are important employee retention and recruitment vehicles.

On March 22, 2018, the Board approved an amendment to the 2010 ESPP, subject to approval by our stockholders at our 2018 annual meeting. We are seeking stockholder approval to amend the 2010 ESPP to increase the maximum number of shares of our common stock that may be issued over the term of the 2010 ESPP by 1,000,000 shares.

A total of 11,241 shares of common stock were initially reserved for future issuance under the 2010 ESPP. Pursuant to its terms, the number of shares reserved for issuance under the 2010 ESPP is increased automatically on the first day of each calendar year during the term of the 2010 ESPP by the lesser of (i) one percent of our shares outstanding on the immediately preceding December 31 and (ii) a number determined by Board or the LDCC, in its discretion, provided that no more than 666,666 shares of our common stock may be issued over the term of the 2010 ESPP without the approval of our stockholders, which we are seeking at the annual meeting. As of March 31, 2018, (i) the company had issued an aggregate of 208,909 shares under the 2010 ESPP, (ii) 445,693 shares of common stock were reserved for future issuance under the 2010 ESPP, plus any such future automatic increases and (iii) 12,064 shares remained available for future issuance over the term of the ESPP, subject to such shares being reserved for issuance pursuant to the terms of the 2010 ESPP. If Proposal 4 is approved, 1,012,064 shares of our common stock will be available for future issuance over the term of the 2010 ESPP, as amended, subject to such shares being reserved for issuance pursuant to the terms of the 2010 ESPP. We estimate that, with an increase in the maximum number of shares that may be issued over the term of the 2010 ESPP of 1,000,000 shares, we will have a sufficient number of shares of common stock to cover purchases under the 2010 ESPP through the expiration of the 2010 ESPP in November 2021.

Purpose of the Amendments to the 2010 Employee Stock Purchase Plan

The Board believes that an increase in the maximum number of shares of common stock that may be issued over the term of the 2010 ESPP is advisable to enable the company to continue to offer competitive benefit programs to our employees. The Board further believes that the amendment to the 2010 ESPP is important to allow us to attract, motivate, reward and retain the broad-based talent critical to achieving our business goals. We believe that without an increase in the maximum number of shares that may be issued over the term of the 2010 ESPP, our ability to recruit and retain employees would be adversely affected. Consequently, the Board has, subject to stockholder approval, increased the maximum number of shares that may be issued over the term of the 2010 ESPP by 1,000,000 shares. The Board believes that it is in the best interests of Amyris and our stockholders to continue to provide our employees with the opportunity to acquire an ownership interest in Amyris through their participation in the 2010 ESPP, encouraging them to remain in our employ and more closely aligning their interests with those of our other stockholders.

Pursuant to Section 14 of the 2010 ESPP, upon a change in the number of outstanding shares of our common stock by a reverse stock split, then, among other things, (a) the number of shares of common stock that may be delivered under the 2010 ESPP and (b) the numerical limits of Sections 1 and 10 of the 2010 ESPP shall be proportionately adjusted. As a result, certain amounts in Sections 1 and 10 of the 2010

ESPP have been updated to reflect the Reverse Stock Split (which amount in Section 1 relating to the maximum number of shares of our common stock that may be issued over the term of the 2010 ESPP would be subsequently increased by the proposed amendment as described above).

Section 25 of the 2010 ESPP requires stockholder approval of amendments to the 2010 ESPP if such amendments would (a) increase the number of shares that may be issued under the 2010 ESPP or (b) change the designation of the employees (or class of employees) eligible for participation in the 2010 ESPP. We are requesting in this Proposal 4 that our stockholders approve the proposed amendment to the 2010 ESPP in accordance with Section 25 of the 2010 ESPP.

If approved by stockholders, the amended 2010 ESPP will be effective on the date of stockholder approval. If our stockholders do not approve the amendment to the 2010 ESPP, then the maximum number of shares issuable under the 2010 ESPP will not be increased.

Our named executive officers have an interest in this proposal by virtue of their being eligible to participate in the 2010 ESPP. During the year ended December 31, 2017, of our named executive officers, only Joel Cherry participated in the 2010 ESPP, during which time Dr. Cherry purchased 533 shares under the 2010 ESPP. Non-employee directors of the Board are not eligible to participate in the 2010 ESPP. The number of shares that may be purchased under the 2010 ESPP in future periods, including by our named executive officers, depends on each employee's voluntary election to participate, and on the fair market value of our common stock during each purchase period. As a result, the actual number of shares that may be purchased by any individual cannot be determined.

Vote Required and Board Recommendation

This proposal must receive a "For" vote from the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy. Abstentions will be counted toward the vote total for this proposal and will have the same effect as "Against" votes for this proposal. Shares represented by executed proxies that do not indicate a vote "For," "Against" or "Abstain" will be voted by the proxy holders "For" this proposal. If you own shares through a bank, broker or other Intermediary, you must instruct your bank, broker or other Intermediary how to vote in order for them to vote your shares so that your vote can be counted on this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

The Board recommends a vote "FOR" this Proposal 4

Description of the Amended 2010 Employee Stock Purchase Plan

The following is a summary of the principal features of the 2010 ESPP, including the proposed amendment in this Proposal 4 (as so amended, the "Amended 2010 ESPP"). This summary, however, does not purport to be a complete description of all of the provisions of the Amended 2010 ESPP. It is qualified in its entirety by reference to the full text of the Amended 2010 ESPP, a copy of which is attached hereto as **Appendix B**.

Background

The Board adopted the 2010 ESPP on July 8, 2010, and our stockholders subsequently approved the 2010 ESPP on July 9, 2010. The 2010 ESPP was subsequently amended by the Board in September 2010 to specify a per-offering period share purchase limit for participants of 266 shares (the "Share Purchase Limit"), and again in February 2017 and February 2018 to increase such limit to 533 shares and 3,000 shares, respectively. The 2010 ESPP became effective on the date the registration statement for our initial public offering was declared effective by the SEC (September 27, 2010) and will expire on November 15, 2021 (the tenth anniversary of the first purchase date under the 2010 ESPP), unless earlier terminated by the Board in accordance with the Amended 2010 ESPP.

The Amended 2010 ESPP is designed to enable eligible employees to periodically purchase shares of our common stock at a discount. Purchases are accomplished through participation in discrete offering periods. The Amended 2010 ESPP is intended to qualify as an "employee stock purchase plan" under Section 423 of the Code.

Administration

The LDCC administers the Amended 2010 ESPP. Subject to the limitations of Section 423 of the Code, all questions of interpretation or application of the Amended 2010 ESPP are determined by the LDCC and its decisions are final and binding upon all participants. The LDCC has full and exclusive discretionary authority to construe, interpret and apply the terms of the Amended 2010 ESPP, to determine eligibility and decide upon any and all claims filed under the Amended 2010 ESPP.

The LDCC also has the right to amend, suspend or terminate the Amended 2010 ESPP. Further, the LDCC has the right to change the offering and purchase periods under the Amended 2010 ESPP, permit contributions to be increased or decreased, and establish such other limitations or procedures as the LDCC determines in its sole discretion advisable which are consistent with the Amended 2010 ESPP. Such actions will not require stockholder approval or the consent of any participants; provided, however, that no amendment shall be made without approval of the stockholders of the company if such amendment would (a) increase the number of shares that may be issued under Amended 2010 ESPP or (b) change the designation of the employees (or class of employees) eligible for participation in the Amended 2010 ESPP.

Eligibility

Employees generally are eligible to participate in the Amended 2010 ESPP if they are customarily employed by Amyris or by a participating subsidiary for more than twenty (20) hours per week and more than five (5) months in any calendar year; provided, that employees who are 5% stockholders, or would become 5% stockholders as a result of their participation in the Amended 2010 ESPP, are not eligible to participate in the Amended 2010 ESPP. Eligible employees are able to acquire shares of our common stock by accumulating funds through payroll deductions. Eligible employees are able to select a rate of payroll deduction between 1% and 15% of their cash compensation and are subject to certain maximum share purchase limits, as discussed below. An employee's participation in the Amended 2010 ESPP automatically ends upon termination of employment for any reason.

As of March 31, 2018, approximately 340 employees, including all of our current named executive officers, are eligible to participate in the 2010 ESPP. For the offering periods under the 2010 ESPP that concluded on May 15, 2017 and November 15, 2017, 131 employees actually participated in such offerings, representing approximately 38% of our employees who are eligible to participate in the 2010 ESPP.

Share Reserve

We initially reserved 11,241 shares of our common stock for issuance under the 2010 ESPP. The number of shares reserved for issuance under the Amended 2010 ESPP is subject to increase on January 1 of each of calendar year during the term of the Amended 2010 ESPP by an amount equal to the lesser of (1) 1% of our shares outstanding on the immediately preceding December 31 and (2) a number of shares as may be determined by the Board or LDCC in their discretion. As a result of this provision, effective January 1, 2011, an additional 29,231 shares were reserved under the 2010 ESPP, representing approximately 1% of our shares outstanding on the December 31, 2010, effective January 1, 2012, an additional 30,622 shares were reserved under the 2010 ESPP, representing approximately 1% of our shares outstanding on December 31, 2011, effective January 1, 2013, an additional 45,807 shares were reserved under the 2010 ESPP, representing approximately 1% of our shares outstanding on December 31, 2012, effective January 1, 2014, an additional 51,109 shares were reserved under the 2010 ESPP, representing approximately 1% of our shares outstanding on December 31, 2013, effective January 1, 2015, an additional 52,815 shares were reserved under the 2010 ESPP, representing approximately 1% of our shares outstanding on December 31, 2014, effective January 1, 2016, an additional 68,678 shares were reserved under the 2010 ESPP, representing approximately 0.5% of our shares outstanding on December 31, 2015, and effective January 1, 2018, an additional 365,099 shares were reserved under the 2010 ESPP, representing approximately 0.8% of our shares outstanding on December 31, 2017.

Purchase Rights

Each offering period under the Amended 2010 ESPP is for one year and consists of two six-month purchase periods. Offering periods under the Amended 2010 ESPP commence on May 16th and November 16th of each year during the term of the Amended 2010 ESPP (subject to the right of the LDCC to change the offering periods as discussed above), and eligible participants may only participate in one offering period cycle. The purchase price for shares of common stock purchased under the Amended 2010 ESPP is the lesser of 85% of the fair market value of our common stock on the first day of the applicable offering period or the last day of the applicable purchase period in such offering period. When an offering period commences, our employees who meet the eligibility requirements for participation in that offering period will be automatically granted a non-transferable option to purchase shares in that offering period. Participating employees may withdraw from participation in the Amended 2010 ESPP at any time prior to the end of an offering period, and any accumulated payroll deductions shall be returned to the withdrawn participant, without interest.

Purchase Limitations

Share purchases under the Amended 2010 ESPP are subject to the Share Purchase Limit. In addition, no participant has the right to purchase shares at a rate which, when aggregated with such participant's purchase rights under all our employee stock purchase plans that are also outstanding in the same calendar year(s), have a fair market value of more than $25,000, determined as of the first day of the applicable offering period, for each calendar year in which such right is outstanding. Furthermore, no employee has the right to purchase shares under the Amended 2010 ESPP if such employee is, or if such purchase would cause the employee to become, a 5% stockholder of Amyris.

Change in Control

In the event of a Corporate Transaction (as defined in the Amended 2010 ESPP), the successor company may assume or substitute the outstanding rights to purchase shares under the Amended 2010 ESPP. If the successor company refuses to assume or substitute such outstanding rights, the offering period for such purchase rights will be shortened and end on a new purchase date on or prior to the consummation of the corporate transaction and no new offering period will commence.

Transferability

Neither payroll deductions nor any purchase rights under the Amended 2010 ESPP may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will or the laws of descent and distribution) by the participant.

U.S. Federal Income Tax Consequences

The Amended 2010 ESPP is intended to be an "employee stock purchase plan" within the meaning of Section 423 of the Code. Under such a plan, no taxable income will be reportable by a participant, and no deductions will be allowable to Amyris, as a result of the grant or exercise of the purchase rights issued under the Amended 2010 ESPP. Taxable income will not be recognized until there is a sale or other disposition of the shares acquired under the Amended 2010 ESPP or in the event the participant should die while still owning the purchased shares.

If the participant sells or otherwise disposes of the purchased shares within two years after commencement of the offering period during which those shares were purchased or within one year of the date of purchase, the participant will recognize ordinary income in the year of sale or disposition equal to the amount by which the fair market value of the shares on the purchase date exceeded the purchase price paid for those shares. If the participant sells or disposes of the purchased shares more than two years after the commencement of the offering period in which those shares were purchased and more than one year from the date of purchase, then the participant will recognize ordinary income in the year of sale or disposition equal to the lesser of the amount by which the fair market value of the shares on the sale or disposition date exceeded the purchase price paid for those shares or 15% of the fair market value of the shares on the date of commencement of such offering period. Any additional gain upon the disposition will be taxed as a capital gain.

If the participant still owns the purchased shares at the time of death, the lesser of the amount by which the fair market value of the shares on the date of death exceeds the purchase price or 15% of the fair market value of the shares on the date of commencement of the offering period during which those shares were purchased will constitute ordinary income in the year of death.

If the purchased shares are sold or otherwise disposed of within two years after commencement of the offering period during which those shares were purchased or within one year after the date of purchase, then Amyris will be entitled to an income tax deduction in the year of sale or disposition equal to the amount of ordinary income recognized by the participant as a result of such sale or disposition. No deduction will be allowed in any other case.

Proposal 5 —
Approval of CEO Equity Awards

General

The Board is asking Amyris's stockholders to approve the following equity awards for our President and Chief Executive Officer, John Melo: (i) a stock option to purchase 3,250,000 shares of our common stock, such award being subject to performance-based vesting conditions as described herein (the "CEO Performance Option"), and (ii) a restricted stock unit award for 700,000 shares of our common stock in accordance with the terms described herein (the "CEO RSU" and together with the CEO Performance Option, the "CEO Equity Awards").

The Board's primary objective in designing the CEO Equity Awards is to help Amyris grow and achieve its mission, which would facilitate the creation of significant stockholder value. There are three main reasons why the Board recommends that stockholders approve the CEO Equity Awards:

- The CEO Equity Awards strengthen Mr. Melo's incentives and further align his interests with our long-term strategic direction and the interests of our stockholders and reduce the possibility of business decisions that favor short-term results at the expense of long-term value creation;
- The incentives created by the CEO Equity Awards will further ensure Mr. Melo's continued leadership of Amyris over the long-term; and
- The performance and stock price conditions for vesting of the CEO Performance Option will promote Mr. Melo's continued focus on Amyris' growth, sustainability and profitability to drive sustained, long-term stockholder returns.

Background of the CEO Equity Awards

As of March 31, 2018, as described below in the Section titled "Security Ownership of Certain Beneficial Owners and Management," Mr. Melo beneficially owned (i) 6,840 shares of common stock, (ii) 76,332 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) options exercisable within 60 days of March 31, 2018 for the purchase of 138,439 shares of common stock, representing in the aggregate less than 1% of Amyris's outstanding common stock as of such date. Please refer to the "Executive Compensation" section of this Proxy Statement for additional information regarding outstanding equity awards held by Mr. Melo.

Taking into account Mr. Melo's existing ownership interests and the Board's belief that equity incentives are a critical compensation element to align management interests with that of Amyris's stockholders, the Board and the LDCC have engaged in extensive discussions regarding additional equity compensation for Mr. Melo.

These discussions extensively covered each of the various considerations that were involved in deciding to approve the CEO Equity Awards, including, among other things:

- The reasons for granting the awards;
- The desire to incentivize and motivate Mr. Melo to continue to lead Amyris over the long-term and to create significant stockholder value in doing so;
- How to structure an award in a way that would further align the interests of Mr. Melo and Amyris's other stockholders;
- What performance milestones should be used in the awards;
- What the total size and form of the awards should be and how that would translate into increased ownership and value for Mr. Melo; and
- How to balance the risks and rewards of any new awards.

Throughout this process, the LDCC used the services of Compensia, its independent compensation consultant, and Fenwick & West LLP, its outside counsel.

At various points during this process, certain members of the LDCC met with Mr. Melo to share their thinking on the awards and get his perspective, including as to each of the issues identified above and ultimately to negotiate the terms of the awards with him.

After engaging in this extended process and arriving at terms for additional equity awards to which the Board, the LDCC and Mr. Melo agreed, and concluding that such awards would motivate and incentivize Mr. Melo to continue to lead the management of Amyris over the long-term to drive Amyris's growth, sustainability and profitability, the LDCC, with the support of the Board, granted the CEO Equity Awards subject to obtaining the approval of Amyris's stockholders of (i) the CEO Equity Awards as detailed below and (ii) the amendments to our 2010 Equity Incentive Plan described above under "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan."

Whether or not our stockholders approve the CEO Equity Awards and/or the amendments to our 2010 Equity Incentive Plan described in Proposal 3, the Board or LDCC may grant additional equity awards to Mr. Melo in their discretion in accordance with the terms of our 2010 Equity Incentive Plan.

Vote Required and Board Recommendation

This proposal must receive a "For" vote from (i) the holders of a majority of the shares of common stock properly casting votes on this proposal at the annual meeting in person or by proxy (the "Bylaws Standard") and (ii) a majority of the total votes of shares of our common stock not owned, directly or indirectly, by John Melo cast in person or by proxy at the annual meeting (the "Disinterested Standard"). Abstentions will be counted toward the vote total for this proposal for purposes of the Bylaws Standard (but not the Disinterested Standard) and will have the same effect as an "Against" vote for this proposal under the Bylaws Standard. Shares represented by executed proxies that do not indicate a vote "For," "Against" or "Abstain" will be voted by the proxy holders "For" this proposal. If you own shares through a bank, broker or other Intermediary, you must instruct your bank, broker or other Intermediary how to vote in order for them to vote your shares so that your vote can be counted on this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

The Board recommends a vote "FOR" this Proposal 5

Summary of the CEO Equity Awards

Overview

On April 11, 2018, the LDCC, with the support of the Board, granted to Mr. Melo the CEO Equity Awards, contingent upon approval by our stockholders of both (i) the CEO Equity Awards as set forth in this Proposal 5 and (ii) the amendments to our 2010 Equity Incentive Plan as set forth in Proposal 3 above.

Because of the direct relationship between the value of our equity awards and the fair market value of our common stock, we believe that granting stock options and restricted stock units will incentivize Mr. Melo in a manner that aligns his interests with our long-term strategic direction and the interests of our stockholders and reduces the possibility of business decisions that favor short-term results at the expense of long-term value creation.

If our stockholders approve this Proposal 5 and Proposal 3, the CEO Performance Option and the CEO RSU will be automatically granted on the first business day of the week following the week in which such Proposals are approved by our stockholders. If our stockholders do not approve this Proposal 5, neither the CEO Performance Option nor the CEO RSU will be granted.

Whether or not our stockholders approve this Proposal 5 and/or Proposal 3, the Board or LDCC may grant additional equity awards to Mr. Melo in their discretion in accordance with the terms of our 2010 Equity Incentive Plan.

Material Terms of the Proposed CEO Performance Option

The principal terms of the CEO Performance Option are summarized below. This summary is not a complete description of the CEO Performance Option, and it is qualified in its entirety by reference to the complete text of the form of CEO Performance Option agreement, which is attached as Appendix C to this proxy statement.

CEO Performance Option Value. The total number of shares of Amyris common stock underlying the CEO Performance Option will be 3,250,000. The total number of shares underlying the CEO Performance Option is equivalent to 6.5% of the total number of shares of our common stock outstanding as of March 31, 2018 (assuming for this purpose that all shares underlying the CEO Equity Awards have been issued).

Equity Type. The CEO Performance Option is a performance-based nonqualified stock option that will be granted pursuant to our 2010 Equity Incentive Plan and the form of CEO Performance Option agreement attached as Appendix C to this proxy statement. Mr. Melo will receive compensation from the CEO Performance Option only to the extent that Amyris achieves the applicable performance milestones.

Date of Grant; Exercise Price. If Proposal 5 and Proposal 3 are approved by our stockholders, the CEO Performance Option will be automatically granted on the first business day of the week following the week in which such Proposals are approved by our stockholders. The exercise price of the CEO Performance Option will be the closing market price of Amyris common stock on the Nasdaq Global Select Market on the date of grant.

Performance Metrics & Vesting. The CEO Performance Option is divided into four tranches as described in the table below (each a "Tranche"). Each of the four Tranches of the CEO Performance Option will vest on or after the applicable vesting date for the Tranche (the "Earliest Vesting Date") provided: (i) the Board or the LDCC certify that both the EBITDA Milestone and the Stock Price Milestone (collectively, the "Milestones") for such Tranche have been met and (ii) Mr. Melo remains our CEO on the applicable vesting date. Any Milestone may be met before, at or after the applicable Earliest Vesting Date for a Tranche provided that the Milestone is met during its applicable Measurement Period. The EBITDA Measurement Period starts January 1, 2018 and ends December 31, 2021. The Stock Price Measurement Period starts January 1, 2018 and ends December 31, 2022. In the event that either the EBITDA Milestone or the Stock Price Milestone is not yet achieved for a Tranche, no shares attributable to such Tranche will be eligible to vest on such Tranche's Earliest Vesting Date; provided, however, the Milestones will remain eligible to be achieved during the remaining EBITDA Measurement Period and Stock Price Measurement Period, as applicable (both as described below). For clarity, upon the achievement of both the applicable EBITDA Milestone and Stock Price Milestone for a Tranche, the shares attributable to such Tranche may not vest until such Tranche's Earliest Vesting Date, and only if Mr. Melo remains the CEO on such date. More than one Tranche may vest simultaneously provided that: the Earliest Vesting Date for each applicable Tranche has occurred, the requisite EBITDA Milestone and Stock Price Milestone for each applicable Tranche have been met and Mr. Melo continues as the CEO through the applicable date of vesting. The table below sets forth the number of shares, EBITDA Milestone, Stock Price Milestone and Earliest Vesting Date for each Tranche:

Tranche	Number of Shares	EBITDA Milestone ($M)	Stock Price Milestone	Earliest Vesting Date
1	750,000	$ 10	$15	July 1, 2019
2	750,000	$ 60	$20	July 1, 2020
3	750,000	$ 80	$25	July 1, 2021
4	1,000,000	$100	$30	July 1, 2022

EBITDA Milestone. The EBITDA Milestone for a Tranche is achieved if Amyris's EBITDA (as described below) equals or exceeds the EBITDA Milestone set forth in the table above for such Tranche for any fiscal year during the EBITDA Measurement Period. The EBITDA Measurement Period starts January 1, 2018 and ends December 31, 2021. The Board or the LDCC will measure and certify the level of achievement of the EBITDA Milestones as of the end of each fiscal year within the EBITDA Measurement Period.

For purposes of the EBITDA Milestone, "EBITDA" shall mean Amyris's net (loss) income attributable to common stockholders for the relevant fiscal year during the EBITDA Measurement Period as determined in accordance with U.S. Generally Accepted Accounting Principles ("GAAP") and as reported by Amyris in its audited financial statements contained in its Annual Report on Form 10-K for the relevant fiscal year filed with the SEC, plus interest expense (benefit), provision for income taxes, depreciation and amortization for the same fiscal year as reflected in the audited financial statements. For the avoidance of doubt, there will be no adjustment to the reported net (loss) income attributable to common stockholders for stock based compensation in determining EBITDA.

In the event of unusual non-recurring events such as acquisition activities or divestitures of significant assets or changes in applicable accounting rules, as a result of which the calculation of Amyris's EBITDA during the EBITDA Measurement Period is increased or decreased by 10% or more in determining Amyris's audited financial statements contained in its Annual Report on Form 10-K filed with the SEC for the most recently completed fiscal year, the Board or, if the Board delegates authority to the LDCC, the LDCC may provide for one or more equitable adjustments to the EBITDA Milestones to preserve the original intent regarding the EBITDA Milestones at the time of the initial award grant.

Stock Price Milestone. The Stock Price Milestone for a Tranche is achieved if each of (i) the average of the daily closing prices of our common stock on the Nasdaq Global Select Market for any one hundred and eighty (180)-consecutive day period starting at any time after the last day of the fiscal year in which the applicable EBITDA Milestone was achieved for the applicable Tranche and ending during the Stock Price Measurement Period and (ii) the average of the daily closing prices of our common stock on the Nasdaq Global Select Market for a thirty (30)-consecutive day period ending on the date on which the 180-day average stock price set forth in the table is achieved for the applicable Tranche equals or exceeds the Stock Price Milestone for the applicable Tranche during the Stock Price Measurement Period. The Stock Price Measurement Period starts January 1, 2018 and ends December 31, 2022.

The Stock Price Milestone will be adjusted to reflect events such as a stock split or recapitalization in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the CEO Performance Option.

The LDCC considers the Stock Price Milestone to be a challenging hurdle and included the EBITDA Milestone to promote Amyris's continued focus on growth, sustainability and profitability. The LDCC selected EBITDA (as defined above) as the appropriate measure because it believes EBITDA is a metric that is commonly used for companies at this stage of development and because many of Amyris's stockholders use it to evaluate Amyris's performance and viability. It is a measure of cash generation from operations that does not disincentivize Amyris from making additional investments to grow further. The EBITDA Milestone is designed to ensure that Amyris maintains operating discipline, but does not represent Amyris's target EBITDA for any future period. The LDCC included the Stock Price Milestone to drive sustained, long-term stockholder returns, and to further align Mr. Melo's compensation opportunity to long-term stockholder interests. In establishing the EBITDA Milestone and Stock Price Milestone, the LDCC carefully considered a variety of factors, including Amyris' growth trajectory and internal growth plans. The LDCC also reviewed special CEO equity awards approved by other public companies as a reference point for setting the magnitude and terms of the CEO Performance Option and CEO RSU.

Term. The term of the CEO Performance Option is ten years from the date of the grant, unless Mr. Melo's employment with Amyris is terminated prior to such date. Accordingly, Mr. Melo will have ten years from the date of grant to exercise any portion of the CEO Performance Option that has vested on or prior to such date, provided that he remains employed at Amyris.

Post-Exercise Holding Period. Mr. Melo must hold at least fifty percent (50%) of the shares he acquires upon exercise of the CEO Performance Option (net of any shares sold to pay the exercise price and any tax withholding obligations with respect to the CEO Performance Option) for two years post-exercise.

The LDCC selected a two-year holding period in order to further align Mr. Melo's interests with Amyris stockholders' interests for two years following the exercise of any portion of the CEO Performance Option. Such alignment ensures that Mr. Melo will be focused on sustaining Amyris' success both before and after he exercises his CEO Performance Option.

Employment Requirement for Continued Vesting. Mr. Melo must continue to be employed as Amyris' CEO upon each vesting date in order for the corresponding Tranche to vest under the CEO Performance Option. If Mr. Melo is still employed at Amyris in a role other than CEO, he will no longer be able to vest under the CEO Performance Option but can continue to hold any unexercised, vested portion of the CEO Performance Option for the full term of the CEO Performance Option.

Termination of Employment. Except in the context of a change of control of Amyris, there will be no acceleration of vesting of the CEO Performance Option if the employment of Mr. Melo is terminated, or if he dies or becomes disabled. In other words, termination of Mr. Melo's employment with Amyris will preclude his ability to earn any then-unvested portion of the CEO Performance Option following the date of his termination.

Change of Control of Amyris. If Amyris experiences a change of control, such as a merger with or purchase by another company, vesting under the CEO Performance Option will not automatically accelerate.

In the event of a change of control, the performance under the CEO Performance Option will be determined as of the change of control. For this change of control determination, the EBITDA Milestone will be disregarded and a Stock Price Milestone relating to any Tranche that has not yet vested shall be achieved if the per share price (plus the per share value of any other consideration) received by the Company's stockholders in the change of control equals or exceeds the applicable Stock Price Milestone. To the extent a Stock Price Milestone for a Tranche is achieved upon a change of control, the shares specified for such Tranche will be subject to time-based vesting (the "COC Time-Based Options"), and such COC Time-Based Options vest upon the later of the date of the change of control and the Earliest Vesting Date applicable to such Tranche, subject to Mr. Melo remaining the CEO on each such vesting date. To the extent a Stock Price Milestone for a Tranche is not achieved as a result of the change of control, such Tranche will be forfeited automatically as of the immediately prior to closing of the change of control and never shall become vested. Notwithstanding the foregoing, if Mr. Melo is terminated without cause or resigns for good reason in connection with the change of control, any then unvested COC Time-Based Options will accelerate, subject to Mr. Melo's satisfaction of certain terms and conditions, including, but not limited to delivery of a release of claims, pursuant to the terms of Amyris's Executive Severance Plan, adopted on November 6, 2013 (the "Severance Plan").

In addition, if the successor or acquiring corporation (if any) of Amyris refuses to assume, convert, replace or substitute the CEO Performance Option in connection with a change of control, 100% of Mr. Melo's COC Time-Based Options shall accelerate and become vested effective immediately prior to the change of control.

The treatment of the CEO Performance Option upon a change of control is intended to align Mr. Melo's interests with Amyris's other stockholders with respect to evaluating potential change of control offers.

Exercise Methods. Mr. Melo may exercise any vested shares under the CEO Performance Option in these ways: (i) cash; (ii) check or (iii) a "broker-assisted" or "same-day sale." A "broker-assisted" or "same-day sale" occurs when the stock option is exercised and the shares are simultaneously sold to pay for the exercise price and any required tax withholding.

Clawback. In the event of a restatement of Amyris's financial statements previously filed with the SEC as a result of material noncompliance with financial reporting requirements ("restated financial results"), Amyris will require forfeiture (or repayment, as applicable) of the portion of the CEO Performance Option in excess of what would have been earned or paid based on the restated financial results.

Material Terms of the Proposed CEO RSU

The principal terms of the CEO RSU are summarized below.

CEO RSU Value. The total number of shares of Amyris common stock underlying the CEO RSU will be 700,000. The total number of shares underlying the CEO RSU is equivalent to 1.4% of the total number of shares of Amyris' common stock outstanding as of March 31, 2018 (assuming for this purpose that all share underlying the CEO Equity Awards have been issued).

Equity Type. The CEO RSU is a time-based restricted stock unit award that will be granted under our 2010 Equity Incentive Plan and our form of restricted stock unit agreement. The CEO RSU will be settled in shares of our common stock upon vesting.

Date of Grant. If Proposal 5 and Proposal 3 are approved by our stockholders, the CEO RSU will be automatically granted on the first business day of the week following the week in which such Proposals are approved by our stockholders.

Vesting. The CEO RSU will vest in four equal annual installments on July 1st of each of 2019, 2020, 2021 and 2022, subject to Mr. Melo' s continued service on each vesting date. This four-year vesting schedule is longer than our typical three-year vesting schedule for restricted stock units granted to our executive officers, and is intended to further align Mr. Melo's compensation opportunity to long-term stockholder interests and to promote retention and continuity in our business.

Termination of Employment. Except in the context of a change of control of Amyris, there will be no acceleration of vesting of the CEO RSU if the employment of Mr. Melo is terminated, or if he dies or becomes disabled. In other words, termination of Mr. Melo's employment with Amyris will preclude his ability to earn any then-unvested portion of the CEO RSU following the date of his termination.

Change of Control of Amyris. If Amyris experiences a change of control, such as a merger with or purchase by another company, vesting under the CEO RSU will not automatically accelerate. Notwithstanding the foregoing, if Mr. Melo is terminated without cause or resigns for good reason in connection with the change of control, any then-unvested portion of the CEO RSU will accelerate, subject to Mr. Melo's satisfaction of certain terms and conditions, including, but not limited to delivery of a release of claims, pursuant to the terms of the Severance Plan.

In addition, if the successor or acquiring corporation (if any) of Amyris refuses to assume, convert, replace or substitute the CEO RSU in connection with a change of control, 100% of Mr. Melo's CEO RSU shall accelerate and become vested effective immediately prior to the change of control.

The treatment of the CEO Performance Option upon a change of control is intended to align Mr. Melo's interests with Amyris' other stockholders with respect to evaluating potential change of control offers.

Accounting and Tax Considerations of Proposed CEO Equity Awards

Accounting Consequences. We follow FASB Accounting Standards Codification Topic 718, Compensation-Stock Compensation ("ASC Topic 718") for our stock-based compensation awards, as discussed in more detail in Note 12, "Stock-based Compensation" of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017. ASC Topic 718 requires companies to measure the compensation expense for all stock-based compensation awards made to employees and directors based on the grant date "fair value" of these awards. Pursuant to ASC Topic 718, this calculation cannot be made for the CEO Performance Option or the CEO RSU prior to the date on which they are granted following approval by our stockholders, if such approval occurs. ASC Topic 718 also requires companies to recognize the compensation cost of their stock-based compensation awards in their income statements over the period that an executive officer is required to render service in exchange for an option or other award. Accordingly, the CEO Performance Option and CEO RSU would result in the recognition of stock-based compensation expense over the term of the award as the tranches thereof become probable of vesting as determined pursuant to ASC Topic 718.

Federal Income Tax Consequences. The following discussion is a brief summary of the principal United States federal income tax consequences of the CEO Performance Option and CEO RSU under the U.S. Internal Revenue Code (the "Code") as in effect on the date of this proxy statement. The following summary assumes that Mr. Melo remains a U.S. taxpayer. The Code and its regulations are subject to change. This summary is not intended to be exhaustive and does not describe, among other things, state, local or non-U.S. income and other tax consequences. The specific tax consequences to Mr. Melo will depend upon his future individual circumstances.

Tax Effect for Mr. Melo. Mr. Melo will not have taxable income upon the grant of the CEO Performance Option or the CEO RSU, or upon stockholder approval of the awards, if such approval occurs. If and when Mr. Melo exercises any portion of the CEO Performance Option, he will recognize ordinary income in an amount equal to the excess of the fair market value (on the exercise date) of the Amyris shares purchased over the exercise price of the option. If and when Mr. Melo vests and is settled in any portion of the CEO RSU, he will recognize ordinary income in an amount equal to the fair market value (on the settlement date) of the Amyris shares issued upon settlement of the CEO RSU. Any taxable income recognized in connection with the exercise of the CEO Performance Option or settlement of the CEO RSU by Mr. Melo will be subject to tax withholding by us. Any additional gain or loss recognized upon any later disposition of the shares will be capital gain or loss.

Tax Effect for Amyris. We will not be entitled to a material tax deduction in connection with the CEO Performance Option and the CEO RSU. In most cases, companies are entitled to a tax deduction in an amount equal to the ordinary income realized by a participant when the participant exercises a nonqualified stock option or vests and settles in a restricted stock unit, and recognizes such income. However, Section 162(m) of the Code limits the deductibility of compensation paid to our Chief Executive Officer and other “covered employees” as defined in Section 162(m) of the Code. No tax deduction is allowed for compensation paid to any covered employee to the extent that the total compensation for that executive exceeds $1,000,000 in any taxable year. Under Section 162(m) of the Code, as most recently amended in December 2017, we expect that Mr. Melo always will be a covered employee for purposes of Section 162(m) of the Code. Therefore, in any given year in which Mr. Melo exercises all or part of the CEO Performance Option, or vests and is settled in any portion of the CEO RSU, we will be able to take a tax deduction of only $1,000,000 or less, regardless of the amount of compensation recognized by Mr. Melo from the exercise of the CEO Performance Option or settlement of the CEO RSU.

Proposal 6 —
Approval of Certain Anti-Dilution Provisions in, and the Issuance of Shares of our Common Stock upon the Exercise of, Warrants Issued in Securities Offerings Completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d)

General

We are asking stockholders to approve certain anti-dilution provisions in, and the issuance of shares of our common stock upon the exercise of, warrants issued in securities offerings completed in August 2017, in accordance with NASDAQ Marketplace Rules 5635(c) and (d), as described in more detail below.

DSM Financing Transaction

DSM Purchase Agreement

On August 2, 2017, the company entered into a Securities Purchase Agreement (the "DSM Purchase Agreement") with DSM International B.V., a subsidiary of Koninklijke DSM N.V. (together with its affiliates, "DSM") for the issuance and sale of 25,000 shares of the company's Series B 17.38% Convertible Preferred Stock, par value $0.0001 per share (the "Series B Preferred Stock"), which Series B Preferred Stock is convertible into the company's common stock as described below, at a price of $1,000 per share of Series B Preferred Stock, and a DSM Cash Warrant (as defined below) to purchase 3,968,116 shares of common stock and a DSM Dilution Warrant (as defined below) (collectively, the "DSM Warrants" and the shares of common stock issuable upon exercise of the DSM Warrants, the "DSM Warrant Shares") in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act") and Regulation D promulgated under the Securities Act (the "DSM Offering").

The DSM Purchase Agreement included customary representations, warranties and covenants of the parties. In addition, pursuant to the DSM Purchase Agreement, the company, subject to certain exceptions, agreed not to (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or securities convertible into or exercisable or exchangeable for common stock until October 31, 2017, (ii) enter into an agreement to effect any issuance by the Company involving a Variable Rate Transaction (as defined in the DSM Purchase Agreement) until May 11, 2018 and (iii) issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock at a price below the Dilution Floor (as defined below) without DSM's consent.

On August 7, 2017, the company and DSM closed the DSM Offering (the "DSM Closing"), resulting in net proceeds to the company of approximately $24.8 million after payment of offering expenses.

Series B Preferred Stock

Each share of Series B Preferred Stock has a stated value of $1,000 and is convertible at any time, at the option of DSM, into common stock (such shares, the "Series B Conversion Shares") at a conversion price of $17.25 per share (the "Series B Conversion Rate"). The Series B Conversion Rate is subject to adjustment in the event of any dividends or distributions of the Common Stock, or any stock split, reverse stock split, recapitalization, reorganization or similar transaction. If not previously converted at the option of DSM, each share of Series B Preferred Stock would be automatically converted, without any further action by DSM, on October 9, 2017.

Dividends, at a rate per year equal to 17.38% of the stated value of the Series B Preferred Stock, are payable semi-annually from the issuance of the Series B Preferred Stock until the tenth anniversary of the date of issuance, on each October 15 and April 15, beginning October 15, 2017, on a cumulative basis, at the company's option, in cash, out of any funds legally available for the payment of dividends, or, subject to the satisfaction of certain conditions, in common stock at the Series B Conversion Rate, or a combination thereof. In addition, upon the conversion of the Series B Preferred Stock prior to the tenth anniversary of the date of issuance, DSM shall be entitled to a payment equal to $1,738 per $1,000 of stated value of the Series B Preferred Stock, less the amount of all prior semi-annual dividends paid on such converted Series B Preferred Stock prior to the relevant conversion date (the "Make-Whole Payment"), at the company's option, in cash, out of any funds legally available for the payment of dividends, or, subject to the satisfaction of certain conditions, in common stock at the Series B Conversion Rate, or a combination thereof. If the company elects to pay any dividend in the form of cash, it shall provide DSM with notice of such election not later than the first day of the month of prior to the applicable dividend payment date.

Unless and until converted into common stock in accordance with its terms, the Series B Preferred Stock has no voting rights, other than as required by law or with respect to matters specifically affecting the Series B Preferred Stock.

In the event of a Fundamental Transaction (as defined in the Certificate of Designation of Preferences, Rights and Limitations relating to the Series B Preferred Stock) DSM will have the right to receive the consideration receivable as a result of such Fundamental Transaction by a holder of the number of shares of common stock for which the Series B Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to whether such Series B Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock.

Upon any liquidation, dissolution or winding-up of the company, DSM shall be entitled to receive out of the assets of the company the same amount that a holder of common stock would receive if the Series B Preferred Stock were fully converted to common stock immediately prior to such liquidation, dissolution or winding-up (without regard to whether such Series B Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock.

On August 8, 2017, DSM elected to convert in full the 25,000 shares of Series B Preferred Stock it acquired pursuant to the DSM Purchase Agreement, and the company issued 3,968,116 shares of common stock to DSM upon such conversion, including payment of the Make-Whole Payment in common stock.

DSM Warrants

Pursuant to the DSM Purchase Agreement, at the DSM Closing the company issued to DSM a warrant, with an exercise price of $6.30 per share, to purchase 3,968,116 shares of common stock (the "DSM Cash Warrant"). The exercise price of the DSM Cash Warrant will be subject to standard adjustments as well as full-ratchet anti-dilution protection for any issuance by the company of equity or equity-linked securities during the three-year period following the DSM Closing (the "DSM Dilution Period") at a per share price (including any conversion or exercise price, if applicable) less than the then-current exercise price of the DSM Cash Warrant, subject to certain exceptions.

In addition, at the DSM Closing the Company issued to DSM a warrant, with an exercise price of $0.0001 per share (the "DSM Dilution Warrant"), to purchase a number of shares of common stock sufficient to provide DSM with full-ratchet anti-dilution protection for any issuance by the company of equity or equity-linked securities during the DSM Dilution Period at a per share price (including any conversion or exercise price, if applicable) less than $6.30 per share, the effective per share price paid by DSM for the shares of common stock issuable upon conversion of the Series B Preferred Stock purchased by DSM in the DSM Offering (including shares of common stock issuable as payment of dividends or the Make-Whole Payment, assuming that all such dividends and the Make-Whole Payment are made in common stock), subject to certain exceptions and subject to a price floor of $0.10 per share (the "Dilution Floor").

The effectiveness of the anti-dilution adjustment provision of the DSM Cash Warrant and the exercise of the DSM Dilution Warrant is subject to the Stockholder Approval (as defined below), which is being sought at the annual meeting. The DSM Warrants will each have a term of five years from the date the DSM Warrants are initially exercisable. As of March 31, 2018, assuming stockholder approval of the exercise thereof, the DSM Dilution Warrant was not exercisable for any shares of common stock.

Registration Rights

Pursuant to the DSM Purchase Agreement, the company agreed to file a registration statement on Form S-3 (or other appropriate form if the Company is not then S-3 eligible) providing for the resale by DSM of the Series B Conversion Shares and DSM Warrant Shares and to use commercially reasonable efforts to cause such registration statement to become effective within 181 days following the DSM Closing and to keep such registration statement effective at all times until (i) DSM does not own any Series B

Conversion Shares or DSM Warrant Shares or (ii) the Series B Conversion Shares and DSM Warrant Shares are eligible for resale under Rule 144 without regard to volume limitations. On November 3, 2017, the company filed a registration statement on Form S-3 covering the resale of the Series B Conversion Shares and DSM Warrant Shares, and it was declared effective by the SEC on December 1, 2017.

Amended and Restated Stockholder Agreement

On May 11, 2017, the company and DSM entered into a Stockholder Agreement (the "DSM Stockholder Agreement") setting forth certain rights and obligations of DSM and the company in connection with DSM's May 2017 investment in the Company, including board designation rights, registration rights, transfer restrictions, standstill restrictions, pre-emptive rights and certain commercial rights. On August 7, 2017, in connection with the DSM Closing, the company and DSM entered into an amendment to the DSM Stockholder Agreement (as amended, the "Amended and Restated Stockholder Agreement") providing, among other things, that DSM will have the right to designate two directors selected by DSM (the "DSM Directors"), subject to certain restrictions, to the company's Board of Directors (the "Board"). The company agreed to appoint the DSM Directors and to use reasonable efforts, consistent with the Board's fiduciary duties, to cause the DSM Directors to be re-nominated in the future; provided, that (i) DSM will only have the right to designate one DSM Director at such time as DSM beneficially owns less than 10% of the company's outstanding voting securities and (ii) DSM will no longer have the right to designate any DSM Director at such time as DSM beneficially owns less than 4.5% of the company's outstanding voting securities. In addition, on August 7, 2017, certain of the licenses granted by the company to DSM with respect to certain company intellectual property useful in DSM's business in connection with the entry into the DSM Stockholder Agreement (the "License Agreements") became effective. The Amended and Restated Stockholder Agreement also provided that the Series B Conversion Shares and DSM Warrant Shares will be entitled to the registration rights provided for the in DSM Stockholder Agreement.

Following the DSM Closing, the parties agreed to negotiate in good faith regarding an agreement concerning the development of certain products in the health and nutrition field and, in the event that the parties did not reach such agreement prior to 90 days after the DSM Closing, (a) certain exclusive negotiating rights granted to DSM in connection with the entry into the DSM Stockholder Agreement would expire and (b) on the first anniversary of the DSM Closing and each subsequent anniversary thereof, the Company would make a $5 million cash payment to DSM, provided that the aggregate amount of such payments would not exceed $25 million. In September 2017, the company and DSM entered into such agreement, and in connection therewith an intellectual property escrow agreement relating to the License Agreements became effective.

Vivo Financing Transaction

Vivo Purchase Agreement

On August 2, 2017, the company entered into a Securities Purchase Agreement (the "Vivo Purchase Agreement" and, together with the DSM Purchase Agreement, the "Purchase Agreements") with affiliates of Vivo Capital LLC (together with its affiliates, "Vivo") for the issuance and sale of an aggregate of 2,826,711 shares of common stock at a price of $4.26 per share, an aggregate of 12,958.21196 shares of the company's Series D Convertible Preferred Stock, par value $0.0001 per share (the "Series D Preferred Stock"), which Series D Preferred Stock is convertible into common stock as described below, at a price of $1,000 per share of Series D Preferred Stock, and Vivo Cash Warrants (as defined below) to purchase an aggregate of 5,575,118 shares of Common Stock and Vivo Dilution Warrants (as defined below) (collectively, the "Vivo Warrants" and the shares of common stock issuable upon exercise of the Vivo Warrants, the "Vivo Warrant Shares") in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act (the "Vivo Offering" and, together with the DSM Offering, the "Offerings").

The Vivo Purchase Agreement includes customary representations, warranties and covenants of the parties. In addition, pursuant to the Vivo Purchase Agreement, the Company, subject to certain exceptions, may not issue any shares of common stock or securities convertible into or exercisable or exchangeable for Common Stock at a price below the Dilution Floor without Vivo's consent.

On August 3, 2017, the company and Vivo closed the Vivo Offering (the "Vivo Closing"), resulting in net proceeds to the company of approximately $24.8 million after payment of offering expenses.

Series D Preferred Stock

Each share of Series D Preferred Stock has a stated value of $1,000 and, subject to the Beneficial Ownership Limitation (as defined below), is convertible at any time, at the option of Vivo, into common stock (such shares, the "Series D Conversion Shares") at a conversion price of $4.26 per share (the "Series D Conversion Rate"). The Series D Conversion Rate is subject to adjustment in the event of any dividends or distributions of the common stock, or any stock split, reverse stock split, recapitalization, reorganization or similar transaction.

Prior to declaring any dividend or other distribution of its assets to holders of Common Stock, the company shall first declare a dividend per share on the Series D Preferred Stock equal to $0.0001 per share. In addition, the Series D Preferred Stock will be entitled to participate with the common stock on an as-converted basis with respect to any dividends or other distributions to holders of common stock.

Unless and until converted into common stock in accordance with its terms, the Series D Preferred Stock has no voting rights, other than as required by law or with respect to matters specifically affecting the Series D Preferred Stock.

In the event of a Fundamental Transaction (as defined in the Certificate of Designation of Preferences, Rights and Limitations relating to the Series D Preferred Stock) the holders of the Series D Preferred Stock will have the right to receive the consideration receivable as a result of such Fundamental Transaction by a holder of the number of shares of common stock for which the Series D Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to whether such Series D Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock.

Upon any liquidation, dissolution or winding-up of the company, the holders of the Series D Preferred Stock shall be entitled to receive out of the assets of the company the same amount that a holder of common stock would receive if the Series D Preferred Stock were fully converted to common stock immediately prior to such liquidation, dissolution or winding-up (without regard to whether such Series D Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock.

Notwithstanding the foregoing, the holders will not have the right to convert any Series D Preferred Stock, and the company shall not effect any conversion of the Series D Preferred Stock, if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of such Series D Preferred Stock (the "Beneficial Ownership Limitation"). The holders may waive the Beneficial Ownership Limitation upon notice to the company, provided that such waiver (i) will not be effective until the 61st day after such notice is delivered to the company, (ii) shall only apply to such holder and no other holder and (iii) will not be effective to the extent such waiver would require the prior approval of the company's stockholders, unless such approval has been obtained.

Vivo Warrants

Pursuant to the Vivo Purchase Agreement, at the Vivo Closing the company issued to Vivo warrants, each with an exercise price of $6.39 per share, to purchase an aggregate of 5,575,118 shares of common stock (the "Vivo Cash Warrants" and, together with the DSM Cash Warrants, the "Cash Warrants"). The exercise price of the Vivo Cash Warrants will be subject to standard adjustments as well as full-ratchet anti-dilution protection for any issuance by the company of equity or equity-linked securities during the three-year period following the Vivo Closing (the "Vivo Dilution Period") at a per share price (including any conversion or exercise price, if applicable) less than the then-current exercise price of the Vivo Cash Warrants, subject to certain exceptions.

In addition, at the Vivo Closing the company issued to Vivo warrants, with an exercise price of $0.0001 per share (the "Vivo Dilution Warrants" and, together with the DSM Dilution Warrants, the "Dilution Warrants"), to purchase a number of shares of common stock sufficient to provide Vivo with full-ratchet anti-dilution protection for any issuance by the company of equity or equity-linked securities during the Vivo Dilution Period at a per share price (including any conversion or exercise price, if applicable) less than $4.26 per share, subject to certain exceptions and subject to the Dilution Floor.

The effectiveness of the anti-dilution adjustment provisions of the Vivo Cash Warrants and the exercise of the Vivo Dilution Warrants is subject to the Stockholder Approval, which is being sought at the annual meeting. The Vivo Warrants will each have a term of five years from the date the Vivo Warrants are initially exercisable. In addition, the exercise of the Vivo Warrants will be subject to the Beneficial Ownership Limitation. As of March 31, 2018, assuming stockholder approval of the exercise thereof and the inapplicability of the Beneficial Ownership Limitation, the Vivo Dilution Warrants were not exercisable for any shares of common stock.

Vivo Stockholder Agreement

On August 3, 2017, in connection with the Vivo Closing, the company and Vivo entered into a Stockholder Agreement (the "Vivo Stockholder Agreement") that sets forth certain rights and obligations of Vivo and the company in connection with Vivo's investment in the company. Pursuant to the Vivo Stockholder Agreement, Vivo will have the right to designate one director selected by Vivo (the "Vivo Director"), subject to certain restrictions, to the Board. The company agreed to appoint the Vivo Director and to use reasonable efforts, consistent with the Board's fiduciary duties, to cause the Vivo Director to be re-nominated in the future; provided, that Vivo will no longer have the right to designate any Vivo Director at such time as Vivo beneficially owns less than 4.5% of the company's outstanding voting securities. In addition, for so long as Vivo beneficially owns at least 4.5% of the company's outstanding voting securities, a representative of Vivo shall be entitled to attend all Board meetings in a nonvoting observer capacity and to receive copies of all materials that the company provides to its directors, at the same time and in the same manner, subject to certain exceptions. Furthermore, Vivo will have the right to purchase additional shares of capital stock of the company in connection with a sale of equity or equity-linked securities by the company in a capital raising transaction for cash, subject to certain exceptions, to maintain its proportionate ownership percentage in the company ("Pre-Emptive Rights").

Pursuant to the Vivo Stockholder Agreement, Vivo will agree not to sell or transfer any of the shares of common stock, Series D Preferred Stock or warrants purchased by Vivo in the Vivo Offering, or any shares of common stock issuable upon conversion or exercise thereof (the "Transfer Restricted Shares"), other than to its affiliates, without the consent of the company during the one-year period following the Vivo Closing. Thereafter, Vivo will have the right to sell or transfer the Transfer Restricted Shares to any third party, other than a competitor of the company or any controlled affiliate of a competitor of the company; provided, that the company will have a limited right of first offer with respect to any such sale or transfer other than to affiliates of Vivo. In addition, Vivo will agree that, other than in connection with the purchase, conversion or exercise of (i) the Series D Preferred Stock or warrants purchased by Vivo pursuant to the Vivo Purchase Agreement or (ii) the exercise of Pre-Emptive Rights, until the later of (i) three years from the Vivo Closing and (ii) three months after there is no Vivo Director on the Board, Vivo will not, without the prior consent of the Board, among other things, purchase any common stock, any options or other rights to acquire common stock or any indebtedness of the company, or make any public offer to acquire Common Stock, options or other rights to acquire common stock or indebtedness of the company, that would result in Vivo and its affiliates beneficially owning more than 33% of the company's outstanding voting securities at the time of acquisition (assuming the exercise or conversion, whether then exercisable or convertible, of any shares of Series D Preferred Stock or warrants beneficially owned by Vivo and/or its affiliates), join in any solicitation of proxies for any matter not previously approved by the Board, or join any "group" (as such term is defined in Section 13(d)(3) of the Securities Exchange Act of 1934) with respect to any of the foregoing.

In addition, the company agreed to register, via one or more registration statements (each, a "Registration Statement") filed with the SEC under the Securities Act, the shares of common stock purchased in the Vivo Offering, as well as the Series D Conversion Shares and Vivo Warrant Shares. Under the terms of the Vivo Stockholder Agreement, the company was required to use its reasonable efforts to prepare and file such Registration Statement as soon as practicable and no later than November 7, 2017, and to use its reasonable best efforts to cause the Registration Statement to be declared effective by the SEC as soon as practicable and no later than December 22, 2017. In addition, Vivo may request that up to three of such registrations provide for an underwritten offering of such shares. In addition, if the company registers any of its securities for public sale under the Securities Act, Vivo will have the right to include their shares in the registration statement, subject to certain exceptions. The managing underwriter of any underwritten offering will have the right to limit, due to marketing reasons, the number of shares registered by Vivo to 25% of the total shares covered by the Registration Statement. The company will agree to pay all expenses incurred in connection with the exercise of such demand and piggyback registration rights, except for legal costs of Vivo, stock transfer taxes and underwriting discounts and commissions. On November 3, 2017, the company filed a Registration Statement covering the resale of the shares of common stock purchased in the Vivo Offering, the Series D Conversion Shares and Vivo Warrant Shares, and such Registration Statement was declared effective by the SEC on December 1, 2017.

Stockholder Approval

Pursuant to the Purchase Agreements, the company agreed to solicit from the company's stockholders such approval as may be required by the applicable rules and regulations of the NASDAQ Stock Market with respect to the anti-dilution provisions of the Cash Warrants and the issuance of shares of common stock upon exercise of the Dilution Warrants (the "Stockholder Approval") at an annual or special meeting of stockholders to be held on or prior to the date of the company's 2018 annual meeting of stockholders (the "Stockholder Meeting"), and to use commercially reasonable efforts to secure the Stockholder Approval. The company is seeking the Stockholder Approval at the annual meeting. Pursuant to the Purchase Agreements, if the Company does not obtain the Stockholder Approval at the annual meeting, the company will call a stockholder meeting every four months thereafter to seek the Stockholder Approval until the earlier of the date Stockholder Approval is obtained or the DSM Warrants and the Vivo Warrants are no longer outstanding. In addition, pursuant to the Purchase Agreements, until the Stockholder Approval has been obtained and deemed effective, the company may not issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock if such issuance would have triggered the anti-dilution adjustment provisions in the DSM Warrants or the Vivo Warrants (if the Stockholder Approval had been obtained prior to such issuance) without the prior written consent of DSM and Vivo, respectively.

Vote Required and Board Recommendation

Proposal 6 must receive a "For" vote from the holders of a majority of the shares of Common Stock properly casting votes in person or by proxy on Proposal 6 at the annual meeting. Abstentions will be counted toward the vote total for this proposal and will have the same effect as an "Against" vote for this proposal. Shares represented by executed proxies that do not indicate a vote "For," "Against" or "Abstain" will be voted by the proxy holders "For" Proposal 6. If you own shares through a bank, broker or other Intermediary, you must instruct your bank, broker or other Intermediary how to vote in order for them to vote your shares so that your vote can be counted on this proposal. Broker non-votes will not be counted toward the vote total for this proposal and therefore will not affect the outcome of this proposal.

The Board recommends a vote "FOR" this Proposal 6.

The Board determined that Proposal 6 is advisable and in the best interest of our stockholders and recommends that our stockholders vote in favor of Proposal 6.

In reaching its determination to approve Proposal 6, the Board, with advice from our management and legal advisors, considered a number of factors, including:

- the fact that the proceeds from the Offerings and the relationships with DSM and Vivo will enable us to advance our strategic direction;
- the Dilution Warrants and the anti-dilution provisions in the Cash Warrants were offered as an inducement for DSM and Vivo to participate in the Offerings, and it was the determination of the Board that the proceeds from the Offerings were important to strengthen our balance sheet;
- our financial condition, results of operations, cash flow and liquidity, including our outstanding debt obligations, which required us to raise additional capital for ongoing cash needs;

- the fact that our management explored financing options with other potential investors and were not aware of an ability for us to obtain the financing needed for our ongoing cash needs on comparable or better terms to the Offerings, or at all;
- the fact that our stockholders would have an opportunity to approve the anti-dilution provisions in the Cash Warrants and the exercisability of the Dilution Warrants;
- the fact that DSM, which designated and is affiliated with director Philip Eykerman, who was serving on the Board at the time the company entered into the DSM Purchase Agreement, and director Christoph Goppelsroeder, who was appointed to the Board in November 2017, and Vivo, which designated and is affiliated with director Dr. Frank Kung, who was appointed to the Board in November 2017, were investors in the Offerings;
- the fact that our stockholders who did not participate in the Offerings may be diluted and the value of the common stock may be diluted upon the effectiveness of the anti-dilution provisions in the Cash Warrants and the exercisability of the Dilution Warrants;
- the fact that each of DSM and Vivo received certain rights in connection with its investment in the Offerings, including the right to designate a member of our Board of Directors; and
- the fees and expenses to be incurred by us in connection with the Offerings.

In view of the variety of factors considered in connection with the evaluation of the offering of the Dilution Warrants and the anti-dilution provisions in the Cash Warrants in the Offerings and the complexity of these matters, the Board did not find it practicable to, and did not, quantify or otherwise attempt to assign any relative weight to the various factors considered. In addition, in considering the various factors, individual members of the Board may have assigned different weights to different factors.

After evaluating these factors for and against the offering of the Dilution Warrants and the anti-dilution adjustment provisions in the Cash Warrants in the Offerings, and based upon their knowledge of our business, financial condition and prospects, potential financing alternatives (or lack thereof), and the views of our management, the Board concluded that offering of the Dilution Warrants and the anti-dilution adjustment provisions in the Cash Warrants in the Offerings is in our best interest and in the best interests of our stockholders, and recommends that all stockholders vote “FOR” the approval of Proposal 6.

Purpose of Proposal 6 — NASDAQ Stockholder Approval Requirement

NASDAQ Marketplace Rule 5635(c) requires stockholder approval of security issuances at below fair market value made to officers, directors, employees or consultants, or affiliated entities of any such persons. Proposal 6 will result in the effectiveness of anti-dilution provisions in the Cash Warrants, and the exercisability of the Dilution Warrants, sold in the Offerings to DSM, which designated and is affiliated with director Philip Eykerman, who was serving on the Board at the time the company entered into the DSM Purchase Agreement, and director Christoph Goppelsroeder, who was appointed to the Board in November 2017, and Vivo, which designated and is affiliated with director Dr. Frank Kung, who was appointed to the Board in November 2017, at a price which may be deemed to be below the fair market value of the our common stock at the time the company entered into the Purchase Agreements, based on a closing market price of our common stock on August 2, 2017 of $3.93 per share. By approving Proposal 6, you are approving the proposal for purposes of the requirements under NASDAQ Marketplace Rules 5635(c), which may result in the issuance of securities at below fair market value to DSM and Vivo, each of which designated and is affiliated with members of our Board.

NASDAQ Marketplace Rule 5635(d) requires stockholder approval in connection with a transaction other than a public offering involving the sale or issuance by the issuer of common stock (or securities convertible into or exchangeable for common stock) equal to 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance for a price that is less than the greater of book or market value of the common stock on the date the company enters into a binding agreement for the issuance of such securities. Based on a closing market price of our common stock on August 2, 2017 of $3.93 per share, the Offerings, after giving effect to the anti-dilution provisions in the Cash Warrants and the exercise of the Dilution Warrants, may be deemed to involve the issuance of securities convertible into more than 20% of our common stock at a discount to the market value of our common stock on the date of execution of the binding agreement to issue such securities. By approving Proposal 6, you are approving the proposal for purposes of the requirements under NASDAQ Marketplace Rule 5635(d), which may result in the issuance by the company of common stock (or securities convertible into or exchangeable for common stock) equal to 20% or more of our common stock or 20% or more of the voting power outstanding before such issuance at a price that is less than the greater of book or market value of our common stock on the date the company entered into the Purchase Agreements.

We are requesting in this Proposal 6 that our stockholders approve the effectiveness of the anti-dilution adjustment provisions in the Cash Warrants, and the issuance of common stock upon exercise of the Dilution Warrants, issued to DSM and Vivo in the Offerings in accordance with NASDAQ Marketplace Rules 5635(c) and (d).

Potential Adverse Effects — Dilution and Impact of the Offering on Existing Stockholders

The exercise of the Dilution Warrants would have a dilutive effect on current stockholders who did not participate in the Offerings in that the percentage ownership of the company held by such current stockholders would decline as a result of the issuance of the common stock issuable upon exercise of the Dilution Warrants. This means also that our current stockholders who did not participate in the Offerings would own a smaller interest in us as a result of the exercise of the Dilution Warrants and therefore have less ability to influence significant corporate decisions requiring stockholder approval. In addition, the issuance of the common stock issuable upon exercise of the Dilution Warrants would have, and the issuance of the common stock issuable upon exercise of the Cash Warrants, after giving effect to the anti-dilution provisions in the Cash Warrants, could have, a dilutive effect on book value per share and any future earnings per share. Dilution of equity interests could also cause prevailing market prices for our common stock to decline.

Because of potential adjustments to the exercise price of the Cash Warrants and the number of shares issuable upon exercise of the Dilution Warrants, as discussed above, the exact magnitude of the dilutive effect resulting from the effectiveness of the anti-dilution provisions in the Cash Warrants and the exercise of the Dilution Warrants cannot be conclusively determined. However, the dilutive effect may be material to current stockholders of the company.

Interests of Certain Persons

When you consider the Board's recommendation to vote in favor of Proposal 6, you should be aware that our directors and executive officers and certain of our stockholders may have interests that may be different from, or in addition to, the interests of other of our stockholders. In particular, directors Philip Eykerman and Christoph Goppelsroeder are affiliated with, and were appointed to serve on the Board by, DSM pursuant to its contractual rights with us, and director Dr. Frank Kung is affiliated with, and was appointed to serve on the Board by, Vivo pursuant to its contractual rights with us. The beneficial ownership of DSM and Vivo is outlined below in the Section titled "Security Ownership of Certain Beneficial Owners and Management." Each of DSM and Vivo have purchased Cash Warrants, the anti-dilution adjustment provisions of which will not become effective, and Dilution Warrants that will not become exercisable, if Proposal 6 is not approved. Neither of DSM or Vivo will, by virtue of the Offerings, including the effectiveness of the anti-dilution provisions in the Cash Warrants and the exercisability of the Dilution Warrants issued to such investor, acquire rights to a majority of the voting power of Amyris.

The Offerings were separately approved by the Pricing Committee of the Board, and none of Mr. Eykerman, Mr. Goppelsroeder or Dr. Kung was a member of, nor participated in, any meetings of the Pricing Committee.

Corporate Governance

Corporate Governance Principles

The Board has adopted written Corporate Governance Principles to provide the Board and its committees with operating principles designed to enhance the effectiveness of the Board and its committees, to establish good Board and committee governance, and to establish the responsibilities of management and the Board in supporting the Board's activities. The Corporate Governance Principles set forth a framework for Amyris's governance practices, including composition of the Board, director nominee selection, Board membership criteria, director compensation, Board education, meeting responsibilities, access to information and employees, executive sessions of independent directors, standing Board committees and their functions, and responsibilities of management.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all directors, officers and employees of Amyris as required by NASDAQ governance rules. Our Code of Business Conduct and Ethics includes a section entitled "Code of Ethics for Chief Executive Officer and Senior Financial Officers," providing additional principles for ethical leadership and a requirement that such individuals foster a culture throughout Amyris that helps ensure the fair and timely reporting of our financial results and condition. Our Code of Business Conduct and Ethics is available on the corporate governance section of our website at http://investors.amyris.com/corporate-governance.cfm. Stockholders may also obtain a printed copy of our Code of Business Conduct and Ethics and our Corporate Governance Principles by writing to the Secretary of Amyris at 5885 Hollis Street, Suite 100, Emeryville, California 94608. If we make any substantive amendments to, or grant any waivers from, a provision of our Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, we will promptly disclose the nature of the amendment or waiver on the corporate governance section of our website at http://investors.amyris.com/corporate-governance.cfm.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information with respect to the beneficial ownership of our common stock, as of March 31, 2018, by:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our voting securities;
- each of our directors;
- each of our named executive officers; and
- all of our directors and named executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission (the "SEC") and generally includes any shares over which the individual or entity has sole or shared voting power or investment power. These rules also treat as outstanding all shares of capital stock that a person would receive upon the exercise of any option, warrant or right or through the conversion of a security held by that person that are immediately exercisable or convertible or exercisable or convertible within 60 days of the date as of which beneficial ownership is determined. These shares are deemed to be outstanding and beneficially owned by the person holding those options, warrants or rights or convertible securities for the purpose of computing the number of shares beneficially owned and the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The information does not necessarily indicate beneficial ownership for any other purpose. Except as indicated in the footnotes to the below table and pursuant to applicable community property laws, to our knowledge the persons named in the table below have sole voting and investment power with respect to all shares of common stock attributed to them in the table.

Information with respect to beneficial ownership has been furnished to us by each director and named executive officer and certain stockholders, and derived from publicly-available SEC beneficial ownership reports on Forms 3 and 4 and Schedules 13D and 13G filed by covered beneficial owners of our common stock. Percentage ownership of our common stock in the table is based on 45,845,314 shares of our common stock outstanding on March 31, 2018 (as reflected in the records of our stock transfer agent). Except as otherwise set forth below, the address of the beneficial owner is c/o Amyris, Inc., 5885 Hollis Street, Suite 100, Emeryville, California 94608.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned (#)	Percent of Class (%)
5% Stockholders		
DSM International B.V.(1)	16,621,192	30.9
Total Raffinage Chimie S.A.(2)	8,946,701	17.7
Maxwell (Mauritius) Pte Ltd(3)	5,370,644	11.2
Entities affiliated with Vivo Capital LLC(4)	4,774,534	9.99
Foris Ventures, LLC(5)	4,612,773	9.99
Directors and Named Executive Officers		
John Melo(6)	221,611	*
John Doerr(5)(7)	4,884,155	10.6
Geoffrey Duyk(8)	8,932	*
Philip Eykerman(9)	4,133	*
Christoph Goppelsroeder(10)	—	*
Frank Kung(4)(11)	4,777,034	10.0
Carole Piwnica(12)	8,332	*
Fernando de Castro Reinach(13)	19,692	*
His Highness Sheikh Abdullah bin Khalifa Al Thani(14)	525,754	1.1

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned (#)	Percent of Class (%)
Christophe Vuillez[15]	—	*
R. Neil Williams[16]	7,132	*
Patrick Yang[17]	36,532	*
Kathleen Valiasek[18]	23,446	*
Joel Cherry[19]	113,560	*
Eduardo Alvarez[20]	70,000	*
Nicole Kelsey[21]	21,000	*
Raffi Asadorian[22]	4,999	*
All Directors and Named Executive Officers as a Group (17 Persons)[23]	10,726,312	21.8

* Represents beneficial ownership of less than 1%.

(1) Includes 7,936,232 shares of common stock issuable upon exercise of certain warrants held by DSM International B.V. DSM International B.V. is a wholly owned subsidiary of Koninklijke DSM N.V. ("DSM"). Accordingly, Koninklijke DSM N.V. may be deemed to share beneficial ownership of the securities held of record by DSM International B.V. Koninklijke DSM N.V. is a publicly traded company with securities listed on the Amsterdam Stock Exchange. The address for DSM International B.V. is HET Overloon 1, 6411 TE Heerlen, Netherlands.

(2) Includes (i) 4,526,274 shares of common stock issuable upon conversion of certain convertible promissory notes held by Total Raffinage Chimie S.A. ("Total") and (ii) 141,881 shares of common stock issuable upon exercise of certain warrants held by Total. The address of Total is 2, Place Jean Millier, La Défense 6, 92400 Courbevoie, France.

(3) Includes 178,073 shares of common stock issuable upon conversion of certain convertible promissory notes held by Maxwell (Mauritius) Pte Ltd ("Maxwell") and (ii) 1,889,986 shares of common stock issuable upon exercise of certain warrants held by Maxwell. Maxwell is wholly owned by Cairnhill Investments (Mauritius) Pte Ltd, which is wholly owned by Fullerton Management Pte Ltd, which is wholly owned by Temasek Holdings (Private) Limited. Each of these entities possesses shared voting and investment control over the shares held by Maxwell. The address of these entities is 60B Orchard Road, #06-18 Tower 2, The Atrium@Orchard, Singapore 238891.

(4) Includes (i) 687,593 shares of common stock issuable upon conversion of shares of the company's Series D Convertible Preferred Stock (the "Series D Preferred Stock") held by affiliates of Vivo Capital LLC (together with its affiliates, "Vivo") and (ii) 1,260,230 shares of common stock issuable upon exercise of certain warrants held by Vivo. Vivo holds additional shares of the company's Series D Preferred Stock, which are currently convertible into 2,354,241 shares of common stock, and additional warrants, which are currently exercisable for 4,314,888 shares of common stock, the conversion and exercise, respectively, of which is subject to a beneficial ownership limitation of 9.99% of the number of shares of common stock outstanding. For purposes of this table, the shares beneficially owned by Vivo have been allocated between the number of shares issuable upon the conversion of shares of Series D Preferred Stock and the exercise of warrants based on the respective number of shares issuable upon such conversion or exercise. Director Frank Kung is a founding member of Vivo and a voting member of the general partner of Vivo entities that hold our common stock, Series D Preferred Stock and warrants, and may be deemed to share voting and dispositive power over the shares held by such entities. The address for Vivo Capital LLC is 505 Hamilton Avenue, Suite 207, Palo Alto, California 94301.

(5) Includes (i) 23,072 shares of common stock issuable upon conversion of shares of the company's Series B 17.38% Convertible Preferred Stock (the "Series B Preferred Stock") held by Foris Ventures, LLC ("Foris"), (ii) 89,037 shares of common stock issuable upon conversion of certain convertible promissory notes held by Foris and (iii) 216,484 shares of common stock issuable upon exercise of certain warrants held by Foris. Foris holds additional shares of the company's Series B Preferred Stock,

which are currently convertible into 1,439,306 shares of common stock, and additional warrants, which are currently exercisable for 6,983,603 shares of common stock, the conversion and exercise, respectively, of which is subject to a beneficial ownership limitation of 9.99% of the number of shares of common stock outstanding (the "Beneficial Ownership Limitation"). Pursuant to the Certificate of Designation of Preferences, Rights and Limitations relating to the Series B Preferred Stock (the "Series B Certificate of Designation"), the shares of Series B Preferred Stock held by Foris automatically converted to common stock on October 9, 2017, subject to the Beneficial Ownership Limitation. Such automatic conversion of the Series B Preferred Stock will be held in abeyance to the extent such conversion would cause Foris to beneficially own in excess of the Beneficial Ownership Limitation, until Foris is able to receive such shares without exceeding the Beneficial Ownership Limitation, but all rights under the Series B Certificate of Designation shall cease to apply, other than the right to convert. Foris is indirectly owned by director John Doerr, who shares voting and investment control over the shares held by such entity. The address for Foris Ventures, LLC is 751 Laurel Street #717, San Carlos, California 94070.

(6) Shares beneficially owned by Mr. Melo include (i) 76,332 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) 138,439 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(7) Shares beneficially owned by Mr. Doerr include (i) 4,612,773 shares of common stock beneficially owned by Foris, in which Mr. Doerr indirectly owns all of the membership interests, (ii) 567 shares of common stock held by The Vallejo Ventures Trust U/T/A 2/12/96, of which Mr. Doerr is a trustee, (iii) 278,882 shares of common stock held by entities affiliated with Kleiner Perkins Caufield & Byers of which Mr. Doerr is an affiliate, excluding 16,399 shares over which Mr. Doerr has no voting or investment power, (iv) 1,133 restricted stock units, all of which were unvested as of March 31, 2018, and (v) 5,066 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(8) Shares beneficially owned by Dr. Duyk include 4,666 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(9) Shares beneficially owned by Mr. Eykerman include (i) 3,133 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) 1,000 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018. Mr. Eykerman was appointed to the Board on May 18, 2017 as the designee of DSM. Mr. Eykerman disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by DSM or any of its affiliates.

(10) Mr. Goppelsroeder was appointed to the Board on November 2, 2017 as the designee of DSM. Mr. Goppelsroeder does not beneficially own any shares of Amyris common stock directly and disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by DSM or any of its affiliates.

(11) Shares beneficially owned by Dr. Kung include (i) 4,774,534 shares of common stock beneficially owned by Vivo, over which Dr. Kung may be deemed to share voting and dispositive power, (ii) 2,000 restricted stock units, all of which were unvested as of March 31, 2018 and (iii) 500 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018. Dr. Kung was appointed to the Board on November 2, 2017 as the designee of Vivo. Dr. Kung disclaims beneficial ownership over shares of Amyris common stock that are or may be beneficially owned by Vivo except to the extent of his pecuniary interest therein.

(12) Shares beneficially owned by Ms. Piwnica include (i) 1,133 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) 5,066 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018. Ms. Piwnica is Director of NAXOS UK, a consulting firm advising private equity, and was designated to serve as our director by Naxyris S.A., an investment vehicle owned by Naxos Capital Partners SCA Sicar. NAXOS UK is affiliated with Naxos Capital Partners SCA Sicar. Ms. Piwnica disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by Naxyris S.A.

(13) Shares beneficially owned by Dr. Reinach include (i) 11,360 shares of common stock held by Sualk Capital Ltd, an entity for which Dr. Reinach serves as sole director, (ii) 1,133 restricted stock units, all of which were unvested March 31, 2018, and (iii) 5,066 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(14) Shares beneficially owned by His Highness include (i) 518,022 shares of common stock beneficially owned by Biolding Investment SA, an entity indirectly owned by His Highness, (ii) 1,133 restricted stock units, all of which were unvested as of March 31, 2018, and (iii) 4,666 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(15) Mr. Vuillez was appointed to the Board on November 3, 2016 as the designee of Total. Mr. Vuillez does not beneficially own any shares of Amyris common stock directly and disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by Total or any of its affiliates.

(16) Shares beneficially owned by Mr. Williams include (i) 1,133 restricted stock units, all of which were unvested as of March 31, and (ii) 4,266 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(17) Shares beneficially owned by Dr. Yang include (i) 1,133 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) 11,866 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(18) Shares beneficially owned by Ms. Valiasek include (i) 12,088 restricted stock units, all of which were unvested as of March 31, 2018, and (ii) 8,278 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(19) Shares beneficially owned by Dr. Cherry include (i) 37,715 restricted stock units, all of which were unvested March 31, 2018, and (ii) 52,215 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of March 31, 2018.

(20) Shares beneficially owned by Mr. Alvarez include 70,000 restricted stock units, all of which were unvested as of March 31, 2018.

(21) Shares beneficially owned by Ms. Kelsey include 21,000 restricted stock units, all of which were unvested as of March 31, 2018.

(22) Mr. Asadorian resigned from the company effective January 4, 2017, at which time all of Mr. Asadorian's outstanding equity awards ceased vesting: all of his vested stock options remained exercisable for a period of three months after January 4, 2017, and all of his unvested stock options and restricted stock units were forfeited.

(23) Shares beneficially owned by all of our named executive officers and directors as a group include the shares of common stock described in footnotes 7 through 22 above.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our executive officers and directors, and any person or entity who beneficially owns more than ten percent of a registered class of our common stock or other equity securities, to file with the SEC certain reports of ownership and changes in ownership of our securities. Executive officers, directors and stockholders who beneficially own more than ten percent of our common stock are required by the SEC to furnish us with copies of all Section 16(a) forms they file. Based solely on review of this information and written representations by our executive officers and directors that no other reports were required, we believe that, during 2017, no reporting person failed to file the forms required by Section 16(a) of the Exchange Act on a timely basis, except that director John Doerr filed one Form 4 late with respect to the automatic conversion of shares of our Series C Convertible Preferred Stock held by Foris Ventures, LLC into common stock in June 2017.

Equity Compensation Plan Information

The following table shows certain information concerning our common stock reserved for issuance in connection with our 2005 Stock Option/Stock Issuance Plan, our 2010 Equity Incentive Plan and our 2010 Employee Stock Purchase Plan as of December 31, 2017:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities to be issued upon vesting of outstanding restricted stock units	Number of securities remaining available for future issuance under equity compensation plans(1)(2)(3)
Equity compensation plans approved by security holders	1,334,367	$33.32	685,007	332,701
Equity compensation plans not approved by security holders	4,000(4)	$58.95	—	—
Total	1,338,367	$33.40	685,007	332,701

(1) Includes 252,107 shares reserved for future issuance under our 2010 Equity Incentive Plan and 80,594 shares reserved for future issuance under our 2010 Employee Stock Purchase Plan. No shares are reserved for future issuance under our 2005 Stock Option/Stock Issuance Plan other than shares issuable upon exercise of equity awards outstanding under such plan.

(2) Effective January 1, 2018, the number of shares available for future issuance under our 2010 Equity Incentive Plan increased by 2,281,871 shares pursuant to the automatic increase provision contained in the 2010 Equity Incentive Plan and the number of shares available for future issuance under our 2010 Employee Stock Purchase Plan increased by 365,099 shares, in each case pursuant to automatic increase provisions contained in the respective plans, as discussed in more detail below.

(3) For information regarding proposed increases to the number of shares available for grant and issuance under our 2010 Equity Incentive Plan and the maximum number of shares that may be issued over the term of our 2010 Employee Stock Purchase Plan, see “Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan” and “Proposal 4 — Approval of Amendment to the Amyris, Inc. 2010 Employee Stock Purchase Plan” in this Proxy Statement.

(4) Includes 4,000 shares reserved for issuance upon exercise of a stock option granted to an entity outside of our equity compensation plans. The stock option was granted to one of our entity stockholders in connection with Fernando de Castro Reinach’s Board service. The non-statutory stock option has an exercise price of $58.95 per share, and was granted on September 15, 2008 with a term of 10 years. The option had a three-year vesting schedule, vesting and becoming exercisable in 12 equal quarterly installments, commencing from the grant date, subject to continued Board service by Dr. Reinach. Dr. Reinach has no beneficial ownership of the securities issuable upon exercise of this option. The option was fully vested as of December 31, 2017.

Our 2010 Equity Incentive Plan includes all shares of our common stock reserved for issuance under our 2005 Stock Option/Stock Issuance Plan immediately prior to our initial public offering that were not subject to outstanding grants as of the completion of such offering. In addition, any shares of our common stock (i) issuable upon exercise of stock options granted under our 2005 Stock Option/Stock Issuance Plan that cease to be subject to such options and (ii) issued under our 2005 Stock Option/Stock Issuance Plan that are forfeited or repurchased by us at the original issue price, will become part of our 2010 Equity Incentive Plan reserve.

The number of shares available for grant and issuance under our 2010 Equity Incentive Plan is increased on January 1 of each year through 2020 by an amount equal to the lesser of (1) five percent (5%) of our shares outstanding on the immediately preceding December 31 and (2) a number of shares as may be determined by the Board or the Leadership Development and Compensation Committee of the Board in their discretion. In addition, shares will again be available for grant and issuance under our 2010 Equity Incentive Plan that are:

- subject to issuance upon exercise of an option or stock appreciation right granted under our 2010 Equity Incentive Plan and that cease to be subject to such award for any reason other than the award's exercise;
- subject to an award granted under our 2010 Equity Incentive Plan and that are subsequently forfeited or repurchased by us at the original issue price;
- surrendered pursuant to an exchange program; or
- subject to an award granted under our 2010 Equity Incentive Plan that otherwise terminates without shares being issued.

For more information regarding our 2010 Equity Incentive Plan, as well as proposed amendments thereto, see "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement.

The number of shares reserved for issuance under our 2010 Employee Stock Purchase Plan is increased on January 1 of each year during the term of the plan by an amount equal to the lesser of (1) one percent (1%) of our shares outstanding on the immediately preceding December 31 and (2) a number of shares as may be determined by the Board or the Leadership Development and Compensation Committee of the Board in their discretion, provided that the aggregate number of shares issued over the term of our 2010 Employee Stock Purchase Plan shall not exceed 666,666 shares. For more information regarding the 2010 Employee Stock Purchase Plan, as well as proposed amendments thereto, see "Proposal 4 — Approval of Amendment to the Amyris, Inc. 2010 Employee Stock Purchase Plan" in this Proxy Statement.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

The following discussion describes and analyzes the compensation policies, arrangements and decisions for our named executive officers in 2017 and should be read in conjunction with the compensation tables contained elsewhere in this Proxy Statement. We believe our existing compensation policies, arrangements and decisions are consistent with our compensation philosophy and objectives discussed below and align the interests of our named executive officers with our short-term and long-term business objectives. During 2017, our named executive officers were:

- John Melo, our President and Chief Executive Officer (our "CEO")
- Kathleen Valiasek, our Chief Financial Officer[(1)]
- Joel Cherry, our President, Research and Development
- Eduardo Alvarez, our Chief Operating Officer[(2)]
- Nicole Kelsey, our General Counsel and Secretary[(3)]
- Raffi Asadorian, our former Chief Financial Officer[(4)]

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(1) Ms. Valiasek joined us as Chief Financial Officer effective January 4, 2017.

(2) Mr. Alvarez joined us as Chief Operating Officer effective October 16, 2017.

(3) Ms. Kelsey joined us as General Counsel and Secretary effective August 7, 2017.

(4) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017.

Compensation Philosophy and Objectives and Elements of Compensation

The primary objectives of our executive compensation program in 2017 were to:

- Attract, retain, and motivate highly talented employees that are key to our success;
- Reinforce our core values and foster a sense of ownership, urgency and entrepreneurial spirit;
- Link compensation to individual, team, and company performance (as appropriate by employee level);
- Emphasize performance-based compensation for individuals who can most directly impact stockholder value; and
- Provide exceptional pay for delivering exceptional results.

Our success depends, among other things, on attracting and retaining executive officers with experience and skills in a number of different areas as we continue to drive improvements in our technology platform and production process, pursue and establish key commercial relationships, develop and commercialize products and establish a reliable supply chain and manufacturing organization.

Our business continues to be in an early stage of development with cash management being one key consideration for our strategy and operations. Accordingly, for 2017, we intended to provide a competitive compensation program that would enable us to attract and retain the top executives and employees necessary to develop our business, while being prudent in the management of our cash and equity. Based on this approach, we continued to aim to balance and reward annual and long-term performance with a total compensation package that included a mix of both cash and equity. Our compensation program was intended to align the interests of our executive officers, key employees and stockholders and to drive the creation of stockholder value by providing long-term incentives through equity-based awards. We continued to adhere to this general compensation philosophy for 2017.

Our intent and philosophy in designing compensation packages at the time of hiring of new executives is based on providing compensation that we believe is sufficient to enable us to attract the necessary talent, within prudent limitations as discussed above. Compensation of our executive officers after the initial period following their hiring is influenced by the amounts of compensation that we initially agreed to pay them, as well as by our evaluation of their subsequent performance, changes in their levels of responsibility, retention considerations, prevailing market conditions, our financial condition and prospects, and our attempt to maintain an appropriate level of internal pay parity in the compensation of existing executive officers relative to the compensation paid to more recently hired executives.

We compensate our executive officers with a combination of salaries, cash bonuses and equity awards. We believe this combination of cash and equity compensation, subject to strategic allocation among such components, is largely consistent with the forms of compensation provided by other companies with which we compete for executive talent, and, as such, matches the expectations of our executive officers and the market for executive talent. We also believe that this combination provides appropriate incentive levels to retain our executives, reward them for performance in the short term and induce them to contribute to the creation of value in Amyris over the long term. We view the different components of our executive compensation program as distinct, each serving particular functions in furthering our compensation philosophy and objectives, and, together, providing a holistic approach to achieving such philosophy and objectives.

Base Salary. We believe that we must maintain base salary levels that are sufficiently competitive to position us to attract and retain the executive officers we need and that it is important for our executive officers to perceive that over time they will continue to have the opportunity to earn a salary that they regard as competitive. The Leadership Development and Compensation Committee of our Board (the "LDCC" or the "Committee") reviews and adjusts, as appropriate, the base salaries of our executive officers on an annual basis, and makes decisions with respect to the base salaries of new executives at the time of hire. In making such determinations, the Committee considers several factors, including our overall financial performance, the individual performance of the executive officer in question (including, for executives other than our CEO, the recommendation of our CEO based on a performance evaluation of the executive officer in question), the executive officer's potential to contribute to our annual and longer-term strategic goals, the executive officer's scope of responsibilities, qualifications and experience, competitive market practices for base salary, prevailing market conditions and internal pay parity.

Cash Bonuses. We believe the ability to earn cash bonuses should provide incentives to our executive officers to effectively pursue goals established by our Board and should be regarded by our executive officers as appropriately rewarding effective performance against these goals. For 2017, the LDCC adopted a cash bonus plan for our executive officers, the details of which are described below under "2017 Compensation." The 2017 cash bonus plan included company performance goals and individual performance goals and was structured to motivate our executive officers to achieve our short-term financial and operational goals and to reward exceptional company and individual performance. In particular, our 2017 cash bonus plan was designed to provide incentives to our executive officers to achieve 2017 company financial and operational targets on a quarterly and annual basis, together with various key individual operational objectives that were considered for annual performance achievement. In general, target bonuses for our executive officers are initially set in their offer letters based on similar factors to those described above with respect to the determination of base salary. For subsequent years, target bonuses for our executive officers may be adjusted by the LDCC based on various factors, including any modifications to base salary, competitive market practices and the other considerations described above with respect to adjustments in base salary. In addition, in 2017 the LDCC granted discretionary cash bonuses to certain of our executive officers in recognition of their exceptional performance, the details of which are described below under "2017 Compensation."

Equity Awards. Our equity awards are designed to be sufficiently competitive to allow us to attract and retain talented and experienced executives. In 2017, we granted both stock option and restricted stock unit ("RSU") awards to our executive officers. Option awards for executive officers are granted with an exercise price equal to the fair market value of our common stock on the date of grant; accordingly, such option awards will have value to our executive officers only if the market price of our common stock increases after the date of grant. RSU awards represent the right to receive full-value shares of our common stock without payment of any exercise or purchase price. Shares of our common stock are not issued when a RSU award is granted; instead, once a RSU award vests, one share of our common stock is issued for each vested RSU. In the past, we generally granted smaller RSU awards as compared to option awards because RSUs have a greater fair value per unit than options. However, in 2017 we continued a practice that began in 2016 to place a greater emphasis on RSU awards to increase the perceived value of equity awards granted to our executive officers. The relative weighting between the option and RSU awards granted to our executive officers is based on the LDCC's review of market practices.

We typically grant option awards with four-year vesting schedules. Stock option grants include a one year "cliff", where the option award vests as to 25% of the shares of our common stock subject to the award after one year, and monthly thereafter, subject to continued service through each vesting date. Our RSU awards have generally been granted with three-year vesting schedules, vesting as to 1/3rd of the units subject to the award annually, subject to continued service through each vesting date. We believe such vesting schedules are generally consistent with the option and RSU award granting practices of our peer group companies. In 2017, we granted option and restricted stock unit awards to new executive officer hires with non-standard vesting terms, the details of which are described below under "2017 Compensation."

We grant equity awards to our executive officers in connection with their hiring, or, as applicable, their promotion from other roles at the company. The size of initial equity awards is determined based on the executive's position with us and takes into consideration the executive's base salary and other compensation as well as an analysis of the grant and compensation practices of our peer group companies in connection with establishing our overall compensation policies. The initial equity awards are generally intended to provide the executive with an incentive to build value in the company over an extended period of time, while remaining consistent with our overall compensation philosophy. Insofar as we have to date incurred operating losses and consumed substantial amounts of cash in our operations, and to compensate for cash salaries and cash bonus opportunities that were, in certain cases, lower than those offered by competing employers, we have sought to attract executives to join us by granting equity awards that would have the potential to provide significant value if we are successful.

We grant additional equity awards in recognition of commendable performance, in connection with significant changes in responsibilities, and/or in order to better ensure appropriate retention and incentive opportunities from time to time. Further, equity awards are a component of the annual compensation package of our executive officers. In 2017, the LDCC granted equity awards based on input from management regarding performance, to satisfy our retention objectives and other considerations. In approving such awards, the LDCC took into account various factors, including the responsibilities, past performance and anticipated future contribution of the executive officer, his or her overall compensation package, his or her existing equity holdings and practice at our peer group companies.

Role of Stockholder Say-on-Pay Votes. At our 2011, 2014 and 2017 annual meetings of stockholders, our stockholders voted, on an advisory basis, on the compensation of our named executive officers (commonly referred to as a "stockholder say-on-pay vote"). A majority of the votes cast were voted in favor of the non-binding advisory resolutions approving the compensation of our named executive officers as summarized in our 2011, 2014 and 2017 proxy statements. In 2017, 99% of the votes cast on the stockholder say-on-pay vote approved, on a non-binding advisory basis, the compensation of our named executive officers as summarized in our 2017 proxy statement. The LDCC believes that this affirms our stockholders' support of our approach to executive compensation, and, accordingly, did not materially change its approach to executive compensation in 2017 and does not intend to do so in 2018. In addition, in 2017 our stockholders approved, and our Board subsequently adopted, a three-year interval for conducting future stockholder say-on-pay votes. Accordingly, our stockholders will again be voting, on an advisory basis, on the compensation of our named executive officers at our 2020 annual meeting of stockholders.

Compensation Policies and Practices As They Relate to Risk Management

The LDCC has determined, through discussions with management and Compensia at Committee meetings held in February 2017 and February 2018, that our policies and practices of compensating our employees, including our executive officers, are not reasonably likely to have a material risk to us. The assessments conducted by the Committee focused on the key terms of our bonus plans and equity compensation programs in 2017, and our plans for such programs in 2018. Among other things, the

Committee focused on whether our compensation programs created incentives for risk-taking behavior and whether existing risk mitigation features and policies were sufficient in light of the overall structure and composition of our compensation programs. Among other things, the Committee considered the following aspects of our overall compensation program:

- Our base salaries are generally high enough to provide our employees with sufficient income so that they are not dependent on bonus income to meet their basic cost of living.
- Cash bonus targets are typically 10 – 25% of an employee's base salary (40 – 100% for our executive officers), which we believe provides balanced incentives for performance, but does not encourage excessive risk taking to achieve such goals.
- For key employees, our 2017 cash bonus plan (as discussed in more detail below under "2017 Compensation — Cash Bonuses") emphasized company performance over individual performance objectives and provided for a maximum total bonus funding available for payout of 137.5% of target funding, with payouts ranging from 0% to 225% of an individual's annual target bonus depending on company and individual performance. Our 2018 cash bonus plan provides for a maximum total bonus funding available for payout of 165% of target funding, with payouts ranging from 0% to 255% of an individual's annual target bonus depending on company and individual performance. For more information regarding our 2018 cash bonus plan, see "2018 Bonus Plan" below.
- Generally, we do not provide commission or similar compensation programs to our employees. However, starting in 2016 we implemented a sales commission plan for certain employees involved in sales activities. The sales commission plan in 2017 for these employees provided what we viewed as moderate leverage, in which approximately 70 – 90% of the salesperson's cash compensation was base salary and approximately 10 – 30% was commission-based, depending on the nature of the role. Further, under the sales commission plan, commissions are not earned by the salesperson until we have received payment from the relevant customer.
- For our executive officers, in 2017 we targeted the 40th percentile of our competitive market for total cash compensation and the 75th percentile or above of our competitive market (subject to dilution constraints) for equity compensation, which typically was to vest over three to four years, providing our executives with significant incentives for our longer-term success. In 2018, we are targeting 50th percentile of our competitive market for total cash compensation and between the 50th to the 75th percentile of our competitive market (subject to company performance and affordability) for equity compensation.

Based on these considerations, the Committee determined that our compensation programs, including our executive and non-executive compensation programs, provide an appropriate balance of incentives and do not encourage our executives or other employees to take excessive risks or otherwise create risks that are likely to have a material adverse effect on us.

Role of Compensation Consultant. In connection with an annual review of our executive compensation program for 2017, the LDCC retained Compensia, a national compensation consulting firm, to provide advice and guidance on our executive compensation policies and practices and relevant information about the executive compensation practices of similarly situated companies. In 2017, Compensia assisted in the preparation of materials for executive compensation proposals in advance of Committee meetings, including 2017 compensation levels for our executive officers and the design of our cash bonus, equity, severance and change of control programs and other executive benefit programs. Compensia also reviewed and advised the LDCC on materials relating to executive compensation prepared by management for Committee consideration. In addition, in the fourth quarter of 2016, Compensia assisted the LDCC in developing our compensation peer group for 2017 (as discussed below). The LDCC retained Compensia again in the third quarter of 2017 to provide assistance with respect to our 2018 compensation planning, including updates to our compensation peer group.

Compensia, under the direction of the LDCC, may continue to periodically conduct a review of the competitiveness of our executive compensation programs, including base salaries, cash bonus opportunities, equity awards and other executive benefits, by analyzing the compensation practices of companies in our compensation peer group, as well as data from third-party compensation surveys. Generally, the LDCC uses the results of such analyses to assess the competitiveness of our executive officers' total compensation, and to determine whether each component of such total compensation is properly aligned with reasonable and responsible practices among our peer companies.

The LDCC also retained Compensia for assistance in reviewing and making recommendations to our Board regarding the compensation program for our non-employee directors when it was originally adopted in late 2010 and again when such program was subsequently amended in December 2015 and November 2016, and to provide market data and materials to management and the Committee.

In August 2016 and September 2017, the LDCC reviewed the independence of Compensia under applicable compensation consultant independence rules and standards and determined that Compensia had no conflict of interest with Amyris.

Compensation Decision Process

Under the charter of the LDCC, our Board has delegated to the Committee the authority and responsibility to discharge the responsibilities of the Board relating to the compensation of our executive officers. This includes, among other things, review and approval of the compensation of our executive officers and of the terms of any compensation agreements with our executive officers. For more information regarding the functions and composition of the LDCC, please refer to "Proposal 1 — Election of Directors — Committees of the Board" above.

In general, the LDCC is responsible for the design, implementation and oversight of our executive compensation program. In accordance with its charter, the Committee determines the annual compensation of our Chief Executive Officer and other executive officers and reports its compensation decisions to our Board. The Committee also administers our equity compensation plans, including our 2010 Equity Incentive Plan (the "2010 EIP") and 2010 Employee Stock Purchase Plan. Generally, our Human Resources, Finance and Legal departments work with our Chief Executive Officer to design and develop new compensation programs applicable to our executive officers and non-employee directors, to recommend changes to existing compensation programs, to recommend financial and other performance targets to be achieved under those programs, to prepare analyses of financial data, to prepare peer compensation comparisons and other committee briefing materials, and to implement the decisions of the Committee. Members of these departments and our Chief Executive Officer also meet separately with Compensia to convey information on proposals that management may make to the LDCC, as well as to allow Compensia to collect information about Amyris to develop its recommendations. In addition, our Chief Executive Officer conducts reviews of the performance and compensation of the other executive officers, and based on these reviews and input from Compensia and our Human Resources department, makes recommendations regarding executive compensation (other than his own) directly to the Committee. For the Chief Executive Officer's compensation, the Chief Human Resources Officer works directly with the LDCC chair, as well as Compensia and the Human Resources, Finance and Legal departments of Amyris to design, develop, recommend to the Committee and implement the above compensation analysis and programs, as well as review the performance of our CEO. None of our executive officers participated in the determinations or deliberations of the LDCC regarding the amount of any component of his or her own 2017 compensation.

Use of Competitive Data. To monitor the competitiveness of our executive officers' compensation, in November 2016 the LDCC approved a compensation peer group (the "Peer Group") to be used in connection with its 2017 compensation discussions that analyzed the compensation of executive officers in comparable positions at similarly-situated companies. The data gathered from the Peer Group was used as a reference in setting executive pay levels (including cash and equity compensation), non-employee director compensation, pay and incentive plan practices, severance and change-in-control practices, equity utilization and pay/performance alignment. The Peer Group was composed of a cross-section of publicly-traded, U.S.-based companies of similar size to us (based on revenue, market capitalization, number of employees and R&D expenditures) from related industries (biotechnology, oil, gas and consumable fuels, chemicals, food products, personal products and household products). Based on these criteria, the following companies were included in the Peer Group approved by the LDCC for use in assessing the market position of our executive compensation for 2017:

2017 Peer Group

- Balchem (Specialty Chemicals)
- BioAmber (Commodity Chemicals)
- Chemtura (Specialty Chemicals)
- Codexis (Specialty Chemicals)
- Innospec (Specialty Chemicals)
- Intrexon (Biotechnology)
- Kraton Performance Polymers (Specialty Chemicals)
- Landec (Packaged Foods & Meats)
- Metabolix (Specialty Chemicals)
- Renewable Energy Group (Oil & Gas Refining & Marketing)
- Rentech (Forest Products)
- Senomyx (Specialty Chemicals)
- TerraVia Holdings (formerly Solazyme) (Specialty Chemicals)

In November 2017, the LDCC conducted a review of the Peer Group for 2018. Similar to our approach for developing the 2017 Peer Group, we identified potential peers by screening publicly-traded, U.S.-based companies of similar size to us (based on revenue, market capitalization, number of employees and R&D expenditures) from related industries (biotechnology, oil, gas and consumable fuels, chemicals, food products, personal products and household products). Based on such analysis, the LDCC removed Chemtura from the Peer Group for 2018 due to it recently being acquired and added American Vanguard, a company operating in the fertilizers and agricultural chemicals industry.

In addition to reviewing the compensation practices of the Peer Group, the LDCC looks to the collective experience and judgment of its members and advisors, as well as relevant industry survey data, in determining total compensation and the various compensation components provided to our executive officers. While the LDCC does not believe that the Peer Group data is appropriate as a stand-alone tool for setting executive compensation due to the unique nature of our business, it believes that this information is a valuable reference source during its decision-making process.

Target Compensation Levels. For 2017, consistent with 2016, the LDCC generally targeted the 40th percentile of our competitive market for total cash compensation (base salary and target cash bonus), as determined based on the Peer Group, supplemented by data from relevant industry surveys. The Committee chose the 40th percentile for total cash compensation in part because we are still in the early stages of product development and therefore need to conserve our cash while we ramp up our operations. Equity has been a critical and prominent component in our overall compensation package and we believe that it will remain an important tool for attracting, retaining and motivating our key talent by providing an opportunity for wealth creation as a result of our long-term success, particularly while we are growing our business and offering total cash compensation opportunities that are below the median of our competitive market. As a result, the LDCC has generally targeted equity compensation levels at the 75th percentile or above of our competitive market for equity compensation based on the Peer Group, supplemented by data from relevant industry surveys, and taking into consideration the LDCC approved targeted annual burn rate.

To this end, the LDCC approved annual equity awards to our named executive officers in May and June 2017 based primarily on the foregoing strategy. Additionally, as noted above, in determining the size of these annual equity grants, the LDCC considered the retention value of existing awards held by our named executive officers (taking into account option exercise prices and the prevailing market value of our common stock), the executives' overall compensation packages, practice at peer companies and the responsibilities, performance, anticipated future contributions and retention risk of our named executive officers.

For 2018, we are targeting the 50th percentile of our competitive market for total cash compensation and between the 50th – 75th percentile of our competitive market (subject to company performance and affordability) for equity compensation, as determined based on the Peer Group, supplemented by data from relevant industry surveys, which approach the LDCC approved in September 2017.

2017 Compensation

Background. In designing the compensation program and making decisions for our executive officers for 2017, the Committee sought to balance achievement of critical operational goals with retention of key personnel, including our executive officers. Accordingly, the Committee focused in particular on providing a strong equity compensation program in order to provide strong retention incentives through challenging periods. It also focused on cash management in setting target total cash compensation (and associated salary and bonus target levels) for our executive officers. Another key theme for 2017 was establishing strong incentives to drive our performance, including continued emphasis on company performance goals over individual goals in the 2017 cash bonus plan and on equity compensation for longer-term upside potential and sharing in company growth.

Base Salaries. In April, May and June 2017, the LDCC reviewed the base salaries, bonus targets and target total cash compensation of our executive officers against the Peer Group, as supplemented by relevant industry survey data, and, as a result of such analysis, as well as consideration of the factors described above under "Compensation Philosophy and Objectives and Elements of Compensation — Base Salary," approved (i) effective April 1, 2017, an increase to the base salary for Dr. Cherry from \$358,750 to \$375,000 and an increase to the base salary for Ms. Valiasek from \$350,000 to \$420,000 and (i) effective June 1, 2017, an increase to the base salary for our CEO from \$550,000 to \$600,000. The base salaries for Mr. Alvarez and Ms. Kelsey of \$400,000 and \$395,000, respectively, were set by their respective employment offer letters.

Cash Bonuses. The LDCC adopted a 2017 cash bonus plan for our executive officers in March 2017. Under the plan, our executive officers were eligible for bonuses based on the achievement of company metrics for each quarter in 2017, with a portion of their target bonus allocated to annual company and individual performance. The 2017 cash bonus plan was intended to provide a balanced focus on both our long-term strategic goals and shorter-term quarterly operational goals. The 2017 cash bonus plan provided for funding and payout of cash bonus awards based on our quarterly and annual performance during 2017 under pre-established metrics set by the LDCC for each quarter and for the year. Payouts, if any, under the 2017 cash bonus plan were made following a review of our results and performance each quarter and, for the annual component, a review occurred in February 2018 with respect to the annual performance of the company as well as each individual's performance. The 2017 cash bonus plan provided for a 50% weighting for quarterly achievement (with each quarter worth 12.5% of the total bonus fund for the year) and 50% for full year 2017 achievement.

The total funding possible under the 2017 cash bonus plan was based on a cash value (or the "target bonus fund") determined by the executive officers' target bonus levels. In May 2017, the LDCC reviewed our executive officers' bonus targets as part of its review of target total cash compensation for similar roles among executive officers at companies in the Peer Group, as supplemented by relevant industry survey data, and, as a result of such analysis, as well as consideration of the factors described above under "Compensation Philosophy and Objectives and Elements of Compensation — Cash Bonuses," approved, effective April 1, 2017, increases to the target bonus levels for our executive officers, including our CEO (from 80% to 100% of annual base salary), Ms. Valiasek (from 33% to 40% of annual base salary) and Dr. Cherry (from approximately 35% to 50% of annual base salary). As a result of such increases, target bonus levels for the executive officers in 2017 varied by individual, but were generally set between 40% and 50% of their annual base salary, other than for our CEO, whose target bonus level was set at 100% of his annual base salary. The target bonus levels for Mr. Alvarez and Ms. Kelsey of 100% and 40% of annual base salary, respectively, were set by their respective employment offer letters.

The quarterly and annual funding of the 2017 cash bonus plan was based on achievement of the following company performance metrics for each quarter during 2017 (as determined by the LDCC and, in the case of quarterly funding, as applicable for the quarter based on our operating plan): GAAP revenue (weighted 40%), technical milestone dollars received (weighted 30%), cash production costs at the company's plant located in Brotas, Brazil (weighted 15%) and cash operating expenditures (weighted 15%). For each quarterly period and for the annual period under the 2017 cash bonus plan, "threshold," "target" and "superior" performance levels were set for each performance metric, which performance levels were intended to capture the relative difficulty of achievement of that metric.

If we did not achieve at least a 70% weighted average achievement level of the performance metrics described above that achieved at least the "threshold" performance level for a given bonus plan period (the "funding threshold"), no funding would occur for such period. If we achieved at least the funding threshold level, 70% funding would occur. For a weighted average achievement between the funding threshold level and "target" level, a pro rata increase in funding would occur up to 100% of the target bonus fund allocated to such period. For weighted average achievement above the target level, an increase in funding of 2.5% for every 1% above target performance would occur up to, for the quarterly funding, 125% of the target bonus fund for such quarter, and for the annual funding, 150% of the annual target bonus fund.

Any payouts for the quarterly bonus periods would be the same as the funded level (provided the recipient met eligibility requirements through the payout date), and would be subject to a cap of 100% of the allocated quarterly target bonus fund. Any funding in excess of 100% of the allocated quarterly target bonus fund would not be paid out, and instead would be allocable to the annual bonus fund. Excess quarterly funding not paid, but added to the annual bonus fund, is in addition to the annual bonus fund maximum of 150% of the annual target bonus fund. Payouts for the annual bonus period would be made from the aggregate funded amount in the discretion of the Committee based on company and individual performance, and could range from 0% to 200% of an individual's funded amount for the annual bonus period (including any excess quarterly funding). The Committee chose to emphasize company performance goals for the quarterly and annual bonus plan periods given the critical importance of our short term strategic goals, but also to retain reasonable incentives and rewards for exceptional individual performance, recognizing the value of such incentives and rewards to our operational performance and to individual retention. For 2017, the LDCC set the following target bonus levels for our named executive officers:

Name	Target Bonus ($)
John Melo(1)(2)	554,166
Kathleen Valiasek(3)(4)(5)	154,876
Joel Cherry(6)(7)	172,127
Eduardo Alvarez(8)	91,026
Nicole Kelsey(9)	63,504
Raffi Asadorian(10)	—

(1) Mr. Melo's target bonus level was increased from 80% to 100% of annual base salary effective April 1, 2017.

(2) Mr. Melo's annual base salary was increased from $550,000 to $600,000 effective June 1, 2017.

(3) Ms. Valiasek joined the company as Chief Financial Officer effective January 4, 2017.

(4) Ms. Valiasek's target bonus level was increased from 33% to 40% of annual base salary effective April 1, 2017.

(5) Ms. Valiasek's annual base salary was increased from $350,000 to $420,000 effective April 1, 2017.

(6) Dr. Cherry's target bonus level was increased from 35% to 50% of annual base salary effective April 1, 2017.

(7) Dr. Cherry's annual base salary was increased from $358,750 to $375,000 effective April 1, 2017.

(8) Mr. Alvarez joined the company as Chief Operating Officer effective October 16, 2017.

(9) Ms. Kelsey joined the company as General Counsel and Secretary effective August 7, 2017.

(10) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017 and was not assigned a target bonus for 2017.

Based on the foregoing bonus plan structure, individual bonuses were awarded each quarter based on the LDCC's assessment of company achievement, and with respect to the annual bonus, the LDCC's assessment of company achievement as well as each executive officer's contributions to such achievement, his or her progress toward achieving his or her individual goals, and his or her demonstrating our core values. Actual payment of any bonuses with respect to 2017 remained subject to the final discretion of the Committee, which may exercise only negative discretion.

Company Performance Goals. Each quarter, company performance was measured and weighted against targets established for GAAP revenues, technical milestone dollars received, production costs and cash operating expenditures. The quarterly and annual weighting and achievement for each metric are described below.

These targets were initially discussed with our Board and the LDCC through the second half of 2016 and adopted in final form in March 2017. The targets were subsequently discussed and evaluated each quarter in 2017 and in February 2018 based on quarterly and annual performance (in February 2018, the LDCC discussed and evaluated the fourth quarter as well as the full year 2017 results) and continued development of our business and operating plans for 2017 and beyond. The specific goals comprising the targets were both qualitative and quantitative, and achievement levels were to be determined in the discretion of the LDCC following each period under the 2017 cash bonus plan.

Degree of Difficulty in Achieving Performance Goals. The LDCC considered the likelihood of achievement when recommending and approving, respectively, the company and individual performance goals and bonus plan structures for each of the 2017 cash bonus plan periods, but it did not undertake a detailed statistical analysis of the difficulty of achievement of each measure. For 2017, the Committee considered the 70% weighted average achievement level to be attainable with normal effort, 100% to be challenging but achievable with significant effort, requiring circumstances to align as predicted, and any amounts in excess of 100% to be difficult to achieve, requiring additional sources of revenue, breakthroughs in technology, manufacturing operations, process development or business development, and exceptional levels of effort on the part of the executive team, as well as favorable external conditions.

2017 Quarterly and Annual Bonus Plan Funding and Award Decisions. In each of May 2017, August 2017, November 2017 and February 2018, the LDCC determined that our quarterly and annual performance goals were achieved as follows:

Company Performance Goal	Weight	Weighted Achievement Level	Funding Level
Q1			
GAAP Revenue	40%	40.6%	
Technical Milestone Dollars	30%	31.9%	
Brotas Cash Production Costs	15%	0%	
Cash Opex	15%	15.1%	
Total Q1	**100.0%**	**87.5%**	**87.5%**
Q2			
GAAP Revenue	40%	43.6%	
Technical Milestone Dollars	30%	38.7%	
Brotas Cash Production Costs	15%	12.1%	
Cash Opex	15%	14.8%	
Total Q2	**100.0%**	**109.2%**	**100.0%**(1)
Q3			
GAAP Revenue	40%	49.8%	
Technical Milestone Dollars	30%	34.6%	
Brotas Cash Production Costs	15%	4.2%	
Cash Opex	15%	14.0%	
Total Q3	**100.0%**	**102.6%**	**100.0%**(2)
Q4			
GAAP Revenue	40%	46.1%	
Technical Milestone Dollars	30%	32.8%	
Brotas Cash Production Costs	15%	12.2%	
Cash Opex	15%	14.8%	
Total Q4	**100.0%**	**105.8%**	**100.0%**(3)
ANNUAL			
GAAP Revenue	40%	49.7%	
Technical Milestone Dollars	30%	34.1%	
Brotas Cash Production Costs	15%	2.0%	
Cash Opex	15%	14.7%	
Total Annual	**100.0%**	**100.4%**	**101.0%**(4)

(1) Excess Q2 funding was allocated to the Annual Period as carryover.

(2) Excess Q3 funding was allocated to the Annual Period as carryover.

(3) Excess Q4 funding was allocated to the Annual Period as carryover.

(4) Plus excess Q2, Q3 and Q4 funding carryover.

Individual Performance Goals.

For the portion of the 2017 cash bonus plan tied to individual performance, the Committee considered several factors, including the following:

- For our CEO, the achievement of growing GAAP revenue, meeting technical targets, developing efficient, stable and predictable manufacturing operations, managing operating expenses, improving employee engagement, maintaining a safe work environment, executive leadership and living our values.
- For Ms. Valiasek, the achievement of obtaining financing to support our operations, meeting quarterly financial targets, developing plans for reducing the cost of goods sold, supporting operating expense planning and execution, improving finance department performance, improving enterprise resource planning systems, executive leadership and living our values.
- For Dr. Cherry, the achievement of assisting in developing new technology projects, managing operating expenses, successfully expanding our technology platforms, operationalizing workflows between company projects, meeting technical targets, executive leadership and living our values.

For Mr. Alvarez and Ms. Kelsey, since they did not join us until the second half of 2017, the Committee considered their performance and contributions during their time with the company in 2017.

The Committee considered a variety of factors in determining, in its discretion, to award payouts under the 2017 cash bonus plan. In addition to the levels of company achievement (for the quarterly and annual portions) and individual performance (for the annual portion) categories, the Committee considered our cash needs as well as the level of performance of each named executive officer in achieving company results and their respective assigned individual goals. Based on the foregoing, and taking into account the factors described above, the Committee approved the following cash bonus awards under the 2017 cash bonus plan:

Name	2017 Cumulative Quarterly Bonus Payouts ($)	2017 Annual Portion Bonus Payout ($)	2017 Aggregate Annual and Quarterly Bonus Payouts ($)	Annual Bonus Target ($)	2017 Actual Bonus Earned as a % of Target Bonus
John Melo	270,052	311,896	581,948	554,166	105.0
Kathleen Valiasek	75,633	87,452	163,085	154,876	105.3
Joel Cherry	84,095	97,236	181,331	172,127	105.3
Eduardo Alvarez(1)	45,513	45,513	91,026	91,026	100.0
Nicole Kelsey(2)	31,752	35,713	67,465	63,504	106.2
Raffi Asadorian(3)	—	—	—	—	—

(1) Mr. Alvarez joined us as Chief Operating Officer effective October 16, 2017. Accordingly, he was not eligible for the bonuses paid for the first, second or third quarters of 2017.

(2) Ms. Kelsey joined the company as General Counsel and Secretary effective August 7, 2017. Accordingly, she was not eligible for the bonuses paid for the first or second quarters of 2017.

(3) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017 and, therefore, was not eligible to receive a bonus in 2017.

We believe that the payment of these awards was appropriate because the 2017 cash bonus plan appropriately held our named executive officers accountable for achievement of company and individual goals, and the payouts were reasonable and appropriate in light of our progress towards our business objectives.

Discretionary Cash Bonuses. In addition to the cash bonus payments under the 2017 cash bonus plan, in 2017 the LDCC approved certain discretionary cash bonuses to our CEO and Ms. Valiasek in recognition of their exceptional individual performance. In May 2017, the LDCC approved a discretionary cash bonus for our CEO in the amount of $300,000 in recognition of his efforts in securing additional financing for us. In September 2017, the LDCC approved a discretionary cash bonus for Ms. Valiasek in the amount of $45,000 in recognition of her work in assisting in the transition to a new independent registered public accounting firm. In November 2017, the LDCC approved a discretionary cash bonus for our CEO in the amount of $200,000 in recognition of his efforts in arranging for the sale of our manufacturing facility in Brazil and related transactions, which bonus was subject to repayment in the event that the sale of the manufacturing facility and related transactions did not close by March 1, 2018. The sale of our manufacturing facility in Brazil and related transactions closed on December 28, 2017.

Further, in June 2017, the LDCC approved a discretionary cash bonus for our CEO in the amount of $140,000 in recognition of the value lost on the voiding of certain equity awards granted to him in November 2015 that, when aggregated with other equity awards granted to him in 2015, inadvertently exceeded the annual per-participant award limit contained in the 2010 EIP. Please refer to the "Outstanding Equity Awards as of December 31, 2017" table below for more information regarding the voided awards and "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement for more information regarding the 2010 EIP and proposed amendments thereto being submitted for approval by our stockholders at the annual meeting, including with respect to the annual per-participant award limit thereunder.

Equity Awards. In May 2017, the LDCC approved annual equity awards for Ms. Valiasek and Dr. Cherry, and in June 2017 the LDCC approved annual equity awards for our CEO (collectively, the "focal awards"). In addition, the LDCC approved equity awards for Ms. Valiasek, Mr. Alvarez and Ms. Kelsey in connection with their hiring in January 2017, October 2017 and August 2017, respectively (collectively, the "new hire awards"). The focal awards and new hire awards consisted of the option and RSU awards set forth in the "Grants of Plan-Based Awards in 2017" table below.

The LDCC determined the allocation of equity awards between options and RSUs after consultation with Compensia, in evaluating the practices of our competitive market (including the Peer Group) and in consultation with management, taking into consideration, among other things, the appropriate balance between rewarding previous performance, retention objectives, upside value potential tied to our and the executive officer's future performance and the mix of the executive officer's current equity holdings.

With respect to the focal awards, the size of the awards varied among the applicable named executive officers based on the value of unvested equity awards already held by him or her, his or her relative contributions during 2016 and anticipated levels of responsibility for key corporate objectives in 2017. Notwithstanding our target of the 75th percentile or above of our competitive market for equity compensation, due to dilution constraints the focal awards fell below the 25th percentile of our competitive market.

With respect to the new hire awards, the size and vesting terms of the awards varied among the applicable named executive officers based on target equity compensation, as determined based on our competitive market (including the Peer Group), and anticipated levels of responsibility for key corporate objectives in 2017 and in subsequent years.

Please see the "Grants of Plan-Based Awards in 2017" table below for more information regarding the award types and sizes, grant dates, exercise prices and vesting schedules of the focal and new hire awards.

In addition, in connection with the hiring of Mr. Alvarez in October 2017, we agreed, subject to the prior approval by our Board and our stockholders, which approval is being sought at the annual meeting, and implementation, of an amendment to the company's 2010 Equity Incentive Plan to increase the maximum number of shares that any employee may receive in any calendar year under the 2010 EIP pursuant to the grant of awards to at least 250,000 shares, to grant Mr. Alvarez an award of 250,000 restricted stock units (the "Alvarez 2018 Award") on or before the earlier of (i) July 1, 2018 and (ii) our entering into a definitive agreement relating to a proposed change of control (as defined in the Severance Plan (as defined below)). The Alvarez 2018 Award, if granted, would fully vest on October 1, 2019. In the event that the number of shares authorized under the 2010 EIP is insufficient to enable us to grant the full Alvarez 2018 Award to Mr. Alvarez on or before the award deadline, then we will grant to Mr. Alvarez a cash-based incentive award designed to provide him with a cash payment on October 1, 2019 (the "Date of

Determination") equal to the value Mr. Alvarez would have been entitled to receive if the full Alvarez 2018 Award had been granted, less the value of any portion of the Alvarez 2018 Award actually granted to Mr. Alvarez, in each case measured as of the Date of Determination, which cash-based award would fully vest on the Date of Determination. For more information regarding the 2010 EIP and amendments thereto being proposed for approval at the annual meeting, see "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement.

Severance Plan. In November 2013, the LDCC adopted the Amyris, Inc. Executive Severance Plan (or the "Severance Plan"). The Severance Plan had an initial term of 36 months and thereafter will be automatically extended for successive additional one-year periods unless we provide six months' notice of non-renewal prior to the end of the applicable term. In May 2016 and May 2017, the LDCC reviewed the terms of the Severance Plan and elected to allow it to automatically renew upon the expiration of its initial term in November 2016 and renewal term in November 2017, respectively. The LDCC adopted the Severance Plan to provide a consistent and updated severance framework for our executive officers that aligns with peer practices. All continuing named executive officers, and all senior level employees of Amyris that are eligible to participate in the Severance Plan (or, collectively, the "participants"), have entered into participation agreements to participate in the Severance Plan. The benefits under the Severance Plan supersede and replace any rights the participants have in connection with any change of control or severance benefits contained in such participants' employment offer letters, equity award agreements or any other agreement that specifically relates to accelerated vesting of equity awards. The terms of the Severance Plan, including the potential amounts payable under the Severance Plan and related defined terms, are described in detail below under "Potential Payments upon Termination and upon Termination Following a Change in Control." Mr. Asadorian received certain benefits under the Severance Plan in connection with his separation in January 2017, as described below. In addition, Mr. Alvarez's participation agreement provides that in the event that following the grant and prior to full vesting of Mr. Alvarez's new hire awards and the Alvarez 2018 Award (including the cash-based award, if any) (collectively, the "Alvarez Equity Awards"), Mr. Alvarez's employment terminates in circumstances entitling him to severance benefits under the Severance Plan (whether before or after a change of control (as defined in the Severance Plan)) (a "Qualifying Termination"), then upon such Qualifying Termination the vesting and exercisability of each Alvarez Equity Award will be automatically accelerated in full and the forfeiture provisions and/or company right of repurchase of each Alvarez Equity Award will automatically lapse accordingly, with the amount of the cash-based award, if any, to be determined as of the date of the Qualifying Termination (with the Date of Determination deemed to be the date of such Qualifying Termination for such purpose).

We believe that the Severance Plan appropriately balances our need to offer a competitive level of severance protection to our executive officers and to induce them to remain in our employ through the potentially disruptive conditions that may exist around the time of a change in control, while not unduly rewarding executive officers for a termination of their employment.

Other Executive Benefits and Perquisites. We provide the following benefits to our executive officers on the same basis as other eligible employees:

- health insurance;
- vacation, personal holidays and sick days;
- life insurance and supplemental life insurance;
- short-term and long-term disability; and
- a Section 401(k) plan with an employer matching contribution.

We believe that these benefits are generally consistent with those offered by other companies with which we compete for executive talent.

Some of the executive officers whom we have hired, including Mr. Asadorian, Mr. Alvarez and Ms. Kelsey, held positions in locations outside of Northern California at the time they agreed to join us. We have agreed in these instances to pay certain relocation and travel expenses to these executive officers, including housing and rental car expenses. The amounts of relocation and travel expenses paid to our named executive officers are included in the "All Other Compensation" column of the "Summary

Compensation Table" below and the associated footnotes. Given the high cost of living in the San Francisco Bay Area relative to most other metropolitan areas in the United States, we believe that for us not to be limited to hiring executives located near our headquarters in Emeryville, California, we must be willing to offer to pay an agreed upon amount of relocation costs.

Other Compensation Practices and Policies. The following additional compensation practices and policies apply to our executive officers in 2017:

Timing of Equity Awards. The timing of equity awards has been determined by our Board or the LDCC based on our Board's or the LDCC's view at the time regarding the adequacy of executive equity interests in us for purposes of retention and motivation.

In November 2017, our Board ratified our existing policy regarding equity award grant dates, fixing grant dates in an effort to ensure the integrity of the equity award granting process. This policy took effect beginning with equity awards granted after the original adoption of the policy in March 2011. Under the policy, equity awards are generally granted on the following schedule:

- For equity awards to ongoing employees, the grant date is set as the first business day of the week following the week in which the award is approved; and
- For equity awards to new hires, the grant date is set as the first business day of the week following the later of the week in which the award is approved or the week in which the new hire commences his or her employment.

Tax Considerations. Generally, Section 162(m) of the Code ("Section 162(m)") disallows a federal income tax deduction for public corporations of remuneration in excess of $1 million paid for any fiscal year to their chief executive officer and up to three other executive officers (other than the chief financial officer) whose compensation is required to be disclosed to their stockholders under the Securities Exchange Act of 1934 because they are our most highly-compensated executive officers. Remuneration in excess of $1 million is exempt from this deduction limit if it qualifies as "performance-based compensation" within the meaning of Section 162(m) with respect to taxable years beginning on or before December 31, 2017 and payable pursuant to a binding written agreement in effect on November 2, 2017.

To date, the Committee has not taken the deductibility limit imposed by Section 162(m) into consideration in setting compensation. However, the 2010 EIP includes various provisions designed to allow us to qualify stock options and other equity awards as "performance-based compensation" under Section 162(m), including a limitation on the maximum number of shares subject to awards that may be granted to an individual under the 2010 EIP in any one year. Among other requirements, for certain awards granted under the 2010 EIP to qualify as fully deductible performance-based compensation under Section 162(m), our stockholders were required to re-approve the 2010 EIP on or before the first annual meeting of stockholders at which directors were to be elected that occurred after the close of the third calendar year following the calendar year of our initial public offering. We sought and received such approval at our 2012 annual meeting of stockholders. Section 162(m) also requires re-approval of the 2010 EIP by stockholders after five years if the compensation committee has retained discretion to select the criteria used to set performance goals under the 2010 EIP from year to year. The 2010 EIP permits the LDCC to choose from among several objective performance measures as the basis for the granting and/or vesting of "performance-based" equity compensation under the 2010 EIP. Accordingly, we sought and received such approval at our 2017 annual meeting of stockholders.

The exemption from Section 162(m)'s deduction limit for "performance-based compensation" has been repealed, effective for taxable years beginning after December 31, 2017, such that compensation paid to our covered executive officers in excess of $1 million will not be deductible unless it qualifies for transition relief applicable to certain arrangements in place as of November 2, 2017. The LDCC cannot determine with certainty how the deduction limit of Section 162(m) may impact our executive compensation programs in future years. While the LDCC has not adopted a formal policy regarding tax deductibility of the compensation paid to our executive officers, tax deductibility under Section 162(m) is a factor in its compensation deliberations. However, because of ambiguities and uncertainties as to the application and interpretation of Section 162(m) and the regulations issued thereunder, including the uncertain scope of the transition relief for certain arrangements in place as of November 2, 2017 under the legislation repealing

Section 162(m)'s exemption from the deduction limit, no assurance can be given that compensation intended to satisfy the requirements for exemption from Section 162(m) in fact will. The LDCC seeks to balance the cost and benefit of tax deductibility with our executive compensation goals designed to promote long-term stockholder interests, and therefore may, in its discretion, authorize compensation payments that do not consider the deductibility limit imposed by Section 162(m) when it believes that such payments are appropriate to attract and retain executive talent and to be in the best interests of the company and our stockholders. Accordingly, we expect that a portion of our future cash compensation and equity awards to our executive officers will not be deductible under Section 162(m).

Compensation Recovery Policy. We do not have a formal policy regarding adjustment or recovery of awards or payments if the relevant performance measures upon which they are based are restated or otherwise adjusted in a manner that would reduce the size of the award or payment. Under those circumstances, our Board or the LDCC would evaluate whether adjustments or recoveries of awards were appropriate based upon the facts and circumstances surrounding the restatement or other adjustment. We anticipate that our Board or the LDCC will adopt a policy regarding restatements in the future based on anticipated SEC and NASDAQ regulations requiring listed companies to have a policy that requires repayment of incentive compensation that was paid to current or former executive officers in the three fiscal years preceding any restatement due to material noncompliance with financial reporting requirements.

Stock Ownership Policy. We have not established stock ownership or similar guidelines with regard to our executive officers. All of our executive officers currently have a direct or indirect, through their stock option holdings, equity interest in our company and we believe that they regard the potential returns from these interests as a significant element of their potential compensation for services to us.

Insider Trading Policy and Hedging Prohibition. We have an Insider Trading Policy that, among other things, prohibits our employees, officers and directors from trading in our securities while in possession of material, non-public information. In addition, under our Insider Trading Policy, our employees, officers and directors may not acquire, sell or trade in any interest or position relating to the future price of our securities (such as a put option, a call option or a short sale).

Leadership Development and Compensation Committee Report*

The Leadership Development and Compensation Committee has reviewed and discussed with management the "Compensation Discussion and Analysis" contained in this Proxy Statement. Based on this review and discussion, the Leadership Development and Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this Proxy Statement.

Amyris, Inc. Leadership Development and Compensation Committee of the Board

Carole Piwnica (Chair)
Patrick Yang

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* *The material in this report is not "soliciting material," is not deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Amyris under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.*

Summary Compensation Table

The following table sets forth information regarding compensation earned by our named executive officers in 2017 and, where the individual was a named executive officer for the relevant prior year, 2016 and 2015.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)(1)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	All Other Compensation ($)	Total ($)
John Melo	2017	579,167(3)	640,000(4)	147,465	43,930	581,948	934(5)	1,993,444
President and Chief Executive Officer	2016	550,000	—	250,750	162,350	333,056	468(6)	1,296,624
	2015	550,000	—	1,322,000	1,036,275	272,234	758(7)	3,181,267
Raffi Asadorian	2017	24,586(8)	—	—	—	—	445,300(9)	469,886
Former Chief Financial Officer	2016	450,000		59,000	76,400	28,519	5,768(10)	619,687
	2015	445,096(11)		350,000	340,890	68,362	57,740(12)	1,262,088
Kathleen Valiasek *Chief Financial Officer*	2017	398,686(13)(14)	45,000(15)	137,623	126,996	163,085	4,310(16)	875,700
Joel Cherry	2017	370,937(17)	—	118,718	35,489	181,331	7,500(18)	713,975
President, Research and Development	2016	358,750	—	118,000	76,400	93,256	7,760(19)	654,166
	2015	358,750	—	336,628	261,173	78,024	7,760(19)	1,042,335
Eduardo Alvarez *Chief Operating Officer*	2017	91,026(20)	—	202,300	62,886	91,026	396(21)	447,634
Nicole Kelsey *General Counsel and Secretary*	2017	158,760(22)	—	52,290	17,077	67,465	237,570(23)	533,162

(1) The amounts in the "Stock Awards" and "Option Awards" columns reflect the aggregate grant date fair value of such awards computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. The assumptions made in the valuation of the awards are discussed in Note 12, "Stock-based Compensation" of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017. See the "Grants of Plan-Based Awards in 2017" table for additional information regarding stock and option awards granted to our named executive officers in 2017. These amounts do not correspond to the actual value that may be recognized by our named executive officers.

(2) As required under applicable rules of the Securities and Exchange Commission, payments under our 2017 cash bonus plan are included in the column entitled "Non-Equity Incentive Plan Compensation," as they were based upon the satisfaction of pre-established performance targets, the outcome of which was substantially uncertain.

(3) Mr. Melo's annual base salary was increased from $550,000 to $600,000 effective June 1, 2017.

(4) Includes certain discretionary cash bonuses paid to Mr. Melo in an aggregate amount of $500,000 in recognition of exceptional individual performance, as well as a discretionary cash bonus paid to Mr. Melo in the amount of $140,000 in recognition of the value lost on the voiding of certain equity awards granted to him in November 2015 that, when aggregated with other equity awards granted to him in 2015, inadvertently exceeded the annual per-participant award limit contained in the 2010 EIP. Please refer to the "Outstanding Equity Awards as of December 31, 2017" table below for more information regarding the voided awards and "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement for more information regarding the 2010 EIP and proposed amendments thereto being submitted for approval by our stockholders at the annual meeting, including with respect to the annual per-participant award limit thereunder.

(5) Includes $934 for taxes associated with long term disability insurance premiums.

(6) Includes $468 for taxes associated with long term disability insurance premiums.

(7) Includes $758 for taxes associated with long term disability insurance premiums.

(8) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017. The amount shown in the "Salary" column for 2017 represents a partial year's salary (including accrued paid time off) based on his January 4, 2017 departure date.

(9) Includes $444,808 for payments pursuant to our Executive Severance Plan (see "Potential Payments upon Termination and upon Termination Following a Change in Control" below for more information regarding benefits under our Executive Severance Plan) and $492 for Section 401(k) plan employer matching contribution.

(10) Includes $5,300 for Section 401(k) plan employer matching contribution and $468 for taxes associated with long term disability insurance premiums.

(11) Mr. Asadorian joined us on January 6, 2015. The amount shown in the "Salary" column for 2015 represents a partial year's salary based on his January 6, 2015 start date.

(12) Includes $53,842 for relocation stipend in connection with Mr. Asadorian's relocation to our headquarters in Emeryville, California and $3,898 for Section 401(k) plan employer matching contribution.

(13) Ms. Valiasek joined us on January 4, 2017. The amount shown in the "Salary" column for 2017 represents a partial year's salary based on her January 4, 2017 start date.

(14) Ms. Valiasek's annual base salary was increased from $350,000 to $420,000 effective April 1, 2017.

(15) Includes a discretionary cash bonus paid to Ms. Valiasek in the amount of $45,000 in recognition of exceptional individual performance.

(16) Includes $4,310 for Section 401(k) plan employer matching contribution.

(17) Dr. Cherry's annual base salary was increased from $358,750 to $375,000 effective April 1, 2017.

(18) Includes $5,400 for Section 401(k) plan employer matching contribution, $1,080 as a stipend for waiving medical benefits and $1,020 reimbursement for commuting expenses.

(19) Includes $5,300 for Section 401(k) plan employer matching contribution, $1,440 as a stipend for waiving medical benefits and $1,020 reimbursement for commuting expenses.

(20) Mr. Alvarez joined us on October 16, 2017. The amount shown in the "Salary" column for 2017 represents a partial year's salary based on his October 16, 2017 start date.

(21) Includes $240 as a stipend for waiving medical benefits and $156 for taxes associated with long term disability insurance premiums.

(22) Ms. Kelsey joined us on August 7, 2017. The amount shown in the "Salary" column for 2017 represents a partial year's salary based on her August 7, 2017 start date.

(23) Includes $178,976 for relocation stipend in connection with Ms. Kelsey's relocation to our headquarters in Emeryville, California, $55,961 reimbursement for temporary housing and rental car expenses and $2,633 for Section 401(k) plan employer matching contribution.

Grants of Plan-Based Awards in 2017

The following table sets forth information regarding grants of compensation in the form of plan-based awards made during 2017 to our named executive officers.

Name	Grant Date[(1)]	Approval Date of Grant[(1)]	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Units (#)[(3)(4)]	All Other Option Awards: Number of Securities Underlying Options (#)[(4)(5)]	Exercise or Base Price of Option Awards ($/Sh)[(6)]	Grant Date Fair Value of Stock and Option Awards ($)[(7)]
			Threshold ($)[(2)]	Target ($)[(2)]	Maximum ($)[(2)]				
John Melo	—	—	267,625	373,250	948,582	—	—	—	—
John Melo	06/12/2017	06/06/2017	—	—	—	46,666[(8)]	—	—	147,465
John Melo	06/12/2017	06/06/2017	—	—	—	—	20,000[(9)]	3.16	43,930
Kathleen Valiasek	—	—	75,102	104,633	265,704	—	—	—	—
Kathleen Valiasek	01/17/2017	01/10/2017	—	—	—	11,133[(10)]	—	—	115,227
Kathleen Valiasek	01/17/2017	01/10/2017	—	—	—	—	16,666[(11)]	10.35	120,300
Kathleen Valiasek	05/15/2017	05/11/2017	—	—	—	4,666[(8)]	—	—	22,397
Kathleen Valiasek	05/15/2017	05/11/2017	—	—	—	—	2,000[(9)]	4.80	6,696
Joel Cherry	—	—	83,565	116,415	295,455	—	—	—	—
Joel Cherry	05/15/2017	05/11/2017	—	—	—	24,733[(8)]	—	—	118,718
Joel Cherry	05/15/2017	05/11/2017	—	—	—	—	10,600[(9)]	4.80	35,489
Eduardo Alvarez	—	—	63,718	91,026	182,052	—	—	—	—
Eduardo Alvarez	10/23/2017	10/18/2017	—	—	—	70,000[(12)]	—	—	202,300
Eduardo Alvarez	10/23/2017	10/18/2017	—	—	—	—	30,000[(13)]	2.89	62,886
Nicole Kelsey	—	—	36,832	52,282	116,566	—	—	—	—
Nicole Kelsey	08/14/2017	08/10/2017	—	—	—	21,000[(14)]	—	—	52,290
Nicole Kelsey	08/14/2017	08/10/2017	—	—	—	—	9,000[(15)]	2.49	17,077
Raffi Asadorian[(16)]	—	—	—	—	—	—	—	—	—

(1) Our Board has adopted a policy regarding the grant date of equity awards under which the grant date of equity awards generally would be, for awards to ongoing employees, the first business day of the week following the week in which the award was approved by the LDCC or, for new hire awards, the first business day of the week following the later of the week in which the award is approved by the LDCC or the week in which the new hire commences his or her employment.

(2) In March 2017, the LDCC approved a non-equity incentive plan upon which the eligibility amounts reported under "Estimated Possible Payouts Under Non-Equity Incentive Plan Awards" were based. The terms of the plan and actual amounts paid out under the plan are discussed above in this Proxy Statement under "Executive Compensation — Compensation Discussion and Analysis — 2017 Compensation — Cash Bonuses" and the amounts paid out under the plan are included in the "Non-Equity Incentive Plan Compensation" column of the "Summary Compensation Table" above. The estimated possible payouts as of December 31, 2017 shown in this table reflect the potential incentive awards that could have been paid for the fourth quarter and annual period of 2017 at the threshold, target and maximum levels for each individual. Mr. Asadorian was not eligible to participate in the plan because he resigned as our Chief Financial Officer effective January 4, 2017.

(3) Amounts in this column represent RSUs granted under the 2010 EIP. Mr. Asadorian was not granted any RSUs in 2017.

(4) On June 5, 2017, we effected a 1 for 15 reverse stock split of our common stock, par value $0.0001 per share. Unless otherwise noted, all common stock share quantities and per share amounts (such as stock option exercise prices) presented in this Proxy Statement relating to transactions and events occurring prior to the reverse stock split have been retroactively adjusted for the reverse stock split as if the reverse stock split had occurred prior to such transaction or event. Certain share amounts may be slightly different from previously reported due to rounding of fractional shares as a result of the reverse stock split.

(5) Amounts in this column represent stock options granted under the 2010 EIP. Mr. Asadorian was not granted any options in 2017.

(6) The exercise price per share of the stock options listed in the table above is the closing price of our common stock on NASDAQ on the Grant Date, which represents the fair value of our common stock on the same date. RSU awards do not have any exercise price.

(7) Reflects the grant date fair value of each award computed in accordance with FASB ASC Topic 718, excluding the effect of estimated forfeitures. The assumptions made in the valuation of the awards are discussed in Note 12, "Stock-based Compensation" of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

(8) These RSUs have a three-year vesting schedule from a vesting commencement date of May 1, 2017, with one third of the units vesting annually, subject to continued service through each vesting date. Such restricted stock units are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(9) These stock options have a four-year vesting schedule from a vesting commencement date of May 1, 2017, with 25% of the shares subject to the stock options vesting on the first anniversary of the vesting commencement date, and 1/48th of the shares subject to the stock options vesting each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date. Such stock options are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(10) These RSUs have a three-year vesting schedule from a vesting commencement date of January 1, 2017, with one third of the units vesting annually, subject to continued service through each vesting date. Such restricted stock units are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(11) These stock options have a four-year vesting schedule from a vesting commencement date of January 4, 2017, with 20% of the shares subject to the stock options vesting on July 4, 2017, 20% of the shares subject to the stock options vesting on January 4, 2018, and 1/60th of the shares subject to the stock options vesting each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date. Such stock options are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(12) These RSUs have a two-year vesting schedule from a vesting commencement date of October 1, 2017, with one half of the units vesting annually, subject to continued service through each vesting date. Such restricted stock units are subject to acceleration of vesting upon termination of employment, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(13) These stock options have a two-year vesting schedule from a vesting commencement date of October 16, 2017, with 25% of the shares subject to the stock options vesting on the first anniversary of the vesting commencement date, and 1/16th of the shares subject to the stock options vesting each month thereafter until the second anniversary of the vesting commencement date, subject to continued service through each vesting date. Such stock options are subject to acceleration of vesting upon termination of employment, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(14) These RSUs have a three-year vesting schedule from a vesting commencement date of August 1, 2017, with one third of the units vesting annually, subject to continued service through each vesting date.

Such restricted stock units are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(15) These stock options have a four-year vesting schedule from a vesting commencement date of August 7, 2017, with 50% of the shares subject to the stock options vesting on the first anniversary of the vesting commencement date, and $1/72^{nd}$ of the shares subject to the stock options vesting each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date. Such stock options are subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(16) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017. Mr. Asadorian was not granted any plan-based awards in 2017.

In addition, to the restricted stock unit and stock option awards listed in the table above, in connection with the hiring of Mr. Alvarez in October 2017, we agreed, subject to the prior approval by the Board and our stockholders, which approval is being sought at the annual meeting, and implementation, of an amendment to the 2010 EIP to increase the maximum number of shares that any employee may receive in any calendar year under the 2010 EIP pursuant to the grant of awards to at least 250,000 shares, to grant Mr. Alvarez an award of 250,000 restricted stock units (the "Alvarez 2018 Award") on or before the earlier of (i) July 1, 2018 and (ii) our entering into a definitive agreement relating to a proposed change of control (as defined in the company's Executive Severance Plan). The Alvarez 2018 Award, if granted, would fully vest on October 1, 2019. In the event that the number of shares authorized under the 2010 EIP is insufficient to enable us to grant the full Alvarez 2018 Award to Mr. Alvarez on or before the award deadline, then we will grant to Mr. Alvarez a cash-based incentive award designed to provide him with a cash payment on October 1, 2019 (the "Date of Determination") equal to the value Mr. Alvarez would have been entitled to receive if the full Alvarez 2018 Award had been granted, less the value of any portion of the Alvarez 2018 Award actually granted to Mr. Alvarez, in each case measured as of the Date of Determination, which cash-based award would fully vest on the Date of Determination. For more information regarding the 2010 EIP and amendments thereto being proposed for approval at the annual meeting, see "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement. The Alvarez 2018 Award would be subject to acceleration of vesting upon termination of employment, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control," with the amount of the cash-based award, if any, to be determined as of the date of the termination (with the Date of Determination deemed to be the date of such termination for such purpose).

Narrative Disclosure to Summary Compensation and Grants of Plan-Based Awards Tables

The material terms of our named executive officers' annual compensation, including base salaries, discretionary cash bonuses, our equity award granting practices and severance benefits and explanations of compensation decisions for cash and equity compensation during 2017 are described above under "Compensation Discussion and Analysis." As noted below under "Agreements with Executive Officers," except for certain terms contained in their employment offer letters, equity award agreements and participation agreements entered into in connection with our Executive Severance Plan, none of our named executive officers has entered into a written employment agreement with us.

2018 Bonus Plan

In February 2018, the LDCC approved a 2018 cash bonus plan (or the "2018 Bonus Plan") that included the cash bonus plan for our executive officers. The 2018 Bonus Plan provides the following structure for our executive officers, including the continuing named executive officers set forth in this Proxy Statement:

- **General Structure.** The 2018 Bonus Plan provides for funding and payout of cash bonus awards based on quarterly and annual performance during 2018. The total potential funding of the 2018 Bonus Plan for each bonus period is based on our performance under certain metrics set by the

Committee for each quarter and for the year. Payouts under the 2018 Bonus Plan would occur following a review of our results and performance for each quarter and for the year and the executive officers' individual performance results at the end of the year.

- **Funding Target Levels and Performance Metrics.** The total funding possible under the 2018 Bonus Plan is based on a cash value (the "Target Bonus Fund") determined by the executive officers' target bonus levels. Target bonus levels for our executive officers vary by officer, but are generally set between 40% and 100% of annual base salary. The aggregate amount of these target bonuses are the basis for the total funding of the 2018 Bonus Plan. The quarterly and annual funding of the 2018 Bonus Plan is based on achievement of the following company performance metrics for each quarter during 2018 (as determined by the Committee and, in the case of quarterly funding, as applicable for the quarter based on Amyris's operating plan): GAAP revenue (weighted 50%) and gross margin (weighted 50%). For each quarterly period and for the annual period of the 2018 Bonus Plan, "threshold," "target" and "superior" performance levels are set for each performance metric, which performance levels are intended to capture the relative difficulty of achievement of that metric.

- **Funding Calculation.** For each of the four quarterly periods of the 2018 Bonus Plan, the 2018 Bonus Plan allocates 12.5% of the total Target Bonus Fund. For the annual period of the 2018 Bonus Plan, the 2018 Bonus Plan allocates 50% of the total Target Bonus Fund. Funding is based on the weighted average achievement of the performance metrics that achieve at least the "threshold" performance level for a given 2018 Bonus Plan period. If we do not achieve at least a 70% weighted average achievement level of the performance metrics described above for a given 2018 Bonus Plan period ("funding threshold level"), no funding would occur under the 2018 Bonus Plan for such period. If we achieve the funding threshold level, 70% funding would occur. For a weighted average achievement between the funding threshold level and "target" level, a pro rata increase in funding would occur up to 100% of the Target Bonus Fund allocated to such period. For weighted average achievement above the target level, an increase in funding of 1.67% for every 1% above target performance would occur up to 150% of the Target Bonus Fund for the applicable period. In addition, funding for the annual period of the 2018 Bonus Plan is subject to further adjustment based on our achievement of a target for 2018 earnings before interest, tax, depreciation and amortization ("EBITDA"), which, if the EBITDA target is exceeded, would increase the funding for the annual period of the 2018 Bonus Plan by 20% or, if the EBITDA target is not met, would reduce the funding for the annual period of the 2018 Bonus Plan by 20%. If we achieve exactly the EBITDA target, no change to the funding for the annual period of the 2018 Bonus Plan would occur.

- **Payouts.** Any payouts for the quarterly periods of the 2018 Bonus Plan would be the same as the funded level based on company performance (provided the recipient meets eligibility requirements), subject to the final discretion of the Committee. Payouts for the annual period of the 2018 Bonus Plan would be made from the aggregate funded amount in the discretion of the Committee based on company and individual performance, and could range from 0% to 200% of an individual's funded amount for the annual bonus period.

2018 CEO Equity Awards

As described above under "Proposal 5 — Approval of CEO Equity Awards" in this Proxy Statement, in April 2018 the LDCC, with the support of the Board, granted our CEO certain equity awards, subject to stockholder approval of such awards and certain amendments to the 2010 EIP (see "Proposal 3 — Approval of Amendments to the Amyris, Inc. 2010 Equity Incentive Plan" in this Proxy Statement), which approval is being sought at the annual meeting.

Outstanding Equity Awards as of December 31, 2017

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of December 31, 2017.

	Option Awards				Stock Awards	
Name	**Number of Securities Underlying Unexercised Options (#) Exercisable**	**Number of Securities Underlying Unexercised Options (#) Unexercisable**	**Option Exercise Price ($/Sh)**	**Option Expiration Date**	**Number of Shares or Units of Stock That Have Not Vested (#)**	**Market Value of Shares or Units of Stock That Have Not Vested ($)[30]**
John Melo	18,665[1][2][11]	—	58.95	08/25/2018		
	19,866[3][12]	—	306.15	04/20/2020		
	5,600[4][15]	—	402.60	04/15/2021		
	6,666[4][16]	—	57.90	04/09/2022		
	24,066[5][17]	—	43.05	06/03/2023		
	18,333[5][18]	1,667[5][18]	52.65	05/05/2024		
	17,708[5][20]	10,625[5][20]	29.40	06/08/2025		
	3,125[5][21][32]	2,875[5][21][32]	24.45	11/09/2025		
	11,215[5][22]	17,118[5][22]	8.85	05/16/2026		
	—	20,000[5][25]	3.16	06/12/2027		
					76,332[6][19][21][22][25][32]	286,245
Kathleen Valiasek	3,334[6][24]	13,332[6][24]	10.35	01/17/2027		
	—	2,000[5][25]	4.80	05/15/2027		
					15,799[6][23][25]	59,246
Joel Cherry	10,904[1][2][13]	—	64.65	09/14/2019		
	1,333[1][2][14]	—	139.80	01/07/2020		
	1,666[4][15]	—	402.60	04/15/2021		
	1,666[4][16]	—	57.90	04/09/2022		
	11,266[5][17]	—	43.05	06/03/2023		
	5,622[5][18]	511[5][18]	52.65	05/05/2024		
	4,583[5][20]	2,750[5][20]	29.40	06/08/2025		
	3,819[5][21]	3,514[5][21]	24.45	11/09/2025		
	5,278	8,055[5][22]	8.85	05/16/2026		
	—	10,600[5][25]	4.80	05/15/2027		
					37,715[6][19][21][22][25]	141,431
Eduardo Alvarez	—	30,000[7][26]	2.89	10/23/2027		
					70,000[10][27]	262,500
Nicole Kelsey	—	9,000[8][28]	2.49	08/14/2027		
					21,000[6][29]	78,750
Raffi Asadorian[31]	—	—	—	—	—	—

(1) These stock options were granted under the 2005 Stock Option/Stock Issuance Plan to certain of our named executive officers and were immediately exercisable, regardless of vesting schedule.

(2) These stock options vest as to 20% of the shares subject to the stock options on the first anniversary of the vesting commencement date, which is a date fixed by the Board or LDCC when granting equity awards, and as to an additional $1/60^{th}$ of the shares subject to the stock options each month thereafter until the fifth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(3) These stock options vest as to $1/60^{th}$ of the shares subject to the stock options each month from the vesting commencement date until the fifth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(4) These stock options vest at a rate of $1/48^{th}$ of the original number of shares each month from the vesting commencement date until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(5) These stock options vest as to 25% of the shares subject to the stock options on the first anniversary of the vesting commencement date, and as to an additional $1/48^{th}$ of the shares subject to the stock options each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(6) These stock options vest as to 20% of the shares subject to the stock options on the six-month anniversary of the vesting commencement date, as to an additional 20% of the shares subject to the stock options vesting on the first anniversary of the vesting commencement date, and as to an additional $1/60^{th}$ of the shares subject to the stock options each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(7) These stock options vest as to 25% of the shares subject to the stock options on the first anniversary of the vesting commencement date, and as to an additional $1/16^{th}$ of the shares subject to the stock options each month thereafter until the second anniversary of the vesting commencement date, subject to continued service through each vesting date.

(8) These stock options vest as to 50% of the shares subject to the stock options on the first anniversary of the vesting commencement date, and as to an additional $1/72^{nd}$ of the shares subject to the stock options each month thereafter until the fourth anniversary of the vesting commencement date, subject to continued service through each vesting date.

(9) These restricted stock units vest as to $1/3^{rd}$ of the units annually from the vesting commencement date until the third anniversary of the vesting commencement date, subject to continued service through each vesting date.

(10) These restricted stock units vest as to one half of the units annually from the vesting commencement date until the second anniversary of the vesting commencement date, subject to continued service through each vesting date.

(11) The vesting commencement date of this award was June 3, 2008.

(12) The vesting commencement date of this award was April 20, 2010.

(13) The vesting commencement date of this award was November 3, 2008.

(14) The vesting commencement date of this award was October 27, 2009.

(15) The vesting commencement date of this award was January 1, 2011.

(16) The vesting commencement date of this award was April 1, 2012.

(17) The vesting commencement date of this award was April 1, 2013.

(18) The vesting commencement date of this award is April 1, 2014. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(19) The vesting commencement date of this award is June 1, 2015. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(20) The vesting commencement date of this award is June 8, 2015. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(21) The vesting commencement date of this award is November 1, 2015. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(22) The vesting commencement date of this award is May 1, 2016. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(23) The vesting commencement date of this award is January 1, 2017. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(24) The vesting commencement date of this award is January 4, 2017. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(25) The vesting commencement date of this award is May 1, 2017. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(26) The vesting commencement date of this award is October 16, 2017. This award is subject to acceleration of vesting upon termination of employment, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(27) The vesting commencement date of this award is October 1, 2017. This award is subject to acceleration of vesting upon termination of employment, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(28) The vesting commencement date of this award is August 7, 2017. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(29) The vesting commencement date of this award is August 1, 2017. This award is subject to acceleration of vesting upon termination of employment following a change of control, as further described below under "Potential Payments upon Termination and upon Termination Following a Change in Control."

(30) Calculated by multiplying the number of units that had not vested as of December 31, 2017 by $3.75, the closing price of our common stock on NASDAQ on December 29, 2017.

(31) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017. Upon the termination of his employment, Mr. Asadorian's outstanding equity awards ceased vesting: all of his vested options remained exercisable for a period of three months after January 4, 2017, and all of his unvested options and RSUs were forfeited.

(32) A portion of this award, when aggregated with other equity awards granted to Mr. Melo in 2015, inadvertently exceeded the annual per-participant award limit contained in our 2010 Equity Incentive Plan (the "Plan Limit") and accordingly was void. On November 9, 2015, Mr. Melo was granted an award of 30,000 stock options and 20,000 restricted stock units, of which 24,000 stock options and 16,000 restricted stock units exceeded the Plan Limit. In June 2017, the LDCC voided the portion of the awards that exceeded the Plan Limit, which included 9,500 vested stock options, 14,500 unvested stock options and 10,666 restricted stock units. In addition, in June 2017 Mr. Melo returned 3,330 of the 4,162 shares of common stock that he received upon the vesting of one third of the original restricted stock units subject to the award on November 1, 2016 to the company, representing a portion of such vested restricted stock units that exceeded the Plan Limit and were void, with the remaining 2,004 shares that exceeded the Plan Limit having been withheld by the company upon vesting to satisfy Mr. Melo's tax withholding obligation. In recognition of the value lost on the voiding of these awards, in June 2017 Amyris paid a cash bonus of $140,000 to Mr. Melo, as discussed above under "Executive Compensation — Compensation Discussion and Analysis — 2017 Compensation — Cash Bonuses."

Option Exercises and Stock Vested During 2017

The following table sets forth information regarding the exercise of options and vesting of RSUs held by our named executive officers during 2017.

	Option Awards		Stock Awards	
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting ($)[1]
John Melo	—	—	26,888	166,346
Kathleen Valiasek	—	—	—	—
Joel Cherry	—	—	10,582	65,358
Eduardo Alvarez	—	—	—	—
Nicole Kelsey	—	—	—	—
Raffi Asadorian[2]	—	—	4,444	48,662

(1) Value realized on vesting is calculated by multiplying the number of units vesting by the closing price of our common stock on NASDAQ on the date of vesting (or most recent closing price in the event the date of vesting falls on a non-trading day).

(2) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017. Upon the termination of his employment, Mr. Asadorian's outstanding equity awards ceased vesting: all of his vested options remained exercisable for a period of three months after January 4, 2017, and all of his unvested options and RSUs were forfeited.

Pension Benefits

None of our named executive officers participates in, or has an account balance in, a qualified or non-qualified defined benefit plan sponsored by us.

Non-Qualified Deferred Compensation

None of our named executive officers participates in, or has account balances in, a traditional non-qualified deferred compensation plan or any other deferred compensation plan maintained by us.

Potential Payments upon Termination and upon Termination Following a Change in Control

In November 2013, the LDCC adopted the Amyris, Inc. Executive Severance Plan (or the "Severance Plan"). The Severance Plan had an initial term of 36 months and thereafter will be automatically extended for successive additional one-year periods unless we provide six months' notice of non-renewal prior to the end of the applicable term. In May 2016 and May 2017, the LDCC reviewed the terms of the Severance Plan and elected to allow it to automatically renew upon the expiration of its initial term in November 2016 and renewal term in November 2017, respectively. The LDCC adopted the Severance Plan to provide a consistent and updated severance framework for our executive officers that aligns with peer practices. All continuing named executive officers, and all senior level employees of Amyris that are eligible to participate in the Severance Plan (or, collectively, the "participants"), have entered into participation agreements to participate in the Severance Plan. The benefits under the Severance Plan supersede and replace any rights the participants have in connection with any change of control or severance benefits contained in such participants' offer letters, equity award agreements or any other agreement that specifically relates to accelerated vesting of equity awards. Upon the execution of a participation agreement, the participants are eligible for the following benefits under the Severance Plan.

Upon termination by us of a participant's employment other than for "cause" (as defined below) or the death or disability of the participant, or upon resignation by the participant of such participant's employment for "good reason" (as defined below) (collectively referred to as an "Involuntary Termination"), the participant becomes eligible for the following severance benefits:

- 12 months of base salary continuation (18 months for the Chief Executive Officer)
- 12 months of health benefits continuation (18 months for the Chief Executive Officer)

Upon an Involuntary Termination of a participant at any time within the period beginning three months before and ending 12 months after a change of control (as defined below) of the company, the participant becomes eligible for the following severance benefits:

- 18 months of base salary continuation (24 months for the Chief Executive Officer)
- 18 months of health benefits continuation (including for the Chief Executive Officer)
- Automatic acceleration of vesting and exercisability of all outstanding equity awards then held by the participant

As noted in the table below, Mr. Alvarez's participation agreement provides that in the event he undergoes an Involuntary Termination (whether before or after a change of control), the vesting and exercisability of certain of his equity awards will accelerate.

In each case, the benefits are contingent upon the participant complying with various requirements, including non-solicitation and confidentiality obligations to us, and on execution, delivery and non-revocation by the participant of a standard release of claims in favor of the company within 60 days of the participant's separation from service (as defined in Section 409A of the U.S. Internal Revenue Code, or the "Code"). The benefits are subject to forfeiture if, among other things, the participant breaches any of his or her obligations under the Severance Plan and related agreements. The benefits are also subject to adjustment and deferral based on applicable tax rules relating to change-in-control payments and deferred compensation.

Under the Severance Plan, "cause" generally encompasses the participant's: (i) gross negligence or intentional misconduct; (ii) failure or inability to satisfactorily perform any assigned duties; (iii) commission of any act of fraud or misappropriation of property or material dishonesty; (iv) conviction of a felony or a crime involving moral turpitude; (v) unauthorized use or disclosure of the confidential information or trade secrets of Amyris or any of our affiliates that use causes material harm to Amyris; (vi) material breach of contractual obligations or policies; (vii) failure to cooperate in good faith with investigations; or (viii) failure to comply with confidentiality or intellectual property agreements. Prior to any determination that "cause" under the Severance Plan has occurred, we are generally required to provide notice to the participant specifying the event or actions giving rise to such determination and a 10-day cure period (30 days in the case of failure or inability to satisfactorily perform any assigned duties).

Under the Severance Plan, "good reason" generally means: (i) a material reduction of the participant's role at Amyris; (ii) certain reductions of base salary; (iii) a workplace relocation of more than 50 miles; or (iv) our failure to obtain the assumption of the Severance Plan by a successor. In order for a participant to assert good reason for his or her resignation, he or she must provide us written notice within 90 days of the occurrence of the condition and allow us 30 days to cure the condition. Additionally, if we fail to cure the condition within the cure period, the participant must terminate employment with us within 30 days of the end of the cure period.

Under the Severance Plan, a "change of control" will generally be deemed to occur if (i) Amyris completes a merger or consolidation after which Amyris's stockholders before the merger or consolidation do not own at least a majority of the outstanding voting securities of the acquiring or surviving entity after such merger or consolidation, (ii) Amyris sells all or substantially all of its assets, (iii) any person or entity acquires more than 50% of Amyris's outstanding voting securities or (iv) a majority of Amyris's directors cease to be directors over any one-year period.

To the extent any severance benefits to a named executive officer constitute deferred compensation subject to Section 409A of the Code and such officer is deemed a "specified employee" under Section 409A, we will defer payment of such benefits to the extent necessary to avoid adverse tax treatment.

Mr. Asadorian became eligible for the non-change of control related benefits under the Severance Plan in connection with his separation from us in January 2017, as described in the "Summary Compensation Table" above.

The following table summarizes the potential amounts payable to each of our named executive officers under the Severance Plan upon an Involuntary Termination (i) other than in connection with a change of control of the company and (ii) in connection with a change of control of the company, assuming in each case, other than for Mr. Asadorian (who resigned from the company effective January 4, 2017 and became eligible for the non-change of control related benefits under the Severance Plan in connection therewith), that such Involuntary Termination occurred on December 31, 2017.

	Involuntary Termination Not in Connection with a Change of Control			Involuntary Termination In Connection with a Change of Control		
Name	**Base Salary ($)**	**Continuing Health Benefits ($)**	**Value of Accelerated Options or Shares ($)(1)**	**Base Salary ($)**	**Continuing Health Benefits ($)**	**Value of Accelerated Options or Shares ($)(2)**
John Melo	900,000	31,498	—	1,200,000	31,498	298,045
Kathleen Valiasek	420,000	14,675	—	630,000	22,013	59,246
Joel Cherry	375,000	14,675	—	562,500	22,013	141,431
Eduardo Alvarez(3)	400,000	—	288,300(2)	600,000	—	288,300
Nicole Kelsey	395,000	12,269	—	592,500	18,404	90,090
Raffi Asadorian(4)	—	—	—	—	—	—

(1) Other than with respect to certain equity awards granted or proposed to be granted to Mr. Alvarez, as noted below, accelerated vesting is only applicable in the event of an Involuntary Termination in connection with a change of control.

(2) With respect to outstanding options as of December 31, 2017, calculated by multiplying the number of shares underlying unvested stock options that would vest as a result of an Involuntary Termination following a change of control by the excess of $3.75, the closing price of our common stock on NASDAQ on December 29, 2017, over the exercise price of the stock options. Unvested stock options with exercise prices higher than $3.75 are excluded from the calculation. With respect to outstanding restricted stock units as of December 31, 2017, calculated by multiplying the number of outstanding unvested restricted stock units that would vest as a result of an Involuntary Termination following a change of control by $3.75, the closing price of our common stock on NASDAQ on December 29, 2017.

(3) Mr. Alvarez's participation agreement provides that in the event that following the grant and prior to full vesting of Mr. Alvarez's new hire equity awards (see the "Grants of Plan-Based Awards in 2017" table above for information regarding Mr. Alvarez's new hire equity awards) and the Alvarez 2018 Award (please refer to "Compensation Discussion and Analysis — 2017 Compensation — Equity Awards" for more information regarding the Alvarez 2018 Award), including the cash-based award, if any (collectively, the "Alvarez Equity Awards"), Mr. Alvarez's employment with the company terminates in circumstances entitling him to severance benefits under the Severance Plan (whether before or after a change of control), then upon such termination the vesting and exercisability of each Alvarez Equity Award shall be automatically accelerated in full, with the amount of the cash-based award, if any, to be determined as of the date of the termination. As of December 31, 2017, the Alvarez 2018 Award had not been granted.

(4) Mr. Asadorian resigned as our Chief Financial Officer effective January 4, 2017. Mr. Asadorian became eligible for the non-change of control related benefits under the Severance Plan in connection with his separation from us, as described in the "Summary Compensation Table" above.

Pay Ratio Disclosure

In August 2015, pursuant to a mandate of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Securities and Exchange Commission adopted a rule requiring annual disclosure of the ratio of the median of the annual total compensation of all employees of the company, other than its principal executive officer, to the total annual compensation of the company's principal executive officer. The Company's principal executive officer is Mr. Melo, our CEO.

For 2017:

- the annual total compensation of our median employee was $95,815; and
- the annual total compensation of Mr. Melo, as reported in the "Summary Compensation Table" above, was $1,993,444.

Thus, for 2017, the ratio of our CEO's annual total compensation to our median employee's annual total compensation was approximately 21 to 1. This ratio is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K.

In determining the median of the annual total compensation of all employees of the company (other than Mr. Melo), we prepared a list of all employees as of December 31, 2017. We then calculated the annual cash compensation (base salary and actual and target bonus) of our employees as of that date for the 12-month period from January 1, 2017 through December 31, 2017. We did not include any contractors or other non-employee workers in our employee population. Salaries and wages were annualized for permanent employees who were not employed for the full year of 2017. We used exchange rates in effect as of December 31, 2017 to convert the base salaries and other compensation amounts of our non-U.S. employees to U.S. dollars. We did not make any cost-of-living adjustments.

Using this approach, we selected the individual at the median of our employee population. We then calculated total compensation for this individual using the same methodology we use for our named executive officers as set forth in the "Summary Compensation Table" above.

Agreements with Executive Officers

We do not have formal employment agreements with any of our named executive officers. The initial compensation of each named executive officer was set forth in an employment offer or promotion letter that we executed with such executive officer at the time his or her employment with us commenced (or at the time of his promotion, as the case may be). Each employment offer letter provides that the named executive officer's employment is "at will."

As a condition to their employment, our named executive officers entered into non-competition, non-solicitation and proprietary information and inventions assignment agreements. Under these agreements, each named executive officer has agreed (i) not to solicit our employees during her or his employment and for a period of 12 months after the termination of his or her employment, (ii) not to compete with us or assist any other person to compete with us during her or his employment, and (iii) to protect our confidential and proprietary information and to assign to us intellectual property developed during the course of his or her employment.

See above under "Executive Compensation — Potential Payments upon Termination and upon Termination Following a Change in Control" for a description of potential payments to our named executive officers upon termination of employment, including in connection with a change of control of the company.

Limitation of Liability and Indemnification

Our certificate of incorporation limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the Delaware General Corporation Law ("DGCL"), and provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty or other duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors for:

- any breach of the director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- voting or assenting to unlawful payments of dividends, stock repurchases or other distributions; or
- any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the DGCL.

In addition, our bylaws provide that we must indemnify our directors and officers to the fullest extent permitted by the DGCL, and we must advance expenses, including attorneys' fees, to our directors and officers, in connection with legal proceedings related to their status or service, subject to very limited exceptions.

We maintain an insurance policy that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of the Board.

We have entered into indemnification agreements with each of our directors and executive officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements require us, among other things, to indemnify our directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by the directors and executive officers in investigating or defending against any such action, suit or proceeding. We believe that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

As previously disclosed in our filings with the Securities and Exchange Commission, Amyris and our Chief Executive Officer, John Melo, and Chief Financial Officer, Kathleen Valiasek, were named parties to a securities class action complaint filed in April 2017, which complaint was voluntarily dismissed without prejudice in September 2017. Subsequent to the filing of the securities class action complaint, four separate purported shareholder derivative complaints were filed based on substantially the same facts as the securities class action complaint and name Amyris as a nominal defendant as well as a number of the company's current officers and directors as additional defendants. The lawsuits seek to recover, on the company's behalf, unspecified damages purportedly sustained by the company in connection with allegedly misleading statements and/or omissions made in connection with the company's securities filings, as well as a series of changes to the company's corporate governance policies, restitution to the company from the individual defendants, and an award of attorneys' fees. In the event that liability is found or a financial settlement is reached with respect to such legal proceedings, Mr. Melo, Ms. Valiasek or our other officers or directors could seek indemnification from Amyris. We are not presently aware of any other pending litigation or proceeding involving any person who is or was one of our directors, officers, employees or other agents or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, policies and agreements, we have been informed that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Director Compensation

Mr. Melo did not receive any compensation in connection with his service as a director due to his status as an employee of the company. The compensation that we pay to Mr. Melo is discussed in the "Executive Compensation" section of this Proxy Statement.

Director Compensation for 2017

During the fiscal year ended December 31, 2017, our non-employee directors who served during 2017 received the compensation set forth below.

Name	Fees Earned or Paid in Cash ($)(1)	Stock Awards ($)(2)(14)	Option Awards ($)(2)(14)	All Other Director Compensation ($)	Total ($)(15)
John Doerr(3)	50,923	4,453	5,190	—	60,566
Geoffrey Duyk(4)	23,750	—	—	—	23,750
Philip Eykerman(5)(6)	24,835	13,153	14,262	—	52,250
Margaret Georgiadis(7)	8,333	—	—	—	8,333
Christoph Goppelsroeder(8)	6,522	—	—	—	6,522
Abraham Klaeijsen(9)	33,587	4,453	5,190	—	43,230
Frank Kung(10)(11)	6,522	6,380	9,481	—	22,383
Carole Piwnica	54,500	4,453	5,190	—	64,143
Fernando de Castro Reinach	47,500	4,453	5,190	—	57,143
HH Sheikh Abdullah bin Khalifa Al Thani	40,000	4,453	5,190	—	49,643
Christophe Vuillez(12)	40,000	—	—	—	40,000
R. Neil Williams	70,000	4,453	5,190	—	79,643
Patrick Yang(13)	43,104	4,453	5,190	—	52,747

(1) Reflects board, committee chair and committee member retainer fees earned during 2017.

(2) The amounts in the "Stock Awards" and "Option Awards" columns reflect the aggregate grant date fair value of such awards computed in accordance with FASB ASC Topic 718. The assumptions made in the valuation of the awards are discussed in Note 12, "Stock-based Compensation" of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017. These amounts do not correspond to the actual value that may be recognized by our non-employee directors.

(3) Mr. Doerr resigned from the LDCC effective May 19, 2017, and the fees earned by him in 2017 include retainer fees earned for the portion of 2017 that he served on the LDCC.

(4) In July 2017, Dr. Duyk, notified us that, effective July 1, 2017, he had elected to decline all cash and equity compensation accruing, payable or issuable to him under our non-employee director compensation program (described in "Narrative to Director Compensation Tables" below), until such time as he revoked such election in a signed writing delivered to an officer of the company. As of the date of this Proxy Statement, Dr. Duyk had not revoked such election.

(5) Mr. Eykerman was appointed to our Board on May 18, 2017, and the fees earned by him in 2017 represent retainer fees earned for the portion of 2017 that he served on our Board. All cash compensation earned by Mr. Eykerman during 2017 was paid directly to DSM, which designated Mr. Eykerman to serve on our Board, and he did not receive any cash benefit from such payments.

(6) Upon joining our Board in May 2017, Mr. Eykerman received an initial award under the 2010 EIP of an option to purchase 3,000 shares of our common stock and 2,000 RSUs. This award was contemplated by our non-employee director compensation program (described in "Narrative to Director Compensation Tables" below). The option award vests in equal quarterly installments over three years and the RSU award vests in three equal annual installments, in each case from a vesting commencement date of May 1, 2017. The grant date fair value for these awards, as calculated under FASB ASC Topic 718, is as shown:

Name	Date of Grant	Number of Shares of Stock or Units (#)	Number of Securities Underlying Options (#)	Exercise Price Per Share ($)	Stock Awards ($)(2)	Option Awards ($)(2)
Philip Eykerman	5/22/2017	—	3,000	4.35	—	9,072
Philip Eykerman	5/22/2017	2,000	—	—	8,700	—

(7) Ms. Georgiadis resigned from our Board effective March 16, 2017, at which time all of her outstanding equity awards ceased vesting: all of her vested options remained exercisable for a period of three months after March 16, 2017, and all of her unvested options and RSUs were forfeited.

(8) Mr. Goppelsroeder was appointed to our Board on November 2, 2017, and the fees earned by him in 2017 represent retainer fees earned for the portion of 2017 that he served on our Board. All cash compensation earned by Mr. Goppelsroeder during 2017 was paid directly to DSM, which designated Mr. Goppelsroeder to serve on our Board, and he did not receive any cash benefit from such payments. In addition, Mr. Goppelsroeder declined the initial equity awards granted to him pursuant to our non-employee director compensation program, without prejudice to future awards.

(9) Mr. Klaeijsen resigned from our Board effective November 2, 2017, at which time all of his outstanding equity awards ceased vesting: all of his vested options remained exercisable for a period of three months after November 2, 2017, and all of his unvested options and RSUs were forfeited.

(10) Dr. Kung was appointed to our Board on November 2, 2017, and the fees earned by him in 2017 represent retainer fees earned for the portion of 2017 that he served on our Board. All cash compensation earned by Dr. Kung during 2017 was paid directly to Vivo, which designated Dr. Kung to serve on our Board, and Dr. Kung did not receive any cash benefit from such payments.

(11) Upon joining our Board in November 2017, Dr. Kung received an initial award under the 2010 EIP of an option to purchase 3,000 shares of our common stock and 2,000 RSUs. This award was contemplated by our non-employee director compensation program (described in "Narrative to Director Compensation Tables" below). The option award vests in equal quarterly installments over three years and the RSU award vests in three equal annual installments, in each case from a vesting commencement date of November 1, 2017. The grant date fair value for these awards, as calculated under FASB ASC Topic 718, is as shown:

Name	Date of Grant	Number of Shares of Stock or Units (#)	Number of Securities Underlying Options (#)	Exercise Price Per Share ($)	Stock Awards ($)(2)	Option Awards ($)(2)
Frank Kung	11/6/2017	—	3,000	3.19	—	9,481
Frank Kung	11/6/2017	2,000	—	—	6,380	—

Pursuant to an agreement between Dr. Kung and Vivo, Dr. Kung has agreed, subject to certain conditions and exceptions, to remit the equity compensation he receives under our non-employee director compensation program to Vivo if and when such equity compensation becomes vested and/or exercised.

(12) All cash compensation earned by Mr. Vuillez during 2017 was paid directly to Total, which designated Mr. Vuillez to serve on our Board, and he did not receive any cash benefit from such payments. In addition, Mr. Vuillez has to date declined each equity award granted to him pursuant to our non-employee director compensation program, without prejudice to future awards.

(13) Dr. Yang was appointed to the LDCC on May 18, 2017, and the fees earned by him in 2017 include retainer fees earned for the portion of 2017 that he served on the LDCC.

(14) In August 2017, each of our non-employee directors other than Dr. Duyk and Mr. Vuillez (and excluding Ms. Georgiadis, who resigned from our Board in March 2017, and Messrs. Goppelsroeder and Kung, who each joined our Board in November 2017) received an annual award under the 2010 EIP of an option to purchase 1,733 shares of our common stock and 1,133 RSUs. These awards were contemplated by our non-employee director compensation program (described in "Narrative to Director Compensation Tables" below). These option and RSU awards will vest in full on August 2, 2018 (subject to continued service through such date). The grant date fair value of these awards, as calculated under FASB ASC Topic 718, is as shown:

Name	Date of Grant	Number of Shares of Stock or Units (#)	Number of Securities Underlying Options (#)	Exercise Price Per Share ($)	Stock Awards ($)(2)	Option Awards ($)(2)
John Doerr	8/2/2017	—	1,733	3.93	—	5,190
John Doerr	8/2/2017	1,133	—	—	4,453	—
Philip Eykerman	8/2/2017	—	1,733	3.93	—	5,190
Philip Eykerman	8/2/2017	1,133	—	—	4,453	—
Abraham Klaeijsen(9)	8/2/2017	—	1,733	3.93	—	5,190
Abraham Klaeijsen(9)	8/2/2017	1,133	—	—	4,453	—
Carole Piwnica	8/2/2017	—	1,733	3.93	—	5,190
Carole Piwnica	8/2/2017	1,133	—	—	4,453	—
Fernando de Castro Reinach	8/2/2017	—	1,733	3.93	—	5,190
Fernando de Castro Reinach	8/2/2017	1,133	—	—	4,453	—
HH Sheikh Abdullah bin Khalifa Al Thani	8/2/2017	—	1,733	3.93	—	5,190
HH Sheikh Abdullah bin Khalifa Al Thani	8/2/2017	1,133	—	—	4,453	—
R. Neil Williams	8/2/2017	—	1,733	3.93	—	5,190
R. Neil Williams	8/2/2017	1,133	—	—	4,453	—
Patrick Yang	8/2/2017	—	1,733	3.93	—	5,190
Patrick Yang	8/2/2017	1,133	—	—	4,453	—

(15) As of December 31, 2017, the non-employee directors who served during 2017 held the following outstanding equity awards:

Name	Outstanding Options (Shares)	Outstanding Stock Awards (Units)
John Doerr	6,799	1,133
Geoffrey Duyk(4)	4,666	—
Philip Eykerman(6)	4,733	3,333
Margaret Georgiadis(7)	—	—
Christoph Goppelsroeder(8)	—	—
Abraham Klaeijsen(9)	3,466	—
Frank Kung(11)	3,000	2,000
Carole Piwnica	6,799	1,133
Fernando de Castro Reinach	6,799	1,133
HH Sheikh Abdullah bin Khalifa Al Thani	6,399	1,133
Christophe Vuillez(12)	—	—
R. Neil Williams	5,999	1,133
Patrick Yang	13,599(16)	1,133

(16) Includes an option to purchase 8,000 shares of our common stock, which Dr. Yang received for consulting work provided to us in 2013 – 2014 prior to his appointment to our Board.

Narrative to Director Compensation Tables

In December 2010, our Board adopted a non-employee director compensation program that took effect on January 1, 2011. In February 2015, due to the commitment required for the role and consistent with similarly situated companies, our Board approved an increase to the annual cash retainer payable to the chair of the Audit Committee from $15,000 to $30,000, effective January 1, 2015. In November 2015, following a review with Compensia, the LDCC recommended to our Board that it increase the equity component of the non-employee director compensation program to provide for awards at approximately the 50th percentile of our competitive market, as determined based on the Peer Group. In December 2015, our Board approved an increase to the equity component of the non-employee director compensation program, which had previously consisted of an initial award upon joining our Board of an option to purchase 1,333 shares of our common stock and an annual award consisting of an option to purchase 400 shares of our common stock and 200 RSUs. In October 2016, the LDCC further recommended to our Board that it add an annual retainer for the position of non-executive Board chair in the form of an award of 2,333 RSUs to the non-employee director compensation program, which our Board approved in November 2016. Under our current non-employee director compensation program, in each case subject to final approval by the Board with respect to equity awards:

- Each non-employee director receives an annual cash retainer of $40,000, an initial award upon joining the Board consisting of an option to purchase 3,000 shares of our common stock and 2,000 RSUs, and an annual award consisting of an option to purchase 1,733 shares of our common stock and 1,133 RSUs. The initial option award vests in equal quarterly installments over three years, the initial RSU award vests in equal annual installments over three years, and the annual option and RSU awards become fully vested after one year (in each case subject to continued service through the applicable vesting date).

- The non-executive Board chair, if any, receives an additional annual award of 2,333 RSUs. The award becomes fully vested after one year (subject to continued service through the vesting date).

- The chair of the Audit Committee receives an additional annual cash retainer of $30,000.

- The chair of the LDCC receives an additional annual cash retainer of $10,000.

- The chair of the Nominating and Governance Committee receives an additional annual cash retainer of $9,000.

- Audit Committee, LDCC and Nominating and Governance Committee members other than the chair receive an additional annual cash retainer of $7,500, $5,000 and $4,500, respectively.

In general, all of the retainers described above are paid quarterly in arrears. In cases where a non-employee director serves for part of the year in a capacity entitling him or her to a retainer payment, the retainer is prorated to reflect his or her period of service in that capacity. Non-employee directors are also eligible for reimbursement of their expenses incurred in attending Board and committee meetings.

Compensation Committee Interlocks and Insider Participation

The members of the Leadership Development and Compensation Committee during 2017 were John Doerr, Carole Piwnica and Patrick Yang. None of these directors was an officer or employee of Amyris or any of our subsidiaries during 2017, nor are any of these directors former officers of Amyris or any of our subsidiaries. Except as set forth under “Transactions with Related Persons” below, none of these directors has any relationships with us of the type that are required to be disclosed under Item 404 of Regulation S-K. None of our executive officers has served as a member of the board of directors or as a member of the compensation or similar committee of any entity that has one or more executive officers who have served on our Board or Leadership Development and Compensation Committee during 2017. Mr. Doerr and Ms. Piwnica may be deemed to have interests in certain transactions with us, as more fully described in “Transactions with Related Persons” below.

Transactions with Related Persons

The following is a description of each transaction since the beginning of 2017, and each currently proposed transaction, in which:

- we have been or are to be a participant;
- the amount involved exceeds $120,000; and
- any of our directors, executive officers or holders of more than 5% of any class of our capital stock at the time of the transactions in issue, or any immediate family member of or person sharing the household with any of these individuals, had or will have a direct or indirect material interest.

Preferred Stock Issuance

In May 2017, we sold 22,140 shares of our Series A 17.38% Convertible Preferred Stock, par value $0.0001 per share, 65,203.8756 shares of our Series B 17.38% Convertible Preferred Stock, par value $0.0001 per share (the "Series B Preferred Stock"), as well as certain warrants to purchase common stock to certain investors in a private placement exempt from registration under the Securities Act pursuant to a Securities Purchase Agreement, dated as of May 8, 2017, between Amyris and certain investors named therein. The Series B Preferred Stock and warrants relating thereto were sold to the purchasers thereof in exchange for (i) aggregate cash consideration of $25 million and (ii) the cancellation of approximately $40.2 million of outstanding indebtedness (including accrued interest thereon) owed by us to such purchasers. The investors purchasing shares of the Series B Preferred Stock include existing stockholders of Amyris affiliated with certain members of our Board of Directors: Foris Ventures, LLC ("Foris", an owner of greater than five percent of our outstanding common stock and an entity affiliated with director John Doerr of Kleiner Perkins Caufield & Byers, a current stockholder), which agreed to purchase 30,728.589 shares of Series B Preferred Stock and warrants to purchase 4,877,386 shares of common stock; Naxyris S.A. ("Naxyris", an investment vehicle owned by Naxos Capital Partners SCA Sicar; director Carole Piwnica is Director of NAXOS UK, which is affiliated with Naxos Capital Partners SCA Sicar), which agreed to purchase 2,333.216 shares of Series B Preferred Stock and warrants to purchase 370,404 shares of common stock; and DSM International B.V. (together with its affiliates, "DSM"; we have a commercial and financial relationship with DSM, which is an owner of greater than five percent of our outstanding common stock and which has the right to designate two members of our Board of Directors), which agreed to purchase 25,000 shares of Series B Preferred Stock and warrants to purchase 3,968,116 shares of common stock. DSM purchased its shares of Series B Preferred Stock and warrants in exchange for $25 million in cash, and Foris and Naxyris purchased their respective shares of Series B Preferred Stock and warrants in exchange for the cancellation of existing indebtedness of the company held by such entities: Foris agreed to exchange an aggregate principal amount of $27.0 million of indebtedness, plus accrued interest thereon, issued to Foris by the Company on February 12, 2016, June 24, 2016 and October 21, 2016; and Naxyris agreed to exchange an aggregate principal amount of $2.0 million of indebtedness, plus accrued interest thereon, issued to Naxyris by the Company on February 15, 2016.

Agreements with DSM

Financing Transactions

See above under "Preferred Stock Issuance."

On August 7, 2017, we issued 25,000 shares of Series B Preferred Stock and warrants to purchase 3,968,116 shares of common stock to DSM in exchange for $25 million in cash in a private placement exempt from registration under the Securities Act pursuant to a Securities Purchase Agreement, dated as of August 2, 2017 (the "DSM Purchase Agreement"), between us and DSM (the "August 2017 DSM Offering"). In addition, on August 7, 2017, Amyris and DSM entered into an Amended and Restated Stockholder Agreement with DSM providing for certain rights to DSM, including the right to designate two members of the Amyris Board of Directors, pre-emptive rights, registration rights, governance rights and commercial rights.

In connection with the issuance of Series B Preferred Stock and warrants to DSM in May and August 2017, we entered into a Stockholder Agreement with DSM (as amended and restated, the "DSM Stockholder Agreement") setting forth certain rights and obligations of DSM and Amyris. Under the DSM Stockholder Agreement, DSM has the right to designate two directors selected by DSM, subject to certain restrictions, to our Board of Directors; provided, that (i) DSM will only have the right to designate one director at such time as DSM beneficially owns less than 10% of our outstanding voting securities and (ii) DSM will no longer have the right to designate any director at such time as DSM beneficially owns less than 4.5% of our outstanding voting securities. In addition, for as long as there is a DSM director serving on our Board of Directors, we will not engage in certain commercial or financial transactions or arrangements without the consent of any then-serving DSM director. Under the DSM Stockholder Agreement, DSM also has certain exclusive negotiating rights in connection with certain future commercial projects and arrangements, whereby DSM will have a 60-day negotiation period with respect to any such projects, as well as a right to use a portion of our manufacturing capacity for toll manufacturing of DSM's products, subject to certain conditions. Furthermore, DSM has the right to purchase additional shares of our capital stock in connection with a sale of equity or equity-linked securities in a capital raising transaction for cash, subject to certain exceptions, to maintain its proportionate ownership percentage in Amyris. Pursuant to the DSM Stockholder Agreement, DSM agreed not to sell or transfer any of the Series B Preferred Stock or warrants purchased by DSM in May and August 2017, or any shares of common stock issuable upon conversion or exercise thereof, other than to its affiliates, without our consent through May 2018 and to any competitor of Amyris thereafter. DSM also agreed that, subject to certain exceptions, until three months after there is no DSM director on our Board of Directors, DSM will not, without the prior consent of our Board of Directors, acquire common stock or rights to acquire common stock that would result in DSM beneficially owning more than 33% of our outstanding voting securities at the time of acquisition. Under the DSM Stockholder Agreement, we agreed to use its commercially reasonable efforts to register, via one or more registration statements filed with the Securities and Exchange Commission (the "SEC") under the Securities Act, the resale by DSM of the shares of common stock issuable upon conversion or exercise of the securities purchased by DSM in May and August 2017.

In addition, pursuant to the DSM Stockholder Agreement, we and DSM agreed to negotiate in good faith regarding an agreement concerning the development of certain products in the Health and Nutrition field and, in the event that the parties did not reach such agreement prior to 90 days after the closing of the August 2017 DSM Offering (the "August 2017 DSM Closing"), (a) certain exclusive negotiating rights granted to DSM in connection with the entry into the DSM Stockholder Agreement would expire and (b) on the first anniversary of the August 2017 DSM Closing and each subsequent anniversary thereof, we would make a $5 million cash payment to DSM, provided that the aggregate amount of such payments would not exceed $25 million. In September 2017, we and DSM entered into such agreement, and in connection therewith an intellectual property escrow agreement relating to certain intellectual property licenses granted to DSM upon the August 2017 DSM Closing became effective.

For more information regarding the August 2017 DSM Offering, please refer to "Proposal 6 — Approval of Certain Anti-Dilution Provisions in, and the Issuance of Shares of our Common Stock upon the Exercise of, Warrants issued in Securities Offerings Completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d)" in this Proxy Statement.

Quota Purchase Agreement

On December 28, 2017, we sold all of the quotas of capital stock of Amyris Brasil Ltda. ("AB") to DSM pursuant to a Quota Purchase Agreement dated as of November 17, 2017 (the "QPA"). Upon the closing of the transaction, DSM paid us total consideration of approximately $33 million in cash for the quotas of capital stock of AB (the "Purchase Price"), which Purchase Price is subject to certain post-closing working capital adjustments. In addition, DSM will pay to us certain additional amounts contingent on future Brazilian tax savings realized by DSM in connection with its purchase of AB (together with the Purchase Price, the "Purchase Consideration"). We used $12.6 million of the proceeds from the Purchase Price to repay certain indebtedness of AB outstanding as of the closing.

In connection with the closing, (i) we entered into an amendment to the QPA with DSM, pursuant to which, among other things, the parties agreed to defer certain elements of a corporate restructuring of AB, whereby AB would transfer certain assets to SMA Indústria Química Ltda. ("SMA"), a subsidiary of

AB that would be transferred to Amyris, including (A) the transfer of AB's assets in Campinas, Brazil to SMA and (B) the execution by AB and SMA of a lease (the "Lease") with respect to land in Brotas, Brazil leased by AB and on which we propose to construct a manufacturing facility (the "Brotas 2 Facility"), including certain corporate registrations and the execution by AB and SMA of the Lease, to after the closing due to administrative delays in Brazil and (ii) an intellectual property license agreement between us and DSM covering certain intellectual property of Amyris useful in the performance of certain commercial supply agreements assigned by us to DSM at the closing relating to products currently manufactured at the existing manufacturing facility owned by AB located in Brotas, Brazil (the "Brotas 1 Facility"), including that certain Renewable Farnesene Supply Agreement, dated as of April 26, 2016 (as amended, the "Nenter Supply Agreement"), between us and Nenter & Co., Inc., became effective, and in connection therewith, DSM paid us an upfront cash license fee of $27.5 million.

In addition, at the closing, the following agreements were entered into in connection with the transactions contemplated by the QPA:

Value Sharing Agreement

On December 28, 2017, we entered into a ten-year Value Sharing Agreement (as subsequently amended, the "Value Sharing Agreement") with DSM, pursuant to which DSM will make certain value share payments to us representing a portion of the profit on the sale of products produced using farnesene purchased under the Nenter Supply Agreement realized by Nenter and paid to DSM in accordance with the Nenter Supply Agreement. In addition, pursuant to the Value Sharing Agreement, DSM will guarantee certain minimum annual value share payments for the first three calendar years of the Value Sharing Agreement, subject to future offsets in the event that the value share payments to which we would otherwise have been entitled under the Value Sharing Agreement for the second and third years fall below certain milestones. After the first three years of the Value Sharing Agreement, value share payments under the Value Sharing Agreement, if any, will be made quarterly by DSM to us. Under the Value Sharing Agreement, we are required to use certain value share payments received by us with respect to the first three calendar years of the Value Sharing Agreement in excess of the guaranteed minimum annual value share payments for such years, if any, to repay amounts outstanding under the DSM Credit Agreement (as defined below).

Transition Services Agreement

On December 28, 2017, we entered into a Transition Services Agreement (the "Transition Services Agreement") with DSM, pursuant to which (i) we will provide, or cause to be provided, certain services to AB to allow for the operation of the Brotas 1 Facility in the ordinary course of business and (ii) DSM and AB will provide, or cause to be provided, certain services to SMA in connection with the operation of the Brotas 2 Facility, in each case for customary compensation for each respective service. The services to be performed, or caused to be performed, by us under the Transition Services Agreement will generally be provided for a period of six months from the closing, and the services to be performed, or caused to be performed, by DSM and AB under the Transition Services Agreement will generally be provided until December 31, 2021, subject to the right of the service provider to earlier terminate such services upon material non-performance by the service recipient and the right of the service recipient to earlier terminate such services upon thirty days' prior written notice to the service provider.

Supply Agreement

On December 28, 2017, we entered into a Supply Agreement (the "Supply Agreement") with DSM, pursuant to which DSM will supply us with certain products useful in our business that were previously, and are expected to continue to be, manufactured at the Brotas 1 Facility, at prices and on production and delivery terms and specifications set forth in the Supply Agreement, which prices are based upon DSM's manufacturing cost plus an agreed margin. The Supply Agreement expires (i) with respect to non-farnesene related products, on the date that the Brotas 2 Facility is fully operational and meets its production targets, but in any event no later than December 31, 2021 and (ii) with respect to farnesene-related products, on the twentieth anniversary of the closing, subject in each case to the right of each of the parties to terminate the Supply Agreement upon ninety days' prior written notice to the other party in the event of an uncured material breach by the other party of the Supply Agreement or in the event the other party is subject to bankruptcy proceedings, liquidation or dissolution or otherwise ceases to conduct its business. In addition, DSM may terminate the Supply Agreement upon two years' notice to us in the event that we do not meet certain farnesene purchase requirements, and we may terminate the Supply Agreement upon written notice to DSM in the event DSM is unable to meet certain supply requirements or in the event DSM undergoes a change of control or transfers the Brotas 1 Facility to a competitor of Amyris.

Performance Agreement

On December 28, 2017, we entered into a Performance Agreement (the "Performance Agreement") with DSM, pursuant to which we will provide certain research and development services to DSM relating to the development of the technology underlying the farnesene-related products to be manufactured at the Brotas 1 Facility in exchange for related funding, including certain bonus payments in the event that specific performance metrics are achieved. The Performance Agreement expires on the third anniversary of the closing, subject to the right of each of the parties to terminate the Performance Agreement upon thirty days' prior written notice to the other party in the event of an uncured material breach by the other party of the Performance Agreement or in the event the other party is subject to bankruptcy proceedings, liquidation, dissolution or similar proceedings or events.

Credit Facility and Note

On December 28, 2017, we entered into a credit agreement (the "DSM Credit Agreement") with DSM to make available to us an unsecured credit facility of $25.0 million. In addition, on December 28, 2017, we borrowed $25.0 million under the DSM Credit Agreement, representing the entire amount available thereunder, and issued a promissory note to DSM in an equal principal amount (the "DSM Note"). We used the proceeds of the amounts borrowed under the DSM Credit Agreement to repay all outstanding principal under the credit facility, dated as of October 26, 2016, between Amyris and Guanfu Holding Co., Ltd.

The DSM Note (i) is an unsecured obligation, (ii) matures on December 31, 2021 and (iii) accrues interest from and including December 28, 2017 at a rate of 10% per annum, payable quarterly beginning on December 31, 2017. The Company may at its option repay the amounts outstanding under the DSM Note before its maturity date, in whole or in part, at a price equal to 100% of the amount being repaid plus accrued and unpaid interest on such amount to the date of repayment. In addition, as described above, we are required to use certain value share payments we receive under the Value Sharing Agreement to repay amounts outstanding under the DSM Credit Agreement.

The DSM Credit Agreement and DSM Note contain customary terms, provisions, representations and warranties, including certain events of default after which the DSM Note may become due and payable immediately, as set forth in the DSM Note.

Commercial Transactions

In July and September 2017, we entered into three separate collaboration agreements with DSM (the "DSM Collaboration Agreements") to jointly develop three new molecules in the Health and Nutrition field (the "DSM Ingredients") using our technology, which we would produce and DSM would commercialize. Pursuant to the DSM Collaboration Agreements, DSM will, subject to certain conditions, provide funding for the development of the DSM Ingredients and, upon commercialization, the parties would enter into supply agreements whereby DSM would purchase the applicable DSM Ingredients from us at prices agreed by the parties. The development activities will be directed by a joint steering committee with equal representation by DSM and us. In addition, the parties will share product margin from DSM's sales of products that incorporate the DSM Ingredients subject to the DSM Collaboration Agreements.

In connection with the entry into the DSM Collaboration Agreements, we also entered into certain license arrangements (the "DSM License Agreements") with DSM providing DSM with certain rights to use the technology underlying the development of the DSM Ingredients to produce and sell products incorporating the DSM Ingredients. Under the DSM License Agreements, DSM paid us $9.0 million for a worldwide, exclusive, perpetual, royalty-free license to produce and sell products incorporating one of the DSM Ingredients in the Health and Nutrition field.

In addition, in connection with the entry into the DSM Collaboration Agreements, we entered into credit letter (the "DSM Credit Letter") with DSM, pursuant to which we granted a credit to DSM in an aggregate amount of $12.0 million to be offset against future collaboration payments (in an amount not to exceed $6.0 million) and value share payments owed by DSM to us beginning in 2018. On December 28, 2017, Amyris and DSM terminated the DSM Credit Letter.

In 2017, we recognized $59.7 million in revenue relating to agreements and transactions with DSM, including those described above, and held $20.8 million in accounts receivable, including an unbilled receivable of $7.9 million, from DSM as of December 31, 2017.

Agreements with Total

R&D Note Amendments

On March 21, 2016, in connection with the restructuring of the ownership and rights of Total Amyris BioSolutions B.V. ("TAB"), the joint venture between us and Total Raffinage Chimie S.A. (together with its affiliates, "Total"), with which we have a commercial and financial relationship and which is an owner of greater than five percent of our outstanding common stock and has the right to designate one member of our Board of Directors, we issued to Total a 1.5% Senior Unsecured Convertible Note (RS-10) (the "R&D Note") in the principal amount of $3.7 million.

On February 27, 2017, we entered into an amendment to the R&D Note with Total to extend the maturity date of the R&D Note from March 1, 2017 to May 15, 2017.

On May 15, 2017, we entered into a second amendment to the R&D Note with Total, pursuant to which (i) the maturity date of the R&D Note was extended from May 15, 2017 to March 31, 2018, (ii) the interest rate on the amounts outstanding under the R&D Note was increased from 1.5% to 12.0%, beginning May 16, 2017, together with a corresponding increase to the default interest rate and (iii) accrued and unpaid interest on the amounts outstanding under the R&D Note would be payable on December 31, 2017 and March 31, 2018.

On March 30, 2018, we entered into a third amendment to the R&D Note with Total, pursuant to which (i) the maturity date of the R&D Note was extended from March 31, 2018 to May 31, 2018 and (ii) accrued and unpaid interest on the amounts outstanding under the R&D Note would be payable on March 31, 2018 and May 31, 2018.

Master Subrecipient Agreement

In October 2016, we entered into an assistance agreement with the United States Department of Energy relating to a research grant award under which we, with the assistance of two specialized subcontractors, including Total, will work to develop a manufacturing-ready process utilizing wood as the cellulosic feedstock to produce farnesene. The program that is the subject of the award is being performed and funded on a milestone basis. Under the award, we and our subcontractors could collectively receive reimbursement for up to $7.0 million in costs expended by us and our subcontractors over the program's three year term if all of the program's milestones are achieved. On April 27, 2017, we entered into a Master Subrecipient Agreement with Total, as subsequently amended, in connection with the grant award, pursuant to which Total would perform certain services in connection with the program and would be reimbursed for such services, up to a maximum amount of approximately $350,000.

Commercial Transactions

We engage in sales of our products to Total (including TAB) in the ordinary course of our business. In 2017, we made product sales to Total of $(0.2) million and held $0.2 million in accounts receivable from Total as of December 31, 2017.

In addition, we are party to a Pilot Plant Agreement and a Secondee Agreement with Total, each dated April 4, 2014 and subsequently amended, under which we lease space in our pilot plants to Total and provide Total with fermentation and downstream separation scale-up services and training to Total employees, and utilize Total employees to perform certain research and development services for us, respectively. In February 2017, we and Total amended these agreements to provide that we would not be charged for the cost of Total's employees on or after May 1, 2016, other than overhead charges. At December 31, 2017, we owed Total a payable of $1.4 million related to these agreements. On December 31, 2017, the Secondee Agreement expired in accordance with its terms.

Agreements with Vivo

On August 3, 2017, we issued 2,826,711 shares of common stock at a price of $4.26 per share, an aggregate of 12,958.21196 shares of our Series D Convertible Preferred Stock, par value $0.0001 per share (the "Series D Preferred Stock"), and warrants to purchase an aggregate of 5,575,118 shares of common stock to affiliates of Vivo Capital LLC (collectively, "Vivo"), with which we have a financial relationship and which is an owner of greater than five percent of our outstanding common stock and has the right to designate one member of our Board of Directors, in a private placement exempt from registration under the Securities Act pursuant to a Securities Purchase Agreement, dated as of August 2, 2017, between us and Vivo (the "August 2017 Vivo Offering").

In connection with the issuance of common stock, Series D Preferred Stock and warrants to Vivo in August 2017, we entered into a Stockholder Agreement (the "Vivo Stockholder Agreement") with Vivo that sets forth certain rights and obligations of Vivo and Amyris. Pursuant to the Vivo Stockholder Agreement, Vivo has the right to designate one director selected by Vivo, subject to certain restrictions, to our Board of Directors; provided, that Vivo will no longer have the right to designate any director at such time as Vivo beneficially owns less than 4.5% of our outstanding voting securities. In addition, for so long as Vivo beneficially owns at least 4.5% of our outstanding voting securities, a representative of Vivo shall be entitled to attend all board meetings in a nonvoting observer capacity and to receive copies of all materials that we provide to our directors, at the same time and in the same manner, subject to certain exceptions. Furthermore, Vivo will have the right to purchase additional shares of our capital stock in connection with a sale of equity or equity-linked securities in a capital raising transaction for cash, subject to certain exceptions, to maintain its proportionate ownership percentage in Amyris.

Pursuant to the Vivo Stockholder Agreement, Vivo agreed not to sell or transfer any of the common stock, Series D Preferred Stock or warrants purchased by Vivo in August 2017, or any shares of common stock issuable upon conversion or exercise thereof, other than to its affiliates, without our consent through August 2018 and to any competitor of Amyris thereafter. Vivo also agreed that, subject to certain exceptions, until the later of (i) August 2020 and (ii) three months after there is no Vivo director on our Board of Directors, Vivo will not, without the prior consent of our Board of Directors, acquire common stock or rights to acquire common stock that would result in Vivo beneficially owning more than 33% of our outstanding voting securities at the time of acquisition. Under the Vivo Stockholder Agreement, we agreed to use our commercially reasonable efforts to register, via one or more registration statements filed with the SEC under the Securities Act, the resale by Vivo of the shares of common stock purchased by Vivo in the August 2017 Vivo Offering as well as the shares of common stock issuable upon conversion or exercise of the Series D Preferred Stock and warrants purchased by Vivo in the August 2017 Vivo Offering.

For more information regarding the August 2017 Vivo Offering, please refer to "Proposal 6 — Approval of Certain Anti-Dilution Provisions in, and the Issuance of Shares of our Common Stock upon the Exercise of, Warrants issued in Securities Offerings Completed in August 2017 in accordance with NASDAQ Marketplace Rules 5635(c) and (d)" in this Proxy Statement.

Biolding Note Amendments

On February 12, 2016, we entered into a Note and Warrant Purchase Agreement for the sale of $20.0 million in aggregate principal amount of unsecured promissory notes and warrants to purchase an aggregate of 190,477 shares of our common stock at an exercise price of $0.15 per share with certain purchasers, including Biolding Investment SA ("Biolding"), a fund affiliated with director HH Sheikh Abdullah bin Khalifa Al Thani, which purchased a note in the principal amount of $2.0 million (the "Biolding Note") and warrants to purchase 19,048 shares of our common stock.

On May 15, 2017, we entered into a first amendment to the Biolding Note with Biolding, pursuant to which the parties agreed to extend the maturity date of the Biolding Note from May 15, 2017 to November 15, 2017.

On November 13, 2017, we entered into a second amendment to the Biolding Note with Biolding, pursuant to which the parties agreed to extend the maturity date of the Biolding Note from November 15, 2017 to December 31, 2017.

Each of the related person transactions described above was reviewed and approved or ratified by our Audit Committee or another independent body of the Board in accordance with our Related-Party Transactions Policy described below.

Letter Agreements

On July 29, 2015, we entered into a Maturity Treatment Agreement with Total and Maxwell (Mauritius) Pte Ltd ("Maxwell"), which is an owner of greater than five percent of our outstanding common stock and has the right to designate one member of our Board of Directors, pursuant to which Total and Maxwell agreed to convert certain of our convertible promissory notes held by them, including our 6.50% Convertible Senior Notes due 2019, into shares of our common stock in accordance with the terms of such notes on or prior to maturity, provided that certain events of default had not occurred with respect to the such notes prior to such maturity.

On May 5, 2017 and May 15, 2017, we entered into letter agreements with Maxwell and Total, respectively, pursuant to which the parties agreed that the 6.50% Convertible Senior Notes due 2019 held by Total and Maxwell, in an aggregate principal amount of $9.7 million and $10.0 million, respectively, would no longer be subject to mandatory conversion at or prior to maturity. Accordingly, we will be required to pay any portion of such notes that remain outstanding at maturity in cash in accordance with their terms.

Indemnification Arrangements

Please see "Executive Compensation — Limitation of Liability and Indemnification" above for information regarding our indemnification arrangements with our directors and executive officers.

Executive Compensation and Employment Arrangements

Please see "Executive Compensation" above for information regarding our compensation arrangements with our executive officers, including equity awards and employment agreements with our executive officers.

Registration Rights Agreements

Certain of our stockholders, including certain entities affiliated with our directors and holders of five percent or more of our outstanding common stock, including DSM, Foris, Vivo, Total, Maxwell and Naxyris, hold registration rights pursuant to (i) the Registration Rights Agreement dated July 30, 2012, by and between us and Total, (ii) the Amended and Restated Letter Agreement dated May 8, 2014, by and among us and certain of our stockholders, (iii) the Registration Rights Agreement dated February 24, 2015, by and between us and Nomis Bay Ltd., (iv) the letter agreement dated as of July 29, 2015, by and among us and certain investors, (v) the Registration Rights Agreement dated October 20, 2015, by and among us and certain purchasers of our 9.50% Convertible Senior Notes due 2019, (vi) the warrant to purchase common stock issued to Nenter & Co., Inc. on November 16, 2016, (vii) the Securities Purchase Agreement, dated as of May 8, 2017, by and among us and certain investors, (viii) the Securities Purchase Agreement, dated as of May 31, 2017, by and between us and the investor named therein, (ix) the DSM Purchase Agreement, (x) the Vivo Stockholder Agreement, and (xi) the DSM Stockholder Agreement.

Related-Party Transactions Policy

Our Related-Party Transactions Policy adopted by our Board of Directors requires that any transaction with a related party that must be reported under applicable SEC rules, other than compensation related matters, must be reviewed and approved or ratified by the Audit Committee of our Board of Directors. Another independent body of our Board of Directors must provide such approval or ratification if the related party is, or is associated with, a member of the Audit Committee or if it is otherwise inappropriate for the Audit Committee to review the transaction. The Audit Committee has not adopted policies or procedures for review of, or standards for approval of, these transactions.

Householding of Proxy Materials

The Securities and Exchange Commission (the "SEC") has adopted rules that permit companies and Intermediaries to satisfy the delivery requirements for proxy statements and annual reports, including Notices of Internet Availability of Proxy Materials, with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials (the "Notice") or other proxy materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

A number of brokers with account holders who are Amyris stockholders may be "householding" our proxy materials. A single copy of the Notice or other proxy materials may be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or you submit contrary instructions. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate Notice or other proxy materials, you may: (1) notify your broker; (2) direct your written request to Amyris Investor Relations at 5885 Hollis Street, Suite 100, Emeryville, California 94608 or to investor@amyris.com; or (3) contact Amyris Investor Relations at (510) 740-7481. Stockholders who currently receive multiple copies of the Notice or other proxy materials at their addresses and would like to request "householding" of their communications should contact their brokers or Amyris Investor Relations at the address or telephone number above. In addition, we will promptly deliver, upon written or oral request to the address or telephone number above, a separate copy of the Notice or other proxy materials to a stockholder at a shared address to which a single copy of such documents was delivered.

Available Information

We will provide to any stockholder entitled to vote at our 2018 Annual Meeting of Stockholders, at no charge, a copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (the "Form 10-K"), including the financial statements and the financial statement schedules contained in the Form 10-K. We make our Annual Reports on Form 10-K, as well as our other SEC filings, available free of charge through the investor relations section of our website located at http://investors.amyris.com/index.cfm as soon as reasonably practicable after they are filed with or furnished to the SEC. Information contained on or accessible through our website or contained on other websites is not deemed to be part of this Proxy Statement. In addition, you may request a copy of the Form 10-K by sending an e-mail request to Amyris Investor Relations at investor@amyris.com, calling (510) 740-7481, or writing to Amyris Investor Relations at 5885 Hollis Street, Suite 100, Emeryville, California 94608.

Incorporation of Information by Reference

The SEC allows us to "incorporate by reference" certain information we file with the SEC, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this Proxy Statement. We incorporate herein the following information contained in or attached to the Form 10-K being delivered to stockholders along with this Proxy Statement: (1) the information under the heading "Executive Officers of the Registrant" in Item 1A, (2) Item 7 entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," (3) Item 7A entitled "Quantitative and Qualitative Disclosures About Market Risk," (4) Item 8 entitled "Financial Statements and Supplementary Data" and (5) Item 9 entitled "Changes in and Disagreements with Accountants on Accounting and Financial Disclosure."

Stockholder Proposals to be Presented at Next Annual Meeting

Stockholder proposals may be included in our proxy statement for an annual meeting so long as they are provided to us on a timely basis and satisfy the other conditions set forth in SEC regulations under Rule 14a-8 regarding the inclusion of stockholder proposals in company-sponsored proxy materials. For a stockholder proposal to be considered for inclusion in our proxy statement for the annual meeting to be held in 2019, we must receive the proposal at our principal executive offices, addressed to the Secretary, no later than December 28, 2018. In addition, a stockholder proposal that is not intended for inclusion in our proxy statement under Rule 14a-8 may be brought before the 2019 annual meeting so long as we receive information and notice of the proposal in compliance with the requirements set forth in our bylaws, addressed to the Secretary at our principal executive offices, not later than March 8, 2019 nor earlier than February 6, 2019.

Other Matters

The Board knows of no other matters that will be presented for consideration at the annual meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

BY ORDER OF THE BOARD OF DIRECTORS,

Nicole Kelsey
General Counsel and Secretary

Emeryville, California
April 27, 2018

<u>APPENDIX A</u>

AMYRIS, INC.

2010 EQUITY INCENTIVE PLAN

As Amended [ ], 2018

1. <u>PURPOSE</u>. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents and Subsidiaries that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 27.

2. <u>SHARES SUBJECT TO THE PLAN</u>.

2.1 <u>Number of Shares Available</u>. Subject to Sections 2.6 and 21 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan is 9,280,000 Shares plus (i) any reserved shares not issued or subject to outstanding grants under the Company's 2005 Stock Option Plan (the "***Prior Plan***") on the Effective Date (as defined below), (ii) shares that are subject to stock options granted under the Prior Plan that cease to be subject to such stock options after the Effective Date and (iii) shares issued under the Prior Plan before or after the Effective Date pursuant to the exercise of stock options that are, after the Effective Date, forfeited and (iv) shares issued under the Prior Plan that are repurchased by the Company at the original issue price.

2.2 <u>Lapsed, Returned Awards</u>. Shares subject to Awards, and Shares issued under the Plan under any Award, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (a) are subject to issuance upon exercise of an Option or SAR granted under this Plan but which cease to be subject to the Option or SAR for any reason other than exercise of the Option or SAR; (b) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price; (c) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued; or (d) are surrendered pursuant to an Exchange Program. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. For the avoidance of doubt, Shares that otherwise become available for grant and issuance because of the provisions of this Section 2.2 shall not include Shares subject to Awards that initially became available because of the substitution clause in Section 21.2 hereof.

2.3 <u>Minimum Share Reserve</u>. At all times the Company shall reserve and keep available a sufficient number of Shares as shall be required to satisfy the requirements of all outstanding Awards granted under this Plan.

2.4 <u>Automatic Share Reserve Increase</u>. The number of Shares available for grant and issuance under the Plan shall be increased on January 1 of each of the calendar years that commence following the Effective Date by the lesser of five (5%) percent of the number of Shares issued and outstanding on each December 31 immediately prior to the date of increase or (ii) such number of Shares determined by the Board or the Committee.

2.5 <u>Limitations</u>. No more than two million (2,000,000) Shares shall be issued pursuant to the exercise of ISOs.

2.6 <u>Adjustment of Shares</u>. If the number of outstanding Shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, then (a) the number of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1 and 2.4 (b) the Exercise Prices of and number of Shares subject to outstanding Options and SARs, (c) the number of Shares subject to other outstanding Awards, (d) the maximum number of shares that may be issued as ISOs set forth in Section 2.5 and (e) the maximum number of Shares that may be issued to an individual or to a new Employee in any one calendar year set forth in Section 3, shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

3. ELIGIBILITY. ISOs may be granted only to Employees. All other Awards may be granted to Employees, Consultants, Directors and Non-Employee Directors of the Company or any Parent or Subsidiary of the Company; provided such Consultants, Directors and Non-Employee Directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction. No Participant will be eligible to receive more than four million (4,000,000) Shares in any calendar year under this Plan pursuant to the grant of Awards.

4. ADMINISTRATION.

4.1 Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan, except, however, the Board shall establish the terms for the grant of an Award to Non-Employee Directors. The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent or Subsidiary of the Company;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been earned;

(l) determine the terms and conditions of any, and to institute any Exchange Program;

(m) reduce or waive any criteria with respect to Performance Factors;

(n) adjust Performance Factors to take into account changes in law and accounting or tax rules as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships provided that such adjustments are consistent with the regulations promulgated under Section 162(m) of the Code with respect to persons whose compensation is subject to Section 162(m) of the Code; and

(o) make all other determinations necessary or advisable for the administration of this Plan.

4.2 Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award shall be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination shall be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement shall be submitted by the Participant or Company to the Committee for review. The resolution of such a dispute by the Committee shall be final and binding on the Company and the Participant. The Committee may delegate to one or more executive officers the authority to review and resolve disputes with respect to Awards held by Participants who are not Insiders, and such resolution shall be final and binding on the Company and the Participant.

4.3 Section 162(m) of the Code and Section 16 of the Exchange Act. When necessary or desirable for an Award to qualify as "performance-based compensation" under Section 162(m) of the Code the Committee shall include at least two persons who are "outside directors" (as defined under Section 162(m) of the Code) and at least two (or a majority if more than two then serve on the Committee) such "outside directors" shall approve the grant of such Award and timely determine (as applicable) the Performance Period and any Performance Factors upon which vesting or settlement of any portion of such Award is to be subject. When required by Section 162(m) of the Code, prior to settlement of any such Award at least two (or a majority if more than two then serve on the Committee) such "outside directors" then serving on the Committee shall determine and certify in writing the extent to which such Performance Factors have been timely achieved and the extent to which the Shares subject to such Award have thereby been earned. Awards granted to Participants who are subject to Section 16 of the Exchange Act must be approved by two or more "non-employee directors" (as defined in the regulations promulgated under Section 16 of the Exchange Act). With respect to Participants whose compensation is subject to Section 162(m) of the Code, and provided that such adjustments are consistent with the regulations promulgated under Section 162(m) of the Code, the Committee may adjust the performance goals to account for changes in law and accounting and to make such adjustments as the Committee deems necessary or appropriate to reflect the impact of extraordinary or unusual items, events or circumstances to avoid windfalls or hardships, including without limitation (i) restructurings, discontinued operations, extraordinary items, and other unusual or non-recurring charges, (ii) an event either not directly related to the operations of the Company or not within the reasonable control of the Company's management, or (iii) a change in accounting standards required by generally accepted accounting principles.

4.4 Documentation. The Award Agreement for a given Award, the Plan and any other documents may be delivered to, and accepted by, a Participant or any other person in any manner (including electronic distribution or posting) that meets applicable legal requirements.

5. OPTIONS. The Committee may grant Options to Participants and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("***ISOs***") or Nonqualified Stock Options ("***NQSOs***"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may be exercised, and all other terms and conditions of the Option, subject to the following:

5.1 Option Grant. Each Option granted under this Plan will identify the Option as an ISO or an NQSO. An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each Option; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2 Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement and a copy of this Plan will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3 Exercise Period. Options may be exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who, at the time the ISO is granted, directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary of the Company ("***Ten Percent Stockholder***") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4 Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (i) the Exercise Price of an ISO will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant and (ii) the Exercise Price of any ISO granted to a Ten Percent Stockholder will not be less than one hundred ten percent (110%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 11. Payment for the Shares purchased may be made in accordance with Section 11 and the Award Agreement and in accordance with any procedures established by the Company. The Exercise Price of a NQSO may not be less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

5.5 Method of Exercise. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.6 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6 Termination. The exercise of an Option will be subject to the following (except as may be otherwise provided in an Award Agreement):

(a) If the Participant is Terminated for any reason except for Cause or the Participant's death or Disability, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable by the Participant on the Termination Date no later than three (3) months after the Termination Date (or such shorter time period or longer time period not exceeding five (5) years as may be determined by the Committee, with any exercise beyond three (3) months after the Termination Date deemed to be the exercise of an NQSO), but in any event no later than the expiration date of the Options.

(b) If the Participant is Terminated because of the Participant's death (or the Participant dies within three (3) months after a Termination other than for Cause or because of the Participant's Disability), then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant's legal representative, or authorized assignee, no later than twelve (12) months after the Termination Date (or such shorter time period not less than six (6) months or longer time period not exceeding five (5) years as may be determined by the Committee, but in any event no later than the expiration date of the Options.

(c) If the Participant is Terminated because of the Participant's Disability, then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the Termination Date and must be exercised by the Participant (or the Participant's legal representative or authorized assignee) no later than twelve (12) months after the Termination Date (with any exercise beyond (a) three (3) months after the Termination Date when the Termination is for a Disability that is not a "permanent and total disability" as defined in Section 22(e)(3) of the Code, or (b) twelve (12) months after the Termination Date when the Termination is for a Disability that is a "permanent and total disability" as defined in Section 22(e)(3) of the Code, deemed to be exercise of an NQSO), but in any event no later than the expiration date of the Options.

(d) If the Participant is terminated for Cause, then Participant's Options shall expire on such Participant's Termination Date, or at such later time and on such conditions as are determined by the Committee, but in any no event later than the expiration date of the Options.

5.7 Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8 Limitations on ISOs. With respect to Awards granted as ISOs, to the extent that the aggregate Fair Market Value of the Shares with respect to which such ISOs are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as NQSOs. For purposes of this Section 5.8, ISOs will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISOs, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9 Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. Subject to Section 18 of this Plan, by written notice to affected Participants, the Committee may reduce the Exercise Price of outstanding Options without the consent of such Participants; provided, however, that the Exercise Price may not be reduced below the Fair Market Value on the date the action is taken to reduce the Exercise Price.

6. RESTRICTED STOCK AWARDS.

6.1 Awards of Restricted Stock. A Restricted Stock Award is an offer by the Company to sell to a Participant Shares that are subject to restrictions ("***Restricted Stock***"). The Committee will determine to whom an offer will be made, the number of Shares the Participant may purchase, the Purchase Price, the restrictions under which the Shares will be subject and all other terms and conditions of the Restricted Stock Award, subject to the Plan.

6.2 Restricted Stock Purchase Agreement. All purchases under a Restricted Stock Award will be evidenced by an Award Agreement. Except as may otherwise be provided in an Award Agreement, a Participant accepts a Restricted Stock Award by signing and delivering to the Company an Award Agreement with full payment of the Purchase Price, within thirty (30) days from the date the Award Agreement was delivered to the Participant. If the Participant does not accept such Award within thirty (30) days, then the offer of such Restricted Stock Award will terminate, unless the Committee determines otherwise.

6.3 Purchase Price. The Purchase Price for a Restricted Stock Award will be determined by the Committee and may be less than Fair Market Value on the date the Restricted Stock Award is granted. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement and in accordance with any procedures established by the Company.

6.4 Terms of Restricted Stock Awards. Restricted Stock Awards will be subject to such restrictions as the Committee may impose or are required by law. These restrictions may be based on completion of a specified number of years of service with the Company or upon completion of Performance Factors, if any, during any Performance Period as set out in advance in the Participant's Award Agreement. Prior to the grant of a Restricted Stock Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.5 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

7. STOCK BONUS AWARDS.

7.1 Awards of Stock Bonuses. A Stock Bonus Award is an award to an eligible person of Shares for services to be rendered or for past services already rendered to the Company or any Parent or Subsidiary. All Stock Bonus Awards shall be made pursuant to an Award Agreement. No payment from the Participant will be required for Shares awarded pursuant to a Stock Bonus Award.

7.2 Terms of Stock Bonus Awards. The Committee will determine the number of Shares to be awarded to the Participant under a Stock Bonus Award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with the Company or upon satisfaction of performance goals based on Performance Factors during any Performance Period as set out in advance in the Participant's Stock Bonus Agreement. Prior to the grant of any Stock Bonus Award the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Stock Bonus Award; (b) select from among the Performance Factors to be used to measure performance goals; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Stock Bonus Awards that are subject to different Performance Periods and different performance goals and other criteria.

7.3 Form of Payment to Participant. Payment may be made in the form of cash, whole Shares, or a combination thereof, based on the Fair Market Value of the Shares earned under a Stock Bonus Award on the date of payment, as determined in the sole discretion of the Committee.

7.4 Termination of Participation. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

8. STOCK APPRECIATION RIGHTS.

8.1 Awards of SARs. A Stock Appreciation Right ("***SAR***") is an award to a Participant that may be settled in cash, or Shares (which may consist of Restricted Stock), having a value equal to (a) the difference between the Fair Market Value on the date of exercise over the Exercise Price multiplied by (b) the number of Shares with respect to which the SAR is being settled (subject to any maximum number of Shares that may be issuable as specified in an Award Agreement). All SARs shall be made pursuant to an Award Agreement.

8.2 Terms of SARs. The Committee will determine the terms of each SAR including, without limitation: (a) the number of Shares subject to the SAR; (b) the Exercise Price and the time or times during which the SAR may be settled; (c) the consideration to be distributed on settlement of the SAR; and (d) the effect of the Participant's Termination on each SAR. The Exercise Price of the SAR will be determined by the Committee when the SAR is granted, and may not be less than Fair Market Value. A SAR may be awarded upon satisfaction of Performance Factors, if any, during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the SAR is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each SAR; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to SARs that are subject to different Performance Factors and other criteria.

8.3 Exercise Period and Expiration Date. A SAR will be exercisable within the times or upon the occurrence of events determined by the Committee and set forth in the Award Agreement governing such SAR. The SAR Agreement shall set forth the expiration date; provided that no SAR will be exercisable after the expiration of ten (10) years from the date the SAR is granted. The Committee may also provide for SARs to become exercisable at one time or from time to time, periodically or otherwise (including, without limitation, upon the attainment during a Performance Period of performance goals based on Performance Factors), in such number of Shares or percentage of the Shares subject to the SAR as the Committee determines. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee). Notwithstanding the foregoing, the rules of Section 5.6 also will apply to SARs.

8.4 Form of Settlement. Upon exercise of a SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying (i) the difference between the Fair Market Value of a Share on the date of exercise over the Exercise Price; times (ii) the number of Shares with respect to which the SAR is exercised. At the discretion of the Committee, the payment from the Company for the SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof. The portion of a SAR being settled may be paid currently or on a deferred basis with such interest or dividend equivalent, if any, as the Committee determines, provided that the terms of the SAR and any deferral satisfy the requirements of Section 409A of the Code.

8.5 Termination of Participation. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

9. RESTRICTED STOCK UNITS.

9.1 Awards of Restricted Stock Units. A Restricted Stock Unit ("***RSU***") is an award to a Participant covering a number of Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). All RSUs shall be made pursuant to an Award Agreement.

9.2 Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; and (c) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each RSU. An RSU may be awarded upon satisfaction of such performance goals based on Performance Factors during any Performance Period as are set out in advance in the Participant's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

9.3 Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both. The Committee may also permit a Participant to defer payment under a RSU to a date or dates after the RSU is earned provided that the terms of the RSU and any deferral satisfy the requirements of Section 409A of the Code.

9.4 Termination of Participant. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

10. <u>PERFORMANCE AWARDS</u>.

10.1 <u>Performance Awards</u>. A Performance Award is an award to a Participant of a cash bonus or a Performance Share bonus. Grants of Performance Awards shall be made pursuant to an Award Agreement.

10.2 <u>Terms of Performance Awards</u>. The Committee will determine, and each Award Agreement shall set forth, the terms of each award of Performance Award including, without limitation: (a) the amount of any cash bonus; (b) the number of Shares deemed subject to Performance Share bonus; (c) the Performance Factors and Performance Period that shall determine the time and extent to which each Performance shall be settled; (d) the consideration to be distributed on settlement, and the effect of the Participant's Termination on each Performance Award. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period and; (y) select from among the Performance Factors to be used. Prior to settlement, the Committee shall determine the extent to which Performance Awards have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Awards that are subject to different Performance Periods and different performance goals and other criteria.

10.3 <u>Value, Earning and Timing of Performance Shares</u>. Any Performance Share bonus will have an initial value equal to the Fair Market Value of a Share on the date of grant. After the applicable Performance Period has ended, the holder of Performance Share bonus will be entitled to receive a payout of the number of Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding Performance Factors or other vesting provisions have been achieved. The Committee, in its sole discretion, may pay earned Performance Share bonus in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Shares at the close of the applicable (Performance Period) or in a combination thereof. Performance Share bonuses may also be settled in Restricted Stock.

10.4 <u>Termination of Participant</u>. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such Participant's Termination Date (unless determined otherwise by the Committee).

11. <u>PAYMENT FOR SHARE PURCHASES</u>.

Payment from a Participant for Shares purchased pursuant to this Plan may be made in cash or by check or, where expressly approved for the Participant by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Participant;

(b) by surrender of shares of the Company held by the Participant that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Participant for services rendered or to be rendered to the Company or a Parent or Subsidiary of the Company;

(d) by consideration received by the Company pursuant to a broker-assisted or other form of cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

12. <u>GRANTS TO NON-EMPLOYEE DIRECTORS</u>.

12.1 <u>Types of Awards</u>. Non-Employee Directors are eligible to receive any type of Award offered under this Plan except ISOs. Awards pursuant to this Section 12 may be automatically made pursuant to policy adopted by the Board, or made from time to time as determined in the discretion of the Board.

12.2 Eligibility. Awards pursuant to this Section 12 shall be granted only to Non-Employee Directors. A Non-Employee Director who is elected or re-elected as a member of the Board will be eligible to receive an Award under this Section 12.

12.3 Vesting, Exercisability and Settlement. Except as set forth in Section 21, Awards shall vest, become exercisable and be settled as determined by the Board. With respect to Options and SARs, the exercise price granted to Non-Employee Directors shall not be less than the Fair Market Value of the Shares at the time that such Option or SAR is granted.

13. WITHHOLDING TAXES.

13.1 Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan, the Company may require the Participant to remit to the Company an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable federal, state, local and international withholding tax requirements.

13.2 Stock Withholding. The Committee, in its sole discretion and pursuant to such procedures as it may specify from time to time, may require or permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld, or (iii) delivering to the Company already-owned Shares having a Fair Market Value equal to the minimum amount required to be withheld. The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

14. TRANSFERABILITY.

14.1 Transfer Generally. Unless determined otherwise by the Committee, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, including, without limitation, by instrument to an inter vivos or testamentary trust in which the Awards are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift to a Permitted Transferee, such Award will contain such additional terms and conditions as the Administrator deems appropriate.

14.2 Award Transfer Program. Notwithstanding any contrary provision of the Plan, the Committee shall have all discretion and authority to determine and implement the terms and conditions of any Award Transfer Program instituted pursuant to this Section 14(b) and shall have the authority to amend the terms of any Award participating, or otherwise eligible to participate in, the Award Transfer Program, including (but not limited to) the authority to (i) amend (including to extend) the expiration date, post-termination exercise period and/or forfeiture conditions of any such Award, (ii) amend or remove any provisions of the Award relating to the Award holder's continued service to the Company, (iii) amend the permissible payment methods with respect to the exercise or purchase of any such Award, (iv) amend the adjustments to be implemented in the event of changes in the capitalization and other similar events with respect to such Award, and (v) make such other changes to the terms of such Award as the Committee deems necessary or appropriate in its sole discretion.

15. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES.

15.1 Voting and Dividends. No Participant will have any of the rights of a stockholder with respect to any Shares until the Shares are issued to the Participant. After Shares are issued to the Participant, the Participant will be a stockholder and have all the rights of a stockholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to retain such stock dividends or stock distributions with respect to Shares that are repurchased at the Participant's Purchase Price or Exercise Price, as the case may be, pursuant to Section 15.2.

15.2 Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a "***Right of Repurchase***") a portion of any or all Unvested Shares held by a Participant following such Participant's Termination at any time within ninety (90) days after the later of the Participant's Termination Date and the date the Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant's Purchase Price or Exercise Price, as the case may be.

16. CERTIFICATES. All certificates for Shares or other securities delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted.

17. ESCROW; PLEDGE OF SHARES. To enforce any restrictions on a Participant's Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Participant's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant's Shares or other collateral. In connection with any pledge of the Shares, the Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

18. REPRICING; EXCHANGE AND BUYOUT OF AWARDS. Without prior stockholder approval the Committee may (i) reprice Options or SARS (and where such repricing is a reduction in the Exercise Price of outstanding Options or SARS, the consent of the affected Participants is not required provided written notice is provided to them), and (ii) with the consent of the respective Participants (unless not required pursuant to Section 5.9 of the Plan), pay cash or issue new Awards in exchange for the surrender and cancellation of any, or all, outstanding Awards.

19. SECURITIES LAW AND OTHER REGULATORY COMPLIANCE. An Award will not be effective unless such Award is in compliance with all applicable federal and state securities laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any state securities laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

20. NO OBLIGATION TO EMPLOY. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent or Subsidiary of the Company or limit in any way the right of the Company or any Parent or Subsidiary of the Company to terminate Participant's employment or other relationship at any time.

21. CORPORATE TRANSACTIONS.

21.1 Assumption or Replacement of Awards by Successor. In the event of a Corporate Transaction any or all outstanding Awards may be assumed or replaced by the successor corporation, which assumption or replacement shall be binding on all Participants. In the alternative, the successor corporation may substitute equivalent Awards or provide substantially similar consideration to Participants as was provided to stockholders (after taking into account the existing provisions of the Awards). The successor corporation may also issue, in place of outstanding Shares of the Company held by the Participant, substantially similar shares or other property subject to repurchase restrictions no less favorable to the Participant. In the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, then notwithstanding any other provision in this Plan to the contrary, such Awards shall have their vesting accelerate as to all shares subject to such Award (and any applicable right of repurchase fully lapse) immediately prior to the Corporate Transaction. In addition, in the event such successor or acquiring corporation (if any) refuses to assume, convert, replace or substitute Awards, as provided above, pursuant to a Corporate Transaction, the Committee will notify the Participant in writing or electronically that such Award will be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the expiration of such period. Awards need not be treated similarly in a Corporate Transaction.

21.2 Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the Purchase Price or the Exercise Price, as the case may be, and the number and nature of Shares issuable upon exercise or settlement of any such Award will be adjusted appropriately pursuant to Section 424(a) of the Code). In the event the Company elects to grant a new Option in substitution rather than assuming an existing option, such new Option may be granted with a similarly adjusted Exercise Price. Substitute Awards shall not reduce the number of Shares authorized for grant under the Plan or authorized for grant to a Participant in any calendar year.

21.3 Non-Employee Directors' Awards. Notwithstanding any provision to the contrary herein, in the event of a Corporate Transaction, the vesting of all Awards granted to Non-Employee Directors shall accelerate and such Awards shall become exercisable (as applicable) in full prior to the consummation of such event at such times and on such conditions as the Committee determines.

22. ADOPTION AND STOCKHOLDER APPROVAL. This Plan, as amended, shall be submitted for the approval of the Company's stockholders, consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board.

23. TERM OF PLAN/GOVERNING LAW. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate ten (10) years from the date this Plan is adopted by the Board. This Plan and all Awards granted hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

24. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the stockholders of the Company, amend this Plan in any manner that requires such stockholder approval; provided further, that a Participant's Award shall be governed by the version of this Plan then in effect at the time such Award was granted.

25. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the stockholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

26. INSIDER TRADING POLICY. Each Participant who receives an Award shall comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company.

27. DEFINITIONS. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

"***Award***" means any award under the Plan, including any Option, Restricted Stock, Stock Bonus, Stock Appreciation Right, Restricted Stock Unit or award of Performance Shares.

"***Award Agreement***" means, with respect to each Award, the written or electronic agreement between the Company and the Participant setting forth the terms and conditions of the Award, which shall be in substantially a form (which need not be the same for each Participant) that the Committee has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

"***Award Transfer Program***" means any program instituted by the Committee which would permit Participants the opportunity to transfer any outstanding Awards to a financial institution or other person or entity approved by the Committee.

"***Board***" means the Board of Directors of the Company.

"***Cause***" means (a) the commission of an act of theft, embezzlement, fraud, dishonesty, (b) a breach of fiduciary duty to the Company or a Parent or Subsidiary, or (c) a failure to materially perform the customary duties of Employee's employment.

"***Code***" means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

"***Committee***" means the Compensation Committee of the Board or those persons to whom administration of the Plan, or part of the Plan, has been delegated as permitted by law.

"***Common Stock***" means the common stock of the Company.

"***Company***" means AMYRIS, INC., or any successor corporation.

"***Consultant***" means any person, including an advisor or independent contractor, engaged by the Company or a Parent or Subsidiary to render services to such entity.

"***Corporate Transaction***" means the occurrence of any of the following events: (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then-outstanding voting securities; (ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation or (iv) any other transaction which qualifies as a "corporate transaction" under Section 424(a) of the Code wherein the stockholders of the Company give up all of their equity interest in the Company (except for the acquisition, sale or transfer of all or substantially all of the outstanding shares of the Company).

"***Director***" means a member of the Board.

"***Disability***" means in the case of incentive stock options, total and permanent disability as defined in Section 22(e)(3) of the Code and in the case of other Awards, that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

"***Effective Date***" means the date of the underwritten initial public offering of the Company's Common Stock pursuant to a registration statement that is declared effective by the SEC.

"***Employee***" means any person, including Officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

"***Exchange Act***" means the United States Securities Exchange Act of 1934, as amended.

"***Exchange Program***" means a program pursuant to which outstanding Awards are surrendered, cancelled or exchanged for cash, the same type of Award or a different Award (or combination thereof).

"***Exercise Price***" means, with respect to an Option, the price at which a holder may purchase the Shares issuable upon exercise of an Option and with respect to a SAR, the price at which the SAR is granted to the holder thereof.

"***Fair Market Value***" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

(a) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in *The Wall Street Journal*;

(b) if such Common Stock is publicly traded but is neither listed nor admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal*;

(c) in the case of an Option or SAR grant made on the Effective Date, the price per share at which shares of the Company's Common Stock are initially offered for sale to the public by the Company's underwriters in the initial public offering of the Company's Common Stock pursuant to a registration statement filed with the SEC under the Securities Act; or

(d) if none of the foregoing is applicable, by the Board or the Committee in good faith.

"***Insider***" means an officer or director of the Company or any other person whose transactions in the Company's Common Stock are subject to Section 16 of the Exchange Act.

"***Non-Employee Director***" means a Director who is not an Employee of the Company or any Parent or Subsidiary.

"***Option***" means an award of an option to purchase Shares pursuant to Section 5.

"***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"***Participant***" means a person who holds an Award under this Plan.

"***Performance Award***" means cash or stock granted pursuant to Section 10 or Section 12 of the Plan.

"***Performance Factors***" means any of the factors selected by the Committee and specified in an Award Agreement, from among the following objective measures, either individually, alternatively or in any combination, applied to the Company as a whole or any business unit or Subsidiary, either individually, alternatively, or in any combination, on a GAAP or non-GAAP basis, and measured, to the extent applicable on an absolute basis or relative to a pre-established target, to determine whether the performance goals established by the Committee with respect to applicable Awards have been satisfied:

(a) Profit Before Tax;

(b) Billings;

(c) Revenue;

(d) Net revenue;

(e) Earnings (which may include earnings before interest and taxes, earnings before taxes, and net earnings);

(f) Operating income;

(g) Operating margin;

(h) Operating profit;

(i) Controllable operating profit, or net operating profit;

(j) Net Profit;

(k) Gross margin;

(l) Operating expenses or operating expenses as a percentage of revenue;

(m) Net income;

(n) Earnings per share;

(o) Total stockholder return;

(p) Market share;

(q) Return on assets or net assets;

(r) The Company's stock price;

(s) Growth in stockholder value relative to a pre-determined index;

(t) Return on equity;

(u) Return on invested capital;

(v) Cash Flow (including free cash flow or operating cash flows)

(w) Cash conversion cycle;

(x) Economic value added; and

(y) Individual confidential business objectives;

(z) Contract awards or backlog;

(aa) Overhead or other expense reduction;

(bb) Credit rating;

(cc) Strategic plan development and implementation;

(dd) Succession plan development and implementation;

(ee) Improvement in workforce diversity;

(ff) Customer indicators;

(gg) New product invention or innovation;

(hh) Attainment of research and development milestones;

(ii) Improvements in productivity;

(jj) Attainment of objective operating goals and employee metrics.

The Committee may, in recognition of unusual or non-recurring items such as acquisition-related activities or changes in applicable accounting rules, provide for one or more equitable adjustments (based on objective standards) to the Performance Factors to preserve the Committee's original intent regarding the Performance Factors at the time of the initial award grant. It is within the sole discretion of the Committee to make or not make any such equitable adjustments.

"***Performance Period***" means the period of service determined by the Committee, not to exceed five (5) years, during which years of service or performance is to be measured for the Award.

"***Performance Share***" means a performance share bonus granted as a Performance Award.

"***Permitted Transferee***" means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Employee, any person sharing the Employee's household (other than a tenant or employee), a trust in which these persons (or the Employee) have more than 50% of the beneficial interest, a foundation in which these persons (or the Employee) control the management of assets, and any other entity in which these persons (or the Employee) own more than 50% of the voting interests

"***Plan***" means this Amyris, Inc. 2010 Equity Incentive Plan, as amended.

"***Purchase Price***" means the price to be paid for Shares acquired under the Plan, other than Shares acquired upon exercise of an Option or SAR.

"***Restricted Stock Award***" means an award of Shares pursuant to Section 6 or Section 12 of the Plan, or issued pursuant to the early exercise of an Option.

"***Restricted Stock Unit***" means an Award granted pursuant to Section 9 or Section 12 of the Plan.

"***SEC***" means the United States Securities and Exchange Commission.

"***Securities Act***" means the United States Securities Act of 1933, as amended.

"***Shares***" means shares of the Company's Common Stock and the common stock of any successor security.

"***Stock Appreciation Right***" means an Award granted pursuant to Section 8 or Section 12 of the Plan.

"***Stock Bonus***" means an Award granted pursuant to Section 7 or Section 12 of the Plan.

"***Subsidiary***" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

"***Termination***" or "***Terminated***" means, for purposes of this Plan with respect to a Participant, that the Participant has for any reason ceased to provide services as an employee, officer, director, consultant, independent contractor or advisor to the Company or a Parent or Subsidiary of the Company. An employee will not be deemed to have ceased to provide services in the case of (i) sick leave, (ii) military leave, or (iii) any other leave of absence approved by the Committee; provided, that such leave is for a period of not more than 90 days, unless reemployment upon the expiration of such leave is guaranteed by contract or statute or unless provided otherwise pursuant to formal policy adopted from time to time by the Company and issued and promulgated to employees in writing. In the case of any employee on an approved leave of absence, the Committee may make such provisions respecting suspension of vesting of the Award while on leave from the employ of the Company or a Parent or Subsidiary of the Company as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. The Committee will have sole discretion to determine whether a Participant has ceased to provide services and the effective date on which the Participant ceased to provide services (the "***Termination Date***").

"***Unvested Shares***" means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

Appendix B

AMYRIS, INC.
2010 EMPLOYEE STOCK PURCHASE PLAN
AS AMENDED [ ], 2018

1. Establishment of Plan. Amyris, Inc. (the "Company") proposes to grant options for purchase of the Company's Common Stock to eligible employees of the Company and its Participating Corporations (as hereinafter defined) pursuant to this Employee Stock Purchase Plan (as amended, this "Plan"). For purposes of this Plan, "Parent" and "Subsidiary" shall have the same meanings as "parent corporation" and "subsidiary corporation" in Sections 424(e) and 424(f), respectively, of the Internal Revenue Code of 1986, as amended (the "Code"), and "Corporate Group" shall refer collectively to the Company and all its Parents and Subsidiaries. "Participating Corporations" are the Company and any Parents or Subsidiaries that the Board of Directors of the Company (the "Board") designates from time to time as corporations that shall participate in this Plan. The Company intends this Plan to qualify as an "employee stock purchase plan" under Section 423 of the Code (including any amendments to or replacements of such Section), and this Plan shall be so construed. Any term not expressly defined in this Plan but defined for purposes of Section 423 of the Code shall have the same definition herein. Subject to Section 14, a total of 11,241 shares of the Company's Common Stock is reserved for issuance under this Plan. In addition, on each January 1 for each calendar year after the Effective Date, the aggregate number of shares of the Company's Common Stock reserved for issuance under the Plan shall be increased automatically by the lesser of one (1%) percent of the number of shares of the Company's Common Stock issued and outstanding on each December 31 immediately prior to the date of increase or (ii) such number of shares of the Company's Common determined by the Board or the Committee provided that the aggregate number of shares issued over the term of this Plan shall not exceed 1,666,666 shares of Common Stock.

2. Purpose. The purpose of this Plan is to provide eligible employees of the Company and Participating Corporations with a means of acquiring an equity interest in the Company through payroll deductions, to enhance such employees' sense of participation in the affairs of the Company and Participating Corporations, and to provide an incentive for continued employment.

3. Administration. The Plan will be administered by the Compensation Committee of the Board or by the Board (either referred to herein as the "Committee"). Subject to the provisions of this Plan and the limitations of Section 423 of the Code or any successor provision in the Code, all questions of interpretation or application of this Plan shall be determined by the Committee and its decisions shall be final and binding upon all Participants. The Committee will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to determine eligibility and decide upon any and all claims filed under the Plan. Every finding, decision and determination made by the Committee will, to the full extent permitted by law, be final and binding upon all parties. Notwithstanding any provision to the contrary in this Plan, the Committee may adopt rules and/or procedures relating to the operation and administration of the Plan to accommodate requirements of local law and procedures outside of the United States. Members of the Committee shall receive no compensation for their services in connection with the administration of this Plan, other than standard fees as established from time to time by the Board for services rendered by Board members serving on Board committees. All expenses incurred in connection with the administration of this Plan shall be paid by the Company.

4. Eligibility. Any employee of the Company or the Participating Corporations is eligible to participate in an Offering Period (as hereinafter defined) under this Plan except the following:

(a) employees who are not employed by the Company or a Participating Corporation prior to the beginning of such Offering Period or prior to such other time period as specified by the Committee; except that employees who are employed on the Effective Date of the Registration Statement filed by the Company with the Securities and Exchange Commission (the "SEC") under the Securities Act of 1933, as amended (the "Securities Act") registering the initial public offering of the Company's Common Stock shall be eligible to participate in the First Offering Period;

(b) employees who are customarily employed for twenty (20) hours or less per week;

(c) employees who are customarily employed for five (5) months or less in a calendar year;

(d) employees who, together with any other person whose stock would be attributed to such employee pursuant to Section 424(d) of the Code, own stock or hold options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any of its Participating Corporations or who, as a result of being granted an option under this Plan with respect to such Offering Period, would own stock or hold options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any of its Participating Corporations;

(e) employees who do not meet any other eligibility requirements that the Committee may choose to impose (within the limits permitted by the Code);

(f) employees who have been an employee of the Company for less than one (1) month prior to the first day of an Offering Period (except as set forth in (a) above); and

(g) individuals who provide services to the Company or any of its Participating Corporations as independent contractors who are reclassified as common law employees for any reason except for federal income and employment tax purposes.

5. Offering Dates.

(a) The offering periods of this Plan (each, an "Offering Period") may be of up to twelve (12) months duration (except the Initial Offering Period, which may be longer than twelve (12) months as described below) and shall commence and end at the times designated by the Committee. Each Offering Period shall consist of two six month purchase periods (each a "Purchase Period") during which payroll deductions of Participants are accumulated under this Plan.

(b) The initial Offering Period shall commence on the date on which the Registration Statement covering the initial public offering of shares of the Company's Common Stock is declared effective by the U.S. Securities and Exchange Commission (the "Effective Date"), and shall end on November 15th of the year following the Effective Date. The initial Offering Period shall consist of a single Purchase Period. Thereafter, a twelve-month Offering Period shall commence on each May 16th and November 16th, with each such Offering Period also consisting of two six-month Purchase Periods.

(c) The first business day of each Offering Period is referred to as the "Offering Date," however, for the initial Offering Period this shall be the Effective Date. The last business day of each Purchase Period is referred to as the "Purchase Date." The Committee shall have the power to change the terms of this Section 5 as provided in Section 25 below.

6. Participation in this Plan.

(a) Any employee who is an eligible employee determined in accordance with Section 4 immediately prior to the initial Offering Period will be automatically enrolled in the initial Offering Period under this Plan. With respect to subsequent Offering Periods, any eligible employee determined in accordance with Section 4 will be eligible to participate in this Plan, subject to the requirement of Section 6(b) hereof and the other terms and provisions of this Plan. Eligible employees who meet the eligibility requirements set forth in Section 4 and who are either automatically enrolled in the initial offering period or who elect to participate in the this Plan pursuant to Section 6(b) are referred to herein as a "Participant" or collectively as "Participants."

(b) Notwithstanding the foregoing, (i) an eligible employee may elect to decrease the number of shares of Common Stock that such employee would otherwise be permitted to purchase for the initial Offering Period under the Plan and/or purchase shares of Common Stock for the initial Offering Period through payroll deductions by delivering a subscription agreement to the Company within thirty (30) days after the filing of an effective registration statement pursuant to Form S-8 and (ii) the Committee may set a later time for filing the subscription agreement authorizing payroll deductions for all eligible employees with respect to a given Offering Period. With respect to Offering Periods after the initial Offering Period, a Participant may elect to participate in this Plan by submitting a subscription agreement prior to the commencement of the Offering Period (or such earlier date as the Committee may determine) to which such agreement relates.

(c) Once an employee becomes a Participant in an Offering Period, then such Participant will automatically participate in the Offering Period commencing immediately following the last day of such prior Offering Period unless the Participant withdraws or is deemed to withdraw from this Plan or terminates further participation in the Offering Period as set forth in Section 11 below. Such Participant is not required to file any additional subscription agreement in order to continue participation in this Plan.

7. Grant of Option on Enrollment. Becoming a Participant with respect to an Offering Period will constitute the grant (as of the Offering Date) by the Company to such Participant of an option to purchase on the Purchase Date up to that number of shares of Common Stock of the Company determined by a fraction, the numerator of which is the amount accumulated in such Participant's payroll deduction account during such Purchase Period and the denominator of which is the lower of (i) eighty-five percent (85%) of the fair market value of a share of the Company's Common Stock on the Offering Date (but in no event less than the par value of a share of the Company's Common Stock), or (ii) eighty-five percent (85%) of the fair market value of a share of the Company's Common Stock on the Purchase Date (but in no event less than the par value of a share of the Company's Common Stock) provided, however, that for the Purchase Period within the initial Offering Period the numerator shall be fifteen percent (15%) of the Participant's compensation for such Purchase Period and provided, further, that the number of shares of the Company's Common Stock subject to any option granted pursuant to this Plan shall not exceed the lesser of (x) the maximum number of shares set by the Committee pursuant to Section 10(b) below with respect to the applicable Purchase Date, or (y) the maximum number of shares which may be purchased pursuant to Section 10(a) below with respect to the applicable Purchase Date. The fair market value of a share of the Company's Common Stock shall be determined as provided in Section 8 below.

8. Purchase Price. The purchase price per share at which a share of Common Stock will be sold in any Offering Period shall be eighty-five percent (85%) of the lesser of:

(a) The fair market value on the Offering Date; or

(b) The fair market value on the Purchase Date.

The term "fair market value" means, as of any date, the value of a share of the Company's Common Stock determined as follows:

(i) if such Common Stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the Common Stock is listed or admitted to trading as reported in The Wall Street Journal or such other source as the Board or the Committee deems reliable; or

(ii) if such Common Stock is publicly traded but is neither listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in The Wall Street Journal or such other source as the Board or the Committee deems reliable; or

(iii) with respect to the initial Offering Period, "fair market value" on the Offering Date shall be the price at which shares of Common Stock are offered to the public pursuant to the Registration Statement covering the initial public offering of shares of the Company's Common Stock; and

(iv) if none of the foregoing is applicable, by the Board or the Committee in good faith.

9. Payment of Purchase Price; Payroll Deduction Changes; Share Issuances.

(a) The purchase price of the shares is accumulated by regular payroll deductions made during each Offering Period. The deductions are made as a percentage of the Participant's compensation in one percent (1%) increments not less than one percent (1%), nor greater than fifteen percent (15%) or such lower limit set by the Committee. Compensation shall mean all compensation categorized by the Company as total compensation including base salary or regular hourly wages, overtime, holiday, vacation and sick pay and shift premiums and excluding, to the extent permitted by Code Section 423, bonuses, salary continuation, relocation assistance payments, geographical hardship pay, noncash prizes and awards, automobile allowances, severance type payments, and nonqualified deferred executive compensation (including amounts attributable to equity compensation), provided, however, that for purposes of determining a Participant's compensation, any election by such Participant to reduce his or her regular cash remuneration under Sections 125 or 401(k) of the Code shall be treated as if the Participant did not make such election. Payroll deductions shall commence on the first payday following the last Purchase Date (first payday following the effective date of filing with the U.S. Securities and Exchange Commission a securities registration statement for the Plan with respect to the initial Offering Period) and shall continue to the end of the Offering Period unless sooner altered or terminated as provided in this Plan.

(b) A Participant may increase or decrease the rate of payroll deductions during an Offering Period by filing with the Company a new authorization for payroll deductions, with the new rate to become effective for the next payroll period commencing after the Company's receipt of the authorization and continuing for the remainder of the Offering Period unless changed as described below. Such change in the rate of payroll deductions may be made at any time during an Offering Period, under rules determined by the Committee. A Participant may increase or decrease the rate of payroll deductions for any subsequent Offering Period by filing with the Company a new authorization for payroll deductions prior to the beginning of such Offering Period, or such other time period as specified by the Committee.

(c) A Participant may reduce his or her payroll deduction percentage to zero during an Offering Period by filing with the Company a request for cessation of payroll deductions. Such reduction shall be effective beginning with the next payroll period after the Company's receipt of the request and no further payroll deductions will be made for the duration of the Offering Period. Payroll deductions credited to the Participant's account prior to the effective date of the request shall be used to purchase shares of Common Stock of the Company in accordance with Section (e) below. A reduction of the payroll deduction percentage to zero shall be treated as such Participant's withdrawal from such Offering Period, and the Plan, effective as of the day after the next Purchase Date following the filing date of such request with the Company.

(d) All payroll deductions made for a Participant are credited to his or her account under this Plan and are deposited with the general funds of the Company. No interest accrues on the payroll deductions. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions.

(e) On each Purchase Date, so long as this Plan remains in effect and provided that the Participant has not submitted a signed and completed withdrawal form before that date which notifies the Company that the Participant wishes to withdraw from that Offering Period under this Plan and have all payroll deductions accumulated in the account maintained on behalf of the Participant as of that date returned to the Participant, the Company shall apply the funds then in the Participant's account to the purchase of whole shares of Common Stock reserved under the option granted to such Participant with respect to the Offering Period to the extent that such option is exercisable on the Purchase Date. The purchase price per share shall be as specified in Section 8 of this Plan. Any amount remaining in a Participant's account on a Purchase Date which is less than the amount necessary to purchase a full share of the Company's Common Stock shall be carried forward, without interest, into the next Purchase Period or Offering Period, as the case may be. In the event that this Plan has been oversubscribed, all funds not used to purchase shares on the Purchase Date shall be returned to the Participant, without interest. No Common Stock shall be purchased on a Purchase Date on behalf of any employee whose participation in this Plan has terminated prior to such Purchase Date.

(f) As promptly as practicable after the Purchase Date, the Company shall issue shares for the Participant's benefit representing the shares purchased upon exercise of his or her option.

(g) During a Participant's lifetime, his or her option to purchase shares hereunder is exercisable only by him or her. The Participant will have no interest or voting right in shares covered by his or her option until such option has been exercised.

10. Limitations on Shares to be Purchased.

(a) No Participant shall be entitled to purchase stock under any Offering Period at a rate which, when aggregated with such Participant's rights to purchase stock, that are also outstanding in the same calendar year(s) (whether under other Offering Periods or other employee stock purchase plans of the Corporate Group), exceeds $25,000 in fair market value, determined as of the Offering Date, (or such other limit as may be imposed by the Code) for each calendar year in which such Offering Period is in effect (hereinafter the "Maximum Share Amount"). The Company shall automatically suspend the payroll deductions of any Participant as necessary to enforce such limit provided that when the Company automatically resumes such payroll deductions, the Company must apply the rate in effect immediately prior to such suspension.

(b) The Committee may, in its sole discretion, set a lower maximum number of shares which may be purchased by any Participant during any Offering Period than that determined under Section 10(a) above, which shall then be the Maximum Share Amount for subsequent Offering Periods; provided, however, in no event shall a Participant be permitted to purchase more than 3,000 Shares during any one Offering Period, irrespective of the Maximum Share Amount set forth in (a) and (b) hereof. If a new Maximum Share Amount is set, then all Participants must be notified of such Maximum Share Amount prior to the commencement of the next Offering Period for which it is to be effective. The Maximum Share Amount shall continue to apply with respect to all succeeding Offering Periods unless revised by the Committee as set forth above.

(c) If the number of shares to be purchased on a Purchase Date by all Participants exceeds the number of shares then available for issuance under this Plan, then the Company will make a pro rata allocation of the remaining shares in as uniform a manner as shall be reasonably practicable and as the Committee shall determine to be equitable. In such event, the Company shall give written notice of such reduction of the number of shares to be purchased under a Participant's option to each Participant affected.

(d) Any payroll deductions accumulated in a Participant's account which are not used to purchase stock due to the limitations in this Section 10, and not covered by Section 9(e), returned to the Participant as soon as practicable after the end of the applicable Purchase Period..

11. Withdrawal.

(a) Each Participant may withdraw from an Offering Period under this Plan by signing and delivering to the Company a written notice to that effect on a form provided for such purpose by the Company. Such withdrawal may be elected at any time prior to the end of an Offering Period, or such other time period as specified by the Committee.

(b) Upon withdrawal from this Plan, the accumulated payroll deductions shall be returned to the withdrawn Participant, without interest, and his or her interest in this Plan shall terminate. In the event a Participant voluntarily elects to withdraw from this Plan, he or she may not resume his or her participation in this Plan during the same Offering Period, but he or she may participate in any Offering Period under this Plan which commences on a date subsequent to such withdrawal by filing a new authorization for payroll deductions in the same manner as set forth in Section 6 above for initial participation in this Plan.

12. Termination of Employment. Termination of a Participant's employment for any reason, including retirement, death, disability, or the failure of a Participant to remain an eligible employee of the Company or of a Participating Corporation, immediately terminates his or her participation in this Plan. In such event, accumulated payroll deductions credited to the Participant's account will be returned to him or her or, in the case of his or her death, to his or her legal representative, without interest. For purposes of this Section 12, an employee will not be deemed to have terminated employment or failed to remain in the continuous employ of the Company or of a Participating Corporation in the case of sick leave, military leave, or any other leave of absence approved by the Company; provided that such leave is for a period of not more than ninety (90) days or reemployment upon the expiration of such leave is guaranteed by contract or statute.

13. Return of Payroll Deductions. In the event a Participant's interest in this Plan is terminated by withdrawal, termination of employment or otherwise, or in the event this Plan is terminated by the Board, the Company shall deliver to the Participant all accumulated payroll deductions credited to such Participant's account. No interest shall accrue on the payroll deductions of a Participant in this Plan.

14. Capital Changes. If the number of outstanding Shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, then the Committee shall adjust the number and class of Common Stock that may be delivered under the Plan, the purchase price per share and the number of shares of Common Stock covered by each option under the Plan which has not yet been exercised, and the numerical limits of Sections 1 and 10 shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

15. Nonassignability. Neither payroll deductions credited to a Participant's account nor any rights with regard to the exercise of an option or to receive shares under this Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 22 below) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition shall be void and without effect.

16. Use of Participant Funds and Reports. The Company may use all payroll deductions received or held by it under the Plan for any corporate purpose, and the Company will not be required to segregate Participant payroll deductions. Until Shares are issued, Participants will only have the rights of an unsecured creditor. Each Participant shall receive promptly after the end of each Purchase Period a report of his or her account setting forth the total payroll deductions accumulated, the number of shares purchased, the per share price thereof and the remaining cash balance, if any, carried forward to the next Purchase Period or Offering Period, as the case may be.

17. Notice of Disposition. Each Participant shall notify the Company in writing if the Participant disposes of any of the shares purchased in any Offering Period pursuant to this Plan if such disposition occurs within two (2) years from the Offering Date or within one (1) year from the Purchase Date on which such shares were purchased (the "Notice Period"). The Company may, at any time during the Notice Period, place a legend or legends on any certificate representing shares acquired pursuant to this Plan requesting the Company's transfer agent to notify the Company of any transfer of the shares. The obligation of the Participant to provide such notice shall continue notwithstanding the placement of any such legend on the certificates.

18. No Rights to Continued Employment. Neither this Plan nor the grant of any option hereunder shall confer any right on any employee to remain in the employ of the Company or any Participating Corporation, or restrict the right of the Company or any Participating Corporation to terminate such employee's employment.

19. Equal Rights And Privileges. All eligible employees shall have equal rights and privileges with respect to this Plan so that this Plan qualifies as an "employee stock purchase plan" within the meaning of Section 423 or any successor provision of the Code and the related regulations. Any provision of this Plan which is inconsistent with Section 423 or any successor provision of the Code shall, without further act or amendment by the Company, the Committee or the Board, be reformed to comply with the requirements of Section 423. This Section 19 shall take precedence over all other provisions in this Plan.

20. Notices. All notices or other communications by a Participant to the Company under or in connection with this Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

21. Term; Stockholder Approval. This Plan will become effective on the Effective Date. This Plan, as amended, shall be approved by the stockholders of the Company, in any manner permitted by applicable corporate law, within twelve (12) months before or after the date this Plan is adopted by the Board. No purchase of shares that are subject to such stockholder approval before becoming available under this Plan shall occur prior to stockholder approval of such shares and the Board or Committee may delay any Purchase Date and postpone the commencement of any Offering Period subsequent to such Purchase Date

as deemed necessary or desirable to obtain such approval. This Plan shall continue until the earlier to occur of (a) termination of this Plan by the Board (which termination may be effected by the Board at any time pursuant to Section 25 below), (b) issuance of all of the shares of Common Stock reserved for issuance under this Plan, or (c) the tenth anniversary of the first Purchase Date under the Plan.

22. Designation of Beneficiary.

(a) A Participant may file a written designation of a beneficiary who is to receive any shares and cash, if any, from the Participant's account under this Plan in the event of such Participant's death subsequent to the end of a Purchase Period but prior to delivery to him of such shares and cash. In addition, a Participant may file a written designation of a beneficiary who is to receive any cash from the Participant's account under this Plan in the event of such Participant's death prior to a Purchase Date.

(b) Such designation of beneficiary may be changed by the Participant at any time by written notice. In the event of the death of a Participant and in the absence of a beneficiary validly designated under this Plan who is living at the time of such Participant's death, the Company shall deliver such shares or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares or cash to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

23. Conditions Upon Issuance of Shares; Limitation on Sale of Shares. Shares shall not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto shall comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act, the Securities Exchange Act of 1934, as amended, the rules and regulations promulgated thereunder, and the requirements of any stock exchange or automated quotation system upon which the shares may then be listed, and shall be further subject to the approval of counsel for the Company with respect to such compliance.

24. Applicable Law. The Plan shall be governed by the substantive laws (excluding the conflict of laws rules) of the State of Delaware.

25. Amendment or Termination. The Committee, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Committee, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Common Stock on the next Purchase Date (which may be sooner than originally scheduled, if determined by the Committee in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 14). If an Offering Period is terminated prior to its previously-scheduled expiration, all amounts then credited to Participants' accounts for such Offering Period, which have not been used to purchase shares of the Company's Common Stock, shall be returned to those Participants (without interest thereon, except as otherwise required under local laws) as soon as administratively practicable. Further, the Committee will be entitled to change the Purchase Periods and Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, permit contributions to be increased or decreased, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the administration of the Plan, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of the Company's Common Stock for each Participant properly correspond with amounts withheld from the Participant's base salary or regular hourly wages, and establish such other limitations or procedures as the Committee determines in its sole discretion advisable which are consistent with the Plan. Such actions will not require stockholder approval or the consent of any Participants. However, no amendment shall be made without approval of the stockholders of the Company (obtained in accordance with Section 21 above) within twelve (12) months of the adoption of such amendment (or earlier if required by Section 21) if such amendment would: (a) increase the number of shares that may be issued under this Plan; or (b) change the designation of the employees (or class of employees) eligible for participation in this Plan.

26. Corporate Transactions.

(a) In the event of a Corporate Transaction (as defined below), each outstanding right to purchase Company Common Stock will be assumed or an equivalent option substituted by the successor corporation or a parent or a subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the purchase right, the Offering Period with respect to which such purchase right relates will be shortened by setting a new Purchase Date (the "New Purchase Date") and will end on the New Purchase Date. The New Purchase Date shall occur on or prior to the consummation of the Corporate Transaction.

(b) "Corporate Transaction" means the occurrence of any of the following events: (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or (ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

APPENDIX C

AMYRIS, INC.
2010 EQUITY INCENTIVE PLAN
NOTICE OF PERFORMANCE STOCK OPTION GRANT

Unless otherwise defined herein, the terms defined in the 2010 Amyris, Inc. (the "**Company**") Equity Incentive Plan (the "**Plan**") shall have the same meanings in this Notice of Performance Stock Option Grant (the "**Notice**").

Name: ____

You (the "**Participant**") have been granted an option to purchase shares of Common Stock of the Company (the "**Option**") under the Plan subject to the terms and conditions of the Plan, this Notice and the Performance Stock Option Award Agreement (the Notice and Performance Stock Option Award Agreement together, the "**Agreement**").

Date of Grant:	____________________________
Exercise Price per Share:	____________________________
Total Number of Shares:	3,250,000
Type of Option:	Non-Qualified Stock Option
Expiration Date:	____________________________
Vesting Schedule:	As set forth below

I. Vesting Requirements

This Option is a performance-based stock option award and, subject to Participant continuing as the Chief Executive Officer of the Company (the "**Chief Executive Officer**") through each vesting event, shall vest and be exercisable upon the vesting dates set forth below subject to the satisfaction of both EBITDA Milestones and Stock Price Milestones as described in more detail below.

Vesting. The Option is divided into four (4) vesting tranches (each a "**Tranche**"), with each Tranche representing a portion of the Option covering that number of Shares specified next to the applicable Tranche in the *Milestone Table* below. Each Tranche shall vest upon the vesting date specified as applicable to the Tranche in the *Milestone Table* (each, an "**Earliest Vesting Date**") subject to all of the following: (a) the achievement of the EBITDA Milestone applicable to the Tranche in the *Milestone Table* during the EBITDA Measurement Period (as defined below) (each, an "**EBITDA Milestone**"), (b) the achievement of the Stock Price Milestone applicable to the Tranche in the *Milestone Table* during the Stock Price Measurement Period (as defined below) (each, a "**Stock Price Milestone**") (the EBITDA Milestones and the Stock Price Milestones, collectively, the "**Milestones**"), (c) Participant continuing as the Chief Executive Officer through the Earliest Vesting Date applicable to the Tranche in the *Milestone Table* and (d) the Certification (as defined below) of the Milestones by the Board of Directors of the Company (the "**Board**") or the Board's Compensation Committee (the "**Compensation Committee**"). Any Milestone may be met before, at or after the applicable Earliest Vesting Date for that Tranche provided that the Milestone is met during its applicable Measurement Period.

Milestone Table

Tranche	Number of Shares	EBITDA Milestone ($M)	Stock Price Milestone	Earliest Vesting Date
1	750,000	$ 10	$15	July 1, 2019
"Tranche One"	**"Tranche One Shares"**			**"Tranche One Earliest Vesting Date"**
2	750,000	$ 60	$20	July 1, 2020
"Tranche Two"	**"Tranche Two Shares"**			**"Tranche Two Earliest Vesting Date"**
3	750,000	$ 80	$25	July 1, 2021
"Tranche Three"	**"Tranche Three Shares"**			**"Tranche Three Earliest Vesting Date"**
4	1,000,000	$100	$30	July 1, 2022
"Tranche Four"	**"Tranche Four Shares"**			**"Tranche Four Earliest Vesting Date"**

In the event that either the EBITDA Milestone or the Stock Price Milestone is not yet achieved for a Tranche, no Shares attributable to such Tranche will be eligible to vest on such Tranche's Earliest Vesting Date; provided, however, the EBITDA Milestones will remain eligible to be achieved during the remaining EBITDA Measurement Period and the Stock Price Milestones will remain eligible to be achieved during the remaining Stock Price Measurement Period (both as defined below).

Any portion of the Option that does not vest (i) on or prior to the end of the EBITDA Measurement Period and the Stock Price Measurement Period, as applicable, or (ii) prior to Participant's termination as Chief Executive Officer (except in connection with a Change of Control (as defined below) as set forth in Section IV below) shall immediately terminate.

For clarity, as set forth above, upon the achievement of both the applicable EBITDA Milestone and Stock Price Milestone for a Tranche, the Shares attributable to such Tranche (the "**Unvested Achieved Options**") may vest only if Participant remains the Chief Executive Officer on the applicable Earliest Vesting Date for such Tranche (except in connection with a Change of Control as set forth in Section IV below).

More than one Tranche may vest simultaneously provided that: the Earliest Vesting Date for each applicable Tranche has occurred, the requisite EBITDA Milestone and Stock Price Milestone for each applicable Tranche have been met and Participant continued as the Chief Executive Officer through the applicable date of vesting. For example, assume that (i) either or both of the Milestones for the First Tranche were not achieved on or prior to the Tranche One Earliest Vesting Date, (ii) all of the Milestones for Tranche One, Tranche Two and Tranche Three were achieved on or prior to the Tranche Two Earliest Vesting Date, then, (x) subject to Participant remaining the Chief Executive Officer through the Tranche Two Earliest Vesting Date, both Tranche One and Tranche Two will become vested on the Tranche Two Earliest Vesting Date and (y) subject to Participant remaining the Chief Executive Officer through the Tranche Three Earliest Vesting Date, Tranche Three will become vested on the Tranche Three Earliest Vesting Date.

Certification. Achievement of the Milestones for each Tranche shall be determined, approved and certified by the Board or the Compensation Committee, in its sole, good faith discretion (a "**Certification**" and the date of such Certification, the "**Certification Date**"). Separate Certifications may occur on separate dates with respect to the achievement of each of EBITDA Milestone and Stock Price Milestone that are required for the vesting of any particular Tranche.

Term; Expiration. The maximum term of the Option shall be ten (10) years unless earlier terminated as set forth herein, and the Option shall expire automatically on the Expiration Date specified above (without regard to whether any or all of the Option vested or whether Participant exercised any vested part of the Option).

II. <u>Determination of EBITDA Milestone</u>

The EBITDA Milestone for a Tranche is achieved if the Company's EBITDA (as defined below) equals or exceeds the EBITDA threshold amount set forth in the *Milestone Table* for such Tranche for any fiscal year during the EBITDA Measurement Period. The Committee will measure and certify the level of achievement of the EBITDA Milestones as of the end of each fiscal year within the EBITDA Measurement Period.

A. For purposes of this Option, "**EBITDA**" shall mean the Company's net (loss) income attributable to common stockholders for the relevant year as determined in accordance with U.S. Generally Accepted Accounting Principles ("**GAAP**") and as reported by the Company in its audited financial statements on the Form 10-K filed with the SEC, for the applicable fiscal year during the EBITDA Measurement Period plus interest expense (benefit), provision for income taxes, depreciation and amortization for the same year as reflected in the audited financial statements. For the avoidance of doubt, there will be no adjustment to the reported net (loss) for stock based compensation in determining EBITDA.

B. For purposes of this Option, "**EBITDA Measurement Period**" shall mean the period starting January 1, 2018 and ending December 31, 2021.

C. In the event of unusual non-recurring events such as acquisition activities or divestitures of significant assets or changes in applicable accounting rules, as a result of which the calculation of the Company's EBITDA for any EBITDA Measurement Period is increased or decreased by 10% or more in determining the Company's financial statements on Form 10-K filed with the SEC for the most recently completed fiscal year, the Board or, if the Board delegates authority to the Compensation Committee, the Compensation Committee may provide for one or more equitable adjustments to the EBITDA Milestones to preserve the original intent regarding the EBITDA Milestones at the time of the initial award grant.

III. <u>Determination of Stock Price Milestone</u>

The Stock Price Milestone for a Tranche is achieved if the both the 180-Day Average Stock Price (as defined below) and the 30-Day Average Stock Price (as defined below) equal or exceed the price set forth in the *Milestone Table* for such Tranche during the Stock Price Measurement Period. The Committee will measure and certify the level of achievement of the Stock Price Milestone during the Stock Price Measurement Period as described below.

A. For purposes of this Option, "**180-Day Average Stock Price**" shall mean for each applicable Tranche, the average of the daily closing prices of the Company's common stock on the Nasdaq Global Select Market for any one hundred and eighty (180)-consecutive day period (x) starting at any time after the last day of the fiscal year in which the applicable EBITDA Milestone was achieved and (y) ending on or prior to the final day of the Stock Price Measurement Period.

B. For purposes of this Option, "**30-Day Average Stock Price**" shall mean for each applicable Tranche, the average of the daily closing prices of the Company's common stock on the Nasdaq Global Select Market for a thirty (30)-consecutive day period ending on the date on which the 180-Day Average Stock Price is achieved for the applicable Tranche, but in any event on or prior to final day of the Stock Price Measurement Period.

C. For purposes of this Option, "**Stock Price Measurement Period**" shall mean the period starting January 1, 2018 and ending December 31, 2022.

D. If the event of a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, the Board or the Compensation Committee, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Option (and in a manner that will not provide Participant with any greater benefit or potential benefits than intended to be made available under the Option, other than as may be necessary solely to reflect changes resulting from any such aforementioned event), will adjust the Stock Price Milestones.

IV. Vesting Determination upon Change of Control of the Company

Calculation of Milestones upon Change of Control. Notwithstanding Sections I, II and III above, in the event of a Change of Control (as defined in the Company's Executive Severance Plan, adopted November 6, 2013, and Participant's related Participation Agreement thereunder (together, the "**Severance Plan**")), for purposes of determining whether any Tranches are eligible to vest on or after the Change of Control, the EBITDA Milestones shall be disregarded and only the Stock Price Milestones shall be required to be met as determined pursuant to this Section IV.

In the event of a Change of Control, a Stock Price Milestone relating to any Tranche that has not yet vested pursuant to Section I above as of immediately before the closing of the Change of Control, shall be achieved if the per Share price (plus the per Share value of any other consideration) received by the Company's stockholders in the Change of Control equals or exceeds the price set forth in the *Milestone Table* for the relevant Stock Price Milestone, and the Shares specified for any such Tranche will be eligible to vest pursuant to the time-based vesting schedule set forth below (the "**COC Time-Based Options**"). To the extent a Stock Price Milestone is not achieved as a result of the Change of Control pursuant to the preceding sentence, the corresponding Tranche of Shares will be forfeited automatically as of the immediately prior to closing of the Change of Control and never shall become vested.

Vesting Requirements Upon Change of Control. Subject to Participant's remaining the Chief Executive Officer, (i) the COC Time-Based Options for Tranche One, if any, will vest on the later of the Tranche One Earliest Vesting Date and the closing date of the Change of Control (the "**Closing Date**"); (ii) the COC Time-Based Options for Tranche Two, if any, will vest on the later of the Tranche Two Earliest Vesting Date and the Closing Date; (iii) the COC Time-Based Options for Tranche Three, if any, will vest on the later of the Tranche Three Earliest Vesting Date and the Closing Date and (iv) the COC Time-Based Options for Tranche Four, if any, will vest on the later of the Tranche Four Earliest Vesting Date and the Closing Date. Notwithstanding the foregoing, in the event the Participant's employment as Chief Executive Officer terminates as a result of an Involuntary Termination (as defined in Participant's Severance Plan) at any time within the period beginning three (3) months before a Change of Control and ending twelve (12) months after a Change of Control, the unvested Achieved Options and COC Time-Based Options shall be eligible for accelerated vesting as provided in the Participant's Severance Plan subject to Participant's satisfaction of all terms and conditions in the Severance Plan, including, but not limited to delivery of a release of claims. If the Participant's employment as Chief Executive Officer terminates as a result of an Involuntary Termination prior to a Change of Control, any then-unvested portion of the Option that would otherwise forfeit upon such termination shall remain outstanding, but cease to continue vesting, for three (3) months following such termination (provided that in no event will the Option remain outstanding beyond the expiration of its maximum term) to permit the acceleration described above. In the event that a Change in Control is not completed during such three (3) month period, any unvested portion of the Option will be automatically and permanently forfeited without having vested effective three (3) months following such termination. For the avoidance of doubt, the accelerated vesting provisions of the Severance Plan apply only upon a Change of Control and apply only to the Unvested Achieved Options and COC Time-Based Options.

Non-Assumption upon Change of Control. Notwithstanding anything to the contrary, if the successor or acquiring corporation (if any) of the Company refuses to assume, convert, replace or substitute the Option in connection with a Change of Control, then notwithstanding any other provision in this Agreement, the Plan or the Severance Plan to the contrary, 100% of Participant's COC Time-Based Options shall accelerate and become vested effective immediately prior to the Change of Control.

V. Termination as Chief Executive Officer

Notwithstanding anything to the contrary in this Agreement, the Severance Agreement Plan or any other agreement, upon Participant's termination as the Chief Executive Officer (except in connection with a Change of Control as set forth in Section IV above), any then-unvested portion of the Option will automatically terminate.

If, upon Participant's termination as the Chief Executive Officer, Participant continues as an Employee of the Company, and so long as Participant continues as an Employee of the Company, any vested and unexercised portion of the Option may be exercised until the Expiration Date of the Option.

If Participant ceases to be an Employee for any reason, this Option may, to the extent vested as of the date of Participant's cessation as an Employee, be exercised during the time periods set forth in the Agreement, but in no event later than the Expiration Date of the Option.

VI. Award Subject to Company Clawback or Recoupment

In the event that the Company determines at any time between the Date of Grant set forth in the Notice and December 31, 2025 that it is required to prepare a material accounting restatement resulting from material noncompliance with financial reporting requirements under applicable law (a "**financial restatement**"), and any of the Milestones that were previously Certified as achieved are subsequently determined to have not been achieved as a result of a financial restatement, the Tranches of the Option that vested as a result of the Certification will be subject to recoupment. In such case, Participant will be required to forfeit, reimburse or repay any portion of the Option that vested based on the original financial statement as compared to the Option that would have vested based on the financial restatement. For purposes of this compensation recovery by the Company: (a) if the Option, or a portion of the Option, is held at the time of recovery, the recoverable amount shall be the number Shares subject to the Option that vested in in excess of the number that should have been vested based on the financial restatement; (b) if the Option, or a portion of the Option, has been exercised, but the underlying Shares have not been sold, the recoverable amount shall be the number of Shares underlying the Option in excess of the number of Shares that should have been vested and exercisable based on the financial restatement; and (c) if Shares have been sold, the recoverable amount shall be the sale proceeds received by Participant in respect of the excess number of Shares underlying the Option in excess of the number of Shares that should have been vested and exercisable based on the financial restatement. In all cases, the determination of amounts to be recovered shall be calculated net of any taxes paid.

In addition to the Company's right to repayment pursuant to the preceding paragraph, the Option shall also be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board as required by law during the term of Participant's employment or other Service that is applicable to Participant. In addition to any other remedies available under such policy, applicable law may require the cancellation of Participant's Option (whether vested or unvested) and the recoupment of any gains realized with respect to Participant's Option.

VII. Exercise Method; Holding Period

Notwithstanding anything to the contrary in this Notice, the Agreement or the Plan, payment of the aggregate exercise price and any tax withholding obligations, may be paid only by any of the following, or a combination thereof, unless the Board or the Compensation Committee determines otherwise: (i) cash; (ii) check or (iii) a "broker-assisted" or "same-day sale" (as described in Section 11(d) of the Plan).

Participant must retain and may not sell, transfer or dispose at least fifty percent (50%) of the Shares acquired upon exercise of the Option net of any shares sold in a same-day sale to pay the exercise price and any tax withholding obligations as described above until after the second (2^{nd}) year anniversary of the applicable date of exercise of such Shares; provided, however, that the Participant may conduct transactions that involve merely a change in the form in which Participant owns such Shares (*e.g.*, transfer Shares to a revocable *inter vivos* trust for which Participant is the trustee and sole beneficiary during Participant's lifetime) as permitted by the Board or the Compensation Committee consistent with the Company's internal policies.

VIII. Acceptance of Option

By Participant's acceptance of this Agreement either electronically through the electronic acceptance procedure established by the Company or through a written acceptance delivered to the Company in a form satisfactory to the Company, Participant agrees that this Option is granted under and governed by the terms and conditions of this Notice, Agreement and the Plan, all of which are made a part of this document. Participant confirms that he has reviewed this Agreement in its entirety, has had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understands all provisions of the Agreement. Participant understand that his employment or service with the Company is for an unspecified duration, can be terminated at any time (i.e., is "at-will"), and that nothing in this Notice, the

Agreement or the Plan changes the at-will nature of that relationship. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board or the Compensation Committee upon any questions relating to the Agreement. Participant further agrees to notify the Company upon any change in the residence address indicated on the Notice.

AMYRIS, INC.

By: ______________________________

Name: ______________________________

Title: ______________________________

AGREED AND ACCEPTED BY PARTICIPANT:

By: ______________________________

Name: ______________________________

Title: ______________________________

AMYRIS, INC.

2010 EQUITY INCENTIVE PLAN

PERFORMANCE STOCK OPTION AWARD AGREEMENT

Unless otherwise defined in this Performance Stock Option Award Agreement (the "***Agreement***"), any capitalized terms used herein shall have the meaning ascribed to them in the Amyris, Inc. (the "***Company***") 2010 Equity Incentive Plan (the "***Plan***").

Participant has been granted an option to purchase Shares (the "***Option***"), subject to the terms and conditions of the Plan, the Notice of Stock Option Grant (the "***Notice***") and this Agreement. The Agreement incorporates the terms of the Notice and any reference to Agreement will be deemed to also include the terms of the Notice. In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Agreement, the terms and conditions of the Plan shall prevail.

1. Vesting Rights. Subject to the applicable provisions of the Plan and this Agreement, this Option may be exercised, in whole or in part, in accordance with the schedule set forth in the Notice.

2. Termination Period.

(a) General Rule. Except as provided below, and subject to the Plan, this Option may be exercised for 3 months after termination of Participant's employment with the Company. In no event shall this Option be exercised later than the Expiration Date set forth in the Notice.

(b) Death; Disability. Unless provided otherwise in the Notice, upon the termination of Participant's service to the Company by reason of his or her Disability or death, or if a Participant dies within three months of the Termination Date, this Option may be exercised for twelve months, provided that in no event shall this Option be exercised later than the Expiration Date set forth in the Notice.

(c) Cause. Upon the termination of Participant's employment by the Company for Cause, the Option shall expire on such date of Participant's Termination Date. For purposes of this Agreement, "Cause" shall be defined in the Plan.

3. Grant of Option. The Participant named in the Notice has been granted an Option for the number of Shares set forth in the Notice at the exercise price per Share set forth in the Notice (the "***Exercise Price***"). This Option shall be treated as a Nonqualified Stock Option ("***NSO***").

4. Exercise of Option.

(a) Right to Exercise. This Option is exercisable during its term in accordance with the Vesting Schedule set forth in the Notice and the applicable provisions of the Plan and this Agreement. In the event of Participant's death, Disability, Termination for Cause or other Termination, the exercisability of the Option is governed by the applicable provisions of the Plan, the Notice and this Agreement.

(b) Method of Exercise. This Option is exercisable by delivery of an exercise notice (the "***Exercise Notice***"), which shall state the election to exercise the Option, the number of Shares in respect of which the Option is being exercised (the "***Exercised Shares***"), and such other representations and agreements as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice shall be delivered in person, by mail, via electronic mail or facsimile or by other authorized method to the Secretary of the Company or other person designated by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares. This Option shall be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by such aggregate Exercise Price.

(c) No Shares shall be issued pursuant to the exercise of this Option unless such issuance and exercise complies with all relevant provisions of law and the requirements of any stock exchange or quotation service upon which the Shares are then listed. Assuming such compliance, for income tax purposes the Exercised Shares shall be considered transferred to the Participant on the date the Option is exercised with respect to such Exercised Shares.

5. Method of Payment. Payment of the aggregate Exercise Price and any tax liability (as described in Section 8 below) shall be by the methods set forth in the Notice.

6. Non-Transferability of Option. This Option may not be transferred in any manner other than by will or by the laws of descent or distribution or court order and may be exercised during the lifetime of Participant only by the Participant unless otherwise permitted by the Board or the Compensation Committee on a case-by-case basis. The terms of the Plan and this Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of the Participant.

7. Term of Option. This Option shall in any event expire on the expiration date set forth in the Notice, which date is 10 years after the Date of Grant.

8. U.S. Tax Consequences. For Participants subject to U.S. income tax, some of the federal tax consequences relating to this Option, as of the date of this Option, are set forth below. All other Participants should consult a tax advisor for tax consequences relating to this Option in their respective jurisdiction. THIS SUMMARY IS NECESSARILY INCOMPLETE, AND THE TAX LAWS AND REGULATIONS ARE SUBJECT TO CHANGE. THE PARTICIPANT SHOULD CONSULT A TAX ADVISER BEFORE EXERCISING THIS OPTION OR DISPOSING OF THE SHARES.

(a) Exercising the Option.

(i) Nonqualified Stock Option. The Participant may incur federal ordinary income tax liability upon exercise of a NSO. The Participant will be treated as having received compensation income (taxable at ordinary income tax rates) equal to the excess, if any, of the Fair Market Value of the Exercised Shares on the date of exercise over their aggregate Exercise Price. If the Participant is an Employee or a former Employee, the Company will be required to withhold from his or her compensation an amount equal to the minimum amount the Company is required to withhold for income and employment taxes or collect from Participant and pay to the applicable taxing authorities an amount in cash equal to a percentage of this compensation income at the time of exercise, and may refuse to honor the exercise and refuse to deliver Shares if such withholding amounts are not delivered at the time of exercise.

(b) Disposition of Shares.

(i) NSO. If the Participant holds NSO Shares for at least one year, any gain realized on disposition of the Shares will be treated as long-term capital gain for federal income tax purposes.

9. Acknowledgement. The Company and Participant agree that the Option is granted under and governed by the Notice, this Agreement and by the provisions of the Plan (incorporated herein by reference). Participant: (i) acknowledges receipt of a copy of the Plan and the Plan prospectus, (ii) represents that Participant has carefully read and is familiar with their provisions, and (iii) hereby accepts the Option subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice.

10. Entire Agreement; Enforcement of Rights. This Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning the purchase of the Shares hereunder are superseded. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, shall be effective unless in writing and signed by the parties to this Agreement. The failure by either party to enforce any rights under this Agreement shall not be construed as a waiver of any rights of such party.

11. Compliance with Laws and Regulations. The issuance of Shares will be subject to and conditioned upon compliance by the Company and Participant with all applicable state and federal laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Common Stock may be listed or quoted at the time of such issuance or transfer.

12. Governing Law; Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, the parties agree to renegotiate such provision in good faith. In the event that the parties cannot reach a mutually agreeable and enforceable replacement for such provision, then (i) such provision shall be excluded from this Agreement, (ii) the balance of this Agreement shall be interpreted as if such provision were so excluded and (iii) the balance of this Agreement shall be enforceable in accordance with its terms. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of California, without giving effect to principles of conflicts of law.

13. No Rights as Employee, Director or Consultant. Nothing in this Agreement shall affect in any manner whatsoever the right or power of the Company, or a Parent or Subsidiary of the Company, to terminate Participant's service, for any reason, with or without cause.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2017

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from __________ to __________

Commission File Number: 001-34885

AMYRIS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**55-0856151**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

5885 Hollis Street, Suite 100, Emeryville, California 94608
(Address of principal executive offices and Zip Code)

(510) 450-0761
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, $0.0001 par value per share	**The NASDAQ Stock Market LLC**
(Title of each class)	**(Name of each exchange on which registered)**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one.)

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☒
		Emerging Growth Company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, was $50.9 million based upon the closing price of the registrant's common stock reported for such date on the NASDAQ Global Select Market.

Number of shares of the registrant's common stock outstanding as of April 16, 2018: 49,694,705

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement related to its 2018 Annual Meeting of Stockholders to be filed within 120 days after the registrant's fiscal year end are incorporated by reference into Part III of this Annual Report on Form 10-K. Except as expressly incorporated by reference herein, the registrant's proxy statement related to its 2018 Annual Meeting of Stockholders shall not be deemed to be part of this report.

AMYRIS, INC.
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2017

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this Annual Report on Form 10-K other than statements of historical fact, including any projections of financing needs, revenue, expenses, earnings or losses from operations, or other financial items; any statements of the plans, strategies and objectives of management for future operations; any statements concerning product research, development and commercialization plans and timelines; any statements regarding expected production capacities, volumes and costs; any statements regarding anticipated benefits of our products and expectations for commercial relationships; any other statements of expectation or belief; and any statements of assumptions underlying any of the foregoing, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Part I, Item 1A, "Risk Factors" in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this Annual Report on Form 10-K may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

Unless expressly indicated or the context requires otherwise, the terms "Amyris," the "Company," "we," "us," and "our" in this Annual Report on Form 10-K refer to Amyris, Inc., a Delaware corporation, and, where appropriate, its consolidated entities.

PART I

ITEM 1. BUSINESS

Overview

Amyris, Inc. (the Company or Amyris) is a leading industrial biotechnology company that applies its technology platform to engineer, manufacture and sell high performance, natural, sustainably sourced products into the Health & Wellness, Clean Skincare, and Flavors & Fragrances markets. Our proven technology platform enables us to rapidly engineer microbes and use them as catalysts to metabolize renewable, plant-sourced sugars into large volume, high-value ingredients. Our biotechnology platform and industrial fermentation process replace existing complex and expensive manufacturing processes. We have successfully used our technology to develop and produce five distinct molecules at commercial volumes.

We believe that industrial synthetic biology represents a third industrial revolution, bringing together biology and engineering to generate new, more sustainable materials to meet the growing global demand for bio-based replacements for petroleum-based and traditional animal- or plant-derived ingredients. We continue to build demand for our current portfolio of products through an extensive sales network provided by our collaboration partners that represent the world's leading companies for our target market sectors. We also have a small group of direct sales and distributors who support our Clean Skincare market. With our partnership model, our partners invest in the development of each molecule to bring it from the lab to commercial scale and use their extensive sales force to sell our ingredients and formulations to their customers as part of their core business. We capture long-term revenue both through the production and sale of the molecule to our partners and through royalty revenues (previously referred to as value share) from our partners' product sales to their customers.

We were founded in 2003 in the San Francisco Bay area by a group of scientists from the University of California, Berkeley. Our first major milestone came in 2005 when, through a grant from the Bill & Melinda Gates Foundation, we developed technology capable of creating microbial strains that produce artemisinic acid, which is a precursor of artemisinin, an effective anti-malarial drug. In 2008, we granted royalty-free licenses to allow Sanofi-Aventis to produce artemisinic acid using our technology. Building on our success with artemisinic acid, in 2007 we began applying our technology platform to develop, manufacture and sell sustainable alternatives to a broad range of markets.

We focused our initial development efforts primarily on the production of Biofene®, our brand of renewable farnesene, a long-chain, branched hydrocarbon molecule that we manufacture through fermentation using engineered microbes. Our farnesene derivatives are sold in hundreds of products as nutraceuticals, skincare products, fragrances, solvents, polymers, and lubricant ingredients. The commercialization of farnesene pushed us to create a more cost efficient, faster and accurate development process in the lab and drive manufacturing costs down. This investment has enabled our technology platform to rapidly develop microbial strains and commercialize target molecules. In 2014, we began manufacturing additional molecules for the Flavors & Fragrances industry; in 2015 we began investing to expand our capabilities to other small molecule chemical classes beyond terpenes via our collaboration with the Defense Advanced Research Projects Agency (DARPA), and in 2016 we expanded into proteins.

We have invested over $500 million in infrastructure and technology to create microbes that produce molecules from sugar or other feedstocks at commercial scale. This platform has been used to design, build, optimize, and upscale strains producing five distinct molecules, leading to more than 15 commercial ingredients used in over 600 consumer products. Our time to market for molecules has decreased from seven years to less than a year for our most recent molecule, mainly due to our ability to leverage the technology platform we have built.

Our technology platform has been in active use since 2008 and has been integrated with our commercial production since 2011, creating an organism development process that we believe makes us an industry leader in the successful scale-up and commercialization of biotech-produced ingredients. The key performance characteristics of our platform that we believe differentiate us include our proprietary computational tools, strain construction tools, screening and analytics tools, and advanced lab automation and data integration. Having this fully integrated with our large scale manufacturing process and capability enables us to always engineer with the end specification and requirements guiding our technology. Our state-of-the-art infrastructure includes industry-leading strain engineering and lab automation located in Emeryville, California, pilot scale production facilities in Emeryville, California and Campinas, Brazil, a demonstration-scale facility in Campinas, Brazil and a commercial-scale production facility in Leland, North Carolina, which is owned and operated by our Aprinnova joint venture to convert our Biofene into squalane and other final products.

We are able to use a wide variety of feedstocks for production, but have focused on accessing Brazilian sugarcane for our large-scale production because of its renewability, low cost and relative price stability. We have also successfully used other feedstocks such as sugar beets, corn dextrose, sweet sorghum and cellulosic sugars at various manufacturing facilities.

Several years ago, we made the strategic decision to transition our business model from collaborating and commercializing molecules in low margin commodity markets to higher margin specialty markets. We began the transition by first commercializing and supplying farnesene-derived squalene as a cosmetic ingredient sold to formulators and distributors. We also entered into collaboration and supply agreements for the development and commercialization of molecules within the Flavors & Fragrances and Cosmetic Ingredients where we utilize our strain generation technology to develop molecules that meet our customers' rigorous specifications.

During this transition, we solidified the business model of partnering with our customers to create sustainable, high performing, low-cost molecules that replace an ingredient in their supply chain, commercially scale and manufacture those molecules, and share in the profits earned by our customers once our customer sells its product into these specialty markets. These three steps constitute our collaboration revenues, renewable product revenues, and royalty revenues (previously referred to as value share revenues).

During 2017, we completed several development agreements with DSM and others for new products such as Vitamin A, a human nutrition molecule and others. We plan to bring two to three new molecules a year to commercial production.

In the first half of 2017, management made the decision to monetize the use for one of our lower margin molecules, farnesene, in certain fields of use (e.g., the human and animal health and nutrition field) while retaining any associated royalties. We began discussions with our partners and ultimately made the decision to license farnesene to DSM for use in these fields, which we announced in November 2017. During the discussions with DSM, management also made the decision to sell to DSM our manufacturing facility, Brotas 1, which we completed on December 28, 2017.

Brotas 1 was built to batch manufacture one commodity product at a time (originally for high-volume production of biofuels, a business the Company has exited), which is an inefficient manufacturing process that is not suited for the high margin specialty markets in which we operate today. We currently manufacture five specialty products and will be increasing the number of specialty products we manufacture by two to three products a year. The inefficiencies we experienced included having to idle the facility for two weeks at a time to prepare for the next product batch manufacture. These inefficiencies caused our cost of goods sold to be significantly higher. With the sale of Brotas 1, we expect that our gross margins will markedly improve from the reduction in manufacturing costs caused by these inefficiencies. Additionally, we currently are constructing our Brotas 2 facility, which will allow for the manufacture of five products concurrently and over 10 different products annually. Concurrent with the sale of Brotas 1, we contracted with DSM for the use of Brotas 1 to manufacture products for us to fulfill our product supply commitments to our customers until Brotas 2 is completed in 2019. In addition, in 2019, we plan to resume construction of a production facility in Pradópolis, Brazil that we partially built prior to 2013. This facility would support production of our alternative sweetener products.

As discussed above, on December 28, 2017, we completed the sale of Amyris Brasil, which operated our Brotas 1 production facility, to DSM and concurrently entered into a series of commercial agreements and a credit agreement with DSM. At closing, we received $33.0 million in cash for the capital stock of Amyris Brasil, which is subject to certain post-closing working capital adjustments and reimbursements from DSM contingent on DSM's utilization of certain Brazilian tax benefits it acquired with its purchase of Amyris Brasil. We used $12.6 million of the cash proceeds received to repay certain indebtedness of Amyris Brasil. The total fair value of the consideration in connection with the sales agreement for Amyris Brasil was $56.9 million and resulted in a pretax gain of $5.7 million from continuing operations.

Concurrent with the sale of Amyris Brasil, we entered into a series of commercial agreements with DSM including (i) a license agreement to DSM of its farnesene product for DSM to use in the Vitamin E, lubricant, and Flavors & Fragrances specialty markets; (ii) a value share agreement that DSM will pay specified royalties representing a portion of the profit on the sale of Vitamin E produced from farnesene under the Nenter Supply Agreement assigned to DSM; (iii) a performance agreement to perform research and development to optimize farnesene for production and sale of farnesene products; and (iv) a transition services agreement where we provide finance, legal, logistics, and human resource services to support the Brotas 1 facility under DSM ownership for a six-month period with a DSM option to extend for six additional months. At closing, DSM paid to us a nonrefundable license fee of $27.5 million and a nonrefundable minimum royalty revenue payment (previously referred to as value share) of $15.0 million. DSM will also pay the Company nonrefundable minimum royalty amounts in 2018 and 2019. The future nonrefundable minimum annual royalty payments were determined to be fixed and determinable with a fair value of $17.8 million, and were included as part of the total arrangement consideration subject to allocation of this overall multiple-element divestiture transaction. See Note 10, “Significant Revenue Agreements”, for a full listing and details of agreements entered into with DSM. Additionally, we entered into a $25.0 million credit agreement with DSM that we used to repay all outstanding amounts under the Guanfu Note (see Note 4, “Debt”).

Technology

We have developed innovative microbial engineering and screening technologies that allow us to transform the way microbes metabolize sugars. Specifically, we engineer microbes, such as yeast, and use them as catalysts to convert sugar, through fermentation, into high-value molecules. In 2015, we were awarded an investment by The Defense Advanced Research Projects Agency (DARPA) to expand the capabilities of our technology platform beyond terpenoids. The investment has resulted in us developing an integrated platform with artificial intelligence that will speed up the development and commercialization of small molecules across 15 different chemical classes. We have also developed our technology to be able to produce large molecules, such as proteins.

We devote substantial resources to our research and development efforts. As of December 31, 2017, our research and development organization included 158 employees, 109 of whom held Ph.D.s. We have invested more than $500 million to date in our research and development capabilities that has resulted in an almost 6X improvement in speed to market and 24X improvement in cost of manufacturing. These achievements are due to the leading strain engineering and upscaling/commercialization capabilities we have developed from our investment.

Strain Engineering

Companies and researchers around the world are continuously learning how the complex biological processes in organisms work. Because there is so much that is still unknown, the best method for development of commercially viable strains is to test as many hypotheses as accurately and quickly as possible to accelerate the learning curve.

We have developed a high-throughput strain engineering system that is currently capable of producing and screening more than 100,000 yeast strains per month, which enables us to achieve an approximately 95% lower cost per strain than we achieved in 2009. We generated more than 360,000 unique strains in 2017, surpassing 6.3 million unique strains created since our inception, with each strain testing for improved production of the target molecules. In addition, through our lab-scale and pilot-plant fermentation operations, and our proprietary analytical tools, we are now able to predict, with high reliability, the performance of candidate strains at industrial scale.

Upscaling and Commercialization

The riskiest part of commercializing biotechnology is often the scale up and manufacturing due to the perceived unpredictability of biotechnology at different scales. We have built scale up capabilities and manufacturing as our advantage by heavily investing in prediction models and analytics to quickly ascertain how a strain’s behavior at one scale will translate in another scale and also by successfully scaling up and manufacturing five distinct molecules to date. The results of our advantage are accelerated speed to market, lower overall development costs, and a significantly lower risk profile for any project we undertake.

A strain must be improved to increase the level of efficiency of production, and tested for performance in larger-volume facilities, before it is implemented at commercial-scale manufacturing facilities. Our unique infrastructure to support this scale-up process includes lab-scale fermenters (0.5 to 2 liter), operating pilot plants in our facilities in Emeryville, California and Campinas, Brazil (300 liters), two 5,000-liter fermenters in our Campinas demonstration facility and five years' experience owning and operating our 1,200,000-liter production facility in Brotas, Brazil. Each of these stages mimic the conditions found in larger scale fermentation so that our findings may translate predictably from lab scale to pilot and ultimately to commercial scale. Our infrastructure is so accurate that we can go straight from lab scale to commercial scale for our fermentations. Typically, the only reason we ever invest in the pilot scale step is to produce enough product to accurately test our downstream processing since our fermentation process is already robust.

The complexities that can arise at industrial scale manufacturing are significant and it takes an experienced team to not only address issues as they arise, but to also have the foresight to prevent issues from arising. With five years of experience operating our production facility in Brotas, Brazil that we designed, we have been able to develop a world-class manufacturing team. This team has successfully brought on line a production facility and scaled up and manufactured five molecules that are currently used in thousands of consumer goods products around the world. Our effort also expands into continued strain and process improvements to ensure our manufacturing is robust and the most cost advantaged.

Product Markets and Partnerships

There are three market areas that are our primary focus and key to our growth: Health & Wellness, Clean Skincare and Flavors & Fragrances. All of these markets embody our core competencies of sustainably providing clean ingredients in markets where we can be the most impactful, not only from a growth and revenue standpoint, but also for healthier living.

We believe that our leadership in biotechnology is demonstrated by collaboration partners, who come to us to access our platform and industrial fermentation expertise. Together we seek to reduce environmental impact, enhance performance, reduce supply and price volatility, and improve profit margins. Our partners include Flavors & Fragrances companies such as Firmenich S.A. (Firmenich) and Givaudan International, SA (Givaudan), and nutraceutical companies such as DSM. Our work has also been funded by the U.S. government, including the Department of Energy (DOE) and DARPA, to develop technologies and processes capable of improving the ability to utilize biotechnology for the production of a broader range of molecules.

Health & Wellness

Our Health & Wellness focus includes alternative sweeteners, nutraceuticals, such as vitamins, and food ingredients. As consumers continue to demand higher nutritional performance, cleaner labels and convenience from their food, the demand for specific ingredients that are often difficult and expensive to procure will continue to grow. Animal farming is also being impacted by the growing demand for protein and the need to change farming practices, such as reducing antibiotic use. Our technology can be employed to provide affordable access to these desired ingredients for both human and animal health. To date, product revenue in this area has been from a derivative made from our Biofene® product by our partner. In 2018, we plan to run at commercial scale our first developed molecule, a superior, alternative, non-nutritive sweetener.

During 2015, we announced the signings of our first ingredient supply agreement and collaboration agreement for the global nutraceuticals market. Under the supply agreement, we source Biofene to our partner, which is then further processed into a nutraceutical product. In 2016, we made the first large scale shipments of Biofene to our partner, who successfully produced and sold a nutraceutical product to its customers. In 2017, we expanded our collaborations in nutraceuticals to two vitamins and a human nutrition ingredient. We have also made significant progress in our alternative sweetener project and plan to initiate commercial scale runs in 2018.

Flavors & Fragrances

Our technology enables us to cost-effectively produce natural oils and aroma chemicals that are commonly used in the Flavors & Fragrances market. Many of the natural ingredients used in the Flavors & Fragrances market are expensive because there is limited supply and the synthetic alternatives require complex chemical conversions. We offer Flavors & Fragrances companies a natural route to procure these high-value ingredients without sacrificing cost or quality. To date, we have successfully brought three Flavors & Fragrances ingredients to market with our collaboration partners. We also have several other ingredients under development.

In late 2013, we commenced commercial production of our first Flavors & Fragrances ingredient for a range of applications, from perfumes to laundry detergent, which is marketed by a collaboration partner which is a global Flavors & Fragrances leader. In 2014, we completed our first production campaign of this ingredient and shipped it to this collaboration partner. In late 2015, we commenced production and initial sales of our second Flavors & Fragrances ingredient to the same collaboration partner. In 2017, we successfully completed our first commercial scale production and shipped our third Flavors & Fragrances ingredient to our partner.

We are currently working to develop and commercialize a variety of Flavors & Fragrances ingredients that are either direct fermentation products or derivatives of fermentation products.

Clean Skincare

Our Clean Skincare focus includes skincare and cosmetic ingredients we develop and commercialize with our partners and our branded Biossance™ and Neossance product lines. In 2017, we successfully brought our first cosmetic ingredient to market with our collaboration partner and have several other ingredients currently under development. Our Biossance™ and Neossance products are discussed further in the *Amyris-branded Product Markets* section.

In 2016, Amyris entered into a partnership in the field of cosmetic actives and completed the engineering of a yeast strain that can produce the first target in this space at significantly reduced cost. In 2017, we successfully launched the product with our partner. This will enable our partner to expand the market for this molecule into new applications and products. The speed to market for this ingredient reinforces the value proposition and strength of the Amyris technology platform and Amyris's ability to scale up products for our partners.

Amyris-branded Product Markets

Through basic chemical finishing steps, we are able to convert our farnesene into squalane, which is used today as a premium emollient in Health & Wellness and Clean Skincare products. We believe that our squalane offers performance attributes equal or superior to those of squalane derived from conventional sources. The ingredient traditionally has been manufactured from olive oil or extracted from deep-sea shark liver oil, which requires that the shark be killed in order to harvest its liver oil. The relatively high price and unstable supply of squalane in the past meant that its use was generally limited to luxury products or small quantities in mass-market product formulations. With our ability to produce a reliable supply of low-cost squalane that eliminates the need to harvest shark liver oil, we offer this ingredient at a price that we believe will drive increasing adoption by formulators. In addition to squalane, we offer a second, lower-cost emollient, hemisqualane, for the cosmetics market. In December 2016, we formed a joint venture for our business-to-business sales of Neossance squalane and hemisqualane with Nikko Chemicals Co., Ltd. (Nikko), in which we hold a 50% interest. See below under "Joint Ventures" for more information regarding our Aprinnova joint venture. The joint venture currently has supply agreements with several regional distributors, including those with locations in Japan, South Korea, Europe, Brazil and North America, and, in some cases, directly with cosmetics formulators, which we transferred to the joint venture during the formation process.

In addition, in 2015 we launched our own consumer brand, Biossance™ skincare products, featuring our Biofene-derived squalane. Under our Biossance™ brand, we market and sell our products directly to retailers and consumers. Biossance™ was initially sold solely through our ecommerce branded website and in 2016, we expanded the product line to include an expansive line of high-performance skincare products and opened up sales through Home Shopping Network (HSN). In October 2016, we announced our Biossance™ product line would begin to be carried at Sephora in 2017. In February 2017, we launched a full squalane-based consumer cosmetic line at participating Sephora stores and Sephora online. All of the products are based on Amyris's commitment to No Compromise™. Since the launch, sales have grown, and with Sephora's partnership, we are looking to expand to more stores.

Manufacturing

Until December 2017, we owned and operated a large-scale production facility located in Brotas, Brazil. In December 2017, we sold the facility to a unit of DSM Nutritional Products Ltd (together with its affiliates, DSM) and entered into a supply agreement with DSM for us to purchase output from the facility. See Note 13, "Divestiture" in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K for more information regarding our December 2017 transaction with DSM.

In February 2017, we broke ground on a second purpose-built, large-scale production facility that is adjacent to the first Brotas facility and which we will own and operate. We intend to complete construction of this facility in late 2019. In addition, in 2019, we plan to resume construction of a production facility in Pradópolis, Brazil that we partially built prior to 2013. This facility will support production of our alternative sweetener products.

For many of our products, we perform additional distillation or chemical finishing steps to convert initial target molecules into other finished products, such as renewable squalane. We have agreements with several facilities in the U.S. and Brazil to perform these downstream steps for such products. We may enter into additional agreements with other facilities for finishing services and to access flexible production capacity and an array of other services as we develop additional products. In December 2016, we purchased a manufacturing facility in Leland, North Carolina, which had been previously operated by Glycotech Inc. (Glycotech) to convert our Biofene into squalane and other final products. We subsequently contributed that facility to our Aprinnova joint venture. See below under "Joint Ventures" for more information regarding our Aprinnova joint venture.

Joint Ventures

Total Amyris BioSolutions B.V.

We have entered into a series of agreements since 2011 to establish a research and development program and form a joint venture with Total to produce and commercialize Biofene-based diesel and jet fuels. We formed such joint venture, Total Amyris BioSolutions B.V. (TAB), in November 2013. With an exception for our fuels business in Brazil, the collaboration and joint venture established the exclusive means for us to develop, produce and commercialize fuels from Biofene. We granted TAB exclusive licenses under certain of our intellectual property to make and sell joint venture products. We also granted TAB, in the event of a buy-out of our interest in the joint venture by Total (which Total is entitled to do under certain circumstances described below), a non-exclusive license to optimize or engineer yeast strains used by us to produce farnesene for the joint venture's diesel and jet fuels. As a result of these licenses, Amyris generally no longer has an independent right to make or sell Biofene fuels outside of Brazil without the approval of TAB.

Our agreements with Total relating to our fuels collaboration created a convertible debt financing structure for funding the research and development program. The collaboration agreements contemplated $105.0 million in financing (R&D Notes) for the program, for which Total completed funding in January 2015.

In July 2015, we entered into a Letter Agreement with Total (as amended in February 2016, the TAB Letter Agreement) regarding the restructuring of the ownership and rights of TAB (the Restructuring), and on March 21, 2016, we, Total and TAB closed the Restructuring and entered into the Restructuring Agreements, including the Jet Fuel Agreement and the EU Diesel Fuel Agreement.

As a result of the Jet Fuel Agreement, we generally no longer have an independent right to make or sell, without the approval of TAB, farnesene- or farnesane-based jet fuels outside of Brazil. TAB elected not to exercise its option to purchase our Brazil jet fuel business, and such option is now expired.

As a result of the EU Diesel Fuel Agreement, we generally no longer have an independent right to make or sell, without the approval of Total, farnesene- or farnesane-based diesel fuels in the EU.

In addition, as part of the closing of the Restructuring and pursuant to the TAB Letter Agreement, on March 21, 2016, we sold to Total one half of our ownership stake in TAB (giving Total an aggregate ownership stake of 75% of TAB and giving us an aggregate ownership stake of 25% of TAB) in exchange for Total canceling (i) $1.3 million of R&D Notes, plus all paid-in-kind and accrued interest under all outstanding R&D Notes (including all such interest that was outstanding as of July 29, 2015) and (ii) a note in the principal amount of €50,000, plus accrued interest, issued to Total in connection with the original TAB capitalization. To satisfy its purchase obligation above, Total surrendered to us the remaining R&D Note of $5.0 million in principal amount, and we executed and delivered to Total a new R&D Note, containing substantially similar terms and conditions other than it is unsecured and its payment terms are severed from TAB's business performance, in the principal amount of $3.7 million. See Note 4, "Debt" and Note 18, "Subsequent Events" in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K for additional details regarding such R&D Note.

As a result of, and in order to reflect, the changes to the ownership structure of TAB described above, on March 21, 2016, (a) we, Total and TAB entered into an Amended and Restated Shareholders' Agreement and filed a Deed of Amendment of Articles of Association of TAB and (b) we and Total terminated the Amended and Restated Master Framework Agreement, dated December 2, 2013 and amended on April 1, 2015, between us and Total.

Novvi LLC

In June 2011, we entered into joint venture agreements with Cosan US. Inc. (Cosan U.S. and, together with its affiliates, Cosan) related to the formation of a joint venture to focus on the worldwide development, production and commercialization of base oils made from Biofene for the automotive, commercial and industrial lubricants markets. In September 2011, we formed Novvi, an entity that was initially jointly owned by Cosan U.S. and us. In connection with the formation of Novvi, we entered into an IP License Agreement with Novvi (as amended, the Novvi IP License Agreement) and both the Company and Cosan U.S. granted Novvi certain rights of first refusal with respect to alternative base oil and additive technologies that may be acquired by the Company or Cosan U.S. during the term of the IP License Agreement, which was 20 years. In March 2013, we entered into additional agreements with Cosan U.S. to (i) expand our base oils joint venture with Cosan to also include additives and lubricants and (ii) operate the joint venture exclusively through Novvi, and amended the Novvi IP License Agreement to reflect such additional agreements. Under these agreements, Amyris and Cosan U.S. each owned 50% of Novvi, and each shared equally in any costs and any profits ultimately realized by the joint venture. In 2014, 2015 and 2016, we and Cosan U.S. purchased additional membership units in Novvi in exchange for cash and/or forgiveness of existing receivables, and made certain loans to Novvi in an aggregate amount of $8.3 million. Following such transactions, Amyris and Cosan U.S. continued to each own 50% of Novvi.

In July 2016, American Refining Group, Inc. (ARG) agreed to make a capital contribution of up to $10.0 million in cash to Novvi, subject to certain conditions, in exchange for a one third ownership stake in Novvi. In connection with such investment, we and Cosan U.S. also agreed to make certain contributions to Novvi (including the forgiveness of outstanding loans and existing receivables) in exchange for receiving additional membership units in Novvi. Following the ARG investment, which was fully funded as of March 31, 2017, and the contributions of us and Cosan U.S., each of Novvi's three members (i.e., ARG, Amyris and Cosan U.S.) owned one third of Novvi. In July 2016, the Novvi joint venture documents and the Novvi IP License Agreement were amended in order to reflect the ARG investment in Novvi and related transactions, and Amyris and Novvi entered into a Renewable Farnesene Supply Agreement (the Novvi Supply Agreement) relating to the supply of farnesene by Amyris to Novvi in connection with the joint venture.

In November 2016, Chevron U.S.A. Inc. (Chevron) made a capital contribution of $1.0 million in cash to Novvi in exchange for a 3% ownership stake in Novvi, which reduced the ownership interests of Amyris, Cosan U.S. and ARG pro rata. In connection with its investment in Novvi, Chevron was granted certain rights to purchase additional units in Novvi as well as the right to purchase up to its pro rata share of additional membership units that Novvi may, from time to time, propose to sell or issue.

In October 2017, H&R Group US, Inc. (H&R) made a capital contribution of $10.0 million in cash to Novvi in exchange for a 24.4% ownership stake in Novvi, which reduced the ownership interests of Amyris, Cosan U.S., ARG and Chevron pro rata. As a result of such investment, each of Amyris, Cosan U.S., ARG and H&R owned 24.4% of Novvi, with Chevron owning the remaining 2.4%. In October 2017, the Novvi joint venture documents and the Novvi IP License Agreement were amended in order to reflect the H&R investment in Novvi and related transactions.

In December 2017, we assigned the Novvi Supply Agreement to DSM as part of the purchase and sale of our Brotas facility. See Note 13, "Divestiture" in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K for more information regarding our December 2017 transaction with DSM.

Aprinnova, LLC

In December 2016, we entered into joint venture agreements with Nikko related to the formation of a joint venture to focus on the worldwide commercialization of our Neossance cosmetic ingredients business. In December 2016, we formed the joint venture under the name Neossance, LLC, and later changed the name to Aprinnova, LLC (the Aprinnova JV), which is jointly owned by us and Nikko. Pursuant to the joint venture agreements, we contributed certain assets to the Aprinnova JV, including certain intellectual property and other commercial assets relating to our Neossance cosmetic ingredients business, as well as the production facility in Leland, North Carolina and related assets purchased by us from Glycotech in December 2016. We also agreed to provide the Aprinnova JV with licenses to certain intellectual property necessary to make and sell products associated with the Neossance business (the Aprinnova JV Products). At the closing of the formation of the joint venture, Nikko purchased a 50% interest in the Aprinnova JV in exchange for an initial payment of $10.0 million and the profits, if any, distributed from the Aprinnova JV to Nikko as a member in cash during the three year period following December 12, 2016, up to a maximum of $10.0 million. In addition, as part of the formation of the Aprinnova JV, we and Nikko agreed to make certain working capital loans to Aprinnova JV and we further agreed to execute a supply agreement to supply farnesene to the Aprinnova JV, to purchase all of our requirements for the Aprinnova JV Products from the Aprinnova JV, to transfer all of our customers for the Aprinnova JV Products to the Aprinnova JV, to guarantee a maximum production cost for certain Aprinnova JV Products, and to bear any cost of production above such guaranteed costs.

Product Distribution and Sales

We distribute and sell our products directly to distributors or collaborators, or through joint ventures, depending on the market. For most of our products, we sell directly to our collaboration partners, except for our consumer care products, which we sell to distributors and formulators (other than our Biossance™ brand, which we sell directly to retailers and consumers). Generally, our collaboration agreements include commercial terms, and sales are contingent upon achievement of technical and commercial milestones.

For the year ended December 31, 2017, revenue from 10%-or-more customers and from all other customers was as follows:

	Renewable products	Licenses and royalties	Grants and collaborations	Total Revenue	% of Total Revenue
DSM	$ —	$57,972	$ 1,679	$ 59,651	41.6%
Firmenich	9,621	1,199	5,803	16,623	11.6%
Nenter & Co., Inc.	12,057	2,633	—	14,690	10.2%
All other customers	20,692	2,673	29,116	52,481	36.6%
Total revenue	$42,370	$64,477	$36,598	$143,445	100.0%

Intellectual Property

Our success depends in large part upon our ability to obtain and maintain proprietary protection for our products and technologies, and to operate without infringing on the proprietary rights of others. We seek to avoid the latter by monitoring patents and publications in our product areas and technologies to be aware of developments that may affect our business, and to the extent we identify such developments, evaluate and take appropriate courses of action. With respect to the former, our policy is to protect our proprietary position by, among other methods, filing for patent applications on inventions that are important to the development and conduct of our business with the U.S. Patent and Trademark Office (the USPTO), and its foreign counterparts.

As of December 31, 2017, we had 474 issued U.S. and foreign patents and 315 pending U.S. and foreign patent applications that are owned or co-owned by or licensed to us. We also use other forms of protection (such as trademark, copyright, and trade secret) to protect our intellectual property, particularly where we do not believe patent protection is appropriate or obtainable. We aim to take advantage of all of the intellectual property rights that are available to us and believe that this comprehensive approach provides us with a strong proprietary position.

Patents extend for varying periods according to the date of patent filing or grant and the legal term of patents in various countries where patent protection is obtained. The actual protection afforded by patents, which can vary from country to country, depends on the type of patent, the scope of its coverage and the availability of legal remedies in the country. See "*Risk Factors — Risks Related to Our Business — Our proprietary rights may not adequately protect our technologies and product candidates*."

We also protect our proprietary information by requiring our employees, consultants, contractors and other advisers to execute nondisclosure and assignment of invention agreements upon commencement of their respective employment or engagement. Agreements with our employees also prevent them from bringing the proprietary rights of third parties to us. In addition, we also require confidentiality or material transfer agreements from third parties that receive our confidential data or materials.

Trademarks

Amyris, the Amyris logo, Biofene, Biossance™ and No Compromise are trademarks or registered trademarks of Amyris, Inc. This report also contains trademarks and trade names of other businesses that are the property of their respective holders.

Competition

We expect that our renewable products will compete with products produced from traditional sources as well as from alternative production methods that established enterprises and new companies are seeking to develop and commercialize.

Health & Wellness

Many active ingredients in the nutraceutical market are made via chemical synthesis by suppliers that have a deep chemistry knowhow and production facilities, including ingredient suppliers. We may compete directly with these companies with respect to specific ingredients or attempt to provide customers with more cost effective or higher performing alternatives. For food ingredients, we compete with companies that produce products from plant and animal derived sources as well as with companies that are also developing biotechnology production solutions to produce specific molecules.

Flavors & Fragrances

The main competition for Flavors & Fragrances and cosmetic actives is from products derived from plant and animal sources as well as chemical synthesis. The products derived from plant and animal sources are typically produced at a higher cost, lower purity and create a greater impact on the environment compared to our products. Products derived from chemical synthesis are often produced at a low cost but have ramifications on sustainability as well as non-natural sourcing. There are also companies that are working to develop products using similar technology to us.

Clean Skincare

We develop and sell active e cosmetic ingredients and consumer products in the Clean Skincare market, creating a competitive landscape that includes ingredient suppliers as well as consumer goods companies, such as P&G and Estee Lauder. Most skincare ingredients are derived from plant and animal sources or created using chemical synthesis. Plant- and animal-sourced ingredients are typically higher in cost, lower in purity and have a greater impact on the environment versus our products. Products derived from chemical synthesis are often produced at a low cost but have ramifications on sustainability as well as non-natural sourcing. There are also companies that are working to develop products using similar technology to us.

Competitive Factors

We believe the primary competitive factors in our target markets are:

- product price;
- product performance and other measures of quality;
- infrastructure compatibility of products;
- sustainability; and
- dependability of supply.

We believe that, for our products to succeed in the market, we must demonstrate that our products are comparable or better alternatives to existing products and to any alternative products that are being developed for the same markets based on some combination of product cost, availability, performance, and consumer preference characteristics.

Regulatory Matters

Environmental Regulations

Our development and production processes involve the use, generation, handling, storage, transportation and disposal of hazardous chemicals and radioactive and biological materials. We are subject to a variety of federal, state, local and international laws, regulations and permit requirements governing the use, generation, manufacture, transportation, storage, handling and disposal of these materials in the United States, Brazil and other countries where we operate or may operate or sell our products in the future. These laws, regulations and permits can require expensive fees, pollution control equipment or operational changes to limit actual or potential impact of our technology on the environment and violation of these laws could result in significant fines, civil sanctions, permit revocation or costs from environmental remediation. We believe we are currently in substantial compliance with applicable environmental regulations and permitting. However, future developments including the commencement of or changes in the processes relating to commercial manufacturing of one or more of our products, more stringent environmental regulation, policies and enforcement, the implementation of new laws and regulations or the discovery of unknown environmental conditions may require expenditures that could have a material adverse effect on our business, results of operations or financial condition. See "*Risk Factors — Risks Relating to Our Business — We may incur significant costs to comply with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities*."

GMM Regulations

The use of genetically-modified microorganisms (GMMs), such as our yeast strains, is subject to laws and regulations in many countries. In the United States, the Environmental Protection Agency (EPA) regulates the commercial use of GMMs as well as potential products produced from the GMMs. Various states within the United States could choose to regulate products made with GMMs as well. While the strain of genetically modified yeast that we use, *S. cerevisiae*, is eligible for exemption from EPA review because it is generally recognized as safe, we must satisfy certain criteria to achieve this exemption, including but not limited to, use of compliant containment structures and safety procedures. In Brazil, GMMs are regulated by the National Biosafety Technical Commission (CTNBio) under its Biosafety Law No. 11.105-2005. We have obtained commercial approvals from CTNBio to use our GMMs in a contained environment in our Brazil facilities for research and development purposes, in manufacturing and at contract manufacturing facilities in Brazil.

We expect to encounter GMM regulations in most if not all of the countries in which we may seek to make our products; however, the scope and nature of these regulations will likely vary from country to country. If we cannot meet the applicable requirements in countries in which we intend to produce our products using our yeast strains, then our business will be adversely affected. See "*Risk Factors — Risks Related to Our Business — Our use of genetically-modified feedstocks and yeast strains to produce our products subjects us to risks of regulatory limitations and rejection of our products*."

Chemical Regulations

Our renewable products may be subject to government regulations in our target markets. In the United States, the EPA administers the requirements of the Toxic Substances Control Act (TSCA), which regulates the commercial registration, distribution and use of many chemicals. Before an entity can manufacture or distribute significant volumes of a chemical, it needs to determine whether that chemical is listed in the TSCA inventory. If the substance is listed, then manufacture or distribution can commence immediately. If not, then in most cases a "Chemical Abstracts Service" number registration and pre-manufacture notice must be filed with the EPA, which has 90 days to review the filing. A similar requirement exists in Europe under the Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH) regulation. See "*Risk Factors — Risks Related to Our Business — We may not be able to obtain regulatory approval for the sale of our renewable products*." In 2013, the EPA registered farnesane as a new chemical substance under the TSCA, which enables us to manufacture and sell farnesane without restriction in the United States.

Other Regulations

Certain of our current or proposed products in the Health & Wellness, Clean Skincare, and Flavors & Fragrances markets, including alternative sweeteners, nutraceuticals, Flavors & Fragrances ingredients, skincare ingredients and cosmetic actives, may be subject to regulation by the United State Food and Drug Administration (the FDA), as well as similar agencies of states and foreign jurisdictions where these products are sold or proposed to be sold. Pursuant to the Federal Food, Drug, and Cosmetic Act (the FDCA), the FDA regulates the processing, formulation, safety, manufacture, packaging, labeling and distribution of food ingredients, vitamins, and cosmetics. Generally, in order to be marketed and sold in the United States, a relevant product must be generally recognized as safe and not adulterated or misbranded under the FDCA and relevant regulations issued thereunder. The FDA has broad authority to enforce the provisions of the FDCA applicable to food ingredients, vitamins and cosmetics, including powers to issue a public warning letter to a company, to publicize information about illegal products, to request a recall of illegal products from the market, and to request the United States Department of Justice to initiate a seizure action, an injunction action, or a criminal prosecution in the U. S. courts. Failure to obtain requisite approval from, or comply with the laws and regulations of, the FDA or similar agencies of states and applicable foreign jurisdictions could prevent us from fully commercializing certain of our products. See "*Risk Factors — Risks Related to Our Business — We may not be able to obtain regulatory approval for the sale of our renewable products*."

In addition, our end-user products such as our Biossance™ brand skincare products are subject to the regulations of the United States Federal Trade Commission (FTC) and similar agencies of states and foreign jurisdictions where these products are sold or proposed to be sold regarding the advertising of such products. In recent years, the FTC has instituted numerous enforcement actions against companies for failure to have adequate substantiation for claims made in advertising or for the use of false or misleading advertising claims. The FTC has broad authority to enforce its laws and regulations applicable to cosmetics, including the ability to institute enforcement actions which often result in consent decrees, injunctions, and the payment of civil penalties by the companies involved. Failure to comply with the laws and regulations of the FTC or similar agencies of states and applicable foreign jurisdictions could impair our ability to market our end-user products.

Employees

As of December 31, 2017, we had 414 full-time employees, of whom 325 were in the United States and 89 were in Brazil. Except for labor union representation for Brazil-based employees based on labor code requirements in Brazil, none of our employees is represented by a labor union or is covered by a collective bargaining agreement. We have never experienced any employment-related work stoppages and consider relations with our employees to be good.

Corporate Information

We were originally incorporated in California in 2003 under the name Amyris Biotechnologies, Inc. and then reincorporated in Delaware in 2010 and changed our name to Amyris, Inc. Our principal executive offices are located at 5885 Hollis Street, Suite 100, Emeryville, California 94608, and our telephone number is (510) 450-0761. Our common stock is listed on The NASDAQ Global Select Market under the symbol "AMRS."

Available Information

Our website address is www.amyris.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and other reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934 (the Exchange Act), as well as amendments thereto, are filed with the U.S. Securities and Exchange Commission (the SEC) and are available free of charge on our website at investors.amyris.com promptly after such reports are available on the SEC's website. We may use our investors.amyris.com website as a means of disclosing material non-public information and of complying with our disclosure obligations under Regulation FD. The public may read and copy any materials filed by Amyris with the SEC at the SEC's Public Reference Room located at 100 F Street, NE, Room 1580, Washington, D.C. 20549.

The public may obtain information regarding the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

The information contained in or accessible through our website or contained on other websites is not incorporated into this filing. Further, any references to URLs contained in this report are intended to be inactive textual references only.

Executive Officers of the Registrant

The following table provides the names, ages and offices of each of our executive officers as of March 30, 2018:

Name	Age	Position
John Melo	52	Director, President and Chief Executive Officer
Eduardo Alvarez	54	Chief Operating Officer
Kathleen Valiasek	54	Chief Financial Officer
Joel Cherry, Ph.D.	57	President of Research and Development
Nicole Kelsey	51	General Counsel and Secretary

John Melo

John Melo has nearly three decades of combined experience as an entrepreneur and thought leader in the global fuels industry and technology innovation. Mr. Melo has served as our Chief Executive Officer and a director since January 2007 and as our President since June 2008. Before joining Amyris, Mr. Melo served in various senior executive positions at BP Plc (formerly British Petroleum), one of the world's largest energy firms, from 1997 to 2006, most recently as President of U.S. Fuels Operations from 2004 until December 2006, and previously as Chief Information Officer of the refining and marketing segment from 2001 to 2003, Senior Advisor for e-business strategy to Lord Browne, BP Chief Executive, from 2000 to

2001, and Director of Global Brand Development from 1999 to 2000. Before joining BP, Mr. Melo was with Ernst & Young, an accounting firm, from 1996 to 1997, and a member of the management teams of several startup companies, including Computer Aided Services, a management systems integration company, and Alldata Corporation, a provider of automobile repair software to the automotive service industry. Mr. Melo currently serves on the board of directors of Renmatix, Inc., and on the board of the Industrial action of Bio and also on the board of the California Life Sciences Association. Mr. Melo was formerly an appointed member to the U.S. section of the U.S.-Brazil CEO Forum.

Eduardo Alvarez

Eduardo Alvarez has served as our Chief Operating Officer since October 2017. Mr. Alvarez has over 30 years of global operations experience both running and advising growth companies. Previously, he served as Global Operations Strategy Leader for PricewaterhouseCoopers LLP (PwC). During his tenure, Mr. Alvarez co-led the integration of his prior company, Booz & Company, following its acquisition by PwC. In that role, he grew operations into a global practice with $1.5 billion in revenue and 4,000 employees. Mr. Alvarez's assignments focused on delivering structural cost improvements while also driving sustained revenue growth. His experience also includes roles at Booz Allen Hamilton, General Electric and AT&T. Alvarez holds a Master of Business Administration from Harvard Business School, a Master of Science in Mechanical Engineering in computer control and manufacturing from the University of California, Berkeley, and a Bachelor of Science degree in mechanical engineering from the University of Michigan. Mr. Alvarez is a board member of The Chicago Council of Global Affairs.

Kathleen Valiasek

Kathleen Valiasek has served as our Chief Financial Officer since January 2017. Prior to joining us, Ms. Valiasek served as Chief Executive Officer of a finance and strategic consulting firm she founded in 1994, and in this capacity she worked closely with the senior management teams of fast-growing companies including start-ups, venture-backed and Fortune 500 companies. Prior to this, she served in key venture capital, real estate development and accounting roles. Ms. Valiasek holds a Bachelor of Business Administration degree from the University of Massachusetts, Amherst.

Joel Cherry, Ph.D.

Dr. Joel Cherry has served as our President of Research and Development since July 2011 and previously as our Senior Vice President of Research Programs and Operations since November 2008. Before joining Amyris, Dr. Cherry was Senior Director of Bioenergy Biotechnology at Novozymes, a biotechnology company focusing on development and manufacture of industrial enzymes, from 1992 to November 2008. At Novozymes, he served in a variety of R&D scientific and management positions, including membership in Novozymes' International R&D Management team, and as Principal Investigator and Director of the BioEnergy Project, a U.S. Department of Energy-funded $18 million effort initiated in 2000. Dr. Cherry holds a Bachelor of Arts degree in Chemistry from Carleton College and a Doctor of Philosophy degree in Biochemistry from the University of New Hampshire.

Nicole Kelsey

Nicole Kelsey has served as our General Counsel and Secretary since August 2017. Her areas of expertise range from U.S. securities laws, to international M&A and corporate governance. Prior to joining Amyris, she served as General Counsel and Secretary of Criteo, a global leader in commerce marketing based in Paris, for over three years. Prior to joining Criteo, Ms. Kelsey was the senior securities lawyer for Medtronic, a global leader in medical technology; she served as head M&A attorney for CIT Group, Inc.; was the general counsel of a private merchant bank; and worked for the international conglomerate Vivendi. Before going in-house, Ms. Kelsey practiced with the law firms of White & Case and Willkie, Farr & Gallagher, in Paris and New York. A Fulbright scholar, Ms. Kelsey holds a J.D. from Northwestern University and a B.A. from The Ohio State University.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information set forth in this Annual Report on Form 10-K, including the consolidated financial statements and related notes, which could materially affect our business, financial condition or future results. If any of the following risks actually occurs, our business, financial condition, results of operations and future prospects could be materially and adversely harmed. The trading price of our common stock could decline due to any of these risks, and, as a result, you may lose all or part of your investment.

Risks Related to Our Business

We have incurred losses to date, anticipate continuing to incur losses in the future, and may never achieve or sustain profitability.

We have incurred significant losses in each year since our inception and believe that we will continue to incur losses and negative cash flows from operations for at least the next 12 months following the issuance of the financial statements. As of December 31, 2017, we had an accumulated deficit of $1.2 billion and had cash and cash equivalents of $57.1 million. We have significant outstanding debt, a significant working capital deficit and contractual obligations related to capital and operating leases, as well as purchase commitments of $18.3 million. As of December 31, 2017, our debt totaled $165.4 million, net of discount and issuance costs of $30.4 million, of which $56.9 million is classified as current. Our debt service obligations over the next twelve months are significant, including $16.9 million of anticipated interest payments (excluding interest paid in kind by adding to outstanding principal) and may include potential early conversion payments of up to $5.4 million (assuming all note holders convert) under our outstanding 9.50% Convertible Senior Notes due 2019 (the "2015 144A Notes"). Furthermore, our debt agreements contain various financial and operating covenants, including restrictions on business that could cause us to be at risk of defaults. We expect to incur additional costs and expenses related to the continued development and expansion of our business, including construction and operation of our manufacturing facilities, contract manufacturing, research and development operations, and operation of our pilot plants. There can be no assurance that we will ever achieve or sustain profitability on a quarterly or annual basis.

Our consolidated financial statements as of and for the year ended December 31, 2017 have been prepared on the basis that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. We have incurred significant losses since our inception and we expect that we will continue to incur losses as we aim to successfully execute our business plan and will be dependent on additional public or private financings, collaborations or licensing arrangements with strategic partners, or additional credit lines or other debt financing sources to fund continuing operations. Based on our cash balances and recurring losses since inception, there is substantial doubt about our ability to continue as a going concern within one year after the date that these financial statements are issued. Our operating plans for 2018 contemplate a significant reduction in our net operating cash outflows as compared to the year ended December 31, 2017 resulting from (i) revenue growth from sales of existing and new products with positive gross margins, (ii) significantly increased royalty streams (previously referred to as value share revenues), (iii) reduced production costs as a result of manufacturing and technology developments, and (iv) cash inflows from grants and collaborations. In addition, as noted below, for our 2018 operating plan, we may depend on funding from sources that are not subject to existing commitments. We may need to obtain additional funding from equity or debt financings, which may require us to agree to burdensome covenants, grant further security interests in our assets, enter into collaboration and licensing arrangements that require us to relinquish commercial rights, or grant licenses on terms that are not favorable. No assurance can be given at this time as to whether we will be able to achieve our expense reduction or fundraising objectives, regardless of the terms. If we are unable to raise additional financing, or if other expected sources of funding are delayed or not received, our ability to continue as a going concern would be jeopardized and we may be forced to delay, scale back or eliminate some of our general and administrative, research and development, or production activities or other operations and reduce investment in new product and commercial development efforts in an effort to provide sufficient funds to continue our operations. If any of these events occurs, our ability to achieve our development and commercialization goals would be adversely affected. In addition, if we are unable to continue as a going concern, we may be unable to meet our obligations under our existing debt facilities, which could result in an acceleration of our obligation to repay all amounts outstanding under those facilities, and we may be forced to liquidate our assets. In such a scenario, the value we receive for our assets in liquidation or dissolution could be significantly lower than the value reflected in our financial statements.

Our consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty, which could have a material adverse effect on our financial condition and cause investors to suffer the loss of all or a substantial portion of their investment.

We will require significant cash inflows from the sales of renewable products, licenses and royalties, and grants and collaborations and, if needed, financings to fund our anticipated operations and to service our debt obligations and may not be able to obtain such funding on favorable terms, if at all.

Our planned working capital needs and operating and capital expenditures for 2018, and our ability to service our outstanding debt obligations, are dependent on significant inflows of cash from grants and collaborations, licenses and royalties, and product sales and, if needed, additional financing arrangements. We will continue to need to fund our research and development and related activities and to provide working capital to fund production, procurement, storage, distribution and other aspects of our business. Some of our anticipated funding sources, such as research and development collaborations, are subject to the risks that we may not be able to meet milestones, or that collaborations may end prematurely for reasons that may be outside of our control (including technical infeasibility of the project or a collaborator's right to terminate without cause). The inability to generate sufficient cash flow, as described above, could have an adverse effect on our ability to continue with our business plans and our status as a going concern.

If we are unable to raise additional funding, or if other expected sources of funding are delayed or not received, our ability to continue as a going concern would be jeopardized and we would take the following actions:

- Shift focus to existing products and customers with significantly reduced investment in new product and commercial development efforts;
- Reduce expenditures for third party contractors, including consultants, professional advisors and other vendors;
- Reduce or delay uncommitted capital expenditures, including non-essential facility and lab equipment, and information technology projects; and
- Closely monitor the Company's working capital position with customers and suppliers, as well as suspend operations at pilot plants.

Implementing this plan could have a negative impact on our ability to continue our business as currently contemplated, including, without limitation, delays or failures in our ability to:

- Achieve planned production levels;
- Develop and commercialize products within planned timelines or at planned scales; and
- Continue other core activities.

Furthermore, any inability to scale-back operations as necessary, and any unexpected liquidity needs, could create pressure to implement more severe measures. Such measures could have an adverse effect on our ability to meet contractual requirements and increase the severity of the consequences described above.

Our existing financing arrangements may cause significant risks to our stockholders and may impact our ability to pursue certain transactions and operate our business.

As of December 31, 2017, our debt totaled $165.4 million, net of discount and issuance costs of $30.4 million, of which $56.9 million is classified as current. Our cash balance is substantially less than the principal amount of our outstanding debt, and we will be required to generate cash from operations or raise additional working capital through future financings or sales of assets to enable us to repay this indebtedness as it becomes due. There can be no assurance that we will be able to do so.

In addition, we have agreed to significant covenants in connection with our debt financing transactions, including restrictions on our ability to incur future indebtedness, and customary events of default, including failure to pay amounts due, breaches of covenants and warranties, material adverse effect events, certain cross defaults and judgements, and insolvency. A failure to comply with the covenants and other provisions of our debt instruments, including any failure to make a payment when required would generally result in events of default under such instruments, which could permit acceleration of such indebtedness and could result in a material adverse effect on us. If such indebtedness is accelerated, it would generally also constitute an event of default under our other outstanding indebtedness, permitting acceleration of a substantial portion of our indebtedness. Any required repayment of our indebtedness as a result of acceleration or otherwise would lower our current cash on hand such that we would not have those funds available for use in our business or for payment of other outstanding indebtedness.

If we are at any time unable to generate sufficient cash flow from operations to service our indebtedness when payment is due, we may be required to attempt to renegotiate the terms of the instruments relating to the indebtedness, seek to refinance all or a portion of the indebtedness or obtain additional financing. There can be no assurance that we would be able to successfully renegotiate such terms, that any such refinancing would be possible or that any additional financing could be obtained on terms that are favorable or acceptable to us, if at all. Any debt financing that is available could cause us to incur substantial costs and subject us to covenants that significantly restrict our ability to conduct our business. If we seek to complete additional equity financings, the interests of existing equity holders may be diluted.

In addition, the covenants in our debt agreements materially limit our ability to take certain actions, including our ability to pay dividends, make certain investments and other payments, undertake certain mergers and consolidations, and encumber and dispose of assets. For example, the purchase agreement for convertible notes that we sold in separate closings in October 2013 and January 2014, which we refer to as the Tranche Notes, requires us to obtain the consent of the holders of a majority of these notes before completing any change of control transaction or purchasing assets in one transaction or a series of related transactions in an amount greater than $20.0 million, in each case while the Tranche Notes are outstanding. In addition, certain of our existing investors, including the investors that purchased the Tranche Notes, have pro rata rights to invest in equity securities that we issue in certain financings, which could delay or prevent us from completing such financings. Furthermore, certain of our other outstanding securities (e.g., the Tranche Notes, the 2015 144A Notes, and warrants issued in May and August 2017), contain anti-dilution adjustment provisions which may be triggered by future issuances of equity or equity-linked instruments in financing transactions. If such adjustment provisions are triggered, the conversion or exercise price of such securities will decrease and/or the number of shares issuable upon conversion or exercise of such securities will increase. In such event, existing stockholders will be further diluted and the effective issuance price of such equity or equity-linked instruments will be reduced, which may harm our ability to engage in future financing transactions to fund our business.

Our substantial leverage may place us at a competitive disadvantage in our industry.

We continue to have substantial debt outstanding and we may incur additional indebtedness from time to time to finance working capital, product development efforts, strategic acquisitions, investments and partnerships, or capital expenditures, or for other general corporate purposes, subject to the restrictions contained in our debt agreements. Our significant indebtedness and debt service requirements could adversely affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities. For example, our high level of indebtedness presents the following risks:

- we will be required to use a substantial portion of our cash flow from operations to pay principal and interest on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, product development efforts, acquisitions, investments and strategic alliances and for other general corporate requirements;

- our substantial leverage increases our vulnerability to economic downturns and adverse competitive and industry conditions and could place us at a competitive disadvantage compared to those of our competitors that are less leveraged;

- our debt service obligations could limit our flexibility in planning for, or reacting to, changes in our business and our industry and could limit our ability to pursue other business opportunities, borrow more money for operations or capital in the future and implement our business strategies;

- our level of indebtedness and the covenants in our debt instruments may restrict us from raising additional financing on satisfactory terms to fund working capital, capital expenditures, product development efforts, strategic acquisitions, investments and alliances, and for other general corporate requirements; and

- our substantial leverage may make it difficult for us to attract additional financing when needed.

Future revenues are difficult to predict, and our failure to predict revenue accurately may cause our results to be below our expectations or those of analysts or investors and could result in our stock price declining.

Our revenues are comprised of product revenues, and grants and collaborations revenues. We generate the substantial majority of our product revenues from sales to collaborators and distributors, and only a small portion from direct sales. Our collaboration, supply and distribution agreements do not usually include any specific purchase obligations. The sales volume of our products in any given period has been difficult to predict. A significant portion of our product sales is dependent upon the interest and ability of third party distributors to create demand for, and generate sales of, such products to end-users. For example, if such distributors are unsuccessful in creating pull-through demand for our products with their customers, such distributors may purchase less of our products from us than we expect.

In addition, many of our new and novel products are intended to be a component of other companies' products; therefore, sales of our products may be contingent on our collaborators' and/or customers' timely and successful development and commercialization of end-use products that incorporate our products, and price volatility in the markets for such end-use products, which may include commodities, could adversely affect the demand for our products and the margin we receive for our product sales, which could harm our financial results. While we maintain certain clawback rights to our technology in the event our collaboration partners are unable or unwilling to commercialize the products we create for them, we may be restricted from or unable to market or sell such products or technologies to other potential collaboration partners, which could hinder the growth of our business. In addition, certain of our collaboration partners have the right to terminate their agreements with us if we undergo a change of control or a sale of our business, which could discourage a potential acquirer from making an offer to acquire us.

Further, we have in the past entered into, and expect in the future to enter into, research and development collaboration arrangements pursuant to which we receive payments from our collaborators. Some of such collaboration arrangements include advance payments in consideration for grants of exclusivity or research and development activities to be performed by us. It has in the past been difficult for us to know with certainty when we will sign a new collaboration arrangement and receive payments thereunder. As a result, achievement of our quarterly and annual financial goals has been difficult to forecast with certainty. Once a collaboration agreement has been signed, receipt of cash payments and/or recognition of related revenues may depend on our achievement of research, development, production or cost milestones, which may be difficult to predict. In addition, a portion of the advance payments we receive under our collaboration agreements is typically classified as deferred revenue and recognized over multiple quarters or years.

Furthermore, we have begun to market and sell some of our products directly to end-consumers, initially in the cosmetics market. Because we have little experience in marketing and selling directly to consumers, it is difficult to predict how successful our efforts will be and we may not achieve the product sales we expect to achieve on the timeline we anticipate, if at all. These factors have made it difficult to predict future revenues and have resulted in our revenues being below our previously announced guidance or analysts' estimates. We continue to face these risks in the future, which may cause our stock price to decline.

Our financial results could vary significantly from quarter to quarter and are difficult to predict.

Our revenues and results of operations could vary significantly from quarter to quarter because of a variety of factors, many of which are outside of our control. As a result, comparing our results of operations on a period-to-period basis may not be meaningful. Factors that could cause our quarterly results of operations to fluctuate include:

- achievement, or failure, with respect to technology, product development or manufacturing milestones needed to allow us to enter identified markets on a cost effective basis;
- delays or greater than anticipated expenses associated with the completion, commissioning, acquisition or retrofitting of new production facilities, or the time to ramp up and stabilize production at a new production facility or the transition (including ramp up) to producing new molecules at existing facilities or with a new contract manufacturer;
- impairment of assets based on shifting business priorities and working capital limitations;
- disruptions in the production process at any manufacturing facility, including disruptions due to seasonal or unexpected downtime at our facilities as a result of feedstock availability, contamination, safety or other technical difficulties, or the scheduled downtime at our facilities as a result of transitioning our equipment to the production of different molecules; however, we do not currently own any manufacturing facilities, as our commercial production is performed by third parties);
- losses of, or the inability to secure new, major customers, collaboration partners, suppliers or distributors;
- losses associated with producing our products as we ramp to commercial production levels;
- failure to recover value added tax (VAT) that we currently reflect as recoverable in our financial statements (e.g., due to failure to meet conditions for reimbursement of VAT under local law);
- the timing, size and mix of product sales to customers;
- increases in price or decreases in availability of feedstock;
- the unavailability of contract manufacturing capacity altogether or at reasonable cost;
- exit costs associated with terminating contract manufacturing relationships;
- fluctuations in foreign currency exchange rates;
- change in the fair value of derivative instruments;
- fluctuations in the price of and demand for sugar, ethanol, petroleum-based and other products for which our products are alternatives;
- seasonal variability in production and sales of our products;
- competitive pricing pressures, including decreases in average selling prices of our products;
- unanticipated expenses or delays associated with changes in governmental regulations and environmental, health, labor and safety requirements;
- departure of executives or other key management employees resulting in transition and severance costs;
- our ability to use our net operating loss carryforwards to offset future taxable income;
- business interruptions such as earthquakes, tsunamis and other natural disasters;
- our ability to integrate businesses that we may acquire;
- our ability to successfully collaborate with joint venture partners;

- risks associated with the international aspects of our business; and
- changes in general economic, industry and market conditions, both domestically and in our foreign markets.

Due to the factors described above, among others, the results of any quarterly or annual period may not meet our expectations or the expectations of our investors and may not be meaningful indications of our future performance.

A limited number of customers, collaboration partners and distributors account for a significant portion of our revenues, and the loss of major customers, collaboration partners or distributors could harm our operating results.

Our revenues have varied significantly from quarter to quarter and are dependent on sales to, and collaborations with, a limited number of customers, collaboration partners and/or distributors. We cannot be certain that customers, collaboration partners and/or distributors that have accounted for significant revenues in past periods, individually or as a group, will continue to generate similar revenues in any future period. If we fail to renew with, or if we lose, a major customer, collaborator or distributor, or group of customers, collaborators or distributors, our revenues could decline if we are unable to replace the lost revenues with revenues from other sources. Further, since our business model depends in part on such collaboration agreements, it may also be difficult for us to rapidly increase our revenues through additional collaborations in any period, as revenue from such new collaborations will often be recognized over multiple quarters or years.

If we do not meet technical, development and commercial milestones in our collaboration agreements, our future revenues and financial results will be adversely impacted.

We have entered into a number of agreements regarding the further development of certain of our products and, in some cases, for ultimate sale of certain products to the customer under the agreement. Most of these agreements affirmatively obligate the other party to purchase specific quantities of any products, and most contain important conditions that must be satisfied before additional research and development funding or product purchases would occur. These conditions include research and development milestones and technical specifications that must be achieved to the satisfaction of our collaborators, which we cannot be certain we will achieve. If we do not achieve these contractual milestones, our revenues and financial results will be adversely affected.

If we are not able to successfully commence, scale up or sustain operations at existing and planned manufacturing facilities, our customer relationships, business and results of operations may be adversely affected.

A substantial component of our planned production capacity in the near and long term depends on successful operations at existing and potential large-scale production plants. Delays or problems in the construction, start-up or operation of these facilities will cause delays in our ramp-up of production and hamper our ability to reduce our production costs. Delays in construction can occur due to a variety of factors, including regulatory requirements and our ability to fund construction and commissioning costs. For example, in 2012 we determined it was necessary to delay further construction of our large-scale manufacturing facility with São Martinho S.A. (São Martinho) in order to focus on the construction and commissioning of the Brotas facility. We have since proposed to complete construction of the facility to initially support production of our alternative sweetener products. In 2016 and 2017, we produced at capacity at the Brotas facility, and therefore, we needed to identify and secure access to additional production capacity based on anticipated volume requirements, either by constructing a new custom-built facility, acquiring an existing facility from a third party, retrofitting an existing facility operated by a current or potential partner or increasing our use of contract manufacturing facilities. In December 2016, we acquired a production facility in Leland, North Carolina, which facility had been previously operated by our partner Glycotech to perform chemical conversion and production of our end-products, and which facility was subsequently transferred to our newly-formed joint venture with Nikko, as further described in Note 7, "Variable-interest Entities and Unconsolidated Investments" to our consolidated financial statements included in this report. In addition, in February 2017 we broke ground on a second custom-built production facility adjacent to our existing Brotas facility. However, there can be no assurance that we will be able to complete such facility or the proposed alternative sweetener facility on our expected timeline, if at all. In December 2017, we sold our first purpose-built, large-scale production plant in Brotas, Brazil to DSM and concurrently entered into a supply agreement with DSM for us to purchase output from the facility. See Note 13, “Divestiture” in “Notes to Consolidated Financial Statements” included in this Annual Report on Form 10-K for more information.

Once our large-scale production facilities are built, acquired or retrofitted, we must successfully commission them, if necessary, and they must perform as we expect. If we encounter significant delays, cost overruns, engineering issues, contamination problems, equipment or raw material supply constraints, unexpected equipment maintenance requirements, safety issues, work stoppages or other serious challenges in bringing these facilities online and operating them at commercial scale, we may be unable to produce our renewable products in the time frame and at the cost we have planned. It is difficult to predict the effects of scaling up production of industrial fermentation to commercial scale, as it involves various risks to the quality and consistency of our molecules. In addition, in order to produce molecules at existing and potential future plants, we have been and may in the future be required to perform thorough transition activities, and modify the design of the plant. Any modifications to the production plant could cause complications in the operations of the plant, which could result in delays or failures in production. If any of these risks occur, or if we are unable to create or obtain additional manufacturing capacity necessary to meet existing and potential customer demand, we may need to continue to use, or increase our use of, contract manufacturing sources, which generally entail greater cost to us to produce our products and would therefore reduce our anticipated gross margins and may also prevent us from accessing certain markets for our products. Further, if our efforts to increase (or commence, as the case may be) production at these facilities are not successful, our partners may decide not to work with us to develop additional production facilities, demand more favorable terms or delay their commitment to invest capital in our production. If we are unable to create and sustain manufacturing capacity and operations sufficient to satisfy the existing and potential demand of our customers and partners, our business and results of operations may be adversely affected.

Loss or termination of contract manufacturing relationships could harm our ability to meet our production goals.

In December 2017, we sold our first purpose-built, large-scale production plant in Brotas, Brazil to DSM and concurrently entered into a supply agreement with DSM for us to purchase output from the facility, which represents a significant portion of our expected supply needs. See Note 13, “Divestiture” in “Notes to Consolidated Financial Statements” included in this Annual Report on Form 10-K for more information. In addition, we rely on other contract manufacturers to produce and/or provide downstream processing of our products. If we are unable to secure the services of contract manufacturers when and as needed, we may lose customer opportunities and the growth of our business may be impaired. We cannot be sure that contract manufacturers will be available when we need their services, that they will be willing to dedicate a portion of their capacity to our projects, or that we will be able to reach acceptable price and other terms with them for the provision of their production services. If we shift priorities and adjust anticipated production levels (or cease production altogether) at contract manufacturing facilities, such adjustments or cessations could also result in disputes or otherwise harm our business relationships with contract manufacturers. In addition, reliance on external sources for our other target molecules could create a risk for us if a single source or a limited number of sources of manufacturing runs into operational issues, creating risk of loss of sales and profitability. Reducing or stopping production at one facility while increasing or starting up production at another facility generally results in significant losses of production efficiency, which can persist for significant periods of time. Also, in order for production to commence under our contract manufacturing arrangements, we generally must provide equipment for such operations, and we cannot be assured that such equipment can be ordered or installed on a timely basis, at acceptable costs, or at all. Further, in order to establish operations at new contract manufacturing facilities, we need to transfer our yeast strains and production processes from our labs to commercial plants controlled by third parties, which may pose technical or operational challenges that delay production or increase our costs.

Our use of contract manufacturers exposes us to risks relating to costs, contractual terms and logistics.

In addition to our production contracts, we must also commercially produce, process and manufacture farnesene and certain specialty molecules through the use of contract manufacturers, and we anticipate that we will continue to use contract manufacturers for the foreseeable future for chemical conversion and production of end-products. In December 2017, we sold our first purpose-built, large-scale production plant in Brotas, Brazil to DSM and concurrently entered into a supply agreement with DSM for us to purchase output from the facility. See Note 13, “Divestiture” in “Notes to Consolidated Financial Statements” included in this Annual Report on Form 10-K for more information. Establishing and operating contract manufacturing facilities requires us to make significant capital expenditures, which reduces our cash and places such capital at risk. Also, contract manufacturing agreements may contain terms that commit us to pay for capital expenditures and other costs and amounts incurred or expected to be earned by the plant operators and owners, which can result in contractual liability and losses for us even if we terminate a particular contract manufacturing arrangement or decide to reduce or stop production under such an arrangement.

The locations of contract manufacturers can pose additional cost, logistics and feedstock challenges. If production capacity is available at a plant that is remote from usable chemical finishing or distribution facilities, or from customers, we will be required to incur additional expenses in shipping products to other locations. Such costs could include shipping costs, compliance with export and import controls, tariffs and additional taxes, among others. In addition, we may be required to use feedstock from a particular region for a given production facility. The feedstock available in such region may not be the least expensive or most effective feedstock for production, which could significantly raise our overall production cost or reduce our product’s quality until we are able to optimize the supply chain.

We face challenges producing our products at commercial scale or at reduced cost and may not be able to commercialize our products to the extent necessary to make a profit or sustain and grow our current business.

To commercialize our products, we must be successful in using our yeast strains to produce target molecules at commercial scale and at a commercially viable cost. If we cannot achieve commercially-viable production economics for enough products to support our business plan, including through establishing and maintaining sufficient production scale and volume, we will be unable to achieve a sustainable products business. A significant portion of our production capacity is through a purpose-built, large-scale production plant in Brotas, Brazil. This plant commenced operations in 2012, and scaling and running the plant has been a technically complex process. In December 2017, we sold the Brotas facility to DSM and concurrently entered into a supply agreement with DSM for us to purchase output from the facility. See Note 13, “Divestiture” in “Notes to Consolidated Financial Statements” included in this Annual Report on Form 10-K for more information. In February 2017, we broke ground on a second custom-built production facility adjacent to the existing Brotas facility and also have plans to complete construction of an additional manufacturing facility in Pradópolis, Brazil initially focused on our alternative sweetener products. However, there can be no assurance that we will be able to complete such facilities on our expected timeline, if at all. Even if we are successful in completing such facilities, there can be no assurance that we will be able to scale and operate such facilities to allow us to meet our operational goals, which could harm our ability to grow our business.

In order to be competitive in the markets we are targeting, our products must have superior qualities or be competitively priced relative to alternatives available in the market. Currently, our costs of production are not low enough to allow us to offer some of our planned products at competitive prices relative to alternatives available in the market. Our production costs depend on many factors that could have a negative effect on our ability to offer our planned products at competitive prices, including, in particular, our ability to establish and maintain sufficient production scale and volume, and feedstock cost.

We face financial risk associated with scaling up production to reduce our production costs. To reduce per-unit production costs, we must increase production to achieve economies of scale and to be able to sell our products with positive margins. However, if we do not sell production output in a timely manner or in sufficient volumes, our investment in production will harm our cash position and generate losses. Additionally, we may incur added costs in storage and we may face issues related to the decrease in quality of our stored products, which could adversely affect the value of such products. Since achieving competitive product prices generally requires increased production volumes and our manufacturing operations and cash flows from sales are in their early stages, we have had to produce and sell products at a loss in the past, and may continue to do so as we build our business. If we are unable to achieve adequate revenues from a combination of product sales and other sources, we may not be able to invest in production and we may not be able to pursue our business plans. In addition, in order to attract potential collaboration or joint venture partners, or to meet payment milestones under existing or future collaboration agreements, we have in the past and may in the future be required to guarantee or meet certain levels of production costs. If we are unable to reduce our production costs to meet such guarantees or milestones, our net cash flow will be further reduced.

Our ability to establish substantial commercial sales of our products is subject to many risks, any of which could prevent or delay revenue growth and adversely impact our customer relationships, business and results of operations.

There can be no assurance that our products will be approved or accepted by customers, or that we will be able to sell our products profitably at prices and with features sufficient to establish demand. The potential customers for our molecules generally have well developed manufacturing processes and arrangements with suppliers of the chemical components of their products and may have a resistance to changing these processes and components. These potential customers frequently impose lengthy and complex product qualification procedures on their suppliers, influenced by consumer preference, manufacturing considerations such as process changes and capital and other costs associated with transitioning to alternative components, supplier operating history, established business relationships and agreements, regulatory issues, product liability and other factors, many of which are unknown to, or not well understood by, us. Satisfying these processes may take many months. Additionally, we may be subject to product safety testing and may be required to meet certain regulatory and/or product safety standards. Meeting these standards can be a time consuming and expensive process, and we may invest substantial time and resources into such qualification efforts without ultimately securing approval. If we are unable to convince these potential customers (and the consumers who purchase products containing such chemicals) that our products are comparable to the chemicals that they currently use or that the use of our products is otherwise to their benefit, we will not be successful in entering these markets and our business will be adversely affected.

The price and availability of sugarcane and other feedstocks can be volatile as a result of changes in industry policy and may increase the cost of production of our products.

In Brazil, Conselho dos Produtores de Cana, Açúcar e Álcool (Council of Sugarcane, Sugar and Ethanol Producers or Consecana), an industry association of producers of sugarcane, sugar and ethanol, sets market terms and prices for general supply, lease and partnership agreements for sugarcane. If Consecana makes changes to such terms and prices, it could result in higher sugarcane prices and/or a significant decrease in the volume of sugarcane available for the production of our products. In addition, if the availability of sugarcane juice or syrup or other feedstocks is restricted or limited due to weather conditions, land conditions or any other reason, we may not be able to manufacture our products in a timely or cost-effective manner, or at all, which would have a material adverse effect on our business.

We expect to face competition for our products from existing suppliers, including from price declines in petroleum and petroleum-based products, and if we cannot compete effectively against these companies, products or prices, we may not be successful in bringing our products to market, demand for some of our renewable products may decline, or we may be unable to further grow our business.

We expect that our renewable products will compete with both the traditional products that are currently being used in our target markets and with the alternatives to these existing products that established enterprises and new companies are seeking to produce. In the markets that we have entered, and in other markets that we may seek to enter in the future, we will compete primarily with the established providers of ingredients currently used in products in these markets. Producers of these incumbent products include global health and nutrition companies, large international chemical companies and companies specializing in specific products, such as flavor or fragrance ingredients, squalane or essential oils. We may also compete in one or more of these markets with products that are offered as alternatives to the traditional products being offered in these markets.

With the emergence of many new companies seeking to produce products from renewable sources, we may face increasing competition from such companies. As they emerge, some of these companies may be able to establish production capacity and commercial partnerships to compete with us. If we are unable to establish production and sales channels that allow us to offer comparable products at attractive prices, we may not be able to compete effectively with these companies.

We believe the primary competitive factors in our target markets are:

- product price;
- product performance and other measures of quality;
- sustainability; and
- dependability of supply.

The global health and nutrition companies, large international chemical companies and companies specializing in specific products with whom we compete are much larger than us, have, in many cases, well developed distribution systems and networks for their products, have valuable historical relationships with the potential customers we are seeking to serve and have much more extensive sales and marketing programs in place to promote their products. In order to be successful, we must convince customers that our products are at least as effective as the traditional products they are seeking to replace and we must provide our products on a cost basis that does not greatly exceed these traditional products and other available alternatives. Some of our competitors may use their influence to impede the development and acceptance of renewable products of the type that we are seeking to produce.

While most of our products do not compete with, and do not serve as alternatives to, petroleum-based products, we anticipate that some of our renewable products will be marketed as alternatives to corresponding petroleum-based products. We believe that for our renewable products to succeed in the market, we must demonstrate that our products are comparable or better alternatives to existing products and to any alternative products that are being developed for the same markets based on some combination of product cost, availability, performance, and consumer preference characteristics. Declining oil prices, or the perception of a sustained or future decline in oil prices, has adversely affected the prices or demand for such products in the past and may continue to do so. During sustained periods of lower oil prices, we may be unable to sell such products at anticipated levels, which could negatively impact our operating results.

We are subject to risks related to our reliance on collaboration arrangements to fund development and commercialization of our products and the success of such products is uncertain, and our financial results may be adversely impacted, if we fail to meet technical, development or commercial milestones in such agreements.

For most product markets we are seeking to enter, we have collaboration partners to fund the research and development, commercialization and production efforts required for the target products. Typically, we provide limited exclusive rights and revenue sharing with respect to the production and sale of particular products in specific markets in exchange for such up-front funding. These exclusivity, revenue-sharing and other similar terms limit our ability to commercialize our products and technology, and may impact the size of our business or our profitability in ways that we do not currently envision. In addition, none of these agreements affirmatively obligates the other party to purchase specific quantities of any products, and most contain important conditions that must be satisfied before additional research and development funding or product purchases would occur. These conditions include research and development programs and milestones, and technical specifications that must be achieved to the satisfaction of our collaborators. We may focus our efforts and resources on potential discovery efforts, product targets or candidates that require substantial technical, financial and human resources which we cannot be certain we will achieve.

Revenues from these types of relationships are a key part of our cash plan for 2018 and beyond. If we fail to collect expected collaboration revenues, or to identify and add sufficient additional collaborations to fund our planned operations, we may be unable to fund our operations or pursue development and commercialization of our planned products. To achieve our collaboration revenue targets from year to year, we may be forced to enter into agreements that contain less favorable terms. As part of our current and future collaboration arrangements, we may be required to make significant capital investments at our existing or new facilities in order to produce molecules or other products. Any failure or difficulties in establishing, building up or retooling our operations could have a significant negative impact on our business, including our ability to achieve commercial viability for our products, lead to the inability to meet our contractual obligations and could cause us to allocate capital, personnel and other resources from our organization which could adversely affect our business and reputation.

Our collaboration arrangements may restrict or prevent our future business activity in certain markets or industries, which could harm our ability to grow our business.

As part of our collaboration arrangements in the ordinary course of business, we may grant to our partners exclusive rights with respect to the development, production and/or commercialization of particular products or types of products in specific markets in exchange for up-front funding and/or downstream value sharing arrangements. These rights might inhibit potential collaboration or strategic partners or potential customers from entering into negotiations with us about further business opportunities, and we may be restricted or prevented from engaging with other partners or customers in those markets, which may limit our ability to grow our business.

In the past, we have had to grant concessions to existing partners in exchange for such partners waiving or modifying their exclusive rights with respect to a particular product, type of product or market so that we could engage with a third party with respect to such product, product type or market. There can be no assurance that existing partners will be willing to grant waivers of or modify their exclusive rights in the future on favorable terms, if at all. If we are unable to engage other potential partners with respect to particular product types or markets for which we have previously granted exclusive rights, our ability to grow our business would be harmed and our results of operations may be adversely affected.

We have limited control over our joint ventures.

We do not have the right or power to control the management of our joint ventures, and our joint venture partners may take action contrary to our interests or objectives. If our joint venture partners act contrary to our interest, it could harm our brand, business, results of operations and financial condition. In addition, operating a joint venture often requires additional organizational formalities and time-consuming procedures for sharing information and making decisions, which can divert management resources, and if a joint venture partner changes or relationships deteriorate, our success in the joint venture may be materially adversely affected, which could harm our business.

Third parties may misappropriate our yeast strains.

Third parties, including collaborators, contract manufacturers, other contractors and shipping agents, often have custody or control of our yeast strains. If our yeast strains were stolen, misappropriated or reverse engineered, they could be used by other parties who may be able to reproduce the yeast strains for their own commercial gain. If this were to occur, it would be difficult for us to challenge and prevent this type of use, especially in countries where we have limited intellectual property protection or that do not have robust intellectual property law regimes.

Our relationship with Ginkgo Bioworks, Inc. exposes us to financial and commercial risks.

In June 2016, we entered into an initial strategic partnership agreement with Ginkgo Bioworks, Inc. (Ginkgo), pursuant to which we licensed certain intellectual property to Ginkgo in exchange for a license fee and royalty, and agreed to pursue the negotiation and execution of a definitive partnership agreement setting forth the terms of a long-term commercial partnership and collaboration arrangement between us and Ginkgo, and in September 2016 we executed a definitive collaboration agreement with Ginkgo setting forth the terms of a commercial partnership under which the parties would collaborate to develop, manufacture and sell commercial products and would share in the value of such products. In connection with the entry into such commercial agreements, we received a waiver under, and subsequently entered into an amendment of, our senior secured credit facility, the agent and lender under which is an affiliate of Ginkgo, which amendment extended, subject to certain conditions which were satisfied in January 2017, the maturity of the loans under the senior secured credit facility, eliminated principal repayments under the facility prior to maturity, subject to the requirement that we apply certain monies received by us under the collaboration agreement with Ginkgo to repay the outstanding loans under the facility, and waived the covenant in the senior secured loan facility requiring the Company to maintain unrestricted, unencumbered cash in defined U.S. bank accounts in an amount equal to at least 50% of the principal amount outstanding under the facility until the maturity date. In November 2017, we amended the partnership with Ginkgo to reduce the scope of our commercial relationship, and in connection therewith we agreed to guarantee certain minimum payments to Ginkgo under the partnership and issued a $12 million promissory note to Ginkgo. For more details on our transactions with Ginkgo, please see Note 4, "Debt" in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K.

There can be no assurance that our partnership with Ginkgo, as amended, will be successful. In addition, negative developments in our commercial partnership with Ginkgo could negatively affect our relationship with the agent and lender under our senior secured credit facility, an affiliate of Ginkgo, which could adversely impact our ability to incur additional indebtedness in the future or take other actions the consent for which would be required from the agent and lender under the facility. In such event, our financial condition and business operations could be adversely affected.

Certain rights we have granted to Total, DSM and other existing stockholders, including in relation to our future securities offerings, could have substantial impacts on our company.

Under certain agreements between us and Total related to Total's original investment in our capital stock, for as long as Total owns 10% of our voting securities, it has rights to an exclusive negotiation period if our board of directors decides to sell our company. In addition, in connection with Total's investments in Amyris, our certificate of incorporation includes a provision that excludes Total from prohibitions on business combinations between Amyris and an "interested stockholder." These provisions could have the effect of discouraging potential acquirers from making offers to acquire us, and give Total more access to Amyris than other stockholders if Total decides to pursue an acquisition.

In addition, Total, DSM and certain other investors have the right to designate one or more directors to serve on our board of directors pursuant to agreements between us and such investors.

In May 2017, we entered into an agreement with DSM, which was amended and restated in August 2017, pursuant to which we agreed (i) that for as long as there is a DSM-designated director serving on our board of directors, we will not engage in certain commercial or financial transactions or arrangements without the consent of such director, and (ii) to provide DSM with certain exclusive negotiating rights in connection with certain future commercial projects and arrangements. These provisions could discourage other potential partners from approaching us with business opportunities, and could restrict, delay or prevent us from pursuing or engaging in such opportunities, which could adversely affect our business.

Additionally, in connection with investments in Amyris, we granted certain investors, including Total and DSM, a right of first investment if we propose to sell securities in certain financing transactions. With these rights, such investors may subscribe for a portion of any such new financing and require us to comply with certain notice periods, which could discourage other investors from participating in, or cause delays in our ability to close, such a financing. Further, in certain cases such investors have the right to pay for any securities purchased in connection with an exercise of their right of first investment by canceling all or a portion of our debt held by them. To the extent such investors exercise these rights, it will reduce the cash proceeds we may realize from the relevant financing.

A significant portion of our operations are centered in Brazil, and our business will be adversely affected if we do not operate effectively in that country.

For the foreseeable future, we will be subject to risks associated with the concentration of essential product sourcing and operations in Brazil. The Brazilian government has changed in the past, and may change in the future, monetary, taxation, credit, tariff, labor and other policies to influence the course of Brazil's economy. For example, the government's actions to control inflation have involved interest rate adjustments. We have no control over, and cannot predict what policies or actions the Brazilian government may take in the future. Our business, financial performance and prospects may be adversely affected by, among others, the following factors:

- delays or failures in securing licenses, permits or other governmental approvals necessary to build and operate facilities and use our yeast strains to produce products;
- rapid consolidation in the sugar and ethanol industries in Brazil, which could result in a decrease in competition;
- political, economic, diplomatic or social instability in or affecting Brazil;
- changing interest rates;
- tax burden and policies;
- effects of changes in currency exchange rates;
- any changes in currency exchange policy that lead to the imposition of exchange controls or restrictions on remittances abroad;
- inflation;
- land reform or nationalization movements;
- changes in labor related policies;
- export or import restrictions that limit our ability to move our products out of Brazil or interfere with the import of essential materials into Brazil;
- changes in, or interpretations of foreign regulations that may adversely affect our ability to sell our products or repatriate profits to the United States;
- tariffs, trade protection measures and other regulatory requirements;
- compliance with United States and foreign laws that regulate the conduct of business abroad;
- compliance with anti-corruption laws recently enacted in Brazil;
- an inability, or reduced ability, to protect our intellectual property in Brazil including any effect of compulsory licensing imposed by government action; and
- difficulties and costs of staffing and managing foreign operations.

We cannot predict whether the current or future Brazilian government will implement changes to existing policies on taxation, exchange controls, monetary strategy, labor relations, social security and the like, nor can we estimate the impact of any such changes on the Brazilian economy or our operations.

Brazil's economy has recently experienced quarters of slow or negative gross domestic product growth and has, until 2017, experienced high inflation and a growing fiscal deficit of its federal government accounts. In addition, major corruption scandals involving members of the executive, state-controlled enterprises and large private sector companies have been disclosed and are the subject of ongoing investigation by federal authorities. The final outcome of these investigations and their impact on the Brazilian economy is not yet known and cannot be predicted with certainty.

In addition, President Trump has made comments suggesting that he is not supportive of certain existing international trade agreements as well as that he might take action to restrict or tax products imported into the U.S. from foreign jurisdictions. At this time, it remains unclear what actions President Trump will or will not take with respect to these international trade agreements or U.S. trade policy. If President Trump takes action to withdraw from or materially modify international trade agreements or place restrictions or tariffs on products imported from Brazil, our business, financial condition and results of operations could be adversely affected.

We maintain operations in foreign jurisdictions other than Brazil, and may in the future expand our operations to additional foreign jurisdictions. Many, if not all of the above-mentioned risks also apply to our operations in such jurisdictions. If any of these risks were to occur, our operations and business would be adversely affected.

Ethical, legal and social concerns about products using genetically modified microorganisms could limit or prevent the use of our products and technologies and could harm our business.

Our technologies and products involve the use of genetically modified microorganisms (GMMs). Public perception about the safety of, and ethical, legal or social concerns over, genetically engineered products, including GMMs, could affect public acceptance of our products. If we are not able to overcome any such concerns relating to our products, our technologies may not be accepted by our customers or end-users. In addition, the use of GMMs has in the past received negative publicity, which could lead to greater regulation or restrictions on imports of our products. Further, there is a risk that products produced using our technologies could cause adverse health effects or other adverse events. If our technologies and products are not accepted by our customers or their end-users due to negative publicity or lack of public acceptance, our business could be significantly harmed.

Our use of genetically-modified feedstocks and yeast strains to produce our products subjects us to risks of regulatory limitations and rejection of our products.

The use of GMMs, such as our yeast strains, is subject to laws and regulations in many countries, some of which are new and some of which are still evolving. In the United States, the Environmental Protection Agency (EPA), regulates the commercial use of GMMs as well as potential products produced from GMMs. Various states or local governments within the United States could choose to regulate products made with GMMs as well. While the strain of genetically modified yeast that we currently use for the development and commercial production of our target molecules, *S. cerevisiae*, is eligible for exemption from EPA review because it is generally recognized as safe, we must satisfy certain criteria to achieve this exemption, including but not limited to use of compliant containment structures and safety procedures, and we cannot be sure that we will meet such criteria in a timely manner, or at all. If exemption of *S. cerevisiae* is not obtained, our business may be substantially harmed. In addition to *S. cerevisiae*, we may seek to use different GMMs in the future that will require EPA approval. If approval of different GMMs is not secured, our ability to grow our business could be adversely affected.

In Brazil, GMMs are regulated by the National Biosafety Technical Commission (CTNBio). We have obtained approvals from CTNBio to use GMMs in a contained environment in our Brazil facilities for research and development purposes as well as at contract manufacturing facilities in Brazil. In addition, we have obtained initial commercial approvals from CTNBio for three of our yeast strains. As we continue to develop new yeast strains and deploy our technology at new production facilities in Brazil, we will be required to obtain further approvals from CTNBio in order to use these strains in commercial production in Brazil. We may not be able to obtain approvals from relevant Brazilian authorities on a timely basis, or at all, and if we do not, our ability to produce our products in Brazil would be impaired, which would adversely affect our results of operations and financial condition.

In addition to our production operations in the United States and Brazil, we have been party to contract manufacturing agreements with parties in other production locations around the world, including Europe. The use of GMM technology is regulated in the European Union, which has established various directives for member states regarding regulation of the use of such technology, including notification processes for contained use of such technology. We expect to encounter GMM regulations in most, if not all, of the countries in which we may seek to establish production capabilities and/or conduct sales to customers or end-use consumers, and the scope and nature of these regulations will likely be different from country to country. If we cannot meet the applicable requirements in other countries in which we intend to produce or sell products using our yeast strains, or if it takes longer than anticipated to obtain such approvals, our business could be adversely affected. Furthermore, there are various governmental, non-governmental and quasi-governmental organizations that review and certify products with respect to the determination of whether products can be classified as "natural" or other similar classifications. While the certification from such governmental, non-governmental and quasi-governmental organizations is generally not mandatory, some of our current or prospective customers, collaborators or distributors may require that we meet the standards set by such organizations as a condition precedent to purchasing or distributing our products. We cannot be certain that we will be able to satisfy the standards of such organizations, and any delay or failure to do so could harm our ability to sell or distribute some or all of our products to certain customers and prospective customers, which could have a negative impact on our business.

We may not be able to obtain regulatory approval for the sale of our renewable products.

Our renewable chemical products may be subject to government regulation in our target markets. In the United States, the EPA administers the Toxic Substances Control Act (the TSCA), which regulates the commercial registration, distribution, and use of many chemicals. Before an entity can manufacture or distribute a new chemical subject to the TSCA, it must file a Pre-Manufacture Notice, or PMN, to add the chemical to a product. The EPA has 90 days to review the filing but may request additional data, which could significantly extend the timeline for approval. As a result, we may not receive EPA approval to list future molecules on the TSCA registry as expeditiously as we would like, resulting in delays or significant increases in testing requirements. A similar program exists in the European Union, called REACH. Under this program, chemicals imported or manufactured in the European Union in certain quantities must be registered with the European Chemicals Agency, and this process could cause delays or entail significant costs. To the extent that other countries in which we are producing or selling (or seeking to produce or sell) our products, such as Brazil and various countries in Asia, rely on TSCA or REACH (or similar laws and programs) for chemical registration or regulation in their jurisdictions, delays with the United States or European authorities, or any relevant authorities in such other countries, may delay entry into these markets as well. In addition, some of our Biofene-derived products are sold for the cosmetics market, and some countries may impose additional regulatory requirements or permits for such uses, which could impair, delay or prevent sales of our products in those markets. Also, certain of our current or proposed products in the Health and Nutrition and Personal Care markets, including alternative sweeteners, nutraceuticals, Flavors & Fragrances ingredients, skincare ingredients and cosmetic actives, may be subject to the approval of and regulation by the FDA, as well as similar agencies of states and foreign jurisdictions where these products are sold or proposed to be sold.

We expect to encounter regulations in most, if not all, of the countries in which we may seek to produce, import or sell our products (and our customers may encounter similar regulations in selling end-use products to consumers), and we cannot assure you that we (or our customers) will be able to obtain necessary approvals in a timely manner or at all. If our products do not meet applicable regulatory requirements in a particular country, then we (or our customers) may not be able to commercialize our products in such country and our business will be adversely affected. In addition, any enforcement action taken by regulators against us or our products could cause us to suffer adverse publicity, which could harm our reputation and our relationship with our customers and vendors.

In addition, many of our products are intended to be a component of our collaborators' and/or customers' (or their customers') end-use products. Such end-use products may be subject to various regulations, including regulations promulgated by the EPA, the FDA, or the European Food Safety Authority. If our company or our collaborators and customers (or their customers) are not successful in obtaining any required regulatory approval for their end-use products that incorporate our products, or fail to comply with any applicable regulations for such end-use products, whether due to our products or otherwise, demand for our products may decline and our revenues will be adversely affected.

Changes in government regulations, including subsidies and economic incentives, could have a material adverse effect on our business.

The markets where we sell our products are heavily influenced by foreign, federal, state and local government regulations and policies. Changes to existing or adoption of new domestic or foreign federal, state and local legislative initiatives that impact the production, distribution or sale of products may harm our business. The uncertainty regarding future standards and policies may also affect our ability to develop our products or to license our technologies to third parties and to sell products to our end customers. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our business, financial condition and results of operations.

Furthermore, the production of our products will depend on the availability of feedstock, especially sugarcane. Agricultural production and trade flows are subject to government policies and regulations. Governmental policies affecting the agricultural industry, such as taxes, tariffs, duties, subsidies, incentives and import and export restrictions on agricultural commodities and commodity products can influence the planting of certain crops, the location and size of crop production, whether unprocessed or processed commodity products are traded, the volume and types of imports and exports, and the availability and competitiveness of feedstocks as raw materials. Future government policies may adversely affect the supply of feedstocks, restrict our ability to use sugarcane or other feedstocks to produce our products, or encourage the use of feedstocks more advantageous to our competitors, which would put us at a commercial disadvantage and could negatively impact our future revenues and results of operations.

We may incur significant costs to comply with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

We use intermediate substances, hazardous chemicals and radioactive and biological materials in our business, and such materials are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials in the United States, European Union and Brazil. Although we have implemented safety procedures for handling and disposing of these materials and related waste products in an effort to comply with these laws and regulations, we cannot be sure that our safety measures and those of our contractors will prevent accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our insurance coverage. There can be no assurance that violations of environmental, health and safety laws will not occur in the future as a result of human error, accident, equipment failure or other causes. Compliance with applicable environmental laws and regulations may be expensive, and the failure to comply with past, present, or future laws could result in the imposition of fines, third party property damage, product liability and personal injury claims, investigation and remediation costs, the suspension of production, or a cessation of operations, and our liability may exceed our total assets. Liability under environmental laws can be joint and several, without regard to comparative fault, and may be punitive in nature. Furthermore, environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could impair our research, development or production efforts and otherwise harm our business.

Our proprietary rights may not adequately protect our technologies and product candidates.

Our commercial success will depend substantially on our ability to obtain patents and maintain adequate legal protection for our technologies and product candidates in the United States and other countries. As of December 31, 2017, we had 474 issued United States and foreign patents and 315 pending United States and foreign patent applications that were owned or co-owned by or licensed to us. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies and future products are covered by valid and enforceable patents or are effectively maintained as trade secrets.

We apply for patents covering both our technologies and product candidates, as we deem appropriate. However, filing, prosecuting, maintaining and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States are less extensive than those in the United States. We may also fail to apply for patents on important technologies or product candidates in a timely fashion, or at all. Our existing and future patents may not be sufficiently broad to prevent others from practicing our technologies or from designing products around our patents or otherwise developing competing products or technologies. In addition, the patent positions of companies like ours are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of patent claims has emerged to date in the United States and the landscape is expected to become even more uncertain in view of recent rule changes by the United States Patent Office, or USPTO. Additional uncertainty may result from legal decisions by the United States Federal Circuit and Supreme Court as they determine legal issues concerning the scope and construction of patent claims and inconsistent interpretation of patent laws or from legislation enacted by the U.S. Congress. The patent situation outside of the United States is even less predictable. As a result, the validity and enforceability of patents cannot be predicted with certainty. Moreover, we cannot be certain whether:

- we (or our licensors) were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we (or our licensors) were the first to file patent applications for these inventions;

- others will independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our or our licensors' patents will be valid or enforceable;
- any patents issued to us (or our licensors) will provide us with any competitive advantages, or will be challenged by third parties;
- we will develop additional proprietary products or technologies that are patentable; or
- the patents of others will have an adverse effect on our business.

We do not know whether any of our pending patent applications or those pending patent applications that we license will result in the issuance of any patents. Even if patents are issued, they may not be sufficient to protect our technology or product candidates. The patents we own or license and those that may be issued in the future may be challenged, invalidated, rendered unenforceable, or circumvented, and the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages. Moreover, third parties could practice our inventions in territories where we do not have patent protection or in territories where they could obtain a compulsory license to our technology where patented. Such third parties may then try to import products made using our inventions into the United States or other territories. Accordingly, we cannot ensure that any of our pending patent applications will result in issued patents, or even if issued, predict the breadth, validity and enforceability of the claims upheld in our and other companies' patents.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries do not favor the enforcement of patents or other intellectual property rights, which could hinder us from preventing the infringement of our patents or other intellectual property rights. Proceedings to enforce our patent rights in the United States or foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert patent infringement or other claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license from third parties.

Unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our intellectual property is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in certain foreign countries where the local laws may not protect our proprietary rights as fully as in the United States or may provide, today or in the future, for compulsory licenses. If competitors are able to use our technology, our ability to compete effectively could be harmed. Moreover, others may independently develop and obtain patents for technologies that are similar to, or superior to, our technologies. If that happens, we may need to license these technologies, and we may not be able to obtain licenses on reasonable terms, if at all, which could cause harm to our business.

We rely in part on trade secrets to protect our technology, and our failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

We rely on trade secrets to protect some of our technology, particularly where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to maintain and protect. Our strategy for contract manufacturing and scale-up of commercial production requires us to share confidential information with our international business partners and other parties. Our product development collaborations with third parties, including with Total and Ginkgo, require us to share certain confidential information,. While we use reasonable efforts to protect our trade secrets, our or our business partners' employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our proprietary information to competitors. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, foreign courts are sometimes less willing than United States courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secrets against them.

We require new employees and consultants to execute proprietary information and inventions agreements upon the commencement of an employment or consulting arrangement with us. We additionally require contractors, advisors, corporate collaborators, outside scientific collaborators and other third parties that may receive trade secret information to execute such agreements. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. Nevertheless, our proprietary information may be disclosed, or these agreements may be unenforceable or difficult to enforce. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. Additionally, trade secret law in Brazil differs from that in the United States, which requires us to take a different approach to protecting our trade secrets in Brazil. Some of these approaches to trade secret protection may be novel and untested under Brazilian law and we cannot guarantee that we would prevail if our trade secrets are contested in Brazil. If any of the above risks materializes, our failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

If we or one of our collaborators is sued for infringing intellectual property rights or other proprietary rights of third parties, litigation could be costly and time consuming and could prevent us from developing or commercializing our future products.

Our commercial success depends on our and our collaborators' ability to operate without infringing the patents and proprietary rights of other parties and without breaching any agreements we have entered into with regard to our technologies and product candidates. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to conduct our business. Our industry spans several sectors, including biotechnology, renewable fuels, renewable specialty chemicals and other renewable compounds, and is characterized by the existence of a significant number of patents and disputes regarding patent and other intellectual property rights. Because patent applications can take several years to issue, there may currently be pending applications, unknown to us, that may result in issued patents that cover our technologies or product candidates. There may be a significant number of patents and patent applications relating to aspects of our technologies filed by, and issued to, third parties. The existence of third-party patent applications and patents could significantly reduce the coverage of patents owned by or licensed to us and our collaborators and limit our ability to obtain meaningful patent protection. If we wish to make, use, sell, offer to sell, or import the technology or compound claimed in issued and unexpired patents owned by others, we may need to obtain a license from the owner, develop or obtain alternative technologies, enter into litigation to challenge the validity of the patents or incur the risk of litigation in the event that the owner asserts that we infringe its patents. If patents containing competitive or conflicting claims are issued to third parties and these claims are ultimately determined to be valid, we and our collaborators may be enjoined from pursing research, development, or commercialization of products, or be required to obtain licenses to these patents, or to develop or obtain alternative technologies.

If a third party asserts that we infringe upon its patents or other proprietary rights, we could face a number of issues that could seriously harm our competitive position, including:

- infringement and other intellectual property claims, which could be costly and time consuming to litigate, whether or not the claims have merit, and which could delay getting our products to market and divert management attention from our business;
- substantial damages for past infringement, which we may have to pay if a court determines that our product candidates or technologies infringe a third party's patent or other proprietary rights;
- a court prohibiting us from selling or licensing our technologies or future products unless the holder licenses the patent or other proprietary rights to us, which it is not required to do; and

- if a license is available from a third party, such third party may require us to pay substantial royalties or grant cross licenses to our patents or proprietary rights.

The industries in which we operate, and the biotechnology industry in particular, are characterized by frequent and extensive litigation regarding patents and other intellectual property rights. Many biotechnology companies have employed intellectual property litigation as a way to gain a competitive advantage. If any of our competitors have filed patent applications or obtained patents that claim inventions also claimed by us, we may have to participate in interference proceedings declared by the relevant patent regulatory agency to determine priority of invention and, thus, the right to the patents for these inventions in the United States. These proceedings could result in substantial cost to us even if the outcome is favorable. Even if successful, an interference proceeding may result in loss of certain claims. Our involvement in litigation, interferences, opposition proceedings or other intellectual property proceedings inside and outside of the United States, to defend our intellectual property rights, or as a result of alleged infringement of the rights of others, may divert management time from focusing on business operations and could cause us to spend significant resources, all of which could harm our business and results of operations.

Many of our employees were previously employed at universities, biotechnology, specialty chemical or oil companies, including our competitors or potential competitors. We may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel and be enjoined from certain activities. A loss of key research personnel or their work product could hamper or prevent our ability to commercialize our product candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and demand on management resources.

We may need to commence litigation to enforce our intellectual property rights, which would divert resources and management's time and attention and the results of which would be uncertain.

Enforcement of claims that a third party is using our proprietary rights without permission is expensive, time consuming and uncertain. Significant litigation would result in substantial costs, even if the eventual outcome is favorable to us and would divert management's attention from our business objectives. In addition, an adverse outcome in litigation could result in a substantial loss of our proprietary rights and we may lose our ability to exclude others from practicing our technology or producing our product candidates.

The laws of some foreign countries do not protect intellectual property rights to the same extent as do the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or bioindustrial technologies. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Moreover, our efforts to protect our intellectual property rights in such countries may be inadequate.

We do not have exclusive rights to intellectual property we develop under U.S. federally funded research grants and contracts, including with DARPA and DOE, and we could ultimately share or lose the rights we do have under certain circumstances.

Some of our intellectual property rights have been or may be developed in the course of research funded by the U.S. government, including under our agreements with DARPA and DOE. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future products pursuant to the Bayh-Dole Act of 1980. Government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right to require us, or an assignee or exclusive licensee to such inventions, to grant licenses to any of these inventions to a third party if they determine that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; (iii) government action is necessary to meet requirements for public use under federal regulations; or (iv) the right to use or sell such inventions is exclusively licensed to an entity within the U.S. and substantially manufactured outside the U.S. without the U.S. government's prior approval. Additionally, we may be restricted from granting exclusive licenses for the right to use or sell our inventions created pursuant to such agreements unless the licensee agrees to additional restrictions (e.g., manufacturing substantially all of the invention in the U.S.). The U.S. government also has the right to take title to these inventions if we fail to disclose the invention to the government and fail to file an application to register the intellectual property within specified time limits. In addition, the U.S. government may acquire title in any country in which a patent application is not filed within specified time limits. Additionally, certain inventions are subject to transfer restrictions during the term of these agreements and for a period thereafter, including sales of products or components, transfers to foreign subsidiaries for the purpose of the relevant agreements, and transfers to certain foreign third parties. If any of our intellectual property becomes subject to any of the rights or remedies available to the U.S. government or third parties pursuant to the Bayh-Dole Act of 1980, this could impair the value of our intellectual property and could adversely affect our business.

Loss of, or inability to secure government contract revenues could impair our business.

We have contracts or subcontracts with certain governmental agencies or their contractors, including DARPA and DOE. Generally, these agreements, as they may be amended or modified from time to time, have fixed terms and may be terminated, modified or be subject to recovery of payments by the government agency under certain conditions (such as failure to comply with detailed reporting and governance processes or failure to achieve milestones). Under these agreements, we are also subject to audits, which can result in corrective action plans and penalties up to and including termination. If these governmental agencies terminate these agreements with us, it could reduce our revenues which could harm our business. Additionally, we anticipate securing additional government contracts as part of our business plan for 2018 and beyond. If we are unable to secure such government contracts, it could harm our business.

Our products subject us to product-safety risks, and we may be sued for product liability.

The design, development, production and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. Our potential products could be used by a wide variety of consumers with varying levels of sophistication. Although safety is a priority for us, we are not always in control of the final uses and formulations of the products we supply or their use as ingredients. Our products could have detrimental impacts or adverse impacts we cannot anticipate. Despite our efforts, negative publicity about Amyris, including product safety or similar concerns, whether real or perceived, could occur, and our products could face withdrawal, recall or other quality issues. In addition, we may be named directly in product liability suits relating to our products, even for defects resulting from errors of our commercial partners, contract manufacturers, chemical finishers or customers or end users of our products. These claims could be brought by various parties, including customers who are purchasing products directly from us or other users who purchase products from our customers. We could also be named as co-parties in product liability suits that are brought against the contract manufacturers with whom we partner to produce our products. Insurance coverage is expensive, may be difficult to obtain and may not be available in the future on acceptable terms. We cannot be certain that our contract manufacturers or the sugar and ethanol producers who partner with us to produce our products will have adequate insurance coverage to cover against potential claims. Any insurance we do maintain may not provide adequate coverage against potential losses, and if claims or losses exceed our liability insurance coverage, our business would be adversely impacted. In addition, insurance coverage may become more expensive, which would harm our results of operations.

We may become subject to lawsuits or indemnity claims in the ordinary course of business, which could materially and adversely affect our business and results of operations.

From time to time, we may in the ordinary course of business be named as a defendant in lawsuits, indemnity claims and other legal proceedings. These actions may seek, among other things, compensation for alleged personal injury, employment discrimination, breach of contract, property damage and other losses or injunctive or declaratory relief. In the event that such actions, claims or proceedings are ultimately resolved unfavorably to us at amounts exceeding our accrued liability, or at material amounts, the outcome could materially and adversely affect our reputation, business and results of operations. In addition, payments of significant amounts, even if reserved, could adversely affect our liquidity position. For more information regarding our current legal proceedings, please refer to the section entitled "Legal Proceedings" in Part I, Item 3 of this Annual Report on Form 10-K.

Loss of key personnel, including key management personnel, and/or failure to attract and retain additional personnel could delay our product development programs and harm our research and development efforts and our ability to meet our business objectives.

Our business involves complex, global operations across a variety of markets and requires a management team and employee workforce that is knowledgeable in the many areas in which we operate. As we continue to build our business, we will need to hire and retain qualified research and development, management and other personnel to succeed. The process of hiring, training and successfully integrating qualified personnel into our operations, in the United States, Brazil and other countries in which we may seek to operate, is a lengthy and expensive one. The market for qualified personnel is very competitive because of the limited number of people available who have the necessary technical skills and understanding of our technology and products, particularly in Brazil. Our failure to hire and retain qualified personnel could impair our ability to meet our research and development and business objectives and adversely affect our results of operations and financial condition.

The loss of any key member of our management or key technical and operational employees, or the failure to attract or retain such employees, could prevent us from developing and commercializing our products for our target markets and executing our business strategy. In addition, we may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among biotechnology and other technology-based businesses. Furthermore, reductions to our workforce as part of potential cost-saving measures, such as those discussed above with respect to our 2018 operating plan, may make it more difficult for us to attract and retain key employees. If we do not maintain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our collaborators and customers in a timely fashion or to support our internal research and development programs and operations. In particular, our product and process development programs depend on our ability to attract and retain highly skilled technical and operational personnel. Competition for such personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms. All of our employees are "at-will" employees, which means that either the employee or we may terminate their employment at any time.

We may not be able to fully enforce covenants not to compete with and not to solicit our employees, and therefore we may be unable to prevent our competitors from benefiting from the expertise of such employees.

Our proprietary information and inventions agreements with our employees contain non-compete and non-solicitation provisions. These provisions prohibit our employees from competing directly with our business or proposed business or working for our competitors during their term of employment, and from directly or indirectly soliciting our employees or consultants to leave our company for any purpose. Under applicable U.S. and Brazilian law, we may be unable to enforce these provisions. If we cannot enforce these provisions with our employees, we may be unable to prevent our competitors from benefiting from the expertise of such employees. Even if these provisions are enforceable, they may not adequately protect our interests. The defection of one or more of our employees to a competitor could materially adversely affect our business, results of operations and ability to capitalize on our proprietary information.

Our operations rely on sophisticated information technology and equipment systems, a disruption of which could harm our operations.

We rely on various information technology and equipment systems, some of which are dependent on services provided by third parties, to manage our technology platform and operations. These systems provide critical data and services for internal and external users, including research and development activities, procurement and inventory management, transaction processing, financial, commercial and operational data, human resources management, legal and tax compliance and other processes necessary to operate and manage our business. These systems are complex and are frequently updated as technology improves, and include software and hardware that is licensed, leased or purchased from third parties. If our information technology and equipment systems experience breaches or other failures or disruptions, our systems and the information contained therein could be compromised. While we have implemented security measures and disaster recovery plans designed to mitigate the effects of any failures or disruption of these systems, such measures may not adequately prevent adverse events such as breaches or failures from occurring or mitigate their severity if they do occur. If our information technology or equipment systems are breached, damaged or fail to function properly due to internal errors or defects, implementation or integration issues, catastrophic events or power outages, we may experience a material disruption in our ability to manage our business operations. Failure or disruption of these systems could have an adverse effect on our operating results and financial condition.

Growth may place significant demands on our management and our infrastructure.

We have experienced, and expect to continue to experience, expansion of our business as we continue to make efforts to develop and bring our products to market. We have grown from 18 employees at the end of 2005 to 414 full-time employees at December 31, 2017. Our growth and diversified operations have placed, and may continue to place, significant demands on our management and our operational and financial infrastructure. In particular, continued growth could strain our ability to:

- manage multiple research and development programs;
- operate multiple manufacturing facilities around the world;
- develop and improve our operational, financial and management controls;
- enhance our reporting systems and procedures;
- recruit, train and retain highly skilled personnel;
- develop and maintain our relationships with existing and potential business partners;
- maintain our quality standards; and
- maintain customer satisfaction.

Managing our growth will require significant expenditures and allocation of valuable management resources. If we fail to achieve the necessary level of efficiency in our organization as it grows, our business, results of operations and financial condition would be adversely impacted.

We have identified material weaknesses in our internal control over financial reporting which, if not corrected, could affect the reliability of our consolidated financial statements and have other adverse consequences.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. Section 404 of the Sarbanes-Oxley Act of 2002 (Section 404) and related SEC rules require management to assess the effectiveness of our internal control over financial reporting. Based on the assessment as of December 31, 2017, our management believes that our internal control over financial reporting was not effective at that date due to a material weakness we identified. A material weakness is a deficiency, or combination of control deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness we identified relates to (i) an insufficient number of trained resources with assigned responsibility and accountability over the design and operation of internal controls related to complex, significant non-routine transactions as well as routine transactions and financial statement presentation and disclosure, (ii) ineffective risk assessment processes to identify and analyze necessary changes in significant accounting policies and practices that were responsive to changes in business operations resulting from complex, significant non-routine transactions, implementation of new accounting standards and related disclosures, and completeness and adequacy of required disclosures, and (iii) an ineffective information and communication process to ensure that processes and controls were effectively documented and disseminated to enable financial personnel to effectively carry out their roles and responsibilities. See Part II, Item 9A "Controls and Procedures" of this Annual Report on Form 10-K for additional information. If not remediated, the material weakness could result in a material misstatement to our annual or interim consolidated financial statements that would not be prevented or detected on a timely basis. Our management has developed, and begun to implement, a plan to remediate the material weakness. We cannot, however, assure you that we will be able to implement the plan, or to remediate the material weakness in a timely manner. Furthermore, during the course of re-design of existing processes and controls, implementation of additional processes and controls and testing of the operating effectiveness of such re-designed and additional processes and controls, we may identify additional control deficiencies that could give rise to other material weaknesses, in addition to the currently identified material weakness. We expect the remediation plan to extend over multiple financial reporting periods in 2018. If our remedial measures are insufficient to address the material weakness, or if additional material weaknesses or significant deficiencies in our internal controls are discovered or occur in the future, we may be unable to report our financial results accurately or on a timely basis, which could cause our reported financial results to be materially misstated and result in the loss of investor confidence and adversely affect the market price of our common stock and our ability to access the capital markets, and we could be subject to sanctions or investigations by the NASDAQ Stock Market (NASDAQ), the SEC or other regulatory authorities.

If we fail to maintain an effective system of internal controls, we may not be able to report our financial results accurately or in a timely manner or prevent fraud; in that case, our stockholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our stock.

Effective internal controls are necessary for us to provide reliable financial reports and help us to prevent fraud. The process of implementing our internal controls and complying with Section 404 is expensive and time consuming, and requires significant attention of management. We cannot be certain that these measures will ensure that we maintain adequate controls over our financial processes and reporting in the future. In addition, to the extent we create joint ventures or have any variable interest entities and the financial statements of such entities are not prepared by us, we will not have direct control over their financial statement preparation. As a result, we will, for our financial reporting, depend on what these entities report to us, which could result in us adding monitoring and audit processes and increase the difficulty of implementing and maintaining adequate controls over our financial processes and reporting in the future and could lead to delays in our external reporting. In particular, this may occur where we are establishing such entities with commercial partners that do not have sophisticated financial accounting processes in place, or where we are entering into new relationships at a rapid pace, straining our integration capacity. Additionally, if we do not receive the information from the joint venture or variable interest entity on a timely basis, it could cause delays in our external reporting. Even if we conclude in the future that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our results of operations or cause us to fail to meet our reporting obligations, which could reduce the market's confidence in our financial statements and harm our stock price.

Our international operations expose us to the risk of fluctuation in currency exchange rates and rates of foreign inflation, which could adversely affect our results of operations.

We currently incur significant costs and expenses in Brazilian real and may in the future incur additional expenses in foreign currencies and derive a portion of our revenues in the local currencies of customers throughout the world. As a result, our revenues and results of operations are subject to foreign exchange fluctuations, which we may not be able to manage successfully. During the past few decades, the Brazilian currency in particular has faced frequent and substantial exchange rate fluctuations in relation to foreign currencies mostly because of political and economic conditions. There can be no assurance that the Brazilian real will not significantly appreciate or depreciate against the United States dollar in the future. We also bear the risk that the rate of inflation in the foreign countries where we incur costs and expenses or the decline in value of the United States dollar compared to those foreign currencies will increase our costs as expressed in United States dollars. For example, future measures by the Central Bank of Brazil to control inflation, including interest rate adjustments, intervention in the foreign exchange market and actions to fix the value of the real, may weaken the United States dollar in Brazil. Whether in Brazil or elsewhere, we may not be able to adjust the prices of our products to offset the effects of inflation or foreign currency appreciation on our cost structure, which could increase our costs and reduce our net operating margins. If we do not successfully manage these risks through hedging or other mechanisms, our revenues and results of operations could be adversely affected.

Our U.S. GAAP operating results could fluctuate substantially due to the accounting for embedded derivatives in our convertible promissory notes and convertible preferred stock.

Features in several of our outstanding convertible debt instruments are accounted for under Accounting Standards Codification 815, Derivatives and Hedging, or ASC 815, as embedded derivatives. For instance, with respect to the 2015 144A Notes, if the holders elect to convert their 2015 144A Notes, such converting holders will receive an early conversion payment equal to the present value of the remaining scheduled payments of interest that would have been made on the 2015 144A Notes being converted through April 15, 2019, the maturity date of the 2015 144A Notes. The early conversion payment features of the 2015 144A Notes are accounted for under ASC 815 as embedded derivatives. ASC 815 requires companies to bifurcate conversion options from their host instruments and account for them as free standing derivative financial instruments according to certain criteria. The fair value of the derivative is remeasured to fair value at each balance sheet date, with a resulting non-cash gain or loss related to the change in the fair value of the derivative being charged to earnings (loss). We have determined that we must bifurcate and account for the early conversion payment features of some of our debt instruments, including the 2015 144A Notes, as well as certain other features of our other convertible debt instruments, as embedded derivatives in accordance with ASC 815. We have recorded these embedded derivative liabilities as non-current liabilities on our consolidated balance sheet with a corresponding discount at the date of issuance that is netted against the principal amount of the 2015 144A Notes or other convertible debt instrument, as applicable. The derivative liabilities are remeasured to fair value at each balance sheet date, with a resulting non-cash gain or loss related to the change in the fair value of the derivative liabilities being recorded in other income or loss. There is no current observable market for this type of derivative and, as such, we determine the fair value of the embedded derivatives using the binomial lattice model. The valuation model uses the stock price, conversion price, maturity date, risk-free interest rate, estimated stock volatility and estimated credit spread. Changes in the inputs for these valuation models may have a significant impact on the estimated fair value of the embedded derivative liabilities. For example, an increase in our stock price results in an increase in the estimated fair value of the embedded derivative liabilities. The embedded derivative liabilities may have, on a U.S. GAAP basis, a substantial effect on our balance sheet from quarter to quarter and it is difficult to predict the effect on our future U.S. GAAP financial results, since valuation of these embedded derivative liabilities are based on factors largely outside of our control and may have a negative impact on our earnings and balance sheet. The effects of these embedded derivatives may cause our U.S. GAAP operating results to be below expectations, which may cause our stock price to decline.

Our ability to use our net operating loss carryforwards to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code (the Code), a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-ownership change net operating loss carryforwards (NOLs) to offset future taxable income. During the three years ended December 31, 2017, changes in our share ownership resulted in a significant reduction in our NOLs. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code; if that occurs, our ability to utilize NOLs could be further limited by Section 382 of the Code. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations under Section 382 of the Code. For these reasons, we may not be able to utilize a material portion of our NOLs as of December 31, 2017, even if we attain profitability, which could adversely affect our results of operations.

If we fail to comply with our obligations as a public company, our business may be adversely affected.

As a public company, we incur significant legal, accounting and other expenses in connection with our obligations under applicable securities laws, including the internal and external costs of maintaining the system of internal controls discussed above as well as the costs of preparing and distributing periodic public reports, including financial statements and footnotes. In addition, changing laws, rules and regulations relating to corporate governance and public disclosure, including regulations implemented by the SEC and NASDAQ, increase our legal and financial costs, including costs relating to monitoring, evaluating and complying with such laws, rules and regulations. These laws, rules and regulations are subject to varying interpretations and may evolve over time as new guidance is provided by regulatory and governing bodies, which may result in increased compliance and governance costs and the diversion of management resources. If our efforts to comply with such laws, rules and regulations are not successful, we could be subject to fines, penalties or regulatory proceedings, which can be time consuming and costly to litigate and could lead to negative publicity about our company. These events could also make it more difficult for us to attract and retain qualified members of our board of directors, executive officers and other employees. If any of these risks occur, or if these requirements divert our management's attention from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Ownership of Our Common Stock

Our stock price may be volatile.

The market price of our common stock has been, and we expect it to continue to be, subject to significant volatility, and it has declined significantly from our initial public offering price. As of December 31, 2017, the reported closing price of our common stock on NASDAQ was $3.75 per share. Market prices for securities of early stage companies have historically been particularly volatile. Such fluctuations could be in response to, among other things, the factors described in this "Risk Factors" section, or other factors, some of which are beyond our control, such as:

- fluctuations in our financial results or outlook or those of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- changes in market valuations of similar companies;
- changes in the prices of commodities associated with our business such as sugar, ethanol and petroleum or changes in the prices of commodities that some of our products may replace, such as oil and other petroleum sourced products;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- announcements by us or our competitors of significant contracts, acquisitions or strategic partnerships;
- regulatory developments in the United States, Brazil, and/or other foreign countries;
- litigation involving us, our general industry or both;
- additions or departures of key personnel;
- investors' general perception of us; and
- changes in general economic, industry and market conditions.

Furthermore, stock markets have experienced price and volume fluctuations that have affected, and continue to affect, the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes and international currency fluctuations, may negatively affect the market price of our common stock.

In the past, many companies that have experienced volatility and sustained declines in the market price of their stock have become subject to securities class action and derivative action litigation. We were involved in two such lawsuits which were dismissed in 2014, were involved in one such lawsuit that was dismissed in September 2017, and are currently involved in four such lawsuits, as described in more detail below under "Legal Proceedings," and we may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If our common stock is delisted from NASDAQ, our business, financial condition, results of operations and stock price could be adversely affected, and the liquidity of our stock and our ability to obtain financing could be impaired.

On June 14, 2016, we received a notice from NASDAQ notifying us that we were not in compliance with the requirement of NASDAQ Listing Rule 5450(a)(1) for continued listing on The NASDAQ Global Market (the Minimum Bid Price Listing Rule), as a result of the closing bid price of our common stock being below $1.00 per share for 30 consecutive business days. In accordance with NASDAQ Listing Rule 5810(c)(3)(A), we had 180 calendar days, or until December 12, 2016, to regain compliance with the Minimum Bid Price Listing Rule. To regain compliance, the closing bid price of our common stock had to be at least $1.00 per share for a minimum of 10 consecutive business days. On November 1, 2016, we received a notice from NASDAQ that we had regained compliance with the Minimum Bid Price Listing Rule. Subsequently, on December 19, 2016, we received a notice from NASDAQ notifying us that we were again not in compliance with the Minimum Bid Price Listing Rule as a result of the closing bid price of our common stock being below $1.00 per share for 30 consecutive business days. In accordance with NASDAQ Listing Rule 5810(c)(3)(A), we had 180 calendar days, or until June 19, 2017, to regain compliance with the Minimum Bid Price Listing Rule. On June 5, 2017, after receiving board and stockholder approval, we amended our certificate of incorporation to implement a 1-for-15 reverse stock split of our common stock as well as a reduction of the total number of authorized shares of our common stock from 500,000,000 to 250,000,000. On June 20, 2017, we received a letter from NASDAQ notifying us that we had regained compliance with the Minimum Bid Price Listing Rule as a result of the closing bid price of our common stock being at $1.00 per share or greater for the 10 consecutive business days from June 6, 2017 to June 19, 2017. There can be no assurance that we will maintain compliance with the Minimum Bid Price Listing Rule in the future or that our common stock will remain listed on NASDAQ.

Any delisting of our common stock from NASDAQ could adversely affect our ability to attract new investors, decrease the liquidity of our outstanding shares of common stock, reduce our flexibility to raise additional capital, reduce the price at which our common stock trades, and increase the transaction costs inherent in trading such shares with overall negative effects for our stockholders. In addition, the delisting of our common stock could deter broker-dealers from making a market in or otherwise seeking or generating interest in our common stock, and might deter certain institutions and persons from investing in our securities at all. Furthermore, the delisting of our common stock from NASDAQ would constitute a breach under certain of our financing agreements, including agreements governing our outstanding convertible indebtedness, which could result in an acceleration of such indebtedness. If such indebtedness is accelerated, it would generally also constitute an event of default under our other outstanding indebtedness, permitting acceleration of such other outstanding indebtedness as well. For these reasons and others, the delisting of our common stock from NASDAQ could materially adversely affect our business, financial condition and results of operations.

The concentration of our capital stock ownership with insiders will limit the ability of other stockholders to influence corporate matters and presents risks related to the operations of our significant stockholders.

As of December 31, 2017, the company's significant stockholders held an aggregate total of 51.2% of the company's total common shares outstanding, as follows: DSM (19%), Foris Ventures, LLC (Foris) (9.4%), Total (9.4%), Maxwell (Mauritius) Pte Ltd (Temasek) (7.2%) and Vivo Capital LLC (Vivo) (6.2%). Furthermore, DSM, Foris, Total, Temasek and Vivo each hold convertible preferred stock, convertible promissory notes and/or warrants, pursuant to which they may acquire additional shares of our common stock and thereby increase their ownership interest in our company. This significant concentration of share ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with stockholders with significant interests. Also, these stockholders, acting together, may be able to control or significantly influence our management and affairs and matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of all or substantially all of our assets, and may not act in the best interests of our other stockholders. Consequently, this concentration of ownership may have the effect of delaying or preventing a change of control, or a change in our management or board of directors, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company, even if such actions would benefit our other stockholders.

The concentration of our capital stock ownership also presents risks related to the operations of our significant stockholders, including their international operations. For example, certain affiliates of Total that we do not control and that may be deemed to be our affiliates solely due to their control by Total may be deemed to have engaged in certain transactions or dealings with the government of Iran in 2017, for which Total has provided disclosure under Section 13(r) of the Exchange Act. Such disclosure is set forth in Exhibit 99.1 to this annual report on Form 10-K and is incorporated herein by reference. Disclosure of such activity, even if such activity is not subject to sanctions under applicable law, and any sanctions actually imposed on Total as a result of these activities or for other violations of applicable laws, such as anti-bribery laws, could harm our reputation and have a negative impact on our business.

In addition, certain of our significant stockholders are also commercial partners, including DSM and Total, and have various rights in connection with their security ownership in us. These stockholders may have interests that are different from those of our other stockholders, including with respect to our company's commercial transactions. While we have a related-party transactions policy that requires certain approvals of any transaction between our company and a significant stockholder or its affiliates, there can be no assurance that our significant stockholders will act in the best interests of our other stockholders, which could harm our results of operations and cause our stock price to decline.

The market price of our common stock could be negatively affected by future sales of our common stock.

If our existing stockholders, particularly our largest stockholders, our directors, their affiliates, or our executive officers, sell a substantial number of shares of our common stock in the public market, the market price of our common stock could decrease significantly. The perception in the public market that these stockholders might sell our common stock could also depress the market price of our common stock and could impair our future ability to obtain capital, especially through an offering of equity securities.

We have in place, or have agreed to file, registration statements for the resale of certain shares of our common stock held by, or issuable to, certain of our largest stockholders. All of our common stock sold pursuant to an offering covered by such registration statements will be freely transferable. In addition, shares of our common stock issued or issuable under our equity incentive plans have been registered on Form S-8 registration statements and may be freely sold in the public market upon issuance, except for shares held by affiliates who have certain restrictions on their ability to sell.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, our stock price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We do not expect to declare any dividends in the foreseeable future.

We do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future. In addition, certain of our equipment leases and credit facilities currently restrict our ability to pay dividends. Consequently, investors may need to rely on sales of their shares of our common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking cash dividends should not purchase our common stock.

Anti-takeover provisions contained in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our certificate of incorporation and bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to nominate directors and take other corporate actions. These provisions include:

- a staggered board of directors;
- authorizing the board of directors to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- authorizing the board of directors to amend our bylaws, to increase the number of directors and to fill board vacancies until the end of the term of the applicable class of directors;
- prohibiting stockholder action by written consent;
- limiting the liability of, and providing indemnification to, our directors and officers;
- eliminating the ability of our stockholders to call special meetings; and
- requiring advance notification of stockholder nominations and proposals.

Section 203 of the Delaware General Corporation Law prohibits, subject to some exceptions, "business combinations" between a Delaware corporation and an "interested stockholder," which is generally defined as a stockholder who becomes a beneficial owner of 15% or more of a Delaware corporation's voting stock, for a three-year period following the date that the stockholder became an interested stockholder. We have agreed to opt out of Section 203 through our certificate of incorporation, but our certificate of incorporation contains substantially similar protections to our company and stockholders as those afforded under Section 203, except that we have agreed with Total that it and its affiliates will not be deemed to be "interested stockholders" under such protections.

In addition, we have an agreement with Total which provides that, so long as Total holds at least 10% of our voting securities, we must inform Total of any offer to acquire us or any decision of our board of directors to sell our company, and we must provide Total with information about the contemplated transaction. In such events, Total will have an exclusive negotiating period of fifteen business days in the event the board of directors authorizes us to solicit offers to buy our company, or five business days in the event that we receive an unsolicited offer to purchase us. This exclusive negotiation period will be followed by an additional restricted negotiation period of ten business days, during which we are obligated to continue to negotiate with Total and will be prohibited from entering into an agreement with any other potential acquirer.

These and other provisions in our certificate of incorporation, our bylaws and in our agreements with Total could discourage potential takeover attempts, reduce the price that investors are willing to pay in the future for shares of our common stock and result in the market price of our common stock being lower than it would be without these provisions.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

The following is a summary of our principal facilities as of December 31, 2017. We lease our principal office and research and development facilities located in Emeryville, California. We hold a 50% ownership interest in a manufacturing facility and related land located in Leland, North Carolina and lease a pilot plant and demonstration facility and related office and laboratory space located in Campinas, Brazil. Our lease agreements expire at various dates through the year 2031.

Location	Approximate Square Feet	Operations
U.S.		
Emeryville, California	136,000	Executive offices; research and development, administrative and pilot plant
Leland, North Carolina	Not applicable (leased by joint venture)	Manufacturing (joint venture with Nikko; see Note 7, "Variable-interest Entities and Unconsolidated Investments" for details)
BRAZIL		
Campinas, Brazil	44,000	Pilot plant, research and development and administrative

In May 2014, pursuant to a sublease agreement and related documents, we agreed to provide Total with access to certain portions of our Emeryville pilot plant facilities for a period of five years. Such subleased area is approximately 22,000 square feet and is composed of two areas, a dedicated area accessible only to Total and a common area which is shared by the Company and Total.

We previously owned an approximately 800,000 square foot manufacturing facility on leased land in Brotas, Brazil, which lease also included approximately 500,000 square feet for a future manufacturing site. In December 2017, we sold the manufacturing facility and transferred the land lease to DSM. See Note 13, "Divestiture" in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K for details. As part of such transaction, DSM agreed to execute a sublease with us for a portion of the land on which we propose to construct a separate manufacturing facility, which we broke ground on in February 2017.

We currently lease approximately 500,000 square feet of land in Pradópolis, Brazil on which we previously began construction of a manufacturing facility with our joint venture partner São Martinho, which was approximately 50% complete when we halted construction in 2013. Notwithstanding the termination of our joint venture with São Martinho, we currently expect to complete construction of this facility and commission it to initially produce our alternative sweetener products.

We believe that our current facilities are suitable and adequate to meet our needs and that suitable additional space will be available to accommodate the foreseeable expansion of our operations. Based on our anticipated volume requirements for 2018 and beyond, we will likely need to identify and secure access to additional production capacity in 2018 and beyond, which we plan to obtain by constructing new facilities and by increasing our use of contract manufacturers, including our collaboration partner, DSM. We are currently making plans to secure such additional capacity.

ITEM 3. LEGAL PROCEEDINGS

In April 2017, a securities class action complaint was filed against the Company and its CEO, John G. Melo, and CFO, Kathleen Valiasek, in the U.S. District Court for the Northern District of California. The complaint sought unspecified damages on behalf of a purported class that would comprise all individuals who acquired the Company's common stock between March 2, 2017 and April 17, 2017. The complaint alleged securities law violations based on statements made by the Company in its earnings press release issued on March 2, 2017 and Form 12b-25 filed with the SEC on April 3, 2017. On September 21, 2017, an Order of Dismissal was entered on the plaintiff's notice of voluntary dismissal without prejudice.

Subsequent to the filing of the securities class action complaint described above, four separate purported shareholder derivative complaints were filed based on substantially the same facts as the securities class action complaint described above (the Derivative Complaints). The Derivative Complaints name Amyris, Inc. as a nominal defendant and name a number of the Company's current officers and directors as additional defendants. The lawsuits seek to recover, on the Company's behalf, unspecified damages purportedly sustained by the Company in connection with allegedly misleading statements and/or omissions made in connection with the Company's securities filings. The Derivative Complaints also seek a series of changes to the Company's corporate governance policies, restitution to the Company from the individual defendants, and an award of attorneys' fees. Two of the Derivative Complaints were filed in the U.S. District Court for the Northern District of California (together, the Federal Derivative Cases): Bonner v. John Melo, et al., Case No. 4:17-cv-04719, filed August 15, 2017, and Goldstein v. John Melo, et al., Case No. 3:17-cv-04927, filed on August 24, 2017. On September 19, 2017, an order was entered consolidating the Federal Derivative Cases into a single consolidated action, captioned: In re Amyris, Inc., Shareholder Derivative Litigation, Lead Case No. 2:15-cv-04719, and ordering plaintiffs to file a consolidated complaint or designate an operative complaint by November 3, 2017. On November 3, 2017, the plaintiffs in the Federal Derivative Cases filed a Notice of Designation of Operative Complaint designating the complaint filed in the Bonner case as the operative complaint. On December 21, 2017, the defendants filed a motion to dismiss the Federal Derivative Cases. By Order dated March 9, 2018, the Court granted defendants' motion to dismiss the Federal Derivative Cases, and on March 29, 2018, the plaintiffs filed an amended complaint with the Court. The remaining two Derivative Complaints were filed in the Superior Court for the State of California (the State Derivative Cases): Gutierrez v. John G. Melo, et al., Case. No. BC 665782, filed on June 20, 2017, in the Superior Court for the County of Los Angeles, and Soleimani v. John G. Melo, et al., Case No. RG 17865966, filed on June 29, 2017, in the Superior Court for the County of Alameda. On August 31, 2017, the Gutierrez case was transferred to the Superior Court for the State of California, County of Alameda and assigned case number RG17876383. These state cases are in the initial pleadings stage. We believe the Derivative Complaints lack merit, and intend to defend ourselves vigorously. Given the early stage of these proceedings, it is not yet possible to reliably determine any potential liability that could result from this matter.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information for Common Stock

Our common stock is traded on the NASDAQ Global Select Market under the symbol AMRS. The high and low common stock sales prices per share for each period were as follows:

	2017		2016	
	High	Low	High	Low
Fiscal Quarter Ended				
March 31	$12.45	$6.30	$26.10	$16.20
June 30	$10.65	$2.63	$21.45	$ 4.65
September 30	$ 4.32	$1.86	$ 9.15	$ 4.80
December 31	$ 3.90	$2.82	$18.15	$ 8.55

At April 16, 2018, there were 73 holders of record (not including beneficial holders of stock held in street names) of our common stock.

Dividend Policy

We have never declared or paid any cash dividend on our common stock. We intend to retain any future earnings and do not expect to pay cash dividends in the foreseeable future.

Recent Sales of Unregistered Equity Securities and Use of Proceeds

For information regarding unregistered sales of our equity securities for prior periods within the three years ended December 31, 2017, see our Quarterly Reports on Form 10-Q filed in 2015, 2016 and 2017, and our Annual Reports on Form 10-K for the years ended December 31, 2015 and 2016.

Securities Authorized for Issuance Under Equity Compensation Plans

The information concerning our equity compensation plans is incorporated by reference herein to the section of the Proxy Statement entitled "Equity Compensation Plan Information," to be filed within 120 days of our December 31, 2017 fiscal year end.

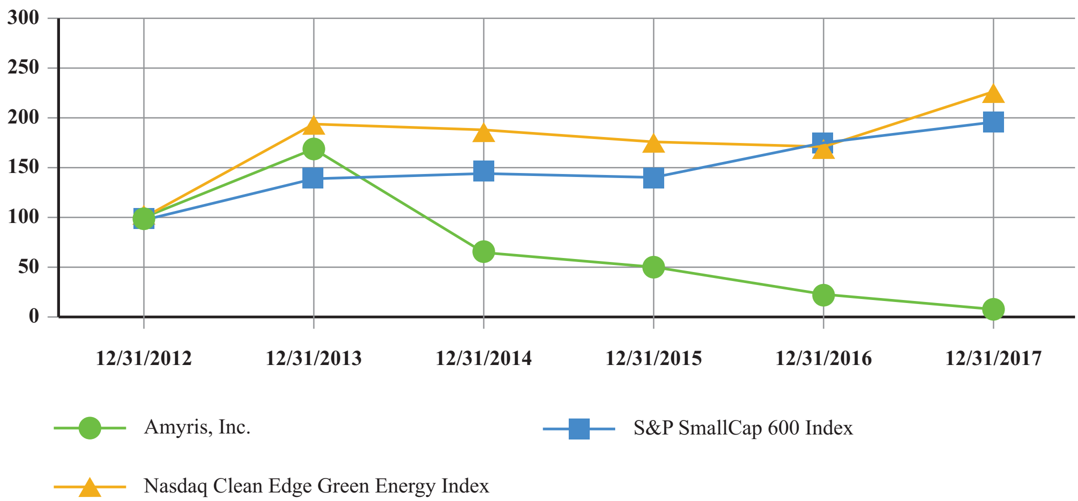
Stock Performance Graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of Amyris, Inc. under the Securities Act of 1933, as amended, or the Exchange Act.

The following graph shows a five-year comparison of the cumulative total shareholder return on Amyris common stock with the cumulative total returns of the S&P SmallCap 600 Index, and the NASDAQ Clean Edge Green Energy Index. The graph tracks the performance of a $100 investment in the Company's common stock and in each of the indexes (with the reinvestment of all dividends) on the date specified. Shareholder returns over the indicated period are based on historical data and should not be considered indicative of future shareholder returns.

COMPARISON OF 5-YEAR CUMULATIVE TOTAL RETURN*

Among Amyris, Inc.,
the Nasdaq Clean Edge Green Energy Index and the S&P SmallCap 600 Index



	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017
Amyris, Inc.	$100	$170	$ 66	$ 52	$ 23	$ 8
Nasdaq Clean Edge Green Energy Index	$100	$194	$188	$176	$171	$227
S&P SmallCap 600 Index	$100	$140	$146	$141	$176	$196

* $100 invested on 12/31/2012 in stock or index, including reinvestment of dividends.

ITEM 6. SELECTED FINANCIAL DATA

Five Year Financial Highlights

Years Ended December 31, (In thousands, except shares and per share amounts)	2017	2016	2015	2014	2013
Consolidated Statements of Operations Data:					
Revenue	$ 143,445	$ 67,192	$ 34,153	$ 43,274	$ 41,119
Total cost and operating expenses	$ 182,960	$ 163,116	$ 182,686	$ 143,102	$ 160,735
Loss from operations	$ (39,515)	$ (95,924)	$ (148,533)	$ (99,828)	$ (119,616)
Net income (loss)	$ (72,329)	$ (97,334)	$ (218,052)	$ 2,167	$ (234,907)
Net income (loss) attributable to Amyris, Inc. common stockholders	$ (93,369)	$ (97,334)	$ (217,952)	$ 2,286	$ (235,111)
Net income (loss) per share attributable to common stockholders:					
Basic	$ (2.89)	$ (6.12)	$ (26.20)	$ 0.44	$ (46.73)
Diluted	$ (2.89)	$ (6.55)	$ (26.20)	$ (13.52)	$ (46.73)
Weighted-average shares of common stock outstanding used in computing net income/loss per share of common stock:					
Basic	32,253,570	15,896,014	8,464,106	5,226,674	5,031,518
Diluted	32,253,570	17,642,965	8,464,106	8,123,964	5,031,518

December 31, (In thousands)	2017	2016	2015	2014	2013
Consolidated Balance Sheets Data:					
Cash, cash equivalents, short-term investments and restricted cash	$ 61,012	$ 33,807	$ 14,685	$ 45,041	$ 9,944
Working capital (deficit), excluding cash and cash equivalents	$ (59,598)	$ (77,895)	$ (53,139)	$ (8,441)	$ (7,250)
Property, plant and equipment, net	$ 13,892	$ 53,735	$ 59,797	$ 118,980	$ 140,591
Total assets	$ 151,483	$ 129,873	$ 106,116	$ 216,183	$ 198,864
Derivative liabilities	$ 119,978	$ 6,894	$ 51,439	$ 59,736	$ 134,717
Total indebtedness (notes payable, loans payable, credit facilities and capital leases)(1)	$ 166,318	$ 228,299	$ 156,755	$ 233,277	$ 153,305
Total stockholders' deficit	$(199,707)	$(183,508)	$(158,456)	$(125,063)	$(135,848)

(1) In 2016, we adopted ASU 2015-03, "Interest — Imputation of Interest: Simplifying the Presentation of Debt Issuance Costs" and applied the guidance to the December 31, 2016 and 2015 Consolidated Balance Sheets Data, thereby classifying debt issuance costs as a direct reduction of the carrying amount of debt. For the years ending December 31, 2014 and 2013, we did not reclassify debt issuance costs as such amounts were not material.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Amyris, Inc. (the Company or Amyris) is a leading industrial biotechnology company that applies its technology platform to engineer, manufacture and sell high performance, natural, sustainably sourced products into the Health & Wellness, Clean Skincare, and Flavors & Fragrances markets. Our proven technology platform enables us to rapidly engineer microbes and use them as catalysts to metabolize renewable, plant-sourced sugars into large volume, high-value ingredients. Our biotechnology platform and industrial fermentation process replace existing complex and expensive manufacturing processes. We have successfully used our technology to develop and produce five distinct molecules at commercial volumes.

We believe that industrial synthetic biology represents a third industrial revolution, bringing together biology and engineering to generate new, more sustainable materials to meet the growing global demand for bio-based replacements for petroleum-based and traditional animal- or plant-derived ingredients. We continue to build demand for our current portfolio of products through an extensive sales network provided by our collaboration partners that represent the leading companies in the world for our target market sectors. We also have a small group of direct sales and distributors who support our Clean Skincare market. Via our partnership model, our partners invest in the development of each molecule to bring it from the lab to commercial scale and use their extensive sales force to sell our ingredients and formulations to their customers as part of their core business. We capture long-term revenue both through the production and sale of the molecule to our partners and through royalty revenues (previously referred to as value share) from our partners' product sales to their customers.

We were founded in 2003 in the San Francisco Bay area by a group of scientists from the University of California, Berkeley. Our first major milestone came in 2005 when, through a grant from the Bill & Melinda Gates Foundation, we developed technology capable of creating microbial strains that produce artemisinic acid, which is a precursor of artemisinin, an effective anti-malarial drug. In 2008, we granted royalty-free licenses to allow Sanofi-Aventis to produce artemisinic acid using our technology. Building on our success with artemisinic acid, in 2007 we began applying our technology platform to develop, manufacture and sell sustainable alternatives to a broad range of markets.

We focused our initial development efforts primarily on the production of Biofene®, our brand of renewable farnesene, a long-chain, branched hydrocarbon molecule that we manufacture through fermentation using engineered microbes. Our farnesene derivatives are sold in hundreds of products as nutraceuticals, skincare products, fragrances, solvents, polymers, and lubricant ingredients. The commercialization of farnesene pushed us to create a more cost efficient, faster and accurate development process in the lab and drive manufacturing costs down. This investment has enabled our technology platform to rapidly develop microbial strains and commercialize target molecules. In 2014, we began manufacturing additional molecules for the Flavors & Fragrances industry; in 2015 we began investing to expand our capabilities to other small molecule chemical classes beyond terpenes via our collaboration with the Defense Advanced Research Projects Agency (DARPA), and in 2016 we expanded into proteins.

We have invested over $500 million in infrastructure and technology to create microbes that produce molecules from sugar or other feedstocks at commercial scale. This platform has been used to design, build, optimize, and upscale strains producing five distinct molecules, leading to more than 15 commercial ingredients used in over 600 consumer products. Our time to market for molecules has decreased from seven years to less than a year for our most recent molecule, mainly due to our ability to leverage the technology platform we have built.

Our technology platform has been in active use since 2008 and has been integrated with our commercial production since 2011, creating an organism development process that we believe makes us an industry leader in the successful scale-up and commercialization of biotech-produced ingredients. The key performance characteristics of our platform that we believe differentiate us include our proprietary computational tools, strain construction tools, screening and analytics tools, and advanced lab automation and data integration. Having this fully integrated with our large scale manufacturing process and capability enables us to always engineer with the end specification and requirements guiding our technology. Our state-of-the-art infrastructure includes industry-leading strain engineering and lab automation located in Emeryville, California, pilot scale production facilities in Emeryville, California and Campinas, Brazil, a demonstration-scale facility in Campinas, Brazil and a commercial-scale production facility in Leland, North Carolina, which is owned and operated by our Aprinnova joint venture to convert our Biofene into squalane and other final products.

We are able to use a wide variety of feedstocks for production, but have focused on accessing Brazilian sugarcane for our large-scale production because of its renewability, low cost and relative price stability. We have also successfully used other feedstocks such as sugar beets, corn dextrose, sweet sorghum and cellulosic sugars at various manufacturing facilities.

Several years ago, we made the strategic decision to transition our business model from collaborating and commercializing molecules in low margin commodity markets to higher margin specialty markets. We began the transition by first commercializing and supplying farnesene-derived squalene as a cosmetic ingredient sold to formulators and distributors. We also entered into collaboration and supply agreements for the development and commercialization of molecules within the Flavors & Fragrances and Cosmetic Ingredients where we utilize our strain generation technology to develop molecules that meet the customer's rigorous specifications.

During this transition, we solidified the business model of partnering with our customers to create sustainable, high performing, low-cost molecules that replace an ingredient in their supply chain, commercially scale and manufacture those molecules, and share in the profits earned by our customers once our customer sells its product into these specialty markets. These three steps constitute our collaboration revenues, renewable product revenues, and royalty revenues (previously referred to as value share revenues).

During 2017, we completed several development agreements with DSM and others for new products such as Vitamin A, a human nutrition molecule and others. We plan to bring two to three new molecules a year to commercial production.

In the first half of 2017, management made the decision to monetize the use for one of our lower margin molecules, farnesene, in certain fields of use (e.g., the human and animal health and nutrition field) while retaining any associated royalties. We began discussions with our partners and ultimately made the decision to license farnesene to DSM for use in these fields, which we announced in November 2017. During the discussions with DSM, management also made the decision to sell to DSM our manufacturing facility, Brotas 1, which we completed on December 28, 2017.

Brotas 1 was built to batch manufacture one commodity product at a time (originally for high-volume production of biofuels, a business the Company has exited), which is an inefficient manufacturing process that is not suited for the high margin specialty markets in which we operate today. We currently manufacture five specialty products and will be increasing the number of specialty products we manufacture by two to three products a year. The inefficiencies we experienced included having to idle the facility for two weeks at a time to prepare for the next product batch manufacture. These inefficiencies caused our cost of goods sold to be significantly higher. With the sale of Brotas 1, we expect that our gross margins will markedly improve from the reduction in manufacturing costs caused by these inefficiencies. Additionally, we currently are constructing our Brotas 2 facility, which will allow for the manufacture of five products concurrently and over 10 different products annually. Concurrent with the sale of Brotas 1, we contracted with DSM for the use of Brotas 1 to manufacture products for us to fulfill our product supply commitments to our customers until Brotas 2 is completed in 2019. In addition, in 2019, we plan to resume construction of a production facility in Pradópolis, Brazil that we partially built prior to 2013. This facility will support production of our alternative sweetener products.

As discussed above, on December 28, 2017, we completed the sale of Amyris Brasil, which operated our Brotas 1 production facility, to DSM and concurrently entered into a series of commercial agreements and a credit agreement with DSM. At closing, we received $33.0 million in cash for the capital stock of Amyris Brasil, which is subject to certain post-closing working capital adjustments and reimbursements from DSM contingent on DSM's utilization of certain Brazilian tax benefits it acquired with its purchase of Amyris Brasil. We used $12.6 million of the cash proceeds received to repay certain indebtedness of Amyris Brasil. The total fair value of the consideration in connection with the sales agreement for Amyris Brasil was $56.9 million and resulted in a pretax gain of $5.7 million from continuing operations.

Concurrent with the sale of Amyris Brasil, we entered into a series of commercial agreements with DSM including (i) a license agreement to DSM of its farnesene product for DSM to use in the Vitamin E, lubricant, and Flavors & Fragrances specialty markets; (ii) a value share agreement that DSM will pay specified royalties representing a portion of the profit on the sale of Vitamin E produced from farnesene under the Nenter Supply Agreement assigned to DSM; (iii) a performance agreement to perform research and development to optimize farnesene for production and sale of farnesene products; and (iv) a transition services agreement where we provide finance, legal, logistics, and human resource services to support the Brotas 1 facility under DSM ownership for a six-month period with a DSM option to extend for six additional months. At closing, DSM paid to us a nonrefundable license fee of $27.5 million and a nonrefundable minimum royalty revenue payment (previously referred to as value share) of $15.0 million. DSM will also pay the Company nonrefundable minimum royalty amounts in 2018 and 2019. The future nonrefundable minimum annual royalty payments were determined to be fixed and determinable with a fair value of $17.8 million, and were included as part of the total arrangement consideration subject to allocation of this overall multiple-element divestiture transaction. See Note 10, "Significant Revenue Agreements", for a full listing and details of agreements entered into with DSM. Additionally, we entered into a $25.0 million credit agreement with DSM that we used to repay all outstanding amounts under the Guanfu Note (see Note 4, "Debt").

Sales and Revenue

We recognize revenue from product sales, license fees and royalties, and grants and collaborations.

We have research and development collaboration arrangements for which we receive payments from our collaborators, who include DARPA, DSM Nutritional Products Ltd (DSM), Firmenich SA (Firmenich), Givaudan International SA (Givaudan), and others. Some of our collaboration arrangements provide for advance payments to us in consideration for grants of exclusivity or research efforts that we will perform. In 2017, we signed collaboration agreements for an infant nutrition ingredient, and two vitamins that will contribute to our collaboration revenue and ultimately product sales. Our collaboration agreements, which may require us to achieve milestones prior to receiving payments, are expected to contribute revenues from product sales and royalties (previously referred to as value share) if and when they are commercialized. See Note 10, "Significant Revenue Agreements" in Part II, Item 8 of this Form 10-K for more details.

All of our non-government partnerships include commercial terms for the supply of molecules we successfully upscale and produce at commercial volumes. The first molecule to generate revenue for the Company outside of farnesene was a fragrance molecule launched in 2015. Since the launch, the product has continued to grow in sales year over year. In 2016, we launched our second fragrance molecule and in 2017, we launched our third fragrance molecule as well as our first cosmetic active ingredient. Our partners for these molecules are indicating continued strong growth due to their cost advantaged position, high purity and sustainable production method. We are continuing to identify new opportunities to apply our technology and deliver sustainable access to key molecules. As a result, we have a pipeline that is expected to deliver two new molecules each year over the coming years with one sweetener, a flavor, a cosmetic active ingredient and a fragrance molecule. For 2018, we are currently finalizing the commercial terms for the products; including our Reb-M product that is a superior sweetener and sugar replacement for food and beverages.

As part of the DSM acquisition of our farnesene for vitamin E business, we will receive a royalty payment on all Nenter sales of vitamin E utilizing farnesene produced and sold by DSM from our technology. DSM will pay us minimum royalties totaling $33 million for 2018, 2019 and 2020, the first three years of the agreement

We have several other collaboration molecules in our development pipeline with partners including DSM, Givaudan and Firmenich that we expect will contribute revenues from product sales and royalties (previously referred to as value share) if and when they are commercialized.

Critical Accounting Policies and Estimates

Management's discussion and analysis of results of operations and financial condition are based on the Company's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. (U.S. GAAP). We believe that the critical accounting policies described in this section are those that significantly impact our financial condition and results of operations and require the most difficult, subjective or complex judgements, often as a result of the need to make estimates about the effects of matters that are inherently uncertain. Because of this uncertainty, actual results may vary from these estimates.

Our most critical accounting estimates include:

- recognition of revenue involving arrangements with multiple revenue-generating activities;
- the valuation of embedded derivatives, which impacts gains or losses on such derivatives, the carrying value of debt, preferred stock, interest expense and deemed dividends; and

- the evaluation of recoverability of property, plant and equipment, which impacts cost of products sold or operating expenses when we record impairments or accelerate their depreciation or amortization.

For more information about our critical accounting estimates and policies, see Note 1, "Basis of Presentation and Summary of Significant Accounting Policies" in Part II, Item 8 of this Form 10-K.

Sale of Subsidiary and Entry into Commercial Agreements

On December 28, 2017, the Company completed the sale of all the capital stock of Amyris Brasil, a wholly-owned subsidiary, to DSM, which is a related party. Amyris Brasil owned and operated the Company's production facility (Brotas 1) in Brotas, Brazil. The Company and DSM also entered into a series of commercial agreements and a credit agreement concurrently with the sale of Amyris Brasil. See Note 10, "Significant Revenue Agreements", Note 11, "Related Party Transactions", and Note 13, "Divestiture" in Part II, Item 8 of this Form 10-K for further information.

Results of Operations

Revenue

Years Ended December 31, (In thousands)	2017	2016	2015	2017 vs 2016 % Change	2016 vs 2015 % Change
Revenue:					
Renewable products	$ 42,370	$25,510	$14,506	66%	76%
Licenses and royalties	64,477	15,839	390	307%	3,961%
Grants and collaborations	36,598	25,843	19,257	42%	34%
Total revenue	$143,445	$67,192	$34,153	113%	97%

2017 Compared to 2016: Total revenue increased by 113% to $143.4 million in 2017, primarily due to revenue in connection with our 2017 collaboration, licensing and royalty agreements with DSM, significant growth in renewable products demand from existing and new customers, and increases in our royalty revenues (previously referred to as value share). Renewable products revenue increased by 66% to $42.4 million in 2017, primarily due to growth in the Clean Skincare and Health & Wellness markets. Licenses and royalty revenue increased by 307% to $64.5 million in 2017, primarily due to $58.0 million of license and royalty revenue from DSM in connection with agreements entered into during 2017. Grants and collaborations revenue increased by 42% to $36.6 million in 2017, primarily due to increases in revenues from our collaborations with Givaudan, DARPA, and DOE as well as revenue recognized upon the acceleration of deferred revenues in connection with the termination of the Company's 2014 collaboration agreement with Manufacture Francaise de Pnematiques Michelin and Braskem S.A. Our revenue are dependent on the timing and nature of arrangements entered into with our customers, which could include multiple elements that require judgement and estimates. Based on the nature of our arrangements, our revenues could vary significantly period over period and as a result we cannot assure that the growth trends can continue.

2016 Compared to 2015: Total revenue increased by 97% to $67.2 million in 2016 primarily due to significant growth in renewable products revenue, licenses and grants and collaborations. Renewable products revenue increased by 76% to $25.5 million in 2016, primarily due to growth in the Flavors & Fragrances and Health & Wellness markets. Licenses and royalty revenue increased by 3,961% to $15.8 million in 2016, primarily due to $15.0 million of license fee revenue from Ginkgo Bioworks, Inc. Grants and collaborations revenue increased by 34% to $25.8 million in 2016, primarily due to $9.7 million of grants revenue resulting from a new contract with DARPA.

Cost and Operating Expenses

Years Ended December 31, (In thousands)	2017	2016	2015	2017 vs 2016 % Change	2016 vs 2015 % Change
Cost of products sold	$ 62,713	$ 56,678	$ 37,374	11%	52%
Research and development	56,956	51,412	44,636	11%	15%
Sales, general and administrative	63,291	47,721	56,262	33%	(15)%
Impairment of property, plant and equipment	—	7,305	34,166	(100)%	(79)%
Withholding tax related to conversion of related party notes	—	—	4,723	nm	(100)%
Impairment of intangible assets	—	—	5,525	nm	(100)%
Total cost and operating expenses	$182,960	$163,116	$182,686	12%	(11)%

nm = not meaningful

Cost of Products Sold

Cost of products sold includes the costs of raw materials, labor and overhead, amounts paid to contract manufacturers, inventory write-downs resulting from applying lower of cost or net realizable value inventory adjustments, and costs related to production scale-up. Because of our product mix, our cost of goods sold does not increase proportionately to increases in our renewable product revenues. As a result of the Brotas 1 divestiture, we expect our cost of products sold to decrease as a percentage of renewable products revenue in the future.

2017 Compared to 2016: Cost of products sold increased by 11% to $62.7 million in 2017, primarily due to a 93% increase in volume of products sold.

2016 Compared to 2015: Cost of products sold increased by 52% to $56.7 million in 2016, primarily due to product mix, an increase in volume of products sold and production scale-up costs.

Research and Development Expenses

2017 Compared to 2016: Research and development expenses increased by 11% to $57.0 million in 2017, primarily due to partnership payments, consulting costs incurred in connection with collaboration projects and increased spending to support the growth in revenues.

2016 Compared to 2015: Research and development expenses increased by 15% to $51.4 million in 2016, primarily due to increases in consulting costs incurred in connection with collaboration projects and increases in personnel expenses necessary to support the growth in collaboration projects.

Sales, General and Administrative Expenses

2017 Compared to 2016: Sales, general and administrative expenses increased by 33% to $63.3 million in 2017, primarily due to increased headcount, sales and marketing expenses to support Biossance™ growth, ASC 606 implementation costs, costs incurred to support the DSM transaction in December 2017, and an exclusivity termination fee of $2.5 million paid to Nenter & Co., Inc.

2016 Compared to 2015: Sales, general and administrative expenses decreased by 15% to $47.7 million in 2016, primarily due to decreases in professional services, personnel expense and stock-based compensation.

Impairment of Property, Plant and Equipment

2017 Compared to 2016: There were no impairments of property, plant and equipment in 2017, compared to $7.3 million in 2016, as described immediately below.

2016 Compared to 2015: Impairment of property, plant and equipment decreased by 79% to \$7.3 million in 2016. The \$7.3 million in 2016 was comprised of \$4.2 million related to the termination of our joint venture with São Martinho in Brazil, and \$3.1 million related to assets at our previous contract manufacturer's site in Brazil that could not be utilized in our Brotas manufacturing facility. In 2015, we incurred \$34.2 million of impairment charges on property, plant and equipment, primarily due to the termination of the São Martinho joint venture and indirect tax allowances.

Withholding tax related to conversion of related party notes

In 2015, we recorded a \$4.7 million expense for withholding taxes related to the conversion of related party notes into equity.

Impairment of Intangible Assets

In 2015, we recorded a \$5.5 million charge to impair in-process research and development assets related to our 2011 acquisition of Draths Corporation.

Other Income (Expense), Net

Years Ended December 31, (In thousands)	2017	2016	2015	2017 vs 2016 % Change	2016 vs 2015 % Change
Gain on divestiture	\$ 5,732	\$ —	\$ —	nm	nm
Interest expense	(34,032)	(37,629)	(78,854)	(10)%	(52)%
Gain (loss) from change in fair value of derivative instruments	(1,742)	41,355	16,287	(104)%	154%
Loss upon extinguishment of debt	(1,521)	(4,146)	(1,141)	(63)%	263%
Other expense, net	(956)	(437)	(1,159)	119%	(62)%
Total other expense, net	\$(32,519)	\$ (857)	\$(64,867)	3,695%	(99)%

2017 Compared to 2016: Total other expense, net was \$32.5 million in 2017, compared to \$0.9 million in 2016. The \$31.7 million increase was primarily comprised of a \$43.1 million decrease in gain (loss) from change in fair value of derivative instruments and a \$2.6 million decrease in loss upon extinguishment of debt, partly offset by a \$5.7 million gain on the divestiture of our Brotas, Brazil manufacturing facility to DSM; see Note 13, "Divestiture" in Part II, Item 8 of this Form 10-K.

2016 Compared to 2015: Total other expense, net was \$0.9 million in 2016, compared to \$64.9 million in 2015. The \$64.0 million decrease was primarily comprised of a \$41.2 million decrease in interest expense and a \$25.1 million increase in gain from change in fair value of derivative instruments.

Income Taxes

On December 22, 2017, the *Tax Cuts and Jobs Act of 2017* (the Act) was signed into law, making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017. There have not been any other significant changes within the provision for income taxes.

We have calculated our best estimate of the impact of the Act in its year-end income tax provision in accordance with our understanding of the Act and guidance available as of the date of this filing. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future was approximately \$37.7 million, with a corresponding and fully offsetting adjustment to our valuation allowance for the year ended December 31, 2017. We do not expect a material impact related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings.

On December 22, 2017, Staff Accounting Bulletin No. 118 *Income Tax Accounting Implications of the Tax Cuts and Jobs Ac*t (SAB 118) was issued to address the application of U.S. GAAP in situations when a company does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. Because we are still in the process of analyzing certain provisions of the Act in accordance with SAB 118, the Company has determined that the adjustment to its deferred taxes was a provisional amount and a reasonable estimate at December 31, 2017. The Act creates a new requirement that certain income (i.e., "GILTI") earned by controlled foreign corporations (CFCs) must be included currently in the gross income of the CFCs' U.S. shareholder. The Company's selection of an accounting policy with respect to the new GILTI tax rules will depend, in part, on analyzing its global income to determine whether it expects to have future U.S. inclusions in taxable income related to GILTI and, if so, what the impact is expected to be. Because whether we expect to have future U.S. inclusions in taxable income related to GILTI depends on not only our current structure and estimated future results of global operations, but also our intent and ability to modify our structure and/or our business, we are not yet able to reasonably estimate the effect of this provision of the Act. Therefore, we have not made any adjustments related to potential GILTI tax in our financial statements and have not made a policy decision regarding whether to record deferred taxes on GILTI.

Given that we are still in the transition period for the accounting for income tax effects of the Act, our current assessment on deferred tax assets is based on currently available information and guidance. If in the future any element of the tax reform changes the related accounting guidance for income tax, such change could affect our income tax position, and we might need to adjust the provision for income taxes accordingly.

See Note 15. "Income Taxes" for additional information.

Liquidity and Capital Resources

December 31, (in thousands)	2017	2016
Working capital deficit, excluding cash and cash equivalents	$ (59,598)	$ (77,895)
Cash and cash equivalents and short-term investments	$ 57,059	$ 28,524
Debt and capital lease obligations	$ 166,318	$ 228,299
Accumulated deficit	$(1,206,767)	$(1,134,438)

Years Ended December 31, (In thousands)	2017	2016	2015
Net cash (used in) provided by:			
Operating activities	$(100,617)	$(82,367)	$(85,132)
Investing activities	$ 51,992	$ 5,642	$ (5,144)
Financing activities	$ 78,348	$ 92,199	$ 61,424

Liquidity. We have incurred significant operating losses since our inception and expect to continue to incur losses and negative cash flows from operations through at least the next 12 months following the issuance of the financial statements. As of December 31, 2017, we had negative working capital of $59.6 million, (compared to negative working capital of $77.9 million as of December 31, 2016), an accumulated deficit of $1.2 billion, and cash and cash equivalents of $57.1 million (compared to $27.2 million as of December 31, 2016).

As of December 31, 2017, our debt (including related party debt), net of deferred discount and issuance costs of $30.4 million, totaled $165.4 million, of which $56.9 million is classified as current. Of the total debt, $21.8 million is mandatorily convertible into equity. The Company's debt service obligations through April 17, 2019 are $129.3 million, including $12.9 million of anticipated cash interest payments. Our debt agreements contain various covenants, including certain restrictions on our business that could cause us to be at risk of defaults, such as restrictions on additional indebtedness, material adverse effect and cross default clauses. A failure to comply with the covenants and other provisions of our debt instruments, including any failure to make a payment when required, would generally result in events of default under such instruments, which could permit acceleration of a substantial portion of such indebtedness. If such indebtedness is accelerated, it would generally also constitute an event of default under our other outstanding indebtedness, resulting in acceleration of a substantial portion of such other outstanding indebtedness.

During the year ended December 31, 2017, we improved our liquidity as follows:

- In January, February and May 2017, debt obligations totaling $21.0 million were extended to dates from November 2017 to April 2019;
- In May 2017, we sold shares of Series A 17.38% Convertible Preferred Stock, par value $0.0001 per share (the Series A Preferred Stock), shares of Series B 17.38% Convertible Preferred Stock, par value $0.0001 per share (the Series B Preferred Stock), and warrants to purchase common stock for net proceeds of $50.7 million;
- In April and May 2017, convertible debt obligations totaling $35.8 million were converted into shares of common stock pursuant to their terms or exchanged for shares of Series B Preferred Stock and warrants to purchase common stock;
- In May 2017, additional debt obligations totaling $29.0 million were exchanged for shares of Series B Preferred Stock and warrants to purchase common stock;
- In May 2017, we made debt principal payments of $21.8 million, which in combination with the debt conversions and exchanges described above, reduced debt obligations by a total of $86.6 million;
- In August 2017, we sold shares of common stock, shares of Series D Convertible Preferred Stock, par value $0.0001 per share (the Series D Preferred Stock), and warrants to purchase common stock for net proceeds of $24.8 million; and
- In August 2017, we sold shares of Series B Preferred Stock, warrants to purchase common stock, dilution warrants and a make-whole provision for net proceeds of $25.9 million; and
- In December 2017, we closed a transaction with DSM under which we sold our Amyris Brasil subsidiary which operated our Brotas production facility and also included entering into a series of commercial transactions including, among others, a license agreement to DSM, a value share agreement under which we will receive royalties, a development agreement, and other arrangements. The cash proceeds in December were $75.5 million. The value share agreement includes guaranteed royalty minimums in 2018 and 2019 totaling $18.1 million.

See Note 4, "Debt" and Note 7, "Stockholders' Deficit" to our unaudited condensed consolidated financial statements included in this report for more information regarding these transactions.

Our consolidated financial statements as of and for the year ended December 31, 2017 have been prepared on the basis that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Due to the factors described above, there is substantial doubt about our ability to continue as a going concern within one year after the date that these financial statements are issued. Our ability to continue as a going concern will depend, in large part, on our ability to achieve positive cash flows from operations during the 12 months from the date of this filing, to extend existing debt maturities, which is uncertain, and to convert certain debt obligations into equity, which conversion is within the control of the Company. The financial statements do not include any adjustments that might result from the outcome of this uncertainty, which could have a material adverse effect on our financial condition. In addition, if we are unable to continue as a going concern, we may be unable to meet our obligations under our existing debt facilities, which could result in an acceleration of our obligation to repay all amounts outstanding under those facilities, and we may be forced to liquidate our assets. In such a scenario, the values we receive for our assets in liquidation or dissolution could be significantly lower than the values reflected in our financial statements.

Our operating plan for 2018 contemplates a significant reduction in our net cash outflows, resulting from (i) revenue growth from sales of existing and new products with positive gross margins, (ii) significantly increased royalty revenues (previously referred to as value share revenues) (iii) reduced production costs as a result of manufacturing and technical developments, and (iv) cash inflows from grants and collaborations. In addition, in the first half of 2018, we plan to restructure a majority of our convertible debt to extend maturities, and obtain project financing for Brotas 2 facility construction. All of the factors noted above are expected to improve our liquidity.

If we are unable to generate sufficient cash contributions from product sales, payments from existing and new collaboration partners, and draw sufficient funds from certain financing commitments due to contractual restrictions and covenants, we may need to obtain additional funding from equity or debt financings, which may not occur timely or on reasonable terms, if at all, agree to burdensome covenants, grant further security interests in our assets, enter into collaboration and licensing arrangements that require us to relinquish commercial rights, or grant licenses on terms that are not favorable.

If we do not achieve our planned operating results, our ability to continue as a going concern would be jeopardized and we may need to take the following actions to support our liquidity needs in 2018:

- Shift focus to existing products and customers with significantly reduced investment in new product and commercial development efforts;
- Reduce expenditures for third party contractors, including consultants, professional advisors and other vendors;
- Reduce or delay uncommitted capital expenditures, including non-essential facility and lab equipment, and information technology projects; and
- Closely monitor our working capital position with customers and suppliers, as well as suspend operations at pilot plants and demonstration facilities.

Implementing this plan could have a negative impact on our ability to continue our business as currently contemplated, including, without limitation, delays or failures in our ability to:

- Achieve planned production levels;
- Develop and commercialize products within planned timelines or at planned scales; and
- Continue other core activities.

We expect to fund operations for the foreseeable future with cash and investments currently on hand, cash inflows from collaborations, grants, product sales, license and royalties and equity and debt financings, to the extent necessary. Some of our research and development collaborations are subject to risk that we may not meet milestones. Future equity and debt financings, if needed, are subject to the risk that we may not be able to secure financing in a timely manner or on reasonable terms, if at all. Our planned working capital and capital expenditure needs for 2018 are dependent on significant inflows of cash from renewable product sales, license and royalties and existing collaboration partners, as well as additional funding from new collaborations.

For details, see the following Notes in "Notes to Consolidated Financial Statements" included in this Annual Report on Form 10-K:

- Note 4, "Debt"
- Note 5, "Mezzanine Equity"
- Note 6, "Stockholders' Deficit"
- Note 13, "Divestiture"

Cash Flows during the Years Ended December 31, 2017, 2016 and 2015

Cash Flows from Operating Activities

Our primary uses of cash from operating activities are for costs related to production and sales of our products and personnel-related expenditures, offset by cash received from product sales, license fees and royalties, and grants and collaborations. Cash used in operating activities was $100.6 million, $82.4 million and $85.1 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Net cash used in operating activities of $100.6 million for the year ended December 31, 2017 was attributable to our net loss of $72.3 million, offset by net non-cash charges of $15.8 million and net change in our operating assets and liabilities of $44.1 million. Net non-cash charges of $15.8 million for the year ended December 31, 2017 consisted primarily of $12.5 million of amortization of debt discount and issuance costs, $11.4 million of depreciation and amortization expenses, $6.3 million of stock-based compensation, $1.5 million of loss from extinguishment of debt, and $1.7 million of loss from the change in the fair value of derivative instruments associated with the issuance of our convertible promissory notes, convertible preferred stock and related warrants, and cross-currency interest rate swap derivative liability, partially offset by $8.0 million noncash license revenue, a gain on divestiture of $5.7 million and by revenue recognized of $2.7 million which was received in the form of equity in another company in connection with a collaboration arrangement and $1.2 million of gain on foreign currency exchange rate. The increase in net operating assets and liabilities of $44.1 million was primarily comprised of a $19.6 million increase in accounts receivable, a $19.3 million increase in prepaid expenses, a $7.9 million increase in unbilled receivable, a $7.2 million decrease in deferred revenue and a $3.1 million increase in inventory offset by a $13.2 million increase in accounts payable and accrued liabilities.

Net cash used in operating activities of $82.4 million for the year ended December 31, 2016 was attributable to our net loss of $97.3 million, offset by net non-cash charges of $4.0 million and net change in our operating assets and liabilities of $10.9 million. Net non-cash charges of $4.0 million for the year ended December 31, 2016 consisted primarily of $14.4 million of amortization of debt discount and issuance costs, $11.4 million of depreciation and amortization expenses, $7.3 million of asset impairment charges, $7.3 million of stock-based compensation, $4.1 million of loss from extinguishment of debt, $0.9 million of loss on foreign currency exchange rates, partially offset by $41.4 million of gain from the change in the fair value of derivative instruments related to the embedded derivative liabilities associated with certain of our convertible promissory notes and cross-currency interest rate swap derivative liability and $0.1 million of gain on disposition of property, plant and equipment. Net change in operating assets and liabilities of $10.9 million for the year ended December 31, 2016 primarily consisted of a $19.1 million increase in accounts payable and accrued other liabilities, a $5.7 million decrease in inventory and a $0.7 million increase in deferred revenue related to funds received under collaboration agreements, partially offset by a $5.7 million increase in prepaid expenses and other assets and deferred rent and a $8.9 million increase in accounts receivable and related party accounts receivable.

Net cash used in operating activities of $85.1 million for the year ended December 31, 2015 was attributable to our net loss of $218.1 million, offset by net non-cash charges of $113.8 million and net change in our operating assets and liabilities of $19.1 million. Net non-cash charges of $113.8 million for the year ended December 31, 2015 consisted primarily of a $58.6 million of amortization of debt discount and issuance costs, including a $36.6 million charge due to acceleration of accretion of debt discount on the Total and Temasek convertible notes converted to equity in July 2015, $16.3 million of loss from the change in the fair value of derivative instruments related to the embedded derivative liabilities associated with our senior convertible promissory notes and cross-currency interest rate swap derivative liability, $12.9 million of depreciation and amortization expenses, $34.2 million of loss on purchase commitments and impairment of production assets, $9.1 million of stock-based compensation, $5.5 million of impairment of intangible assets, $4.7 million of withholding tax related to conversion of related party note, $4.2 million of loss from investment in affiliates, $1.1 million of loss from extinguishment of debt, $0.4 million of other non-cash expenses and $0.2 million on disposition of property, plant and equipment. Net change in operating assets and liabilities of $19.1 million for the year ended December 31, 2015 primarily consisted of a $15.3 million increase in accounts payable and accrued other liabilities and a $4.3 million decrease in accounts receivable and related party accounts receivable and a $4.5 million increase in inventory, partially offset by a $4.9 million decrease in prepaid expenses and other assets and deferred rent and $0.1 million decrease in deferred revenue related to the funds received under collaboration agreements.

Cash Flows from Investing Activities

Net cash provided from investing activities of $52.0 million for the year ended December 31, 2017, was primarily due to the sale of Amyris Brasil to DSM, which operated the Company's Brotas 1 production facility, and the series of commercial agreements discussed above, partially offset by $4.4 million of purchase of property, plant and equipment.

Net cash provided from investing activities of $5.6 million for the year ended December 31, 2016, was primarily due to $10.0 million of proceeds on disposal of noncontrolling interest and $6.2 million of maturities of short-term investments, offset by $0.9 million of purchase of property, plant and equipment, a $4.0 million increase in restricted cash and $5.5 million of purchase of short-term investments.

Net cash used in investing activities of $5.1 million for the year ended December 31, 2015, was primarily due to $3.3 million of purchase of property, plant and equipment, $1.6 million of loans to an affiliate, $2.7 million of purchase of short-term investments, offset by $2.3 million of maturities of short-term investments and $0.2 million of change in restricted cash.

Cash Flows from Financing Activities

Net cash provided by financing activities of $78.3 million for the year ended December 31, 2017, was primarily due to the receipt of $101.3 million of proceeds from the sales of common and preferred stock and warrants and $18.9 million of net proceeds from debt issued, partly offset by $37.5 million of principal payments on debt.

Net cash provided by financing activities of $92.2 million for the year ended December 31, 2016, was primarily due to the receipt of $63.9 million from debt financings, $29.7 million from notes payable issued to related parties, $5.0 million from proceeds from exercise of warrants and $5.0 million from proceeds from issuance of contingently redeemable equity, offset by $9.8 million of repayment of debt and $1.6 million of principal payments on capital leases.

Net cash provided by financing activities of $61.4 million for the year ended December 31, 2015, was primarily due to the receipt of $77.7 million from debt financings, of which $10.9 million was from debt issued to a related party, which related to the closing of the final installment of notes issued to Total under the Total Fuel Agreements and the receipt of $24.6 million from the issuance of common stock in private placements, offset by $40.8 million of repayment of debt.

Off-Balance Sheet Arrangements

None.

Contractual Obligations

The following is a summary of our contractual obligations as of December 31, 2017:

Payable by Year Ended December 31, (In thousands)	Total	2018	2019	2020	2021	2022	Thereafter
Principal payments on debt(1)	$195,819	$57,007	$ 98,943	$ 231	$25,243	$12,255	$2,140
Interest payments on debt(2)	36,013	16,851	9,833	3,896	3,884	1,162	387
Operating leases	44,107	10,127	8,760	7,018	7,242	7,415	3,545
Principal payments on capital leases	941	724	178	39	—	—	—
Interest payments on capital leases	38	31	7	—	—	—	—
Purchase obligations(3)	18,326	7,807	7,667	2,852	—	—	—
Total	$295,244	$92,547	$125,388	$14,036	$36,369	$20,832	$6,072

(1) Principal payments on debt shown above include a total of $21.8 million in 2018 and 2019 subject to a Maturity Treatment Agreement, which will be converted to common stock at maturity, subject to there being no default under the terms of the debt.

(2) Does not include any obligations related to make-whole interest or down-round provisions. The fixed interest rates are more fully described in Note 4, "Debt" in Part II, Item 8 of this Form 10-K.

(3) Purchase obligations include $9.0 million of noncancelable contractual obligations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The market risk inherent in our market risk sensitive instruments and positions is the potential loss arising from adverse changes in: commodity market prices, foreign currency exchange rates, and interest rates as described below.

Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio and our outstanding debt obligations, including embedded derivatives therein. We generally invest our cash in investments with short maturities or with frequent interest reset terms. Accordingly, our interest income fluctuates with short-term market conditions. As of December 31, 2017, our investment portfolio consisted primarily of money market funds and certificates of deposit, both of which are highly liquid. Due to the short-term nature of our investment portfolio, we do not believe that an immediate 10% increase in interest rates would have a material effect on the fair value of our portfolio. Since we believe we have the ability to liquidate our investment portfolio, we expect that our operating results or cash flows would not be materially affected by a sudden change in market interest rates on the portfolio.

As of December 31, 2017, 83% of our outstanding debt is in fixed rate instruments. The remaining 17% of our outstanding debt is comprised of variable-rate loans under our Senior Secured Loan Facility for which the interest rate is based on the U.S. Prime Rate, subject to a rate floor (see Note 4, "Debt" and Note 18, "Subsequent Events" in Part II, Item 8 of this Form 10-K for details). As a result, changes in interest rates could affect interest expense and payments in relation to that component of our debt.

In addition, changes in interest rates may significantly change the fair value of our embedded derivative liabilities.

Foreign Currency Risk

Most of our sales contracts are denominated in U.S. dollars, and therefore our revenues are not currently subject to significant foreign currency risk.

The functional currency of our consolidated Brazilian subsidiary is the local currency (Brazilian real), in which recurring business transactions occur. We do not use currency exchange contracts as hedges against our investment in that subsidiary.

On December 28, 2017, we sold our Brotas, Brazil production facility to DSM; see Note 13, "Divestiture" in Part II, Item 8 of this Form 10-K for details. Subsequent to the divestiture, we continue to employ approximately 30 people in Brazil to manage our supply chain, provide manufacturing support to DSM and construct new production facilities.

Our permanent investment in Brazil was $17.8 million as of December 31, 2017 and $119.4 million as of December 31, 2016, using the exchange rate at each date; the decrease is due to the sale of our Brotas production facility. A hypothetical 10% adverse change in Brazilian real exchange rates would have had an adverse impact to Other Comprehensive Loss of $1.8 million as of December 31, 2017 and $11.9 million as of December 31, 2016.

Prior to our December 2017 sale of the Brotas production facility, we made use of a cross-currency interest rate swap arrangement to manage exposure to foreign currency exchange rate and interest rate fluctuations related to our note payable to Banco Pine; see Note 4, "Debt" in Part II, Item 8 of this Form 10-K for details. As of December 31, 2017, the balances of the loan and the associated cross-currency interest rate swap were zero.

We have also evaluated foreign currency exposure in relation to our other non-U.S. Dollar denominated assets and liabilities and determined that there would be an immaterial effect on our results of operations from 10% exchange rate fluctuations between those currencies and the U.S. Dollar.

Commodity Price Risk

Our primary exposure to market risk for changes in commodity prices relates to our procurement of products from contract manufacturers and other suppliers whose prices are affected by the price of sugar feedstocks. Our suppliers manage exposure to this risk primarily through the use of feedstock pricing agreements.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

AMYRIS, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm — KPMG LLP

To the Stockholders and Board of Directors of
Amyris, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of Amyris, Inc. and subsidiaries (the Company) as of December 31, 2017, the related consolidated statements of operations, comprehensive loss, stockholders' deficit and mezzanine equity, and cash flows for the year then ended, and the related notes and financial statement schedule (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017, and the results of its operations and its cash flows for the year then ended, in conformity with U.S. generally accepted accounting principles.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses from operations and has current debt service requirements that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

San Francisco, California
April 17, 2018

Report of Independent Registered Public Accounting Firm — PricewaterhouseCoopers LLP

To the Board of Directors and Stockholders of
Amyris, Inc.:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Amyris, Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and on the financial statement schedule based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has a net stockholders' deficit that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP
San Jose, California
April 17, 2017

AMYRIS, INC.

CONSOLIDATED BALANCE SHEETS

December 31, (In thousands, except shares and per share amounts)	2017	2016
Assets		
Current assets:		
Cash and cash equivalents	$ 57,059	$ 27,150
Restricted cash	2,994	4,326
Short-term investments	—	1,374
Accounts receivable, net of allowance of $642 and $501, respectively	33,621	13,977
Inventories	5,408	6,213
Prepaid expenses and other current assets	5,525	6,083
Total current assets	104,607	59,123
Property, plant and equipment, net	13,892	53,735
Unbilled receivable	7,940	—
Restricted cash, noncurrent	959	957
Recoverable taxes from Brazilian government entities	1,445	13,723
Other assets	22,640	2,335
Total assets	$ 151,483	$ 129,873
Liabilities, Mezzanine Equity and Stockholders' Deficit		
Current liabilities:		
Accounts payable	$ 15,921	$ 15,315
Accrued and other current liabilities	29,402	30,110
Deferred revenue	4,880	5,288
Debt, current portion	36,924	25,853
Related party debt, current portion	20,019	33,302
Total current liabilities	107,146	109,868
Long-term debt, net of current portion	61,893	128,744
Related party debt, net of current portion	46,541	39,144
Derivative liabilities	119,978	6,894
Other noncurrent liabilities	10,632	23,731
Total liabilities	346,190	308,381
Commitments and contingencies (Note 9)		
Mezzanine equity:		
Contingently redeemable common stock (Note 5)	5,000	5,000
Stockholders' deficit:		
Preferred stock – $0.0001 par value, 5,000,000 shares authorized as of December 31, 2017 and 2016, and 22,171 and 0 shares issued and outstanding as of December 31, 2017 and December 31, 2016, respectively	—	—
Common stock – $0.0001 par value, 250,000,000 and 500,000,000 shares authorized as of December 31, 2017 and 2016, respectively; 45,637,433 and 18,273,921 shares issued and outstanding as of December 31, 2017 and December 31, 2016, respectively	5	2
Additional paid-in capital – common stock and other	1,048,274	990,895
Accumulated other comprehensive loss	(42,156)	(40,904)
Accumulated deficit	(1,206,767)	(1,134,438)
Total Amyris, Inc. stockholders' deficit	(200,644)	(184,445)
Noncontrolling interest	937	937
Total stockholders' deficit	(199,707)	(183,508)
Total liabilities, mezzanine equity and stockholders' deficit	$ 151,483	$ 129,873

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

Years Ended December 31, (In thousands, except shares and per share amounts)	2017	2016	2015
Revenue			
Renewable products (includes related party revenue of $1,291, $1,562 and $865, respectively)	$ 42,370	$ 25,510	$ 14,506
Licenses and royalties (includes related party revenue of $57,972, $0 and $0, respectively)	64,477	15,839	390
Grants and collaborations (includes related party revenue of $1,679, $0 and $0, respectively)	36,598	25,843	19,257
Total revenue	143,445	67,192	34,153
Cost and operating expenses			
Cost of products sold	62,713	56,678	37,374
Research and development	56,956	51,412	44,636
Sales, general and administrative	63,291	47,721	56,262
Impairment of property, plant and equipment	—	7,305	34,166
Withholding tax related to conversion of related party notes	—	—	4,723
Impairment of intangible assets	—	—	5,525
Total cost and operating expenses	182,960	163,116	182,686
Loss from operations	(39,515)	(95,924)	(148,533)
Other income (expense)			
Gain on divestiture	5,732	—	—
Interest expense	(34,032)	(37,629)	(78,854)
Gain (loss) from change in fair value of derivative instruments	(1,742)	41,355	16,287
Loss upon extinguishment of debt	(1,521)	(4,146)	(1,141)
Other expense, net	(956)	(437)	(1,159)
Total other expense, net	(32,519)	(857)	(64,867)
Loss before income taxes and loss from investments in affiliates	(72,034)	(96,781)	(213,400)
Provision for income taxes	(295)	(553)	(468)
Net loss before loss from investments in affiliates	(72,329)	(97,334)	(213,868)
Loss from investments in affiliates	—	—	(4,184)
Net loss	(72,329)	(97,334)	(218,052)
Net loss attributable to noncontrolling interest	—	—	100
Net loss attributable to Amyris, Inc.	(72,329)	(97,334)	(217,952)
Less deemed dividend on capital distribution to related parties	(8,648)	—	—
Less deemed dividend related to beneficial conversion feature on Series A preferred stock	(562)	—	—
Less deemed dividend related to beneficial conversion feature on Series B preferred stock	(634)	—	—
Less deemed dividend related to beneficial conversion feature on Series D preferred stock	(5,757)	—	—
Less cumulative dividends on Series A and Series B preferred stock	(5,439)	—	—
Net loss attributable to Amyris, Inc. common stockholders	$ (93,369)	$ (97,334)	$ (217,952)
Net loss per share attributable to Amyris, Inc. common stockholders:			
Basic	$ (2.89)	$ (6.12)	$ (26.20)
Diluted	$ (2.89)	$ (6.55)	$ (26.20)
Weighted-average shares of common stock outstanding used in computing net loss per share of common stock:			
Basic	32,253,570	15,896,014	8,464,106
Diluted	32,253,570	17,642,965	8,464,106

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

Years Ended December 31, (In thousands)	2017	2016	2015
Comprehensive loss:			
Net loss	$(72,329)	$(97,334)	$(218,052)
Foreign currency translation adjustment, net of tax	(1,252)	6,294	(16,901)
Total comprehensive loss	(73,581)	(91,040)	(234,953)
Net loss attributable to noncontrolling interest	—	—	100
Foreign currency translation adjustment attributable to noncontrolling interest	—	—	(320)
Comprehensive loss attributable to Amyris, Inc.	$(73,581)	$(91,040)	$(235,173)

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT AND MEZZANINE EQUITY

(In thousands, except number of shares)	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Noncontrolling Interest	Total Stockholders' Deficit	Mezzanine Equity-Preferred Stock	Mezzanine Equity-Common Stock
	Shares	Amount	Shares	Amount							
December 31, 2014	—	$—	5,281,459	$ 1	$724,676	$(29,977)	$ (819,152)	$(611)	$(125,063)	—	—
Issuance of common stock in private placement, net of issuance costs	—	—	1,068,377	—	24,626	—	—	—	24,626	—	—
Issuance of common stock upon conversion of debt	—	—	4,146,148	1	96,621	—	—	—	96,622	—	—
Issuance of warrants on conversion of debt	—	—	—	—	51,704	—	—	—	51,704	—	—
Issuance of common stock upon exercise of warrants	—	—	3,158,832	—	19,194	—	—	—	19,194	—	—
Issuance of common stock from restricted stock settlement	—	—	60,592	—	(333)	—	—	—	(333)	—	—
Issuance of common stock upon ESPP purchase	—	—	25,727	—	595	—	—	—	595	—	—
Issuance of common stock upon exercise of stock options	—	—	884	—	18	—	—	—	18	—	—
Stock-based compensation	—	—	—	—	9,134	—	—	—	9,134	—	—
Foreign currency translation adjustment	—	—	—	—	—	(17,221)	—	320	(16,901)	—	—
Net loss	—	—	—	—	—	—	(217,952)	(100)	(218,052)	—	—
December 31, 2015	—	$—	13,742,019	$ 2	$926,235	$(47,198)	$(1,037,104)	$(391)	$(158,456)	—	—
Issuance of common stock upon conversion of debt	—	—	1,048,601	—	14,366	—	—	—	14,366	—	—
Issuance of common stock for settlement of debt principal payments	—	—	2,381,588	—	17,414	—	—	—	17,414	—	—
Issuance of common stock upon exercise of warrants	—	—	666,667	—	10,435	—	—	—	10,435	—	—
Issuance of common stock from restricted stock settlement	—	—	120,234	—	(254)	—	—	—	(254)	—	—
Issuance of common stock upon ESPP purchase	—	—	22,405	—	180	—	—	—	180	—	—
Issuance of common stock upon exercise of stock options	—	—	9	—	—	—	—	—	—	—	—
Issuance of contingently redeemable common stock	—	—	292,398	—	—	—	—	—	—	—	5,000
Issuance of warrants with debt private placement and collaboration agreements	—	—	—	—	4,387	—	—	—	4,387	—	—
Contribution upon restructuring of Total Amyris BioSolutions B.V.	—	—	—	—	4,252	—	—	—	4,252	—	—
Acquisitions of noncontrolling interests	—	—	—	—	(2,508)	—	—	391	(2,117)	—	—
Disposal of noncontrolling interest in Aprinnova LLC	—	—	—	—	9,063	—	—	937	10,000	—	—
Stock-based compensation	—	—	—	—	7,325	—	—	—	7,325	—	—
Foreign currency translation adjustment	—	—	—	—	—	6,294	—	—	6,294	—	—
Net loss	—	—	—	—	—	—	(97,334)	—	(97,334)	—	—
December 31, 2016	—	$—	18,273,921	$ 2	$990,895	$(40,904)	$(1,134,438)	$ 937	$(183,508)	—	5,000

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT AND MEZZANINE EQUITY — (Continued)

(In thousands, except number of shares)	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Noncontrolling Interest	Total Stockholders' Deficit	Mezzanine Equity-Preferred Stock	Mezzanine Equity-Common Stock
	Shares	Amount	Shares	Amount							
Issuance of Series A preferred stock for cash, net of issuance costs of $562	22,140	—	—	—	—	—	—	—	—	—	—
Issuance of Series B preferred stock upon conversion of debt, net of issuance costs of $0	40,204	—	—	—	—	—	—	—	—	11,530	—
Issuance of Series B preferred stock for cash, net of issuance costs of $860	55,700	—	—	—	5,476	—	—	—	5,476	1,300	—
Issuance of Series D preferred stock for cash, net of issuance costs of $176	12,958	—	—	—	6,197	—	—	—	6,197	—	—
Issuance of common stock due to rounding from reverse stock split	—	—	6,473	—	—	—	—	—	—	—	—
Issuance of common stock for cash	—	—	2,826,711	—	5,527	—	—	—	5,527	—	—
Issuance of common stock upon conversion of preferred stock	(108,831)	—	17,274,017	3	(1)	—	—	—	2	—	—
Issuance of common stock upon conversion of debt	—	—	2,257,786	—	6,417	—	—	—	6,417	—	—
Issuance of common stock for settlement of debt principal payments	—	—	1,246,165	—	10,708	—	—	—	10,708	—	—
Issuance of common stock for settlement of debt interest payments	—	—	400,967	—	3,436	—	—	—	3,436	—	—
Issuance of common stock upon exercise of warrants	—	—	3,148,097	—	9,557	—	—	—	9,557	—	—
Issuance of common stock upon restricted stock settlement	—	—	156,104	—	(385)	—	—	—	(385)	—	—
Issuance of common stock upon ESPP purchase	—	—	47,058	—	—	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	134	—	—	—	—	—	—	—	—
Beneficial conversion feature of Series A preferred stock	—	—	—	—	562	—	—	—	562	—	—
Deemed dividend on beneficial conversion feature of Series A preferred stock	—	—	—	—	(562)	—	—	—	(562)	—	—
Beneficial conversion feature to related party of Series B preferred stock	—	—	—	—	634	—	—	—	634	—	—
Deemed dividend to related party on beneficial conversion feature of Series B preferred stock	—	—	—	—	(634)	—	—	—	(634)	—	—

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT AND MEZZANINE EQUITY — (Continued)

(In thousands, except number of shares)	Preferred Stock Shares	Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Noncontrolling Interest	Total Stockholders' Deficit	Mezzanine Equity- Preferred Stock	Mezzanine Equity- Common Stock
Beneficial conversion feature of Series D preferred stock	—	—	—	—	5,757	—	—	—	5,757	—	—
Deemed dividend on beneficial conversion feature of Series D preferred stock	—	—	—	—	(5,757)	—	—	—	(5,757)	—	—
Reclassification from mezzanine equity to permanent equity	—	—	—	—	12,830	—	—	—	12,830	(12,830)	—
Deemed dividend on capital distribution to related parties	—	—	—	—	(8,648)	—	—	—	(8,648)	—	—
Stock-based compensation	—	—	—	—	6,265	—	—	—	6,265	—	—
Foreign currency translation adjustment	—	—	—	—	—	(1,252)	—	—	(1,252)	—	—
Net loss	—	—	—	—	—	—	(72,329)	—	(72,329)	—	—
December 31, 2017	22,171	$—	45,637,433	$ 5	$1,048,274	$(42,156)	$(1,206,767)	$937	$(199,707)	—	5,000

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31, (In thousands)	2017	2016	2015
Operating activities			
Net loss	$ (72,329)	$(97,334)	$(218,052)
Adjustments to reconcile net loss to net cash used in operating activities:			
Gain on divestiture	(5,732)	—	—
Depreciation and amortization	11,358	11,374	12,920
Loss on impairment of property, plant and equipment	—	7,305	34,166
Impairment of intangible assets	—	—	5,525
Withholding tax related to conversion of related party notes	—	—	4,723
Loss from investments in affiliates	—	—	4,184
Loss (gain) on disposal of property, plant and equipment	142	(161)	154
Stock-based compensation	6,265	7,325	9,134
Amortization of debt discount	12,490	14,445	58,559
Loss upon extinguishment of debt	1,521	4,146	1,141
Receipt of noncash consideration in connection with license revenue	(8,046)	—	—
Receipt of equity in connection with collaboration arrangements revenue	(2,661)	—	—
Loss (gain) from change in fair value and extinguishment of derivative instruments	1,742	(41,355)	(16,287)
(Gain) loss on foreign currency exchange rates	(1,230)	557	1,328
Other non-cash expenses	—	442	(1,741)
Changes in assets and liabilities:			
Accounts receivable	(19,647)	(8,959)	4,271
Inventories	(3,126)	5,686	4,470
Prepaid expenses and other assets	(19,336)	(4,913)	(4,297)
Unbilled receivable	(7,940)	—	—
Accounts payable	5,858	6,442	4,373
Accrued and other liabilities	7,295	11,919	10,386
Deferred revenue	(7,241)	714	(89)
Net cash used in operating activities	(100,617)	(82,367)	(85,132)
Investing activities			
Proceeds from divestiture	54,827	—	—
Purchase of short-term investments	(11,786)	(5,559)	(2,759)
Maturities of short-term investments	12,403	6,187	2,321
Sale of short-term investments	95	—	—
Purchases of property, plant and equipment	(4,412)	(922)	(3,367)
Proceeds on disposal of noncontrolling interest	—	10,000	—
Change in restricted cash	865	(4,040)	240
Loan to affiliate	—	—	(1,579)
Change in restricted stock	—	(24)	—
Net cash provided by (used in) investing activities	51,992	5,642	(5,144)
Financing activities			
Proceeds from sale of convertible preferred stock in May 2017 Offerings, net of issuance costs	50,411	—	—
Proceeds from sale of convertible preferred stock in August 2017 Vivo Offering, net of issuance costs	24,768	—	—
Proceeds from sale of convertible preferred stock in August 2017 DSM Offering, net of issuance costs	25,945	—	—
Proceeds from issuance of common stock in private placements, net of issuance costs	—	—	24,625
Proceeds from debt issued	18,925	63,911	66,931
Proceeds from debt issued to related parties	—	29,699	10,850
Principal payments on debt	(37,500)	(9,759)	(40,819)
Payment on early redemption of debt	(1,909)	—	—
Proceeds from issuance of contingently redeemable common stock	—	5,000	—
Proceeds from exercise of warrants	—	5,000	285
Proceeds from exercises of common stock options, net of repurchases	160	180	614
Principal payments on capital leases	—	(1,579)	(729)
Change in restricted cash related to contingently redeemable common stock	1,046	—	—
Payment of swap termination	(3,113)	—	—
Employees' taxes paid upon vesting of restricted stock units	(385)	(253)	(333)
Net cash provided by financing activities	78,348	92,199	61,424
Effect of exchange rate changes on cash and cash equivalents	186	(316)	(1,203)
Net increase (decrease) in cash and cash equivalents	29,909	15,158	(30,055)
Cash and cash equivalents at beginning of period	27,150	11,992	42,047
Cash and cash equivalents at end of period	$ 57,059	$ 27,150	$ 11,992

See accompanying notes to consolidated financial statements.

AMYRIS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)

Years Ended December 31, (In thousands)	2017	2016	2015
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 11,539	$ 9,983	$9,425
Supplemental disclosures of non-cash investing and financing activities:			
Acquisition of property, plant and equipment under accounts payable, accrued liabilities and notes payable	$ 221	$ (1,252)	$ (465)
Financing of equipment	$ —	$ 2,136	$ 613
Acquisition of noncontrolling interest in Glycotech via debt	$ —	$ 3,906	$ —
Financing of insurance premium under note payable	$ (467)	$ (123)	$ 53
Issuance of debt in exchange for prepaid royalties	$ 6,847	$ —	$ —
Issuance of note payable in exchange for debt extinguishment with third party	$ 16,954	$ —	$ —
Settlement of debt principal by a related party	$(25,000)	$ —	$ —
Issuance of common stock for settlement of debt principal and interest payments	$ 3,436	$17,410	$ —
Issuance of convertible preferred stock upon conversion of debt	$ 40,204	$ —	$ —
Issuance of common stock upon conversion of debt	$ 28,702	$14,364	$ —
Issuance of common stock for settlement of debt	$ 10,708	$ —	$ —
Receipt of antidilution warrants	$ 9,549	$ —	$ —
Deemed dividend on capital distribution to related parties	$ 8,468	$ —	$ —
Accrued interest added to debt principal	$ 2,816	$ 3,147	$6,354
Revenue recognized from noncash consideration received	$ 2,661	$ —	$ —
Cancellation of debt and accrued interest on disposal of interest in affiliate	$ —	$ 4,252	$ —

See accompanying notes to consolidated financial statements.

1. Basis of Presentation and Summary of Significant Accounting Policies

Business Description

Amyris, Inc. (Amyris or the Company) is a leading industrial biotechnology company that applies its technology platform to engineer, manufacture and sell high performance, natural, sustainably sourced products into the Health & Wellness, Clean Skincare, and Flavors & Fragrances markets. The Company's proven technology platform enables the Company to rapidly engineer microbes and use them as catalysts to metabolize renewable, plant-sourced sugars into large volume, high-value ingredients. The Company's biotechnology platform and industrial fermentation process replace existing complex and expensive manufacturing processes. The Company has successfully used its technology to develop and produce five distinct molecules at commercial volumes.

The Company believes that industrial synthetic biology represents a third industrial revolution, bringing together biology and engineering to generate new, more sustainable materials to meet the growing global demand for bio-based replacements for petroleum-based and traditional animal- or plant-derived ingredients. The Company continues to build demand for its current portfolio of products through an extensive sales network provided by its collaboration partners that represent the leading companies in the world for its target market sectors. The Company also has a small group of direct sales and distributors who support the Company's Clean Skincare market. With its partnership model, the Company's partners invest in the development of each molecule to bring it from the lab to commercial scale and use their extensive sales force to sell the Company's ingredients and formulations to their customers as part of their core business. The Company captures long-term revenue both through the production and sale of the molecule to its partners and through royalty revenues (previously referred to as value share) from its partners' product sales to their customers.

On December 28, 2017, the Company completed the sale of Amyris Brasil, which operated the Company's Brotas 1 production facility, to DSM and concurrently entered into a series of commercial agreements and a credit agreement with DSM. At closing, the Company received $33.0 million in cash for the capital stock of Amyris Brazil, which is subject to certain post-closing working capital adjustments; and reimbursements contingent upon DSM's utilization of certain Brazilian tax benefits it acquired with its purchase of Amyris Brasil. The Company used $12.6 million of the cash proceeds received to repay certain indebtedness of Amyris Brasil. The total fair value of the consideration to be received by the Company for Amyris Brasil was $56.9 million and resulted in a pretax gain of $5.7 million from continuing operations.

Concurrent with the sale of Amyris Brasil, the Company and DSM entered into a series of commercial agreements including (i) a license agreement to DSM of its farnesene product for DSM to use in the Vitamin E, lubricant, and flavor and fragrance markets; (ii) a value share agreement that DSM will pay the Company specified royalties representing a portion of the profit on the sale of Vitamin E produced from farnesene under the Nenter Supply Agreement assigned to DSM; (iii) a performance agreement for the Company to perform research and development to optimize farnesene for production and sale of farnesene products; and (iv) a transition services agreement for the Company to provide finance, legal, logistics, and human resource services to support the Brotas 1 facility under DSM ownership for a six-month period with a DSM option to extend for six additional months. At closing, DSM paid the Company a nonrefundable license fee of $27.5 million and a nonrefundable royalty payment (previously referred to as value share) of $15.0 million. DSM will also pay the Company nonrefundable minimum annual royalty payments in 2018 and 2019. The future nonrefundable minimum annual royalty payments were determined to be fixed and determinable with a fair value of $17.8 million, and were included as part of the total arrangement consideration subject to allocation of this overall multiple-element divestiture transaction. See Note 10, "Significant Revenue Agreements", for a full listing and details of agreements entered into with DSM. Additionally, the Company and DSM entered into a $25.0 million credit agreement that the Company used to repay all outstanding amounts under the Guanfu Note (see Note 4, "Debt").

Liquidity

The Company has incurred significant operating losses since its inception and expects to continue to incur losses and negative cash flows from operations for at least the next 12 months following the issuance of the financial statements. As of December 31, 2017, the Company had negative working capital of $59.6 million, (compared to negative working capital of $77.9 million as of December 31, 2016), and an accumulated deficit of $1.2 billion.

As of December 31, 2017, the Company's debt (including related party debt), net of deferred discount and issuance costs of $30.4 million, totaled $165.4 million, of which $56.9 million is classified as current and $21.8 million of which is mandatorily convertible into equity and within the control of the Company. The Company's debt service obligations through April 17, 2019 are $129.3 million, including $12.9 million of anticipated cash interest payments. The Company's debt agreements contain various covenants, including certain restrictions on the Company's business that could cause the Company to be at risk of defaults, such as restrictions on additional indebtedness, material adverse effect and cross default clauses. A failure to comply with the covenants and other provisions of the Company's debt instruments, including any failure to make a payment when required, would generally result in events of default under such instruments, which could permit acceleration a substantial portion of such indebtedness. If such indebtedness is accelerated, it would generally also constitute an event of default under the Company's other outstanding indebtedness, permitting acceleration of a substantial portion of such other outstanding indebtedness.

Cash and cash equivalents of $57.1 million as of December 31, 2017 and cash proceeds from the Warrant Exchange and Exercise on April 12, 2018 (see Note 18), are not sufficient to fund expected future negative cash flows from operations and cash debt service obligations through March 31, 2019. These factors raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that these financial statements are issued. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. The Company's ability to continue as a going concern will depend, in large part, on its ability to extend existing debt maturities by restructuring a majority of its convertible debt, which is uncertain and outside the control of the Company, in addition to the conversion of certain debt obligations into equity, which conversion is within the control of the Company. Further, the Company's operating plan for 2018 contemplates a significant reduction in its net operating cash outflows as compared to the year ended December 31, 2017, resulting from (i) revenue growth from sales of existing and new products with positive gross margins, (ii) significantly increased royalty revenues (previously referred to as value share revenues) (iii) reduced production costs as a result of manufacturing and technical developments, and (iv) cash inflows from grants and collaborations. Finally, in the first half of 2018, the Company plans to obtain project financing for the Brotas 2 facility construction. If the Company is unable to complete these actions, it expects to be unable to meet its operating cash flow needs and its obligations under its existing debt facilities. This could result in an acceleration of its obligation to repay all amounts outstanding under those facilities, and it may be forced to liquidate its assets or obtain additional equity or debt financing, which may not occur timely or on reasonable terms, if at all.

Basis of Consolidation

The accompanying consolidated financial statements have been prepared in accordance with the accounting principles generally accepted in the United States (U.S. GAAP). The consolidated financial statements include the accounts of Amyris, Inc. and its wholly-owned and partially-owned subsidiaries in which the Company has a controlling interest after elimination of all significant intercompany accounts and transactions.

Investments and joint venture arrangements are assessed to determine whether the terms provide economic or other control over the entity requiring consolidation of the entity. Entities controlled by means other than a majority voting interest are referred to as variable-interest entities (VIEs) and are consolidated when Amyris has both the power to direct the activities of the VIE that most significantly impact its economic performance and the obligation to absorb losses or the right to receive benefits that could potentially be significant to the entity. For any investment or joint venture in which (i) the Company does not have a majority ownership interest, (ii) the Company possesses the ability to exert significant influence and (iii) the entity is not a VIE for which the Company is considered the primary beneficiary, the Company accounts for the investment or joint venture using the equity method. Investments in which the Company does not possess the ability to exert significant influence over the investee and are not VIEs for which the Company is considered the primary beneficiary are accounted for using the cost method. For investments that the Company accounts for under the cost method, earnings from the investment are equal to dividends received from the investee.

Sale of Subsidiary and Entry into Commercial Agreements

On December 28, 2017, the Company completed the sale of all the capital stock of Amyris Brasil, a wholly-owned subsidiary, to DSM Produtos Nutricionais Brasil S.A (DSM), a related party. Amyris Brasil owned and operated the Company's production facility (Brotas 1) in Brotas, Brazil. The transaction resulted in a pretax gain of $5.7 million from continuing operations. The transaction did not result in presenting Amyris Brasil as a discontinued operation in the consolidated financial statements because (a) the transaction did not represent a strategic shift in accordance with U.S. GAAP or (b) result in the release of Amyris Brasil's $29.7 million cumulative translation adjustment from stockholders' equity, as the transaction was not a substantial liquidation in accordance with U.S. GAAP due to the Company's continuing commercial presence and reinvestment in a new production facility (Brotas 2) under construction in Brazil and its continuing operation, SMA, in Brazil. The Company and DSM also entered into a series of commercial agreements and a credit agreement concurrently with the sale of Amyris Brasil. See Note 10, "Significant Revenue Agreements", Note 11, "Related Party Transactions", and Note 13, "Divestiture" for further information.

Use of Estimates and Judgements

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates, judgements and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates, and such differences may be material to the consolidated financial statements.

Reverse Stock Split

On June 5, 2017, the Company effected a 1 for 15 reverse stock split (Reverse Stock Split) of the Company's common stock, par value $0.0001 per share, as well as a reduction in the total number of authorized shares of common stock from 500,000,000 to 250,000,000. Unless otherwise noted, all common stock share quantities and per-share amounts for all periods presented in the financial statements and notes thereto have been retroactively adjusted for the Reverse Stock Split as if such Reverse Stock Split had occurred on the first day of the first period presented. Certain amounts in the notes to the financial statements may be slightly different from previously reported due to rounding of fractional shares as a result of the Reverse Stock Split.

The par value, number of shares outstanding and number of authorized shares of preferred stock were not adjusted as a result of the reverse stock split.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation in the Company's consolidated financial statements and the accompanying notes to the consolidated financial statements. The consolidated statements of operations previously presented license fee revenue in combination with grants and collaborations revenue, and royalties (formerly referred to as "value share") were previously presented in combination with renewable products revenue. Licenses and royalties revenue is presented as a separate line within the consolidated statements of operations. The reclassifications reflect the growth in the Company's business model to license its technology and earn royalties from customers utilizing the Company's technology in the products it produces and sells. The reclassifications had no impact on total revenue. Additional information is disclosed in the notes if material.

Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original or remaining maturity of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents are maintained with various financial institutions.

Inventories

Inventories, which consist of farnesene-derived products and flavors and fragrances ingredients, are stated at the lower of cost or net realizable value and are categorized as finished goods, work in process or raw material inventories. The Company evaluates the recoverability of its inventories based on assumptions about expected demand and net realizable value. If the Company determines that the cost of inventories exceeds their estimated net realizable value, the Company records a write-down equal to the difference between the cost of inventories and the estimated net realizable value. If actual net realizable values are less favorable than those projected by management, additional inventory write-downs may be required that could negatively impact the Company's operating results. If actual net realizable values are more favorable, the Company may have favorable operating results when products that have been previously written down are sold in the normal course of business. The Company also evaluates the terms of its agreements with its suppliers and establishes accruals for estimated losses on adverse purchase commitments as necessary, applying the same lower of cost or net realizable value approach that is used to value inventory. Cost is computed on a first-in, first-out basis. Inventory costs include transportation costs incurred in bringing the inventory to its existing location.

Property, Plant and Equipment, Net

Property and equipment are recorded at cost. Depreciation and amortization are computed straight-line based on the estimated useful lives of the related assets, ranging from 3 to 15 years for machinery, equipment and fixtures, and 15 years for buildings. Leasehold improvements are amortized over their estimated useful lives or the period of the related lease, whichever is shorter.

The Company expenses costs for maintenance and repairs and capitalizes major replacements, renewals and betterments. For assets retired or otherwise disposed, both cost and accumulated depreciation are eliminated from the asset and accumulated depreciation accounts, and gains or losses related to the disposal are recorded in the statement of operations for the period.

Impairment of Long-Lived Assets

Long-lived assets that are held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability of long-lived assets is based on an estimate of the undiscounted future cash flows resulting from the use of the asset and its eventual disposition. Measurement of an impairment loss for long-lived assets that management expects to hold and use is based on the difference between the fair value of the asset and its carrying value. Long-lived assets to be disposed of are reported at the lower of carrying amount or fair value less costs to sell.

Recoverable Taxes from Brazilian Government Entities

Recoverable taxes from Brazilian government entities represent value-added taxes paid on purchases in Brazil, which are reclaimable from the Brazilian tax authorities, net of reserves for amounts estimated not to be recoverable.

Fair Value Measurements

The Company measures certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Where available, fair value is based on or derived from observable market prices or other observable inputs. Where observable prices or inputs are not available, valuation techniques are applied. These valuation techniques involve some level of management estimation and judgement, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

The carrying amounts of certain financial instruments, such as cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities. The fair values of loans payable, convertible notes and credit facilities are based on the present value of expected future cash flows and assumptions about current interest rates and the creditworthiness of the Company. The loans payable, convertible notes and credit facilities are carried on the consolidated balance sheet on a historical cost basis, because the Company has not elected to recognize the fair value of these liabilities. However, the Remaining Notes subject to the Maturity Treatment Agreement were revalued to fair value on July 29, 2015; see Note 4, "Debt" for details.

Changes in the inputs into these valuation models have a significant impact on the estimated fair value of the embedded and freestanding derivatives. For example, a decrease (increase) in the estimated credit spread for the Company results in an increase (decrease) in the estimated fair value of the embedded derivatives. Conversely, a decrease (increase) in the stock price results in a decrease (increase) in the estimated fair value of the embedded derivatives. The changes during 2017, 2016 and 2015 in the fair values of the bifurcated compound embedded derivatives are primarily related to the change in price of the Company's common stock and are reflected in the consolidated statements of operations as "Gain from change in fair value of derivative instruments."

Derivatives

The Company has made limited use of derivative instruments, including cross-currency interest rate swap agreements, to manage the Company's exposure to foreign currency exchange rate fluctuations and interest rate fluctuations related to the Company's Banco Pine S.A. loan, which the Company repaid in full in December 2017; see Note 4, "Debt". Changes in the fair value of the cross-currency interest rate swap derivative were recognized in the consolidated statements of operations in "Gain (loss) from change in fair value of derivative instruments". As of December 31, 2017, the balances of the loan and the associated cross-currency interest rate swap were zero.

Embedded derivatives that are required to be bifurcated from the underlying debt instrument (i.e., host) are accounted for and valued as separate financial instruments. The Company evaluated the terms and features of its convertible notes payable and convertible preferred stock and identified compound embedded derivatives requiring bifurcation and accounting at fair value because the economic and contractual characteristics of the embedded derivatives met the criteria for bifurcation and separate accounting due to the instruments containing conversion options, "make-whole interest" provisions, down round conversion price adjustment provisions and conversion rate adjustments. Cash and anti-dilution warrants issued in conjunction with the convertible debt and equity financings are freestanding financial instruments which are also classified as derivative liabilities.

Noncontrolling Interest

Noncontrolling interests represent the portion of the Company's net income (loss), net assets and comprehensive income (loss) that is not allocable to the Company, in situations where the Company consolidates its equity investment in a joint venture for which there are other owners. The amount of noncontrolling interest is comprised of the amount of such interests at the date of the Company's original acquisition of an equity interest in a joint venture, plus the other shareholders' share of changes in equity since the date the Company made an investment in the joint venture.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash and cash equivalents, short-term investments and accounts receivable. The Company places its cash equivalents and investments (primarily certificates of deposits) with high credit quality financial institutions and, by policy, limits the amount of credit exposure with any one financial institution. Deposits held with banks may exceed the amount of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents and short-term investments.

The Company performs ongoing credit evaluation of its customers, does not require collateral, and maintains allowances for potential credit losses on customer accounts when deemed necessary.

Customers representing 10% or greater of accounts receivable were as follows:

As of December 31,	2017	2016
Customer A (related party)	38%	*
Customer B	10%	33%
Customer C	**	22%
Customer E	15%	**

** Less than 10%

Customers representing 10% or greater of revenue were as follows:

Years Ended December 31,	2017	2016	2015
Customer A (related party)	42%	*	*
Customer B	12%	27%	37%
Customer C	10%	**	*
Customer D	**	22%	*
Customer E	**	14%	**
Customer G	**	**	10%

* Not a customer

** Less than 10%

Revenue Recognition

The Company recognizes revenue from the sale of renewable products, licenses of and royalties from intellectual property, and grants and collaborative research and development services. Revenue is recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the fee is fixed or determinable, and collectability is reasonably assured.

If sales arrangements contain multiple elements, the Company evaluates whether the components of each arrangement represent separate units of accounting.

Renewable Product Sales

The Company's renewable product sales do not include rights of return. Returns are only accepted if the product does not meet product specifications and such nonconformity is communicated to the Company within a set number of days of delivery. The Company offers a two year standard warranty provision for squalane products sold after March 31, 2012, if the products do not meet Company-established criteria as set forth in the Company's trade terms. The Company bases its return reserve on a historical rate of return for the Company's squalane products. Revenues are recognized, net of discounts and allowances, once passage of title and risk of loss has occurred and contractually specified acceptance criteria have been met, provided all other revenue recognition criteria have also been met.

Licenses and Royalties

License fees for intellectual property transferred to other parties, representing non-refundable payments received at the time of signature of license agreements, are recognized as revenue upon signature of the license agreements when the Company has no significant future performance obligations and collectability of the fees is assured. Upfront payments received at the beginning of licensing agreements with future service obligations are deferred and recognized as revenue on a systematic basis over the period during which the related services are rendered and all obligations are performed.

Royalties from intellectual property licenses that allow Amyris's customers to use the Company's intellectual property to produce and sell their products in which the Company shares in the profits are recognized in the period the royalty report is received.

Grants and Collaborative Research and Development Services

Revenues from collaborative research and development services are recognized as the services are performed consistent with the performance requirements of the contract. In cases where the planned levels of research and development services fluctuate over the research term, the Company recognizes revenues using the proportional performance method based upon actual efforts to date relative to the amount of expected effort to be incurred by us. When up-front payments are received and the planned levels of research and development services do not fluctuate over the research term, revenues are recorded on a ratable basis over the arrangement term, up to the amount of cash received. When up-front payments are received and the planned levels of research and development services fluctuate over the research term, revenues are recorded using the proportional performance method, up to the amount of cash received. Where arrangements include milestones that are determined to be substantive and at risk at the inception of the arrangement, revenues are recognized upon achievement of the milestone and is limited to those amounts whereby collectability is reasonably assured.

Grants are agreements that generally provide cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Revenues from grants are recognized in the period during which the related costs are incurred, provided that the conditions under which the grants were provided have been met and only perfunctory obligations are outstanding.

Cost of Products Sold

Cost of products sold includes the production costs of renewable products, which include the cost of raw materials, amounts paid to contract manufacturers and period costs including inventory write-downs resulting from applying lower of cost or net realizable value inventory adjustments. Cost of products sold also includes certain costs related to the scale-up of production. Shipping and handling costs charged to customers are recorded as revenues. Outbound shipping costs incurred are included in cost of products sold. Such charges were not material for any of the periods presented.

Research and Development

Research and development costs are expensed as incurred and include costs associated with research performed pursuant to collaborative agreements and government grants, including internal research. Research and development costs consist of direct and indirect internal costs related to specific projects, as well as fees paid to others that conduct certain research activities on the Company's behalf.

Debt Extinguishment

The Company accounts for the income or loss from extinguishment of debt in accordance with ASC 470, *Debt,* which indicates that for all extinguishment of debt, the difference between the reacquisition price and the net carrying amount of the debt being extinguished should be recognized as gain or loss when the debt is extinguished. The gain or loss from debt extinguishment is recorded in the consolidated statements of operations under "other income (expense)" as "gain (loss) from extinguishment of debt."

Stock-based Compensation

The Company accounts for stock-based employee compensation plans under the fair value recognition and measurement provisions of U.S. GAAP. Those provisions require all stock-based payments to employees, including grants of stock options and restricted stock units (RSUs), to be measured using the grant-date fair value of each award. The Company recognizes stock-based compensation expense net of expected forfeitures over each award's requisite service period, which is generally the vesting term. Expected forfeiture rates are based on the Company's historical experience. Stock-based compensation plans are described more fully in Note 12, "Stock-based Compensation".

Income Taxes

The Company is subject to income taxes in the United States and foreign jurisdictions and uses estimates to determine its provisions for income taxes. The Company uses the asset and liability method of accounting for income taxes, whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect for the year in which the differences are expected to affect taxable income.

Recognition of deferred tax assets is appropriate when realization of such assets is more likely than not. The Company recognizes a valuation allowance against its net deferred tax assets unless it is more likely than not that such deferred tax assets will be realized. This assessment requires judgement as to the likelihood and amounts of future taxable income by tax jurisdiction.

The Company applies the provisions of Financial Accounting Standards Board (FASB) guidance on accounting for uncertainty in income taxes. The Company assesses all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability, and the tax benefit to be recognized is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and the Company will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgement, and such judgements may change as new information becomes available.

Foreign Currency Translation

The assets and liabilities of foreign subsidiaries, where the local currency is the functional currency, are translated from their respective functional currencies into U.S. dollars at the rates in effect at each balance sheet date, and revenue and expense amounts are translated at average rates during each period, with resulting foreign currency translation adjustments recorded in other comprehensive loss, net of tax, in the consolidated statements of stockholders' deficit. As of December 31, 2017 and 2016, cumulative translation losses, net of tax, were $42.2 million and $40.9 million, respectively.

Where the U.S. dollar is the functional currency, remeasurement adjustments are recorded in other income (expense), net in the accompanying consolidated statements of operations. Net losses resulting from foreign exchange transactions were $0.4 million, $0.6 million, and $1.3 million for the years ended December 31, 2017, 2016, and 2015, respectively.

Recently Adopted Accounting Standards

During the year ended December 31, 2017 the Company adopted the following Accounting Standards Updates (ASUs):

- ASU 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory.* Under ASU 2015-11, inventory is measured at the lower of cost or net realizable value (NRV). NRV is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Under the previous guidance, inventory was measured at the lower of cost or market, with market defined as NRV less a normal profit margin.
- ASU 2016-06*, Derivatives and Hedging (Topic 815): Contingent Put and Call Options in Debt Instruments.* The Company did not elect a one-time option, as of January 1, 2017, to irrevocably elect to measure the Company's debt instruments at fair value with changes in fair value recognized in earnings.
- ASU 2016-09, *Compensation — Stock Compensation (Topic 718): Improvements to Employee Share-based Payment Accounting.* ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, classification on the statement of cash flows and an entity can now make an entity-wide election to either estimate the number of awards expected to vest or account for forfeitures when they occur. The Company elected to continue to estimate expected

forfeitures using historical experience and will revise its estimated forfeiture rate if actual forfeitures differ from initial estimates. Upon adoption, the Company recognized previously unrecognized excess tax benefits using the modified retrospective transition method. The previously unrecognized excess tax effects were recorded as a deferred tax asset, which was fully offset by a valuation allowance. Without the valuation allowance, the Company's deferred tax assets would have increased by $40.1 million.

None of the adopted ASUs had a material impact on the Company's consolidated financial statements and related disclosures.

Recently Issued Accounting Standards Not Yet Adopted

Revenue Recognition

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which will become effective for the Company beginning in the first quarter of 2018. The standard's core principle is that a reporting entity will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The FASB issued supplemental adoption guidance and clarification to ASU 2014-09 in March 2016, April 2016, May 2016 and December 2016 within ASU 2016-08, *Revenue from Contracts with Customers: Principal versus Agent Considerations*, ASU 2016-10, *Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing*, ASU 2016-12, *Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients*, and ASU 2016-20, *Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers*, respectively.

The Company is adopting these standards using the modified retrospective approach applied only to contracts that are not completed at the adoption date of January 1, 2018. The cumulative effect of adopting these standards will be recorded to retained earnings on January 1, 2018. The Company has made substantial progress towards completing its assessment of the effect of adoption and, based on that assessment, the standard will impact the measurement and timing of recognition of royalty revenues (previously referred to as value share) and the measurement and timing of recognition of certain variable incentive payments payable by the Company. Under the new standard, the Company will be required to measure the variable consideration in the transaction price of royalty revenues and accelerate recognition of royalty revenues that have been recognized during the period the royalty report was received to the periods during which the renewable product sales occur, subject to the constraint on variable consideration. The Company also will be required to measure certain variable incentive payments payable by the Company as part of the transaction price. Adoption of the standard will result in a pretax adjustment to retained earnings on January 1, 2018 ranging from a decrease of $1.0 million to an increase of $2.0 million, primarily from the measurement of the variable consideration in the transaction price of royalty revenues and the acceleration of royalty revenue recognition. Adoption of these standards also will result in additional revenue-related disclosures in the notes to the condensed consolidated financial statements for the first quarter of 2018.

Financial Instruments

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments-Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*, which changes the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. ASU 2016-01 requires, among other things, that equity investments (other than those accounted for using the equity method of accounting) be measured at fair value through earnings. However, entities can elect a measurement alternative if the equity investment does not have a readily determinable fair value. Under this alternative method, the equity investment is recorded at cost and remeasured to fair value when there is an observable transaction involving the same or similar equity investment or an impairment. ASU 2016-01 became effective January 1, 2018, and the transition provisions generally require adoption using the modified retrospective approach. However, ASU 2016-01 is applied prospectively to equity investments without a readily determinable fair value that exist as of the date of adoption. The election to apply to measurement alternative is made upon the adoption of ASU 2016-01, and subsequently upon the purchase or acquisition of an equity investment.

In February 2018, the FASB issued ASU 2018-03, *Technical Corrections and Improvements to Financial Instruments — Recognition and Measurement of Financial Assets and Financial Liabilities*. ASU 2018-03 provides reporting entities with the option to move from the measurement alternative to fair value through current earnings but stipulates that once the voluntary election is made to stop using the measurement alternative it can no longer be applied to any identical or similar investment from the same issuer. ASU 2018-03 also clarifies that when applying the measurement alternative to equity investments that do not have a readily determinable fair value the equity investment is remeasured to its fair value as of the date of the observable price/transaction. ASU 2018-03 is effective for fiscal years beginning after December 15, 2017, and interim periods beginning after June 15, 2018, but may be adopted concurrently with ASU 2016-01.

The Company will be adopting ASU 2016-01 and ASU 2018-03 concurrently on January 1, 2018. The Company is currently evaluating the adoption impact of these standards, including whether to elect the measurement alternative for the investment in the unregistered shares of SweeGen, Inc. The Company does not expect the impact of adoption to be material to the consolidated financial statements.

Leases

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842),* with fundamental changes as to how entities account for leases. Lessees will need to recognize a right-of-use asset and a lease liability for virtually all of their leases (other than leases that meet the definition of a short-term lease). The liability will be equal to the present value of lease payments. The asset will be based on the liability, subject to adjustment, such as for initial direct costs. Additional disclosures for leases will also be required. The accounting standard update will be effective beginning in the first quarter of fiscal 2019 using a modified retrospective approach, which requires lessees and lessors to recognize and measure leases at the beginning of the earliest period presented. The Company is in the initial stages of evaluating the impact of the new standard on its consolidated financial statements.

Classification of Cash Flow Elements

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230) — *Classification of Certain Cash Receipts and Cash Payments*. The new standard amends the existing standards for the statement of cash flows to provide guidance on the following cash flow issues: debt prepayment or debt extinguishment costs; settlement of zero-coupon or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies; distributions received from equity method investees; beneficial interests in securitization transactions; separately identifiable cash flows and application of the predominance principle; and restricted cash. ASU 2016-15 became effective January 1, 2018 with adoption required using the retrospective transition method. The Company is evaluating the impact that this standard will have on the consolidated statement of cash flows.

Income Tax Consequences of Intra-Entity Transfers of Assets Other Than Inventory

In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers Other than Inventory*, which requires companies to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs, rather than when the asset has been sold to an outside party. The Company will adopt the new standard effective January 1, 2018, using the modified retrospective transition approach through a cumulative-effect adjustment to retained earnings as of the effective date. A cumulative-effect adjustment will capture the write-off of income tax consequences deferred from past intra-entity transfers involving assets other than inventory, new deferred tax assets, and other liabilities for amounts not currently recognized under U.S. GAAP. Based on transactions up to December 31, 2017, the Company anticipates that the effect of adoption of ASU 2016-16 on the consolidated financial statements will be immaterial.

Restricted Cash in Statement of Cash Flows

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230): *Restricted Cash*, to address the diversity in the classification and presentation of changes in restricted cash in the statement of cash flows by requiring entities to combine the changes in cash and cash equivalents and restricted cash in one line. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash in the statement of cash flows. Additionally, if more than one line item is recorded on the balance sheet for cash and cash equivalents and restricted cash, a reconciliation between the statement of cash flows and balance sheet is required. ASU 2016-18 became effective January 1, 2018 with adoption required using the retrospective transition method. The Company does not expect the impact of adoption to be material to the consolidated statement of cash flows.

Derecognition of Nonfinancial Assets

In February 2017, the FASB issued ASU 2017-05, *Other Income — Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets,* which requires entities to apply certain recognition and measurement principles in ASC 606 when they derecognize nonfinancial assets and in substance nonfinancial assets, and the counterparty is not a customer. The guidance applies to: (1) contracts to transfer to a noncustomer a nonfinancial asset or group of nonfinancial assets, or an ownership interest in a consolidated subsidiary that does not meet the definition of a business and is not a not-for-profit activity; and (2) contributions of nonfinancial assets that are not a business to a joint venture or other noncontrolled investee. The accounting standard update will be effective beginning in the first quarter of fiscal 2018 on a modified retrospective basis. The Company is assessing the impact to its accounting practices and financial reporting procedures as a result of the issuance of this standard.

Financial Instruments with "Down Round" Features

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815): Accounting for Certain Financial Instruments with Down Round Features*. The amendments of this ASU update the classification analysis of certain equity-linked financial instruments, or embedded features, with down round features, as well as clarify existing disclosure requirements for equity-classified instruments. When determining whether certain financial instruments should be classified as liabilities or equity instruments, a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity's own stock. The accounting standard update will be effective beginning in the first quarter of fiscal 2019 using a modified retrospective approach. The Company is in the initial stages of evaluating the impact of the new standard on its consolidated financial statements.

2. Balance Sheet Details

Accounts Receivable, Net

December 31, (In thousands)	2017	2016
Accounts receivable	$19,572	$13,673
Related party accounts receivable	14,691	805
	34,263	14,478
Less: allowance for doubtful accounts	(642)	(501)
Total accounts receivable, net	$33,621	$13,977

Inventories

December 31, (In thousands)	2017	2016
Raw materials	$ 819	$3,159
Work in process	364	1,848
Finished goods	4,225	1,206
Total inventories	$5,408	$6,213

Property, Plant and Equipment, net

December 31, (In thousands)	2017	2016
Machinery and equipment	$ 49,277	$ 82,688
Leasehold improvements	40,036	38,785
Computers and software	9,555	9,585
Buildings	—	4,699
Furniture and office equipment, vehicles and land	3,415	2,957
Construction in progress	17,438	2,216
	119,721	140,930
Less: accumulated depreciation and amortization	(105,829)	(87,195)
Total property, plant and equipment, net	$ 13,892	$ 53,735

Property, plant and equipment, net includes $4.2 million and $3.1 million of machinery and equipment under capital leases as of December 31, 2017 and 2016, respectively. Accumulated amortization of assets under capital leases totaled $1.6 million and $0.6 million as of December 31, 2017 and 2016, respectively.

Depreciation and amortization expense, including amortization of assets under capital leases, was $11.4 million, $11.4 million and $12.9 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Losses (gains) on disposal of property, plant and equipment were $0.1 million, $(0.2) million and $0.2 million for the years ended December 31, 2017, 2016 and 2015, respectively. Such losses or gains were included in the line captioned "Other expense, net" in the consolidated statements of operations.

In December 2017, the Company's sold its Brotas production plant in Brazil to a unit of DSM Nutritional Products Ltd (together with its affiliates, DSM); see Note 13, "Divestiture" for details.

In 2016, the Company recorded an impairment charge of $7.3 million (in "Impairment of property, plant and equipment" in the consolidated statements of operations), related to assets used in a Brazilian joint venture and by a Brazilian contract manufacturer.

Other Assets

December 31, (In thousands)	2017	2016
Contingent consideration	$ 8,151	$ —
Prepaid royalty	7,409	—
Cost-method investment in SweeGen	3,233	—
Deposits	2,462	409
Goodwill	560	560
Other	825	1,366
Total other assets	$22,640	$2,335

Accrued and Other Current Liabilities

December 31, (In thousands)	2017	2016
Accrued interest	$ 8,213	$ 4,847
Payroll and related expenses	7,238	6,344
Tax-related liabilities	5,837	2,610
SMA relocation accrual	3,587	3,641
Other	2,633	5,792
Professional services	1,894	6,876
Total accrued and other current liabilities	$29,402	$30,110

Other Noncurrent Liabilities

December 31, (In thousands)	2017	2016
Deferred rent, net of current portion	$ 7,818	$ 8,906
Deferred revenue, net of current portion	383	6,650
Capital lease obligation, net of current portion	217	334
Accrued interest, net of current portion	—	5,542
Other liabilities	2,214	2,299
Total other noncurrent liabilities	$10,632	$23,731

3. Fair Value Measurement

Assets and liabilities are measured and reported at fair value per related accounting standards that define fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. An asset's or liability's level is based on the lowest level of input that is significant to the fair value measurement. Assets and liabilities carried at fair value are valued and disclosed in one of the following three levels of the valuation hierarchy:

- Level 1: Quoted market prices in active markets for identical assets or liabilities.
- Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.
- Level 3: Unobservable inputs that are not corroborated by market data.

As of December 31, 2017 and 2016, the Company's financial assets and financial liabilities measured at fair value on a recurring basis were classified within the fair value hierarchy as follows:

December 31, (In thousands)	2017				2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
Money market funds	$53,199	$—	$ —	$ 53,199	$1,549	$ —	$ —	$1,549
Certificates of deposit	7,813	—	—	7,813	1,373	—	—	1,373
Total assets measured and recorded at fair value	$61,012	$—	$ —	$ 61,012	$2,922	$ —	$ —	$2,922
Liabilities								
Embedded derivatives in connection with issuance of debt and equity instruments	$ —	$—	$ 4,203	$ 4,203	$ —	$ —	$2,283	$2,283
Freestanding derivative instruments in connection with issuance of equity instruments	—	—	115,775	115,775	—	—	1,852	1,852
Cross-currency interest rate swap derivative liability(1)	—	—	—	—	—	3,343	—	3,343
Total liabilities measured and recorded at fair value	$ —	$—	$119,978	$119,978	$ —	$3,343	$4,135	$7,478

(1) The balance of the cross-currency interest rate swap derivative liability at December 31, 2017 was zero, subsequent to the Company's December 2017 repayment in full of the Banco Pine loan.

There were no transfers between the levels during 2017 or 2016.

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgements and consider factors specific to the asset or liability. The fair values of money market funds and certificates of deposit are based on fair values of identical assets. The fair values of the loans payable, convertible notes, credit facilities and cross-currency interest rate swap are based on the present value of expected future cash flows and assumptions about current interest rates and the creditworthiness of the Company. The method of determining the fair value of the compound embedded derivative liabilities is described subsequently in this note. Market risk associated with the fixed and variable rate long-term loans payable, credit facilities and convertible notes relates to the potential reduction in fair value and negative impact to future earnings, from an increase in interest rates. Market risk associated with the compound embedded derivative liabilities relates to the potential reduction in fair value and negative impact to future earnings from a decrease in interest rates.

At December 31, 2017 and December 31, 2016, the carrying value of certain financial instruments, such as cash equivalents, accounts receivable, prepaid expenses and other current assets, accounts payable and other current accrued liabilities, approximate fair value due to their relatively short maturities and low market interest rates, if applicable.

Derivative Instruments

The following table provides a reconciliation of the beginning and ending liability balances associated with both freestanding and compound embedded derivatives measured at fair value using significant unobservable inputs (Level 3):

(in thousands)	2017	2016
Balance at January 1	$ 4,135	$ 46,430
Additions	130,957	2,050
(Gain) loss from change in fair value of derivative liabilities	31,600	(41,459)
Derecognition upon conversion or extinguishment	(46,714)	(2,886)
Balance at December 31	$119,978	$ 4,135

The liabilities associated with freestanding and compound embedded derivatives represent the fair value of the equity conversion options, make-whole provisions, down round conversion price or conversion rate adjustment provisions and antidilution provisions in some of the Company's debt, preferred stock, cash warrants and antidilution warrants; see Note 4, "Debt", and Note 6, "Stockholders' Deficit. There is no current observable market for these types of derivatives and, as such, the Company determined the fair value of the freestanding or embedded derivatives using the binomial lattice model. The binomial lattice model was used to value the embedded and freestanding derivatives.

A Monte Carlo simulation valuation model combines expected cash outflows with market-based assumptions regarding risk-adjusted yields, stock price volatility, probability of a change of control and the trading information of the Company's common stock into which the notes are or may be convertible. A binomial lattice model generates two probable outcomes — one up and another down — arising at each point in time, starting from the date of valuation until the maturity date.

A lattice model was used to determine if a convertible note or share of convertible preferred stock would be converted, called or held at each decision point. Within the lattice model, the following assumptions are made: (i) the convertible note or share of convertible preferred stock will be converted early if the conversion value is greater than the holding value and (ii) the convertible note or share of convertible preferred stock will be called if the holding value is greater than both (a) redemption price and (b) the conversion value at the time. If the convertible note or share of convertible preferred stock is called, the holder will maximize their value by finding the optimal decision between (1) redeeming at the redemption price and (2) converting the convertible note or share of convertible preferred stock. Using this lattice method, the Company valued the embedded and freestanding derivatives using the "with-and-without method", where the fair value of each related convertible note or share of convertible preferred stock including the embedded derivative is defined as the "with", and the fair value of the convertible note excluding the embedded derivatives is defined as the "without". This method estimates the fair value of the embedded and freestanding derivatives by looking at the difference in the values between each convertible note or share of convertible preferred stock with the embedded and freestanding derivatives and the fair value of such convertible note or share of convertible preferred stock without the embedded and freestanding derivatives. The lattice model uses the stock price, conversion price, maturity date, risk-free interest rate, estimated stock volatility and estimated credit spread. The Company marks the compound embedded derivatives to market due to the conversion price not being indexed to the Company's own stock.

The market-based assumptions and estimates used in valuing the compound embedded and freestanding derivative liabilities include amounts in the following ranges/amounts:

December 31,	2017	2016
Risk-free interest rate	1.68% – 2.40%	0.55% – 1.31%
Risk-adjusted yields	18.40% – 28.53%	12.80% – 22.93%
Stock price volatility	45% – 80%	45%
Probability of change in control	5%	5%
Stock price	$3.75	$10.95
Credit spread	16.63% – 26.70%	11.59% – 21.64%
Estimated conversion dates	2018 – 2025	2017 – 2019

Changes in valuation assumptions can have a significant impact on the valuation of the embedded and freestanding derivative liabilities. For example, all other things being equal, a decrease/increase in the Company's stock price, probability of change of control, credit spread, term to maturity/conversion or stock price volatility decreases/increases the valuation of the liabilities, whereas a decrease/increase in risk adjusted yields or risk-free interest rates increases/decreases the valuation of the liabilities. Certain of the convertible notes and shares of convertible preferred stock also include conversion price adjustment features and, for example, certain issuances of common stock by the Company at prices lower than the current conversion price result in a reduction of the conversion price of such notes or convertible preferred stock, which increases the value of the embedded and freestanding derivative liabilities; see Note 4, "Debt" for details.

In June 2012, the Company entered into a cross-currency interest rate swap arrangement with Banco Pine with respect to the repayment of R$22.0 million (approximately U.S. $6.6 million based on the exchange rate as of December 31, 2017) of the Banco Pine Note. The swap arrangement exchanged the principal and interest payments under the Banco Pine Note (see Note 4, "Debt") for alternative principal and interest payments that are subject to adjustment based on fluctuations in the foreign currency exchange rate between the U.S. dollar and Brazilian real. The swap had a fixed interest rate of 3.94%. Changes in the fair value of the swap were recognized in the consolidated statements of operations, in "Gain (loss) from change in fair value of derivative instruments". As of December 31, 2017, the balances of the loan and the associated cross-currency interest rate swap were zero.

On July 29, 2015, Maxwell (Mauritius) Pte Ltd (Temasek) exchanged its Tranche I Notes and Tranche II Notes (see the "August 2013 Financing Convertible Notes" subsection of Note 4, "Debt") and Total exchanged $70 million in principal amount of R&D Notes (see the "R&D Note" subsection of Note 4, "Debt") for shares of the company's common stock (the "Exchange"). As part of the Exchange transaction, the Company granted a warrant to Temasek to purchase the Company's common stock (the Temasek Funding Warrant). The terms of the Temasek Funding Warrant provide for an adjustment to the number of shares issuable in the future based on the number of any additional shares for which certain of the Company's outstanding convertible promissory notes may become exercisable as a result of a reduction to the conversion price of such notes, including down-round provisions. As a result of the future adjustment feature (for reduction to the conversion price of outstanding convertible notes), the Company determined the Temasek Funding Warrant would not meet the conditions in ASC 815-40-15 to be considered indexed to the Company's own equity. Consequently, the Temasek Funding Warrant is a derivative and is marked to market each reporting period. The Temasek Funding Warrant is valued using a Black-Scholes valuation model with the following assumptions (in addition to the Company's share price):

	Initial recognition (July 29, 2015)
Expected dividend yield	—%
Risk-free interest rate	2%
Expected term (in years)	10.0
Expected volatility	74%

The Company recognized a derivative liability for the Temasek Funding Warrant of $19.4 million on July 29, 2015. On December 15, 2015, Temasek exercised the Temasek Funding Warrant for cash of $0.1 million. At the day of exercise, the Temasek Funding Warrant was valued at $18.9 million, which was the fair value of the 12.7 million shares issued upon exercise of the warrant. In February and May 2016, as a result of adjustments to the conversion price of the Tranche I Notes and the Tranche II Notes (see Note 4, "Debt"), the Temasek Funding Warrant became exercisable for an additional 164,169 shares of common stock. Following the issuance by the Company of shares of convertible preferred stock and warrants to purchase common stock in May 2017 and August 2017 (see Note 6, "Stockholders' Deficit), and corresponding adjustments to the conversion price of the Tranche I Notes and Tranche II Notes (see Note 4, "Debt"), the Temasek Funding Warrant became exercisable for an additional 1,125,755 and 600,062 shares of common stock, respectively.

The May 2017 Series A Preferred Stock and Series B Preferred Stock, the August 2017 DSM Offering and the August 2017 Vivo Offering (see Note 6, “Stockholder’s Deficit”) included make whole provisions, which are accounted for as embedded derivatives. Cash and antidilution warrants, classified as freestanding financial instruments, were also issued in conjunction with the financings and are classified as derivative liabilities. The total derivative liability recorded for the May 2017 Warrants, May 2017 Offering make whole provision, August 2017 DSM Offering warrants and make whole provision and August 2017 Vivo Offering was $123.0 million. The value of the embedded and freestanding derivatives at December 31, 2017 was $120.0 million. The Company recorded a gain of $1.1 million in fiscal year 2017 for the change in value and extinguishments of these derivative liabilities. See Note 6, “Stockholders’ Deficit” for additional details.

Derivative instruments measured at fair value on a recurring basis as of December 31, 2017 and 2016, and their classification on the consolidated balance sheets are as follows:

December 31, (In thousands)	2017	2016
Swap obligation, at fair market value:		
Current portion	$ —	$ 584
Noncurrent portion	—	2,759
Total swap obligation	—	3,343
Freestanding or compound embedded derivative liabilities, at fair value	119,978	4,135
Total derivative liabilities	$119,978	$7,478

Assets and Liabilities Recorded at Carrying Value

Financial Assets and Liabilities

The carrying amounts of certain financial instruments, such as cash equivalents, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities and low market interest rates, if applicable. Loans payable, credit facilities and convertible notes are recorded at carrying value, which is representative of fair value at the date of acquisition. The Company estimates the fair value of loans payable and credit facilities using observable market-based inputs (Level 2) and estimates the fair value of convertible notes based on rates currently offered for instruments with similar maturities and terms (Level 3). The carrying amount of the Company’s debt at December 31, 2017 was $165.4 million. The fair value of such debt at December 31, 2017 was $156.9 million, and was determined by discounting expected cash flows using the Company’s weighted-average cost of capital of 27%.

Cost-method Investment

In April 2017, the Company received 850,115 unregistered shares of SweeGen common stock in satisfaction of the payment obligation of Phyto Tech Corp. (d/b/a Blue California) under the Intellectual Property License and Strain Access Agreement entered into between Blue California and the Company in December 2016. The Company obtained an independent valuation of the shares that established acquisition-date fair value of $3.2 million using an income approach under which cash flows were discounted to present value at 40%.

4. Debt

December 31, (In thousands)	2017 Principal	2017 Unamortized Debt (Discount) Premium	2017 Net	2016 Principal	2016 Unamortized Debt (Discount) Premium	2016 Net
Convertible notes payable						
2015 Rule 144A convertible notes	$ 37,887	$ (6,872)	$ 31,015	$ 40,478	$(17,712)	$ 22,766
2014 Rule 144A convertible notes	24,004	(3,170)	20,834	27,404	(5,399)	22,005
December 2016, April 2017, June 2017 and December 2017 convertible notes	5,000	(25)	4,975	10,000	(78)	9,922
August 2013 financing convertible notes	4,009	(2,918)	1,091	13,826	(4,579)	9,247
Fidelity notes	—	—	—	15,309	(326)	14,983
	70,900	(12,985)	57,915	107,017	(28,094)	78,923
Related party convertible notes payable						
August 2013 financing convertible notes	21,711	897	22,608	19,781	2,033	21,814
2014 Rule 144A convertible notes	24,705	(3,784)	20,921	24,705	(7,380)	17,325
R&D note	3,700	(18)	3,682	3,700	(80)	3,620
	50,116	(2,905)	47,211	48,186	(5,427)	42,759
Loans payable and credit facilities						
Senior secured loan facility	28,566	(253)	28,313	28,566	(908)	27,658
Ginkgo notes	12,000	(4,983)	7,017	8,500	—	8,500
Nossa Caixa and Banco Pine notes	—	—	—	11,135	—	11,135
Other loans payable	6,463	(1,277)	5,186	8,305	(1,361)	6,944
Guanfu credit facility	—	—	—	25,000	(5,436)	19,564
Other credit facilities	381	—	381	1,869	—	1,869
	47,410	(6,513)	40,897	83,375	(7,705)	75,670
Related party loans payable						
DSM note	25,000	(8,039)	16,961	—	—	—
February 2016 private placement	2,000	—	2,000	20,000	(1,309)	18,691
Other DSM loan	393	—	393	—	—	—
June and October 2016 private placements	—	—	—	11,000	—	11,000
	27,393	(8,039)	19,354	31,000	(1,309)	29,691
Total debt	$195,819	$(30,442)	165,377	$269,578	$(42,535)	227,043
Less: current portion			(56,943)			(59,155)
Long-term debt, net of current portion			$108,434			$167,888

Future minimum payments under the debt agreements as of December 31, 2017 are as follows:

Years Ending December 31, (In thousands)	Convertible Notes	Related Party Convertible Notes	Loans Payable and Credit Facilities	Related Party Loans Payable	Total
2018	$ 11,060	$ 20,835	$ 36,465	$ 5,423	$ 73,783
2019	69,334	35,238	1,704	2,500	108,776
2020	—	—	1,627	2,500	4,127
2021	—	—	1,627	27,500	29,127
2022	—	—	13,417	—	13,417
Thereafter	—	—	2,528	—	2,528
Total future minimum payments(1)	80,394	56,073	57,368	37,923	231,758
Less: amount representing interest(2)	(22,479)	(8,862)	(16,471)	(18,569)	(66,381)
Present value of minimum debt payments	57,915	47,211	40,897	19,354	165,377
Less: current portion	(4,932)	(17,626)	(31,992)	(2,393)	(56,943)
Noncurrent portion of debt	$ 52,983	$ 29,585	$ 8,905	$ 16,961	$108,434

(1) Including $5.8 million in 2018 related to the $5 Million Note that, at the Company's election, may be settled in cash or shares, and an aggregate of $25.0 million in 2018 and 2019 that a holder of the Tranche Notes has agreed to convert to common stock at maturity, subject to there being no default under the terms of the debt; see "Maturity Treatment Agreement" below for details.

(2) Including net debt discount of $30.4 million that will be amortized to interest expense under the effective interest method over the term of the debt.

Convertible Notes Payable

2015 Rule 144A Convertible Notes

In October 2015, the Company sold $57.6 million aggregate principal amount of 9.50% convertible senior notes due 2019 (the 2015 144A Notes) to certain qualified institutional buyers in a private placement. Net proceeds from the offering were $54.4 million after payment of offering expenses and placement agent fees, which together are treated as a debt discount and are being amortized over the remaining loan term. The Company used $18.3 million of the net proceeds to repurchase $22.9 million aggregate principal amount of outstanding 2014 144A Notes as discussed below. The 2015 144A Notes bear interest at a rate of 9.50% per year, payable semiannually in arrears on April 15 and October 15 of each year. Interest on the 2015 144A Notes is payable, at the Company's option, entirely in cash or entirely in common stock valued at 92.5% of a market-based price. The Company elected to make the April 15, 2016 and 2017 interest payments in shares of common stock and the October 15, 2016 and 2017 interest payments in cash. The 2015 144A Notes will mature on April 15, 2019 unless earlier converted or repurchased.

The 2015 144A Notes are convertible into shares of the Company's common stock at a conversion rate of 58.2076 shares per $1,000 principal amount of 2015 144A Notes (which conversion rate is subject to adjustment in certain circumstances), representing an effective conversion price of approximately $17.18 per share as of December 31, 2017. If converted prior to maturity, noteholders are entitled to receive a payment (the Early Conversion Payment) equal to the present value of the remaining scheduled payments of interest on the 2015 144A Notes being converted through April 15, 2019, computed using a discount rate of 0.75%. The Company may make the Early Conversion Payment, at its election, either in cash or, subject to certain conditions, in common stock valued at 92.5% of a market-based price. Through December 31, 2017, the Company has elected to make each Early Conversion Payment in shares of common stock.

In January 2017, the Company issued an additional $19.1 million in aggregate principal amount of 2015 144A Notes (the Additional 2015 144A Notes) in exchange for the cancellation of $15.3 million in aggregate principal amount of outstanding Fidelity Notes, as further described below under "Fidelity

Notes," with the same terms as the 2015 144A Notes; provided, that the aggregate number of shares issued with respect to the Additional 2015 144A Notes (and any other transaction aggregated for such purpose) cannot exceed 3,652,935 shares of common stock (the Additional 2015 144A Notes Exchange Cap) without prior stockholder approval. The exchange was accounted for as an extinguishment of debt, resulting in a $0.1 million gain in the year ended December 31, 2017.

In May 2017, the Company exchanged $3.7 million in aggregate principal amount of 2015 144A Notes for shares of its Series B 17.38% Convertible Preferred Stock and warrants to purchase common stock, as described in more detail in Note 6, "Stockholders' Deficit". The exchange was accounted for as an extinguishment of debt, resulting in a $2.0 million loss in the year ended December 31, 2017.

2014 Rule 144A Convertible Notes

In May 2014, the Company sold $75.0 million in aggregate principal amount of 6.50% Convertible Senior Notes due 2019 (the 2014 144A Notes) to qualified institutional buyers in a private placement. The net proceeds from the offering were $72.0 million after payment of initial purchaser discounts and offering expenses, which together are treated as a debt discount and are being amortized over the remaining loan term. The Company used $9.7 million of the net proceeds to repay convertible notes previously issued to an affiliate of Total S.A. (together with its affiliates, Total), representing the amount of 2014 144A Notes purchased by Total. Certain of the Company's affiliated entities (including Total) purchased $24.7 million in aggregate principal amount of 2014 144A Notes. The 2014 144A Notes bear interest at an annual rate of 6.5%, payable semiannually in arrears on May 15 and November 15 of each year in cash. The 2014 144A Notes mature on May 15, 2019, unless earlier converted or repurchased.

The 2014 144A Notes are convertible into shares of the Company's common stock at a conversion rate of 17.8073 shares per $1,000 principal amount of 2014 144A Notes (which conversion rate is subject to adjustment in certain circumstances), representing an effective conversion price of approximately $56.16 per share as of December 31, 2017. See the "Maturity Treatment Agreement" section below for details of the impact of that agreement on the 2014 144A Notes.

In May 2017, the Company exchanged $3.4 million in aggregate principal amount of 2014 144A Notes for shares of its Series B 17.38% Convertible Preferred Stock and warrants to purchase common stock, as described in more detail in Note 6, "Stockholders' Deficit". The exchange was accounted for as an extinguishment, resulting in a $1.8 million loss for the year ended December 31, 2017.

Maturity Treatment Agreement

In July 2015, the Company entered into an Exchange Agreement (the 2015 Exchange Agreement) with Total and Temasek pursuant to which Temasek exchanged $71.0 million in principal amount of outstanding Tranche Notes and Total exchanged $70.0 million in principal amount of outstanding convertible notes for shares of the Company's common stock at a price of $34.50 per share (2015 Exchange). At the closing of the 2015 Exchange, the Company, Total and Temasek also entered into a Maturity Treatment Agreement dated July 29, 2015, pursuant to which Total and Temasek agreed to convert any Tranche Notes or 2014 144A Notes held by them that were not canceled in the 2015 Exchange (Remaining Notes) into shares of the Company's common stock in accordance with the terms of such Remaining Notes at or prior to maturity, provided that certain events of default had not occurred with respect to the applicable Remaining Notes. In May 2017, the Company entered into separate letter agreements with each of Total and Temasek, pursuant to which the Company agreed that the Remaining Notes consisting of 2014 144A Notes held by Total ($9.7 million in principal amount as of December 31, 2017) and Temasek ($10.0 million in principal amount as of December 31, 2017) would no longer be subject to mandatory conversion at or prior to the maturity of such Remaining Notes. Accordingly, the Company will be required to pay any portion of such Remaining Notes that remain outstanding at maturity in cash in accordance with the terms of such Remaining Notes. As of December 31, 2017, after giving effect to such letter agreements, Temasek did not hold any Remaining Notes and Total held $21.8 million in principal amount of Remaining Notes (consisting of Tranche Notes). The 2015 Exchange Agreement contains customary terms, covenants and restrictions, including a limit on the Company's debt of the greater of $200 million or 50% of its consolidated total assets and the Company's secured debt of the greater of $125 million or 30% of its consolidated total assets, subject to certain exceptions. In addition, the Maturity Treatment Agreement provides that, as long as Total or Temasek holds at least $5 million of Remaining Notes, the Company shall not incur any material debt, prepay any material debt or materially amend any debt.

December 2016, April 2017, June 2017 and December 2017 Convertible Notes

In December 2016, the Company entered into a securities purchase agreement (December 2016 Purchase Agreement) with a private investor (Purchaser) and issued and sold a convertible note in principal amount $10.0 million (the December 2016 Convertible Note) to the Purchaser, resulting in net proceeds to the Company of $9.9 million. The December 2016 Convertible Note was fully repaid in May 2017, and no gain or loss was recorded upon extinguishment.

In April 2017, the Company entered into a securities purchase agreement (April 2017 Purchase Agreement) with the Purchaser relating to the sale of up to an additional $15.0 million aggregate principal amount of convertible notes (the April 2017 Convertible Notes). In April 2017, the Company issued and sold an April 2017 Convertible Note in the principal amount of $7.0 million to the Purchaser, for proceeds to the Company of $6.9 million. This note was fully repaid in May 2017, and a $1.4 million loss was recorded upon extinguishment for the year ended December 31, 2017.

In May 2017, in connection with the Purchaser agreeing to extend the time period for certain obligations of the Company under the April 2017 Purchase Agreement, the Company and the Purchaser entered into an Amendment Agreement (Amendment Agreement) with respect to the December 2016 Purchase Agreement, the December 2016 Convertible Note, the April 2017 Purchase Agreement and the April 2017 Convertible Notes (the Amended Notes). Pursuant to the Amendment Agreement, the Company and the Purchaser agreed, among other things, to (i) reduce the price at which the Company may pay monthly installments under the Amended Notes in common stock to a 20% discount to a market-based price and (ii) reduce the price floor related to any such payment to 70% of a market-based price. No accounting impact was recorded in May 2017.

In June 2017, the Company issued and sold an Amended Note under the April 2017 Purchase Agreement in the principal amount of $3.0 million to the Purchaser, for proceeds to the Company of $3.0 million. This note was fully repaid in August 2017, and a $0.5 million loss was recorded upon extinguishment.

In December 2017, in connection with the Purchaser exercising its right to purchase the remaining Notes under the April 2017 Purchase Agreement, the Company issued and sold an Amended Note under the April 2017 Purchase Agreement in the principal amount of $5.0 million (the $5 Million Note) to the Purchaser, for proceeds to the Company of $5.0 million. In connection with the Purchaser granting certain waivers under the April 2017 Purchase Agreement and the December 2016 Purchase Agreement, the parties agreed to provide for a maturity date of June 1, 2018 for the $5 Million Note. Upon issuance of the $5 Million Note, all of the Notes provided for in the April 2017 Purchase Agreement had been issued and sold. The $5 Million Note is payable in monthly installments, in either cash at 118% of such installment amount or, at the Company's option, subject to the satisfaction of certain equity conditions, shares of common stock at a discount to the then-current market price, subject to a price floor, as described above. In addition, in the event that the Company elects to pay all or any portion of a monthly installment in common stock, the holder of the $5 Million Note has the right to require that the Company repay in common stock an additional amount of the Amended Notes not to exceed 50% of the aggregate amount by which the dollar-weighted trading volume of the Company's common stock for all trading days during the applicable installment period exceeds $200,000. The Company has the right to redeem the $5 Million Note for cash in full or in part at any time at a price equal to 118% of the principal amount being redeemed. The $5 Million Note is convertible at the election of the holder into common stock at a conversion price of $28.50 per share as of December 31, 2017 (which conversion price is subject to adjustment in certain circumstances). The conversion of the $5 Million Note and the repayment of the $5 Million Note in common stock is subject to a beneficial ownership limitation of 4.99% (or such other percentage not to exceed 9.99%, provided that any increase will not be effective until 61 days after notice thereof from the holder), and the aggregate number of shares issued with respect to the $5 Million Note (and any other transaction aggregated for such purpose) cannot exceed 3,645,118 shares of common stock without prior stockholder approval. For as long as it holds the $5 Million Note or shares of common stock issued under the

$5 Million Note, the holder may not sell any shares of common stock at a price less than the price floor applicable to the installment period with respect to which such shares were issued. The April 2017 Purchase Agreement and the $5 Million Note contain customary terms, covenants and restrictions, including certain events of default after which the $5 Million Note may become due and payable immediately. At December 31, 2017, the principal balance outstanding was $5.0 million.

August 2013 Financing Convertible Notes

In August 2013, the Company entered into a Securities Purchase Agreement (the August 2013 SPA) with Total and Temasek to sell up to $73.0 million in convertible notes in private placements (the August 2013 Financing). The August 2013 SPA provided for the August 2013 Financing to be divided into two tranches, each with differing closing conditions. The Tranche I Notes are due sixty months from the date of issuance (October 16, 2018). Interest accrues on the Tranche I Notes at 5% per six months, compounded semiannually, and is payable in kind by adding to the principal or in cash. Through December 31, 2017, the Company has elected to pay interest on the Tranche I Notes in kind. The Tranche I Notes may be prepaid in full or in part without penalty or premium every six months at the date of payment of the semiannual coupon.

The Tranche II Notes are due sixty months from the date of issuance (January 15, 2019). Interest accrues on the Tranche II Notes at 10% per annum, compounded annually, and is payable in kind by adding to the principal or in cash. Through December 31, 2017, the Company has elected to pay interest on the Tranche II Notes in kind.

The conversion price of the Tranche Notes is $5.2977 per share as of December 31, 2017 (which conversion price is subject to adjustment in certain circumstances, including certain price-based anti-dilution adjustments). The August 2013 SPA and the Tranche Notes contain customary terms, covenants and restrictions, including a limit on the Company's debt of the greater of $200 million or 50% of its consolidated total assets and the Company's secured debt of the greater of $125 million or 30% of its consolidated total assets, subject to certain exceptions. The SPA also requires the Company to obtain the consent of the holders of a majority of these notes before completing any change of control transaction or purchasing assets in one transaction or in a series of related transactions in an amount greater than $20.0 million, in each case while the Tranche Notes are outstanding. In addition, the Tranche Notes contain certain events of default after which the Tranche Notes may become due and payable immediately.

Fidelity Notes

In 2012, the Company sold $25.0 million in aggregate principal amount of convertible promissory notes to entities affiliated with Fidelity (the Fidelity Notes) in a private placement. The Fidelity Notes had a March 1, 2017 maturity date, bore interest at 3.0% per annum and had an initial conversion price equal to $106.02 per share of the Company's common stock. In October 2015, as discussed above, the Company issued $57.6 million of 2015 144A Notes and used approximately $8.8 million of the proceeds therefrom to repurchase $9.7 million aggregate principal amount of outstanding Fidelity Notes. In January 2017, the Company issued $19.1 million in aggregate principal amount of its 2015 144A Notes to the holders of the Fidelity Notes in exchange for the cancellation of the $15.3 million of outstanding Fidelity Notes in a private exchange (the Fidelity Exchange), representing an exchange ratio of approximately 1:1.25 (i.e., each $1.00 of Fidelity Notes was exchanged for approximately $1.25 of additional 2015 144A Notes). The Company did not receive any cash proceeds from the Fidelity Exchange. The Fidelity Exchange was accounted for as an extinguishment of debt, and a gain of $0.1 million was recognized during the year ended December 31, 2017.

Related Party Convertible Notes Payable

August 2013 Financing Convertible Notes

Certain of the August 2013 Financing Convertible Notes are held by related parties. See Note 11, "Related Party Transactions" for details.

2014 Rule 144A Convertible Notes

Certain of the 2014 Rule 144A Convertible Notes are held by related parties. See Note 11, "Related Party Transactions" for details.

R&D Note

In March 2016, as a result of the restructuring of the Company's fuels joint venture with Total, Total Amyris BioSolutions B.V., the Company issued to Total an unsecured convertible note (the R&D Note) in the principal amount of $3.7 million, representing the remaining portion of the $105.0 million convertible note facility between the Company and Total initially established in 2012. In February 2017, the Company and Total agreed to extend the maturity of the R&D Note from March 1, 2017 to May 15, 2017. In May 2017, the Company and Total amended the R&D Note to (i) extend the maturity from May 15, 2017 to March 31, 2018, (ii) increase the interest rate from 1.5% to 12.0%, beginning May 16, 2017, and (iii) provide that accrued and unpaid interest will be payable on December 31, 2017 and the maturity date. In March 2018, the Company and Total amended the R&D Note to extend the maturity from March 31, 2018 to May 31, 2018, with accrued and unpaid interest payable on March 31, 2018 and May 31, 2018. The R&D Note is convertible into the Company's common stock, at a conversion price of $46.20 per share as of December 31, 2017 (which conversion price is subject to adjustment in certain circumstances), (i) within 10 trading days prior to maturity, (ii) on a change of control of the Company, and (iii) on a default by the Company. The R&D Note contains customary terms, covenants and restrictions, including a limit on the Company's debt of the greater of $200 million or 50% of its consolidated total assets and the Company's secured debt of the greater of $125 million or 30% of its consolidated total assets, subject to certain exceptions. In addition, the R&D Note contains certain events of default after which the R&D Note may become due and payable immediately.

Loans Payable and Credit Facilities

Senior Secured Loan Facility

In March 2014, the Company entered into a Loan and Security Agreement (LSA) with Hercules Technology Growth Capital, Inc. (Hercules) to make available to the Company a secured loan facility (the Senior Secured Loan Facility) in an initial aggregate principal amount of up to $25.0 million. The LSA was subsequently amended in June 2014, March 2015 and November 2015 to (i) extend additional credit facilities to the Company in an aggregate amount of up to $31.0 million, of which $16.0 million was drawn by the Company, (ii) extend the maturity date of the loans, and (iii) remove, add and/or modify certain covenants and agreements under the LSA. In connection with such amendments, the Company paid aggregate fees of $1.5 million to Hercules.

In June 2016, Hercules transferred and assigned its rights and obligations under the Senior Secured Loan Facility to Stegodon Corporation (Stegodon), an affiliate of Ginkgo Bioworks, Inc. (Ginkgo), and in connection with the execution by the Company and Ginkgo of an initial strategic partnership agreement, the Company received a deferment from Stegodon of all scheduled principal repayments under the Senior Secured Loan Facility, as well as a waiver of a covenant in the LSA requiring the Company to maintain unrestricted, unencumbered cash in defined U.S. bank accounts in an amount equal to at least 50% of the principal amount of the loans then outstanding under the Senior Secured Loan Facility (the Minimum Cash Covenant). In October 2016, in connection with the execution by the Company and Ginkgo of a definitive collaboration agreement (the Ginkgo Collaboration Agreement), the Company and Stegodon entered into a fourth amendment of the LSA, pursuant to which the parties agreed to (i) extend the maturity date of the Senior Secured Loan Facility, subject to the Company extending the maturity of certain of its other outstanding indebtedness (the Extension Condition), (ii) make the Senior Secured Loan Facility interest-only until maturity, subject to the requirement that the Company apply certain monies received by it under the Ginkgo Collaboration Agreement to repay the amounts outstanding under the Senior Secured Loan Facility, up to a maximum amount of $1 million per month and (iii) waive the Minimum Cash Covenant until the maturity date of the Senior Secured Loan Facility.

In January 2017, the maturity date of the Senior Secured Loan Facility was extended to October 15, 2018 due to the Extension Condition being met as a result of the Fidelity Exchange; see above under "Fidelity Notes" for additional details. This modification of the Senior Secured Loan Facility was accounted for as a troubled debt restructuring with the future undiscounted cash flows being greater than the carrying value of the debt prior to extension. No gain was recorded, and a new effective interest rate was established based on the carrying value of the debt and the revised future cash flows. In addition, in January 2017, in connection with Stegodon granting certain waivers and releases under the LSA in connection with the formation of the Aprinnova JV (as defined below) (see Note 7, "Variable-interest Entities and Unconsolidated Investments"), the Company and Stegodon entered into a fifth amendment of the LSA, pursuant to which the Company agreed to apply additional monies received by it under the Ginkgo Collaboration Agreement towards repayment of the outstanding loans under the Senior Secured Loan Facility, up to a maximum amount of $3 million.

In December 2017, in connection with Stegodon granting waivers of certain covenants under the LSA in connection with the sale of the Company's Brotas production facility to DSM (see Note 13, "Divestiture"), the Company and Stegodon entered into a sixth amendment of the LSA, pursuant to which the parties agreed, among other things, to (i) amend the maturity date of the LSA from October 15, 2018 to July 15, 2018 (the LSA Maturity Date), (ii) require the Company to make principal repayments of $1.3 million in January 2018 and $5.5 million in March 2018, prior to the July 15, 2018 LSA Maturity Date, (iii) remove the requirement that the Company apply certain monies received by the Company under the Ginkgo Collaboration Agreement towards repayment of the outstanding loans under the Senior Secured Loan Facility, and (iv) require the Company to pledge 65% of its equity interest in SMA and 100% of its equity interest in Novvi LLC as security for the loans under the LSA. The sixth amendment of the LSA was accounted for as a troubled debt restructuring. No gain was recorded, and a new effective interest rate was established based on the carrying value of the debt and the revised future cash flows.

On March 30, 2018, the Company and Stegodon amended the Senior Secured Loan Facility to extend the date for a $5.5 million principal payment from March 31, 2018 to May 31, 2018. Under the extension, the interest rate from April 1, 2018 through the date of payment for the $5.5 million principal will be the previously agreed interest rate plus 5.0%.

Certain of the loans under the Senior Secured Loan Facility bear interest at a rate per annum equal to the greater of (i) the prime rate reported in the Wall Street Journal plus 6.25% and (ii) 9.50%, and certain of the loans under the Senior Secured Loan Facility bear interest at a rate per annum equal to the greater of (i) the prime rate reported in the Wall Street Journal plus 5.25% and (ii) 8.5%, in each case payable monthly. The Company may prepay the loans under the Senior Secured Loan Facility in whole at a price equal to 101% of the principal amount plus an end of term charge equal to $3.3 million. In addition, the Company (i) recorded a fee of $425,000 payable to Stegodon during the year ended December 31, 2017 and (ii) agreed to pay a fee of $450,000 to Stegodon on or prior to the maturity date of the Senior Secured Loan Facility, in connection with Stegodon granting certain waivers and releases under the LSA in connection with the formation of the Aprinnova JV; see Note 7, "Variable-interest Entities and Unconsolidated Investments". The fees paid to Stegodon are treated as a debt discount and are being amortized over the remaining loan term. The Senior Secured Loan Facility is secured by first-priority liens on substantially all of the Company's assets, including Company intellectual property. The LSA includes customary terms, covenants and restrictions, including restrictions on the Company's ability to incur additional debt and liens, subject to certain exceptions. In addition, the LSA contains certain events of default after which the loans thereunder may become due and payable immediately.

Ginkgo Notes

In November 2017, the Company issued an unsecured promissory note in the principal amount of $12.0 million to Ginkgo (the November 2017 Ginkgo Note) in connection with the termination of the Ginkgo Collaboration Agreement, which is described in Note 10, "Significant Revenue Agreements." The November 2017 Ginkgo Note bears interest at 10.5% per annum, payable monthly, and has a maturity date of October 19, 2022. The November 2017 Ginkgo Note represents advanced payments to be made to Ginkgo under the Partnership Agreement entered into in 2017. The Company determined the fair value of the Note to be $6.8 million, which has been recorded as a prepaid expense. The remaining $5.2 million is treated as a debt discount and will be amortized over the loan term. The November 2017 Ginkgo Note may be prepaid in full without penalty or premium at any time, provided that certain payments have been made under the Company's partnership agreement with Ginkgo. The November 2017 Ginkgo Note contains customary terms, covenants and restrictions, including certain events of default after which the note may become due and payable immediately.

In October 2016, the Company issued and sold a secured promissory note in the principal amount of $8.5 million to Ginkgo. In April 2017, the Company issued a further secured promissory note to Ginkgo, in the principal amount of $3.0 million, in satisfaction of certain payments owed by the Company under the Ginkgo Collaboration Agreement. Each of the notes bore interest at 13.50% per annum, payable at maturity, and had a maturity date of May 15, 2017. The notes were repaid in full at maturity and the security interests relating thereto were terminated, and no gain or loss was realized upon extinguishment.

Nossa Caixa and Banco Pine Notes

In July 2012, Amyris Brasil entered into a Note of Bank Credit and a Fiduciary Conveyance of Movable Goods Agreement (or, together, the July 2012 Bank Agreements) with each of Nossa Caixa Desenvolvimento (Nossa Caixa) and Banco Pine S.A. (Banco Pine).

Under the July 2012 Bank Agreements, the Company could borrow an aggregate of R$52.0 million (U.S. $15.7 million based on the exchange rate as of December 31, 2017) as financing for capital expenditures relating to the Company's manufacturing facility located in Brotas, Brazil. The funds for the loans were provided by the Brazilian Development Bank (BNDES), but were guaranteed by the lenders. Under the July 2012 Bank Agreements, the Company pledged certain farnesene production assets as collateral for loans (separately, the Nossa Caixa Note and the Banco Pine Note) totaling R$52.0 million (U.S. $15.7 million based on the exchange rate as of December 31, 2017). The Company's total acquisition cost for such pledged assets was R$68.0 million (U.S. $20.6 million based on the exchange rate as of December 31, 2017). The loans have a final maturity date of July 15, 2022 and bore interest at 5.5% per annum.

As of December 31, 2017, outstanding balances for Nossa Caixa and Banco Pine Notes were zero.

Other Loans Payable

Salisbury Note: In December 2016, in connection with the Company's purchase of a manufacturing facility in Leland, North Carolina and related assets (the Glycotech Assets), the Company issued a purchase money promissory note in the principal amount of $3.5 million (the Salisbury Note) in favor of Salisbury Partners, LLC. The Salisbury Note (i) bore interest at 5.0% per year, (ii) had a term of 13 years, (iii) was payable in equal monthly installments of principal and interest beginning on January 1, 2017 and (iv) was secured by a purchase money lien on the Glycotech Assets. In January 2017, the Salisbury Note was repaid with proceeds from the Nikko Note (as defined below) and the security interest relating thereto was terminated. No gain or loss was recorded upon termination, as the Nikko Note was substantially similar, and the Salisbury Note was considered to be exchanged for the Nikko Note.

Nikko Note: In December 2016, in connection with the Company's formation of its cosmetics joint venture (the Aprinnova JV) with Nikko Chemicals Co., Ltd. (Nikko), as discussed in Note 7, "Variable-interest Entities and Unconsolidated Investments," Nikko made a loan to the Company in the principal amount of $3.9 million and the Company issued a promissory note (the Nikko Note) to Nikko in an equal principal amount. The proceeds of the Nikko Note were used to satisfy the Company's remaining liabilities related to the Company's purchase of the Glycotech Assets, including liabilities under the Salisbury Note. The Nikko Note (i) bears interest at 5% per year, (ii) has a term of 13 years, (iii) is payable in equal monthly installments of principal and interest beginning on January 1, 2017 and (iv) is secured by a first-priority lien on 10% of the Aprinnova JV interests owned by the Company. In addition, (i) the Company repaid $400,000 of the Nikko Note in equal monthly installments of $100,000 as required on January 1, 2017, February 1, 2017, March 1, 2017 and April 1, 2017 and (ii) the Company is required to repay the Nikko Note with any profits distributed to the Company by the Aprinnova JV, beginning with the distributions for the fourth fiscal year of the Aprinnova JV, until the Nikko Note is fully repaid. The Nikko Note may be prepaid in full or in part at any time without penalty or premium. The Nikko Note contains customary terms and provisions, including certain events of default after which the Nikko Note may become due and payable immediately.

Aprinnova Working Capital Loans: In February 2017, in connection with the formation of the Aprinnova JV, Nikko made a working capital loan to the Aprinnova JV in the principal amount of $1.5 million and received a promissory note from the Aprinnova JV in an equal amount (the First

Aprinnova Note). The First Aprinnova Note was repayable in $375,000 installments plus accrued interest on May 1, 2017, August 1, 2017, November 1, 2017 and February 1, 2018. The First Aprinnova Note was fully repaid in February 2018. In August 2017, Nikko made a second working capital loan to the Aprinnova JV in the principal amount of $1.5 million and received a promissory note from the Aprinnova JV in an equal amount (the Second Aprinnova Note). The Second Aprinnova Note is payable in full on July 31, 2018, with interest payable quarterly. Both notes bear interest at 2.75% per annum.

Guanfu Credit Facility

In October 2016, the Company and Guanfu Holding Co., Ltd. (Guanfu), an existing commercial partner of the Company, entered into a credit agreement to make available to the Company an unsecured credit facility (the Guanfu Credit Facility) in an aggregate principal amount of up to $25.0 million; in connection therewith, the Company granted to Guanfu the global exclusive purchase right with respect to a certain Company product. On December 31, 2016, the Company borrowed the full amount under the Guanfu Credit Facility and issued to Guanfu a note in the principal amount of $25.0 million (the Guanfu Note). The Guanfu Note had a term of five years and accrued interest at 10% per annum, payable quarterly beginning March 31, 2017. In December 2017, the Company repaid the Guanfu Note in full with the proceeds of the DSM Note (as defined below).

Other Credit Facilities

FINEP Credit Facility: In November 2010, the Company entered into a credit facility with Financiadora de Estudos e Projetos (FINEP Credit Facility). The FINEP Credit Facility was extended to partially fund expenses related to the Company's research and development project on sugarcane-based biodiesel and provided for loans of up to an aggregate principal amount of R$6.4 million (U.S. $1.9 million based on the exchange rate as of December 31, 2017). Loaned amounts bore interest at 5% per annum. The Company borrowed R$6.4 million against the credit facility. As of December 31, 2017, the outstanding balance was zero.

BNDES Credit Facility: In December 2011, the Company entered into a credit facility with the Brazilian Development Bank (BNDES Credit Facility) in the amount of R$22.4 million (U.S. $6.8 million based on the exchange rate as of December 31, 2017). The BNDES Credit Facility was extended as project financing for a production site in Brazil. Loaned amounts bore interest at 7% per annum. The Company borrowed R$19.1 million against the credit facility and paid the final installment in December 2017.

Related Party Loans Payable

DSM Note

In December 2017, the Company and DSM entered into a credit agreement (the DSM Credit Agreement) to make available to the Company an unsecured credit facility of $25.0 million. On December 28, 2017, the Company borrowed $25.0 million under the DSM Credit Agreement, representing the entire amount available thereunder, and issued a promissory note to DSM in an equal principal amount (the DSM Note). The Company used the proceeds of the amounts borrowed under the DSM Credit Agreement to repay all outstanding principal under the Guanfu Note. Due to the multiple-element arrangement entered into with DSM, the Company fair valued the DSM Note to determine the arrangement consideration that should be allocated to the DSM Note. The fair value of the DSM Note was discounted using a Company specific weighted average cost of capital rate that resulted in a debt discount of $8.0 million. The debt discount will be amortized over the loan term.

The DSM Note (i) is an unsecured obligation of the Company, (ii) matures on December 31, 2021 and (iii) accrues interest from and including December 28, 2017 at 10% per annum, payable quarterly beginning on December 31, 2017. The DSM Note may be prepaid in full or in part at any time without penalty or premium. In addition, the Company is required to use certain payments received by the Company from DSM under the Value Sharing Agreement (see Note 10, "Significant Revenue Agreements") to repay amounts outstanding under the DSM Credit Agreement. The DSM Credit Agreement and the DSM Note contain customary terms, covenants and restrictions, including certain events of default after which the DSM Note may become due and payable immediately.

February 2016 Private Placement

In February 2016, the Company issued and sold $20.0 million in aggregate principal amount of promissory notes (the February 2016 Notes), as well as warrants to purchase an aggregate of 190,477 shares of the Company's common stock, exercisable at a price of $0.15 per share as of December 31, 2017 (the February 2016 Warrants), resulting in aggregate proceeds to the Company of $20.0 million, in a private placement to certain existing stockholders of the Company that are affiliated with members of the Company's Board of Directors (the Board): Foris Ventures, LLC (Foris, an entity affiliated with director John Doerr of Kleiner Perkins Caufield & Byers, a current stockholder), which purchased $16.0 million aggregate principal amount of the February 2016 Notes and warrants to purchase 152,381 shares of the Company's common stock; Naxyris S.A. (Naxyris, an investment vehicle owned by Naxos Capital Partners SCA Sicar; director Carole Piwnica is Director of NAXOS UK, which is affiliated with Naxos Capital Partners SCA Sicar, and was designated as a director of the Company by Naxyris), which purchased $2.0 million aggregate principal amount of the February 2016 Notes and warrants to purchase 19,048 shares of the Company's common stock; and Biolding Investment SA (Biolding, a fund affiliated with director HH Sheikh Abdullah bin Khalifa Al Thani, who was designated as a director of the Company by Biolding), which purchased $2.0 million aggregate principal amount of the February 2016 Notes and warrants to purchase 19,048 shares of the Company's common stock.

The February 2016 Notes bear interest at 13.50% per annum and had an initial maturity date of May 15, 2017. In May 2017, the February 2016 Notes purchased by Foris and Naxyris were exchanged for shares of the Company's Series B 17.38% Convertible Preferred Stock and warrants to purchase common stock; see Note 6, "Stockholders' Deficit".

In May 2017, the Company and Biolding amended the February 2016 Note issued to Biolding (the Biolding Note) to extend the maturity of the Biolding Note to November 15, 2017, and on November 13, 2017, the Company and Biolding further amended the Biolding Note to extend maturity to December 31, 2017. The Company paid the Biolding Note in full on January 2, 2018.

The February 2016 Warrants each have five-year terms. The February 2016 Warrants purchased by Naxyris were fully exercised in the year ended December 31, 2017, and a gain of $0.1 million was recorded in earnings. As of December 31, 2017, none of the February 2016 Warrants purchased by Foris or Biolding have been exercised.

June and October 2016 Private Placements

In June and October 2016, the Company issued and sold secured promissory notes to Foris in an aggregate principal amount of $11.0 million (the Foris Notes) in private placements. The Foris Notes bore interest at 13.50% per annum and had a maturity date of May 15, 2017. In May 2017, the Foris Notes were exchanged for shares of the Company's Series B 17.38% Convertible Preferred Stock and warrants to purchase common stock (see Note 6, "Stockholders' Deficit"), and the security interests relating thereto were terminated. The debt exchange for shares did not result in a gain or loss, as the transaction was with a related party.

Letters of Credit

In June 2012, the Company entered into a letter of credit agreement for $1.0 million under which it provided a letter of credit to the landlord for its headquarters in Emeryville, California in order to cover the security deposit on the lease. This letter of credit is secured by a certificate of deposit. Accordingly, the Company has $1.0 million of restricted cash, noncurrent in connection with this arrangement as of December 31, 2017 and 2016.

5. Mezzanine Equity

Mezzanine equity at December 31, 2017 and 2016 is comprised of proceeds from common shares sold on May 10, 2016 to the Bill & Melinda Gates Foundation (the Gates Foundation). On April 8, 2016, the Company entered into a Securities Purchase Agreement with the Gates Foundation, pursuant to which the Company agreed to sell and issue 292,398 shares of its common stock to the Gates Foundation in a private placement at a purchase price per share of $17.10, the average of the daily closing price per share of the

Company's common stock on the NASDAQ Stock Market for the twenty consecutive trading days ending on April 7, 2016, for aggregate proceeds to the Company of approximately $5.0 million (the Gates Foundation Investment). The Securities Purchase Agreement includes customary representations, warranties and covenants of the parties.

In connection with the entry into the Securities Purchase Agreement, on April 8, 2016, the Company and the Gates Foundation entered into a Charitable Purposes Letter Agreement, pursuant to which the Company agreed to expend an aggregate amount not less than the amount of the Gates Foundation Investment to develop a yeast strain that produces artemisinic acid and/or amorphadiene at a low cost and to supply such artemisinic acid and amorphadiene to companies qualified to convert artemisinic acid and amorphadiene to artemisinin for inclusion in artemisinin combination therapies used to treat malaria commencing in 2017. The Company is currently conducting the project. If the Company defaults in its obligation to use the proceeds from the Gates Foundation Investment as set forth above or defaults under certain other commitments in the Charitable Purposes Letter Agreement, the Gates Foundation will have the right to request that the Company redeem, or facilitate the purchase by a third party of, the Gates Foundation Investment shares then held by the Gates Foundation at a price per share equal to the greater of (i) the closing price of the Company's common stock on the trading day prior to the redemption or purchase, as applicable, or (ii) an amount equal to $17.10 plus a compounded annual return of 10%.

6. Stockholders' Deficit

May 2017 Offerings

In May 2017, the Company issued and sold an aggregate of 22,140 shares of Series A Preferred Stock, 70,904 shares of Series B Preferred Stock, and warrants to purchase an aggregate of 7,384,190 shares of common stock at an exercise price of $7.80 per share, warrants to purchase an aggregate of 7,384,190 shares of common stock at an exercise price of $9.30 per share, and warrants to purchase a number of shares of common stock sufficient to provide full-ratchet anti-dilution protection with respect to the effective price paid for the common stock underlying the Series A Preferred Stock and Series B Preferred Stock (collectively, the May 2017 Warrants) in separate offerings, certain of which were registered under the Securities Act or others of which were private placements (collectively, the May 2017 Offerings).

The net proceeds to the Company from the May 2017 Offerings were $50.7 million after payment of offering expenses and placement agent fees. The Series A Preferred Stock and May 2017 Warrants relating thereto were sold to the purchasers thereof in exchange for aggregate cash consideration of $22.1 million, and the Series B Preferred Stock and May 2017 Warrants relating thereto were sold to the purchasers thereof in exchange for (i) aggregate cash consideration of $30.7 million and (ii) the cancellation of $40.2 million of outstanding indebtedness (including accrued interest thereon) owed by the Company to certain purchasers, of which $33.1 million was from related parties, as further described below.

Series A Preferred Stock

Each share of Series A Preferred Stock has a stated value of $1,000 and is convertible at any time, at the option of the holder, into common stock at a conversion price of $17.25 per share (the Preferred Stock Conversion Rate). The Preferred Stock Conversion Rate is subject to adjustment in the event of any dividends or distributions of common stock, or any stock split, reverse stock split, recapitalization, reorganization or similar transaction. If not previously converted at the option of the holder, each share of Series A Preferred Stock automatically converted on October 9, 2017, the 90th day following the date that the Company announced that Stockholder Approval was obtained and effected, subject to the May 2017 Offerings Beneficial Ownership Limitation (as defined below).

Dividends, at a rate per year equal to 17.38% of the stated value of the Series A Preferred Stock, will be payable semiannually from the issuance of the Series A Preferred Stock until the tenth anniversary of the date of issuance, on each October 15 and April 15, beginning October 15, 2017, on a cumulative basis, at the Company's option, in cash, out of any funds legally available for the payment of dividends, or, subject to the satisfaction of certain conditions, in Common Stock at the Preferred Stock Conversion Rate, or a combination thereof. In addition, upon the conversion of the Series A Preferred Stock prior to the tenth anniversary of the date of issuance, the holders of the Series Preferred A Stock shall be entitled to a payment equal to $1,738 per $1,000 of stated value of the Series A Preferred Stock, less the amount of all prior semiannual dividends paid on such converted Series A Preferred Stock prior to the relevant conversion date (the Make-Whole Payment), at the Company's option, in cash, out of any funds legally available for the payment of dividends, or, subject to the satisfaction of certain conditions, in common stock at the Preferred Stock Conversion Rate, or a combination thereof. If the Company elects to pay any dividend in the form of cash, it shall provide each holder with notice of such election not later than the first day of the month of prior to the applicable dividend payment date.

Unless and until converted into common stock in accordance with its terms, the Series A Preferred Stock has no voting rights, other than as required by law or with respect to matters specifically affecting the Series A Preferred Stock.

Upon any liquidation, dissolution or winding-up of the Company, the holders of the Series A Preferred Stock shall be entitled to receive out of the assets of the Company the same amount that a holder of Common Stock would receive if the Series A Preferred Stock were fully converted to common stock immediately prior to such liquidation, dissolution or winding-up (without regard to whether such Series A Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of Common Stock.

The conversion of the Series A Preferred Stock is subject to a beneficial ownership limitation of 4.99% (or such other percentage not to exceed 9.99%, provided that any increase will not be effective until 61 days after notice thereof by the holder) of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of such Series A Preferred Stock (the May 2017 Offerings Beneficial Ownership Limitation). In addition, prior to obtaining the July 2017 Stockholder Approval (as defined below), the aggregate number of shares issued with respect to the Series A Preferred Stock (and any other transaction aggregated for such purpose) could not exceed 3,792,778 shares of common stock (the May 2017 Exchange Cap).

The Series A Preferred Stock is classified as permanent equity, as the Company controls all actions or events required to settle the optional and mandatory conversion feature in shares. The Make-Whole Payment was determined to be an embedded derivative requiring bifurcation and separate recognition as a derivative liability recognized at its fair value as of the issuance date with subsequent changes in fair value recorded in earnings until the Series A Preferred Stock is converted into common stock and the Make-Whole Payment is paid or until the Make-Whole Payment is paid through declared dividends or cash. A derivative liability was recognized at fair value on the date of issuance for the Make-Whole Payment in the amount of $11.0 million. The Series A Preferred Stock also contains a beneficial conversion feature which was recognized up to the amount of $0.6 million of proceeds allocated to the preferred stock. Net proceeds allocated to the Series A Preferred Stock were $0.

As of December 31, 2017, 22,140 shares of Series A Preferred Stock have been converted into common stock (with the Make-Whole Payment in each case being made in the form of common stock) and zero shares of Series A Preferred Stock were outstanding. For the year ended December 31, 2017, the Company recognized a gain of $10.5 million for the reduction in fair value of the derivative liabilities in connection with the 22,140 shares of Series A Preferred Stock converted into common stock.

Series B Preferred Stock

The Series B Preferred Stock has substantially identical terms to the Series A Preferred Stock, except that (i) the conversion of the Series B Preferred Stock was subject to the July 2017 Stockholder Approval and (ii) the May 2017 Offerings Beneficial Ownership Limitation does not apply to DSM. The Series B Preferred Stock is classified as permanent equity at December 31, 2017, which is a change from the mezzanine classification at June 30, 2017. As described in more detail below under "July 2017 Stockholder Approval," in July 2017 the Company's stockholders approved removing a restriction preventing the Series B Preferred Stock issued in the May 2017 Offerings from being convertible into common stock. As a result of the July 2017 Stockholder Approval, the Company now controls all actions or events required to settle an optional or mandatory conversion feature in shares and has reclassified $12.8 million from mezzanine to permanent equity.

The investors that purchased shares of the Series B Preferred Stock included related parties affiliated with members of the Board: Foris exchanged an aggregate principal amount of $27.0 million of indebtedness, plus accrued interest thereon, for 30,729 shares of Series B Preferred Stock and May 2017 Warrants to purchase 4,877,386 shares of Common Stock and Naxyris exchanged an aggregate principal amount of $2.0 million of indebtedness, plus accrued interest thereon, for 2,333 shares of Series B Preferred Stock and May 2017 Warrants to purchase 370,404 shares of common stock. The fair value of the Series B Preferred Stock, embedded make whole payment and related warrants exceeded the carrying value of the related party debt and accrued interest exchanged by $8.6 million which was recorded as a reduction to Additional Paid in Capital and considered a deemed dividend, increasing net loss attributable to Amyris, Inc. common stockholders.

The investors that purchased shares of the Series B Preferred Stock also included non-related party holders of the Company's 2014 144A Notes and 2015 144A Notes. These investors exchanged all or a portion of their holding of such indebtedness, including accrued interest thereon, representing an aggregate of $3.4 million of 2014 144A Notes and $3.7 million of 2015 144A Notes, for Series B Preferred Stock and May 2017 Warrants in the May 2017 Offerings. The fair value of the Series B Preferred Stock, embedded make whole payment and related warrants exceeded the carrying value of the debt and accrued interest exchanged by $1.9 million, which was recognized as a loss on extinguishment of debt in other income (expense).

Upon the closing of the May 2017 Offerings, all of such exchanged indebtedness was canceled and the agreements relating thereto, including any note purchase agreements or unsecured or secured promissory notes (including any security interest relating thereto), were terminated, except to the extent such investors or other investors retain a portion of such indebtedness.

The Series B Preferred Stock issued to DSM in the May 2017 Offerings contains a contingent beneficial conversion feature that was recognized in the three months ending September 30, 2017 upon the July 2017 Stockholder Approval, which eliminated the contingency. As a result, $0.6 million was recorded as a reduction to Additional Paid in Capital and was considered a deemed dividend, increasing net loss attributable to Amyris, Inc. common stockholders. The conversion feature (the right to negotiate the Second Tranche Funding Option) is not a separate unit of account requiring bifurcation.

As of December 31, 2017, 86,691 shares of Series B Preferred Stock (including the Series B Preferred Stock issued in the August 2017 DSM Offering) had been converted into common stock (with the Make-Whole Payment in each case being made in the form of common stock) and 9,213 shares of Series B Preferred Stock were outstanding. A derivative liability was recognized at fair value on the date of issuance for the make whole payment in the amount of $34.7 million. Changes in the fair value of this derivative from the date of issuance through December 31, 2017 have been recorded in earnings. Issuance costs of $1.2 million were netted against the proceeds. Additional issuance costs of $0.2 million were expensed as debt extinguishment costs for debt that was exchanged in the May 2017 Offerings. For the year ended December 31, 2017, the Company recognized a gain of $26.7 million for the reduction in fair value of the derivative liabilities in connection with the 86,691 shares of Series B Preferred Stock converted into common stock.

May 2017 Warrants

The Company issued to each investor in the May 2017 Offerings warrants to purchase a number of shares of common stock equal to 100% of the shares of common stock into which such investor's shares of Series A Preferred Stock or Series B Preferred Stock were initially convertible (including shares of common stock issuable as payment of dividends or the Make-Whole Payment, assuming that all such dividends and the Make-Whole Payment are made in common stock), representing warrants to purchase 14,768,380 shares of common stock in the aggregate for all investors (collectively, the May 2017 Cash Warrants). The exercise price of the May 2017 Cash Warrants is subject to standard adjustments as well as full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the three-year period following the issuance of such warrants (the May 2017 Dilution Period) at a per share price less than the then-current exercise price of the May 2017 Cash Warrants, subject to certain exceptions. As of December 31, 2017, the exercise prices of the May 2017 Cash Warrants were $4.40 per share. As of December 31, 2017, no May 2017 Cash Warrants had been exercised.

In addition, the Company issued to each investor a warrant, with an exercise price of $0.0015 per share as of December 31, 2017 (collectively, the May 2017 Dilution Warrants), to purchase a number of shares of common stock sufficient to provide the investor with full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the May 2017 Dilution Period at a per share price less than $6.30, the effective per share price paid by the investors for the shares of common stock issuable upon conversion of their Series A Preferred Stock or Series B Preferred Stock (including shares of common stock issuable as payment of dividends or the Make-Whole Payment, assuming that all such dividends and the Make-Whole Payment are made in common stock) subject to certain exceptions. As of December 31, 2017, the May 2017 Dilution Warrants were exercisable for an aggregate of 6,377,466 shares, of which 3,103,278 were exercised, resulting in a $9.6 million reduction in the derivative liabilities.

The May 2017 Warrants each have a term of five years from the date such warrants initially became exercisable upon the receipt and effectiveness of the July 2017 Stockholder Approval. The exercise of the May 2017 Warrants (other than the May 2017 Warrants held by DSM) is subject to the May 2017 Offerings Beneficial Ownership Limitation. The May 2017 Cash Warrants are freestanding financial instruments that are accounted for as derivative liabilities and recognized at their fair value on the date of issuance of $39.5 million. As of December 31, 2017, the fair value of the May 2017 Cash Warrants was $34.1 million based on an independent third-party appraisal using Monte Carlo simulation and Black-Scholes-Merton option value approaches. For the year ended December 31, 2017, the Company recorded a gain of $5.4 million to reflect change in fair value of the May 2017 Cash Warrants. Subsequent changes to the fair value of the May 2017 Cash Warrants will continue to be recorded in earnings until the warrants are exercised or expire in July 2022.

The full-ratchet anti-dilution protection of the May 2017 Cash Warrants are also freestanding financial instruments that have been accounted for as derivative liabilities and recognized at their fair value on the date of issuance of $4.4 million. As of December 31, 2017, the fair value of the full-ratchet anti-dilution protection feature of the May 2017 Cash Warrants was $40.6 million. For the year ended December 31, 2017, the Company recorded a loss of $45.7 million to reflect change in fair value of the derivative liability. Future changes in fair value of the derivative liability will continue to be recorded in earnings until the warrants are exercised or expire in July 2022.

July 2017 Stockholder Approval

In connection with the May 2017 Offerings, the Company agreed to solicit from its stockholders (i) any approval required by the rules and regulations of the NASDAQ Stock Market, including without limitation for the issuance of common stock upon conversion of the Series A Preferred Stock in excess of the May 2017 Exchange Cap, upon conversion of the Series B Preferred Stock and upon exercise of the May 2017 Warrants (the NASDAQ Approval) and (ii) approval to effect the Reverse Stock Split (collectively, the July 2017 Stockholder Approval) at an annual or special meeting of stockholders to be held on or prior to July 10, 2017, and to use commercially reasonable efforts to secure the July 2017 Stockholder Approval. The Reverse Stock Split was approved by the Company's stockholders in May 2017 and the NASDAQ Approval was obtained on July 7, 2017.

August 2017 DSM Offering

On August 7, 2017, the Company issued and sold the following securities to DSM in a private placement (the August 2017 DSM Offering):

- 25,000 shares of Series B Preferred Stock (the August 2017 DSM Series B Preferred Stock) at a price of $1,000 per share;
- a warrant to purchase 3,968,116 shares of common stock at an exercise price of $6.30 per share expiring in five years (August 2017 DSM Cash Warrant); and
- the August 2017 DSM Dilution Warrant (as described below).

Net proceeds to the Company were $25.9 million after payment of offering expenses and the allocation of total fair value received to the elements in the arrangement.

The exercise price of the August 2017 DSM Cash Warrant is subject to standard adjustments as well as full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the three-year period following August 7, 2017 (the DSM Dilution Period) at a per share price less than the then-current exercise price of the August 2017 DSM Cash Warrant, subject to certain exceptions.

The August 2017 DSM Dilution Warrant allows DSM to purchase a number of shares of common stock sufficient to provide DSM with full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the DSM Dilution Period at a per share price less than $6.30, the effective per share price paid by DSM for the shares of common stock issuable upon conversion of its Series B Preferred Stock (including shares of common stock issuable as payment of dividends or the Make-Whole Payment (as defined below), assuming that all such dividends and the Make-Whole Payment are made in common stock), subject to certain exceptions and subject to a price floor of $0.10 per share (the Dilution Floor). The August 2017 DSM Dilution Warrant expires five years from the date it is initially exercisable.

The effectiveness of the anti-dilution adjustment provision of the August 2017 DSM Cash Warrant and the exercise of the August 2017 DSM Dilution Warrant are subject to the August 2017 Stockholder Approval (as defined below). As of December 31, 2017, the August 2017 DSM Cash Warrant had not been exercised for any shares and the August 2017 DSM Dilution Warrant was not exercisable for any shares.

In connection with the August 2017 DSM Offering, the Company also agreed that, subject to certain exceptions, it would not (i) issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock prior to October 31, 2017, (ii) effect any issuance of securities involving a variable rate transaction until May 11, 2018 or (iii) issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock at a price below the Dilution Floor without DSM's consent.

In connection with the August 2017 DSM Offering, the Company and DSM also entered into an amendment to the stockholder agreement dated May 11, 2017 (the DSM Stockholder Agreement) between the Company and DSM (the Amended and Restated DSM Stockholder Agreement). Under the DSM Stockholder Agreement, DSM was granted the right to designate one director selected by DSM, subject to certain restrictions and a minimum beneficial ownership level of 4.5%, to the Board. Furthermore, DSM has the right to purchase additional shares of capital stock of the Company in connection with a sale of equity or equity-linked securities by the Company in a capital raising transaction for cash, subject to certain exceptions, to maintain its proportionate ownership percentage in the Company. Pursuant to the DSM Stockholder Agreement, DSM agreed not to sell or transfer any of the Series B Preferred Stock or warrants purchased by DSM in the May 2017 Offerings (as defined below), or any shares of common stock issuable upon conversion or exercise thereof, other than to its affiliates, without the consent of the Company through May 2018 and to any competitor of the Company thereafter. DSM also agreed that, subject to certain exceptions, until three months after there is no DSM director on the Board, DSM will not, without the prior consent of the Board, acquire common stock or rights to acquire common stock that would result in DSM beneficially owning more than 33% of the Company's outstanding voting securities at the time of acquisition. Under the DSM Stockholder Agreement, the Company agreed to use its commercially reasonable efforts to register, via one or more registration statements filed with the Securities and Exchange Commission (the SEC) under the Securities Act of 1933, as amended (the Securities Act), the shares of common stock issuable upon conversion or exercise of the securities purchased by DSM in the May 2017 Offerings. The Amended and Restated DSM Stockholder Agreement provides that (i) DSM has the right to designate a second director to the Board, subject to certain restrictions and a minimum beneficial ownership level of 10%, and (ii) the shares of common stock issuable upon conversion or exercise of the securities purchased by DSM in the August 2017 DSM Offering are (a) entitled to the registration rights provided for in the DSM Stockholder Agreement and (b) subject to the transfer restrictions set forth in the DSM Stockholder Agreement.

In addition, pursuant to the Amended and Restated DSM Stockholder Agreement, the Company and DSM agreed to negotiate in good faith regarding an agreement concerning the development of certain products in the Health and Nutrition field and, in the event that the parties did not reach such agreement prior to 90 days after the closing of the August 2017 DSM Offering (the August 2017 DSM Closing),

(a) certain exclusive negotiating rights granted to DSM in connection with the entry into the DSM Stockholder Agreement would expire and (b) on the first anniversary of the August 2017 DSM Closing and each subsequent anniversary thereof, the Company would make a $5.0 million cash payment to DSM, provided that the aggregate amount of such payments would not exceed $25.0 million. In September 2017, the Company and DSM entered into such agreement, and in connection therewith an intellectual property escrow agreement relating to certain intellectual property licenses granted by the Company to DSM upon the August 2017 DSM Closing became effective.

In connection with the August 2017 DSM Offering and its $25.9 million in net proceeds, the Company also entered into a separate intellectual property license with DSM for consideration of $9.0 million in cash, which DSM remitted to the Company on October 28, 2017, and a credit letter (the DSM Credit Letter) to be applied against future collaboration and value share payments owed by DSM to the Company beginning in 2018. The DSM Credit Letter had a fair value of $7.1 million and was recorded as deferred revenue on the transaction date. The total fixed consideration of $34.0 million was allocated to each of the August 2017 DSM Series B Preferred Stock, Make Whole Payment, August 2017 DSM Cash Warrant, August 2017 DSM Dilution Warrant and DSM Credit Letter at fair value based on level 3 inputs. The August 2017 DSM Series B Preferred Stock was recognized at its fair value on the date of issuance of $5.5 million, net of issuance costs of $0.2 million. The Make-Whole Payment is an embedded derivative and was initially recognized at its fair value of $9.9 million. The August 2017 DSM Cash Warrant and August 2017 DSM Dilution Warrant are freestanding financial instruments and have been recognized at their fair value of $10.6 million. The Make Whole Payment, August 2017 DSM Cash Warrant and August 2017 DSM Dilution Warrant have been reported together as derivative liabilities. Changes in the fair value and extinguishments of these derivatives from the date of issuance through December 31, 2017 have been recorded in earnings, with a $2.4 million gain recorded for the year ended December 31, 2017. As of December 31, all of the preferred shares have been converted into common stock, and no preferred shares under the August 2017 DSM Offering remained outstanding. None of the August 2017 DSM Cash warrant or August 2017 DSM Dilution Warrant have been exercised as of December 31, 2017. The Make Whole Payment compound embedded derivative's value was reduced to zero at December 31, 2017 due to the conversion of the preferred shares into common. A gain of $9.9 million was recognized in earnings resulting from the Make Whole Payment.

The DSM Credit Letter was reported as deferred revenue and its fair value was determined based on the assumptions that DSM would realize its credit over the next 18 months to 4 years with a 50% to 90% likelihood the credit will be utilized, fully discounted at the Company's 8.6% average cost of debt. After allocating the $34.0 million in fixed consideration to the financial instruments noted above and the DSM Credit Letter, $0.7 million was available for recognition as revenue related to the intellectual property licenses delivered to DSM during the year ended December 31, 2017. The DSM Credit Letter was terminated in December 2017, resulting in the reversal of a $7.3 million liability previously recorded as consideration for the DSM License and Collaboration transaction; see Note 10, "Significant Revenue Agreements" for further details.

August 2017 Vivo Offering

On August 3, 2017, the Company issued and sold the following securities to affiliates of Vivo Capital (collectively, Vivo) in a private placement (the August 2017 Vivo Offering):

- 2,826,711 shares of common stock at a price of $4.26 per share;
- 12,958 shares of Series D Preferred Stock at a price of $1,000 per share;
- warrants to purchase an aggregate of 5,575,118 shares of common stock at an exercise price of $6.39 per share, expiring in five years (the August 2017 Vivo Cash Warrants); and
- the August 2017 Vivo Dilution Warrants (as described below).

Net proceeds to the Company were $24.8 million after payment of offering expenses.

Each share of Series D Preferred Stock has a stated value of $1,000 and, subject to the August 2017 Vivo Offering Beneficial Ownership Limitation (as defined below), is convertible at any time, at the option of the holders, into common stock at a conversion price of $4.26 per share. The Series D Conversion Rate is subject to adjustment in the event of any dividends or distributions of the common stock, or any stock split, reverse stock split, recapitalization, reorganization or similar transaction.

The conversion of the Series D Preferred Stock is subject to a beneficial ownership limitation of 9.99% (the August 2017 Vivo Offering Beneficial Ownership Limitation), which limitation may be waived by the holders on 61 days' prior notice.

Prior to declaring any dividend or other distribution of its assets to holders of common stock, the Company shall first declare a dividend per share on the Series D Preferred Stock equal to $0.0001 per share. In addition, the Series D Preferred Stock will be entitled to participate with the common stock on an as-converted basis with respect to any dividends or other distributions to holders of common stock. There were no conversions or dividends declared as of December 31, 2017.

Unless and until converted into common stock in accordance with its terms, the Series D Preferred Stock has no voting rights, other than as required by law or with respect to matters specifically affecting the Series D Preferred Stock. The Series D Preferred Stock is classified as permanent equity, as the Company controls all actions or events required to settle the optional conversion feature in shares.

The August 2017 Vivo Cash Warrants and August 2017 Vivo Dilution Warrants are freestanding derivative instruments in connection with the issuance of equity instruments, which have been recorded as derivative liabilities. These warrants have been recognized at their fair value of $13.0 million as determined by management with the assistance of an independent third party appraisal based on level 3 inputs. Changes in the fair value of these derivative liabilities from the date of issuance through December 31, 2017 have been recorded in earnings, with a $3.1 million loss recorded for the year ended December 31, 2017. The remaining $12.0 million in proceeds received was allocated on a relative fair value basis, resulting in $5.5 million of proceeds being allocated to the common stock sold in the August 2017 Vivo Offering and $6.2 million allocated to the Series D Preferred Stock, net of $0.2 million in issuance costs. The Series D Preferred Stock includes a beneficial conversion feature of $5.8 million as the full fair value of the Series D Preferred Stock of $12.0 million was greater than the $6.2 million allocated to the Series D Preferred Stock.

In the event of a Fundamental Transaction, the holders of the Series D Preferred Stock will have the right to receive the consideration receivable as a result of such Fundamental Transaction by a holder of the number of shares of common stock for which the Series D Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to whether such Series D Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock. A Fundamental Transaction is defined in the Certificate of Designation of Preferences, Rights and Limitations relating to the Series D Preferred Stock as any of the following: (i) merger with or consolidation into another legal entity; (ii) sale, lease, license, assignment, transfer or other disposition of all or substantially all of the Company's assets in one or a series of related transactions; (iii) purchase offer, tender offer or exchange offer of the Company's common stock pursuant to which holders of the Company's common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding common stock; (iv) reclassification, reorganization or recapitalization of the Company's stock; or (v) stock or share purchase agreement that results in another party acquiring more than 50% of the Company's outstanding shares of common stock.

Upon any liquidation, dissolution or winding-up of the Company, the holders of the Series D Preferred Stock shall be entitled to receive out of the assets of the Company the same amount that a holder of common stock would receive if the Series D Preferred Stock were fully converted to common stock immediately prior to such liquidation, dissolution or winding-up (without regard to whether such Series D Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of common stock.

The exercise price of the August 2017 Vivo Cash Warrants is subject to standard adjustments as well as full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the three-year period following August 3, 2017 (the Vivo Dilution Period) at a per share price less than the then-current exercise price of the August 2017 Vivo Cash Warrants, subject to certain exceptions.

The August 2017 Vivo Dilution Warrants allow Vivo to purchase a number of shares of common stock sufficient to provide Vivo with full-ratchet anti-dilution protection for any issuance by the Company of equity or equity-linked securities during the Vivo Dilution Period at a per share price less than $4.26, the effective per share price paid by Vivo for the shares of common stock issuable upon conversion of the Series D Preferred Stock, subject to certain exceptions and subject to the Dilution Floor. The August 2017 Vivo Dilution Warrants expire five years from the date they are initially exercisable.

The effectiveness of the anti-dilution adjustment provision of the August 2017 Vivo Cash Warrants and the exercise of the August 2017 Vivo Dilution Warrants were subject to the August 2017 Stockholder Approval (as defined below). As of December 31, 2017, none of the August 2017 Vivo Cash Warrants had been exercised and the August 2017 Vivo Dilution Warrants were not exercisable for any shares.

In connection with the August 2017 Vivo Offering, the Company agreed that it would not issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock at a price below the Dilution Floor without Vivo's consent.

In connection with the August 2017 Vivo Offering, the Company and Vivo also entered into a Stockholder Agreement (the Vivo Stockholder Agreement) setting forth certain rights and obligations of Vivo and the Company. Pursuant to the Vivo Stockholder Agreement, Vivo will have the right, subject to certain restrictions and a minimum beneficial ownership level of 4.5%, to (i) designate one director selected by Vivo to the Board and (ii) appoint a representative to attend all Board meetings in a nonvoting observer capacity and to receive copies of all materials provided to directors, subject to certain exceptions. Furthermore, Vivo will have the right to purchase additional shares of capital stock of the Company in connection with a sale of equity or equity-linked securities by the Company in a capital raising transaction for cash, subject to certain exceptions, to maintain its proportionate ownership percentage in the Company. Vivo agreed not to sell or transfer any of the shares of common stock, Series D Preferred Stock or warrants purchased by Vivo in the August 2017 Vivo Offering, or any shares of common stock issuable upon conversion or exercise thereof, other than to its affiliates, without the consent of the Company through August 2018 and to any competitor of the Company thereafter. Vivo also agreed that, subject to certain exceptions, until the later of (i) three years from the closing of the August 2017 Vivo Offering and (ii) three months after there is no Vivo director on the Board, Vivo will not, without the prior consent of the Board, acquire common stock or rights to acquire common stock that would result in Vivo beneficially owning more than 33% of the Company's outstanding voting securities at the time of acquisition. Under the Vivo Stockholder Agreement, the Company agreed to use its commercially reasonable efforts to register, via one or more registration statements filed with the SEC under the Securities Act, the shares of common stock purchased in the August 2017 Vivo Offering as well as the shares of common stock issuable upon conversion or exercise of the Series D Preferred Stock and warrants purchased by Vivo in the August 2017 Vivo Offering.

August 2017 Stockholder Approval

The Company has agreed to solicit from its stockholders such approval as may be required by the applicable rules and regulations of the NASDAQ Stock Market with respect to the anti-dilution provisions of the August 2017 DSM Cash Warrant and the August 2017 Vivo Cash Warrants and the exercise of the August 2017 DSM Dilution Warrant and the August 2017 Vivo Dilution Warrants (the August 2017 Stockholder Approval) at an annual or special meeting of stockholders to be held on or prior to the date of the Company's 2018 annual meeting of stockholders (the Stockholder Meeting), and to use commercially reasonable efforts to secure the August 2017 Stockholder Approval. DSM and Vivo may, at their option, upon at least 90 days' prior written notice, require the Company to hold the Stockholder Meeting prior to the Company's 2018 annual meeting of stockholders. If the Company does not obtain the August 2017 Stockholder Approval at the Stockholder Meeting, the Company will call a stockholder meeting every four months thereafter to seek the August 2017 Stockholder Approval until the earlier of the date the August 2017 Stockholder Approval is obtained or the August 2017 DSM Cash Warrant, the August 2017 Vivo Cash Warrants, the August 2017 Vivo Dilution Warrants and the August 2017 DSM Dilution Warrant are no longer outstanding. In addition, until the August 2017 Stockholder Approval has been obtained and deemed effective, the Company may not issue any shares of common stock or securities convertible into or exercisable or exchangeable for common stock if such issuance would have triggered the anti-dilution adjustment provisions in the August 2017 DSM Cash Warrant, the August 2017 DSM Dilution Warrant, the August 2017 Vivo Cash Warrants or the August 2017 Vivo Dilution Warrants (if the August 2017 Stockholder Approval had been obtained prior to such issuance) without the prior written consent of DSM and Vivo, respectively.

Warrants in Connection with May and August 2017 Offerings

Warrant activity and balances in connection with the May and August 2017 Offerings are as follows:

	Issued	Exercised	Warrants Outstanding at 12/31/2017
May and August 2017 Cash Warrants			
May 2017	14,768,380	—	14,768,380
August 2017	9,543,234	—	9,543,234
	24,311,614	—	24,311,614
May and August 2017 Dilution Warrants			
May 2017	6,377,466	(3,103,278)	3,274,188
August 2017	—	—	—
	6,377,466	(3,103,278)	3,274,188
	30,689,080	(3,103,278)	27,585,802

May 2017 Exchange of Common Stock for Series C Convertible Preferred Stock

In May 2017, Foris and Naxyris agreed to exchange (the May 2017 Exchange) their outstanding shares of common stock, representing a total of 1,394,706 shares, for 20,921 shares of the Company's Series C Convertible Preferred Stock, par value $0.0001 per share (the Series C Preferred Stock) in a private exchange. In addition, Foris and Naxyris agreed not to convert any of their outstanding convertible promissory notes, warrants or any other equity-linked securities of the Company until the July 2017 Stockholder Approval had been obtained.

Each share of Series C Preferred Stock has a stated value of $1,000 and would automatically convert into common stock, at a conversion price of $15.00 per share (the Series C Conversion Rate), upon the approval by the Company's stockholders and implementation of a reverse stock split.

The Series C Preferred Stock is entitled to participate with the common stock on an as-converted basis with respect to any dividends or other distributions to holders of common stock.

The Series C Preferred Stock shall vote together as one class with the common stock on an as-converted basis, and shall also vote with respect to matters specifically affecting the Series C Preferred Stock.

Upon any liquidation, dissolution or winding-up of the Company, the holders of the Series C Preferred stock shall be entitled to receive out of the assets of the Company an amount equal to the greater of (i) the par value of each share of Series C Preferred Stock, plus any accrued and unpaid dividends or other amounts due on such Series C Preferred Stock, prior to any distribution or payment to the holders of common stock or (ii) the amount that a holder would receive if the Series C Preferred Stock were fully converted to common stock immediately prior to such liquidation, dissolution or winding-up (without regard to whether such Series C Preferred Stock is convertible at such time), which amount shall be paid *pari passu* with all holders of Common Stock.

The shares of Series C Preferred Stock automatically converted to common stock on June 6, 2017 in connection with the effectiveness of the Reverse Stock Split. The Company accounted for the Series C Preferred Stock and the May 2017 Exchange as a non-monetary transaction that had no impact on the consolidated financial statements.

Exchange Agreement Warrants

Under the 2015 Exchange Agreement, Total and Temasek received the following warrants at the closing of the 2015 Exchange:

- Total received a warrant to purchase 1,261,613 shares of common stock (the Total Funding Warrant), which warrant had been fully exercised as of December 31, 2017.

- Total received a warrant to purchase 133,334 shares of the Company's common stock that would only be exercisable if the Company failed, as of March 1, 2017, to achieve a target cost per liter to manufacture farnesene (the Total R&D Warrant). As of March 1, 2017, the Company had not achieved the target cost per liter to manufacture farnesene provided in the Total R&D Warrant, and as a result, on March 1, 2017 the Total R&D Warrant became exercisable in accordance with its terms. As of December 31, 2017, the Total R&D Warrant had not been exercised.
- Temasek received a warrant to purchase 978,525 shares of common stock, which warrant had been fully exercised as of December 31, 2017.
- Temasek received a warrant exercisable for that number of shares of common stock equal to 58,690 multiplied by a fraction equal to the number of shares for which Total exercises the Total R&D Warrant divided by 133,334 (the Temasek R&D Warrant). As of December 31, 2017, the Temasek R&D Warrant was not exercisable for any shares of common stock.
- Temasek received a warrant exercisable for that number of shares of common stock equal to (1) (A) the sum of (i) the number of shares for which Total exercises the Total Funding Warrant plus (ii) the number of any additional shares for which the outstanding Tranche Notes may become exercisable as a result of a reduction in their conversion price as a result of and/or subsequent to the 2015 Exchange plus (iii) the number of additional shares in excess of 133,334, if any, for which the Total R&D Warrant becomes exercisable, multiplied by (B) a fraction equal to 30.6% divided by 69.4% plus (2) (A) the number of any additional shares for which the outstanding 2014 144A Notes may become exercisable as a result of a reduction in their conversion price multiplied by (B) a fraction equal to 13.3% divided by 86.7% (the Temasek Funding Warrant). As of December 31, 2017, the Temasek Funding Warrant had been exercised with respect to 846,683 shares of common stock and was exercisable for 1,889,986 shares of common stock.

The warrants issued to Total in the 2015 Exchange each have five-year terms, and the warrants issued to Temasek in the 2015 Exchange each have ten-year terms. All of such warrants have an exercise price of $0.15 per share as of December 31, 2017.

In addition to the grant of the warrants in the 2015 Exchange, a warrant to purchase 66,667 shares of common stock issued by the Company to Temasek in October 2013 in conjunction with a prior convertible debt financing became exercisable in full upon the completion of the 2015 Exchange. As of December 31, 2017 and 2016, such warrant had been fully exercised.

July 2015 PIPE Warrants

In July 2015, the Company entered into a securities purchase agreement with certain purchasers, including entities affiliated with members of the Board, under which the Company agreed to sell 1,068,379 shares of common stock at a price of $23.40 per share, for aggregate proceeds to the Company of $25.0 million. The sale of common stock was completed on July 29, 2015. In connection with such sale, the Company granted to each of the purchasers a warrant, exercisable at a price of $0.15 per share as of December 31, 2017, to purchase of a number of shares of common stock equal to 10% of the shares of common stock purchased by such investor. The exercisability of the warrants was subject to stockholder approval, which was obtained on September 17, 2015. As of December 31, 2017, such warrants had been exercised with respect to 25,643 shares of common stock and warrants with respect to 81,197 shares of common stock were outstanding.

At Market Issuance Sales Agreement

On March 8, 2016, the Company entered into an At Market Issuance Sales Agreement (the ATM Sales Agreement) with FBR Capital Markets & Co. and MLV & Co. LLC (the Agents) under which the Company may issue and sell shares of its common stock having an aggregate offering price of up to $50.0 million (the ATM Shares) from time to time through the Agents, acting as its sales agents, under the Company's Registration Statement on Form S-3 (File No. 333-203216), effective April 15, 2015. Sales of the ATM Shares through the Agents, if any, will be made by any method that is deemed an "at the market offering" as defined in Rule 415 under the Securities Act, including by means of ordinary brokers' transactions at market prices, in block transactions, or as otherwise agreed by the Company and the Agents.

Each time that the Company wishes to issue and sell ATM Shares under the ATM Sales Agreement, the Company will notify one of the Agents of the number of ATM Shares to be issued, the dates on which such sales are anticipated to be made, any minimum price below which sales may not be made and other sales parameters as the Company deems appropriate. The Company will pay the designated Agent a commission rate of up to 3.0% of the gross proceeds from the sale of any ATM Shares sold through such Agent as agent under the ATM Sales Agreement. The ATM Sales Agreement contains customary terms, provisions, representations and warranties. The ATM Sales Agreement includes no commitment by other parties to purchase shares the Company offers for sale.

During the years ended December 31, 2017 and December 31, 2016, the Company did not sell any shares of common stock under the ATM Sales Agreement. As of December 31, 2017, \$50.0 million remained available for future sales under the ATM Sales Agreement.

Evergreen Shares for 2010 Equity Incentive Plan and 2010 Employee Stock Purchase Plan

In January 2017, the Company's Board of Directors (Board) approved an increase to the number of shares available for issuance under the Company's 2010 Equity Incentive Plan (Equity Plan). These shares represent an automatic annual increase in the number of shares available for issuance under the Equity Plan of 548,214. This increase is equal to approximately 3.0% of the 18,273,921 total outstanding shares of the Company's common stock as of December 31, 2016. This automatic increase was effective as of January 1, 2017. Shares available for issuance under the Equity Plan were initially registered on a registration statement on Form S-8 filed with the Securities and Exchange Commission on October 1, 2010 (Registration No. 333-169715). The Company filed a registration statement on Form S-8 on April 17, 2017 (Registration No. 333-217345) with respect to the shares added by the automatic increase on January 1, 2017. The Board did not approve any increase to the number of shares reserved for issuance under the Company's 2010 Employee Stock Purchase Plan in 2017.

Right of First Investment to Certain Investors

In connection with investments in Amyris, the Company has granted certain investors, including Total and DSM, a right of first investment if the Company proposes to sell securities in certain financing transactions. With these rights, such investors may subscribe for a portion of any such new financing and require the Company to comply with certain notice periods, which could discourage other investors from participating in, or cause delays in its ability to close, such a financing. Further, in certain cases such investors have the right to pay for any securities purchased in connection with an exercise of their right of first investment by canceling all or a portion of the Company's debt held by them. To the extent such investors exercise these rights, it will reduce the cash proceeds the Company may realize from the relevant financing.

7. Variable-interest Entities and Unconsolidated Investments

Consolidated Variable-interest Entity

Aprinnova, LLC (Aprinnova JV)

In December 2016, the Company, Nikko Chemicals Co., Ltd. an existing commercial partner of the Company, and Nippon Surfactant Industries Co., Ltd., an affiliate of Nikko (collectively, Nikko) entered into a joint venture (the Aprinnova JV Agreement) under the name Neossance, LLC, and later changed the name to Aprinnova, LLC (the Aprinnova JV). Pursuant to the Aprinnova JV agreement, the Company contributed certain assets, including certain intellectual property and other commercial assets relating to its business-to-business cosmetic ingredients business (the Aprinnova JV Business), as well as the Leland Facility described below. The Company also agreed to provide the Aprinnova JV with exclusive (to the extent not already granted to a third party), royalty-free licenses to certain of the Company's intellectual property necessary to make and sell products associated with the Aprinnova JV Business (the Aprinnova JV Products), and, in the event the Company is unable to meet its supply commitments under the Aprinnova JV Supply Agreement (as defined below), or Nikko terminates the Aprinnova JV Supply Agreement due to a material breach or default thereunder by the Company, the Company would be required to grant to the Aprinnova JV and Nikko additional non-exclusive, royalty-free licenses to certain of the Company's intellectual property rights related to the production of farnesene in connection with the manufacture, production and sale of the Aprinnova JV Products.

Nikko purchased a 50% interest in the Aprinnova JV in December 2016 in exchange for the following payments to the Company: (i) an initial payment of $10.0 million and (ii) the profits, if any, distributed to Nikko in cash as members of the Aprinnova JV during the three year period following the date of the Aprinnova JV Agreement, up to a maximum of $10.0 million.

Pursuant to the Aprinnova JV Agreement, the Company and Nikko agreed to make working capital loans to the Aprinnova JV in the amounts of $0.5 million and $1.5 million, respectively. In addition, the Company agreed to guarantee a maximum production cost for certain Aprinnova JV Products to be produced by the Aprinnova JV and to bear any cost of production above such guaranteed costs.

Under the Aprinnova JV Agreement, in the event of a merger, acquisition, sale or other similar reorganization, or a bankruptcy, dissolution, insolvency or other similar event, of the Company, on the one hand, or Nikko, on the other hand, the other member will have a right of first purchase with respect to such member's interest in the Aprinnova JV, at the fair market value of such interest, in the case of a merger, acquisition, sale or other similar reorganization, and at the lower of the fair market value or book value of such interest, in the case of a bankruptcy, dissolution, insolvency or other similar event.

The Aprinnova JV operates under an agreement (the Aprinnova Operating Agreement) under which the Aprinnova JV is managed by a Board of Directors that consists of four directors, two appointed by the Company and two appointed by Nikko. In addition, Nikko has the right to designate the Chief Executive Officer of the Aprinnova JV from among the directors and the Company has the right to designate the Chief Financial Officer. The Company determined that it controls the Aprinnova JV because of its significant ongoing involvement in operational decision making and its guarantee of production costs for squalane and hemisqualane. The Company has concluded that the Aprinnova JV is a variable-interest entity (VIE) under the provisions of ASC 810, *Consolidation,* and that the Company is the VIE's primary beneficiary. As a result, the Company accounts for its investment in the Aprinnova JV on a consolidation basis in accordance with ASC 810.

Under the Aprinnova Operating Agreement, profits from the operations of the Aprinnova JV, if any, are distributed as follows: (i) first, to the Company and Nikko (the Members) in proportion to their respective unreturned capital contribution balances, until each Member's unreturned capital contribution balance equals zero and (ii) second, to the Members in proportion to their respective interests. In addition, any future capital contributions will be made by the Company and Nikko on an equal (50%/50%) basis each time, unless otherwise mutually agreed.

In connection with the contribution of the Leland Facility by the Company to the Aprinnova JV, at the closing of the formation of the Aprinnova JV, Nikko made a loan to the Company in the principal amount of $3.9 million, and the Company in consideration therefore issued a promissory note to Nikko in an equal principal amount, as described in more detail in Note 4, "Debt" under "Nikko Note."

Purchase of North Carolina Manufacturing Facility and Transfer to Aprinnova JV

In December 2016, the Company purchased a manufacturing facility in Leland, North Carolina from which it had previously purchased production output from a contract manufacturer. The Company's purchase of the facility included the building, land and equipment (collectively, the Leland Facility). The aggregate purchase price was $4.4 million, of which $3.5 million was paid in the form of a promissory note to the sellers. The promissory note is described in more detail in Note 4, "Debt" under "Salisbury Note." In December 2016, the Company transferred the Leland Facility to the Aprinnova JV upon its formation and repaid the Salisbury Note with the proceeds of the Nikko Note.

The following presents the carrying amounts of the Aprinnova JV's assets and liabilities included in the accompanying consolidated balance sheets. Assets presented below are restricted for settlement of the Aprinnova JV's obligations and all liabilities presented below can only be settled using the Aprinnova JV resources.

December 31, (In thousands)	2017	2016
Assets	$36,781	$30,778
Liabilities	$ 3,187	$ 333

The Aprinnova JV's assets and liabilities are primarily comprised of inventory, property, plant and equipment, accounts payable and debt, which are classified in the same categories in the Company's consolidated balance sheets.

The change in noncontrolling interest for the Aprinnova JV for the years ended December 31, 2017 and 2016 is as follows:

(In thousands)	2017	2016
Balance at January 1	$(937)	$ 391
Income attributable to noncontrolling interest	—	(1,328)
Balance at December 31	$(937)	$ (937)

Unconsolidated Investments

Equity-method Investments

Novvi LLC (Novvi)

Novvi is a U.S.-based joint venture among the Company, Cosan US, Inc. (Cosan U.S.), American Refining Group, Inc. (ARG), Chevron U.S.A. Inc. (Chevron) and H&R Group US, Inc. (H&R). Novvi's purpose is to develop, produce and commercialize base oils, additives and lubricants derived from Biofene for use in the automotive, commercial and industrial lubricants markets.

In July 2016, ARG agreed to make an initial capital contribution of up to $10.0 million in cash to Novvi in exchange for a one third ownership stake in Novvi. In connection with such investment, the Company agreed to contribute all outstanding amounts owed by Novvi to the Company under the seven existing member senior loan agreements between the Company and Novvi, as well as certain existing receivables due from Novvi to the Company related to rent and other services performance by the Company, in exchange for receiving additional membership units in Novvi. Likewise, Cosan U.S. agreed to contribute an equal amount to Novvi as the Company in exchange for receiving an equal amount of additional membership interests in Novvi. Following the ARG investment, which was fully funded as of December 31, 2017, and the capital contributions of the Company and Cosan U.S., each of Novvi's three members (i.e., ARG, the Company and Cosan U.S.) owned one third of Novvi's issued and outstanding membership units and were represented by two members of Novvi's Board of Managers.

In November 2016, Chevron made a capital contribution of $1.0 million in cash to Novvi in exchange for a 3% ownership stake in Novvi, which reduced the ownership interests of the Company, Cosan U.S. and ARG pro rata. In connection with its investment in Novvi, for so long as Chevron or its affiliates owns any membership units in Novvi, Chevron shall have the right to purchase up to such additional membership units as would result in Chevron owning the greater of (i) 25% of the aggregate membership units then outstanding held by Chevron, the Company, Cosan U.S. and ARG (including their affiliates and successors-in-interest) following such purchase and (ii) the highest percentage of such membership units held by the Company, Cosan U.S. and ARG (including their affiliates and successors-in-interest) following such purchase. In addition, Chevron was granted the right to purchase up to its pro rata share of all additional membership units that Novvi may, from time to time, propose to sell or issue.

In October 2017, H&R made a capital contribution of $10.0 million in cash to Novvi in exchange for a 24.39% ownership stake in Novvi, which reduced the ownership interests of Amyris, Cosan U.S., ARG and Chevron pro rata. As a result of such investment, as of December 31, 2017, each of Amyris, Cosan U.S., ARG and H&R owned a 24.39% equity ownership interest in Novvi, with Chevron owning the remaining 2.44%.

Additional funding requirements to finance the ongoing operations of Novvi are expected to occur through revolving credit or other loan facilities provided by unrelated parties (i.e., such as financial institutions); cash advances or other credit or loan facilities provided by Novvi's members or their affiliates; or additional capital contributions by the existing Novvi members or new investors.

The Company has identified Novvi as a VIE and determined that the power to direct activities which most significantly impact the economic success of the joint venture (i.e., continuing research and development, marketing, sales, distribution and manufacturing of Novvi products) are shared among the Company, Cosan U.S., ARG and H&R. Accordingly, The Company accounts for its investment in Novvi under the equity method of accounting, having determined that (i) Novvi is a VIE, (ii) the Company is not Novvi's primary beneficiary, and (iii) the Company has the ability to exert significant influence over Novvi. Under the equity method, the Company's share of profits and losses and impairment charges on investments in affiliates are included in "Loss from investments in affiliates" in the consolidated statements of operations. The carrying amount of the Company's equity investment in Novvi was zero as of December 31, 2017 and 2016 as the result of cumulative equity in losses.

Total Amyris BioSolutions B.V. (TAB)

TAB is a joint venture formed in November 2013 between the Company and Total to produce and commercialize farnesene- or farnesane-based jet and diesel fuels. TAB has not carried out any commercial activity since its inception. As of December 31, 2017, the Company and Total each owned 25% and 75% of the common equity of TAB, respectively. The Company accounts for its investment in TAB under the equity method of accounting, having determined that (i) TAB is a VIE, (ii) the Company is not TAB's primary beneficiary, and (iii) the Company has the ability to exert significant influence over TAB. The carrying value of the Company's investment in TAB as of December 31, 2017 was $0.

Cost-method Investment

In April 2017, the Company received 850,115 unregistered shares of common stock of SweeGen, Inc. (SweeGen) in satisfaction of a payment obligation from Phyto Tech Corp. (d/b/a Blue California), an affiliate of SweeGen, under a revenue agreement entered into between Blue California and the Company in December 2016. The Company obtained an independent valuation of the shares that established acquisition-date fair value of $3.2 million using an income approach under which cash flows were discounted to present value at 40%.

8. Net Loss per Share Attributable to Common Stockholders

The Company computes net loss per share in accordance with ASC 260, "Earnings per Share." Basic net loss per share of common stock is computed by dividing the Company's net loss attributable to Amyris, Inc. common stockholders (as adjusted in 2015 to remove the impact of the fair value adjustments for any currently exercisable warrants in which the number of shares are included in the weighted average number of shares of common stock outstanding) by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share of common stock is computed by giving effect to all potentially dilutive securities, including stock options, restricted stock units and common stock warrants, using the treasury stock method or the as converted method, as applicable. For the years ended December 31, 2017 and 2015, basic net loss per share was the same as diluted net loss per share because the inclusion of all potentially dilutive securities outstanding was anti-dilutive. As such, the numerator and the denominator used in computing both basic and diluted net loss were the same for those years.

The following table presents the calculation of basic and diluted net loss per share of common stock attributable to Amyris, Inc. common stockholders:

Years Ended December 31, (In thousands, except shares and per share amounts)	**2017**	**2016**	**2015**
Numerator:			
Net income (loss) attributable to Amyris, Inc.	$ (72,329)	$ (97,334)	$ (217,952)
Less deemed dividend on capital distribution to related parties	(8,648)	—	—
Less deemed dividend related to beneficial conversion feature on Series A preferred stock	(562)	—	—
Less deemed dividend related to beneficial conversion feature on Series B preferred stock	(634)	—	—
Less deemed dividend related to beneficial conversion feature on Series D preferred stock	(5,757)	—	—
Less cumulative dividends on Series A and Series B preferred stock	(5,439)	—	—
Net loss attributable to Amyris, Inc. common stockholders, basic	(93,369)	(97,334)	(217,952)
Adjustment to exclude fair value gain on liability classified warrants[(1)]	—	—	(3,825)
Net loss attributable to Amyris, Inc. common stockholders for basic net loss per share	(93,369)	(97,334)	(221,777)
Interest on convertible debt	—	4,428	—
Accretion of debt discount	—	2,889	—
Gain from change in fair value of derivative instruments	—	(25,630)	—
Net loss attributable to Amyris, Inc. common stockholders, diluted	$ (93,369)	$ (115,647)	$ (221,777)
Denominator:			
Weighted-average shares of common stock outstanding used in computing net loss per share of common stock, basic	32,253,570	15,896,014	8,464,106
Basic loss per share	$ (2.89)	$ (6.12)	$ (26.20)
Weighted-average shares of common stock outstanding	32,253,570	15,896,014	8,464,106
Effective of dilutive convertible promissory notes	—	1,746,951	—
Weighted-average common stock equivalents used in computing net loss per share of common stock, diluted	32,253,570	17,642,965	8,464,106
Diluted loss per share	$ (2.89)	$ (6.55)	$ (26.20)

(1) The amount represents a net gain related to a change in the fair value of a liability classified common stock warrant included in the Company's consolidated statement of operations for the year ended December 31, 2015. The warrant has a nominal exercise price and shares issuable upon exercise of the warrant are considered equivalent to the Company's common shares for the purpose of computation of basic earnings per share and consequently losses are adjusted to exclude the gain. The warrant was exercised in 2015.

The following outstanding shares of potentially dilutive securities were excluded from the computation of diluted net loss per share of common stock for the periods presented because including them would have been anti-dilutive:

Years Ended December 31,	2017	2016	2015
Period-end common stock warrants	29,921,844	334,740	193,462
Convertible promissory notes[(1)]	8,040,828	2,395,596	4,835,821
Period-end stock options to purchase common stock	1,338,367	899,179	862,008
Period-end restricted stock units	685,007	466,076	370,323
Total potentially dilutive securities excluded from computation of diluted net loss per share	39,986,046	4,095,591	6,261,614

(1) The potentially dilutive effect of convertible promissory notes was computed based on conversion ratios in effect as of December 31, 2017. A portion of the convertible promissory notes issued carries a provision for a reduction in conversion price under certain circumstances, which could potentially increase the dilutive shares outstanding. Another portion of the convertible promissory notes issued carries a provision for an increase in the conversion rate under certain circumstances, which could also potentially increase the dilutive shares outstanding.

9. Commitments and Contingencies

Lease Obligations

The Company leases certain facilities and finances certain equipment under operating and capital leases, respectively. Operating leases include leased facilities and capital leases include leased equipment (see Note 2, "Balance Sheet Details"). The Company recognizes rent expense on a straight-line basis over the noncancelable lease term and records the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. Where leases contain escalation clauses, rent abatements, and/or concessions, such as rent holidays and landlord or tenant incentives or allowances, the Company applies them as straight-line rent expense over the lease term. The Company has noncancelable operating lease agreements for office, research and development, and manufacturing space that expire at various dates, with the latest expiration in February 2031. Rent expense under operating leases was $5.1 million, $5.3 million and $5.5 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Future minimum payments under the Company's lease obligations as of December 31, 2017, are as follows:

Years Ending December 31 (In thousands)	Capital Leases	Operating Leases	Total Lease Obligations
2018	$ 755	$10,127	$10,882
2019	185	8,760	8,945
2020	39	7,018	7,057
2021	—	7,242	7,242
2022	—	7,415	7,415
Thereafter	—	3,545	3,545
Total future minimum payments	979	$44,107	$45,086
Less: amount representing interest	(38)		
Present value of minimum lease payments	941		
Less: current portion	(724)		
Long-term portion	$ 217		

Sublease Arrangements

The Company subleases certain of its facilities to two of its collaboration partners. Total minimum rentals to be received in the future under noncancelable subleases as of December 31, 2017 were $0.4 million.

Guarantor Arrangements

The Company has agreements whereby it indemnifies its officers and directors for certain events or occurrences while the officer or director is serving in his or her official capacity. The indemnification period remains enforceable for the officer's or director's lifetime. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future payments. As a result of its insurance policy coverage, the Company believes the estimated fair value of these indemnification agreements is minimal. Accordingly, the Company had no liabilities recorded for these agreements as of December 31, 2017 and 2016.

The Company entered into the FINEP Credit Facility to finance a research and development project on sugarcane-based biodiesel; see Note 4, "Debt". The FINEP Credit Facility is guaranteed by a chattel mortgage on certain equipment of the Company. The Company's total acquisition cost for the equipment under this guarantee is R$6.0 million (approximately U.S. $1.8 million based on the exchange rate as of December 31, 2017). The FINEP Credit Facility was repaid in full in January 2018.

The Company entered into the BNDES Credit Facility to finance a production site in Brazil; see Note 4, "Debt". The BNDES Credit Facility, which was extinguished in December 2017 upon the Company's final installment payment, was collateralized by a first priority security interest in certain of the Company's equipment and other tangible assets with a total acquisition cost of R$24.9 million (approximately U.S. $7.5 million based on the exchange rate as of December 31, 2017). The Company was a parent guarantor for the payment of the outstanding balance under the BNDES Credit Facility. Additionally, the Company was required to provide certain bank guarantees under the BNDES Credit Facility.

In 2012, the Company pledged certain farnesene production assets as collateral for notes payable to Nossa Caixa and Banco Pine totaling R$52.0 million (U.S. $15.7 million based on the exchange rate as of December 31, 2017); see Note 4, "Debt". At December 31, 2017, the Company was also a parent guarantor for payment of outstanding balances under the two loan agreements. In December 2017, the Company repaid the Nossa Caixa and Banco Pine notes in full in connection with the sale of Amyris Brasil to DSM (see Note 13, "Divestiture"), and in January 2018 the pledges and parent guarantees were extinguished.

The Company has a financing agreement with Banco Safra for $1.0 million for a one-year term through June 2018 to fund exports.

The Senior Secured Loan Facility (see Note 4, "Debt") is collateralized by first-priority liens on substantially all of the Company's assets, including Company intellectual property. In addition, as discussed in Note 4, "Debt", the Nikko Note is collateralized by a first-priority lien on 10% of the Aprinnova JV interests owned by the Company.

Purchase Obligations

As of December 31, 2017, the Company had $18.3 million in purchase obligations which included $9.0 million of noncancelable contractual obligations.

Production Cost Commitment

As of December 31, 2017, the Company is committed to supplying squalane and hemisqualane to the Aprinnova JV at specified cost targets. The Company is obligated to pay all product costs above a specified target, but is not obligated to supply squalane and hemisqualane at a loss, and no liability has been accrued for the Company's commitment to supply at the specified cost target.

Other Matters

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company but will only be recorded when one or more future events occur or fail to occur. The Company's management assesses such contingent liabilities, and such assessment inherently involves an exercise of judgement. In assessing loss contingencies related to legal proceedings that are pending against and by the Company or unasserted claims that may result in such proceedings, the Company's management evaluates the perceived merits of any legal proceedings or unasserted claims as well as the perceived merits of the amount of relief sought or expected to be sought.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potential material loss contingency is not probable but is reasonably possible, or is probable but cannot be reasonably estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material would be disclosed. Loss contingencies considered to be remote by management are generally not disclosed unless they involve guarantees, in which case the guarantee would be disclosed.

In April 2017, a securities class action complaint was filed against the Company and its CEO, John G. Melo, and CFO, Kathleen Valiasek, in the U.S. District Court for the Northern District of California. The complaint sought unspecified damages on behalf of a purported class that would comprise all individuals who acquired the Company's common stock between March 2, 2017 and April 17, 2017. The complaint alleged securities law violations based on statements made by the Company in its earnings press release issued on March 2, 2017 and Form 12b-25 filed with the SEC on April 3, 2017. On September 21, 2017, an Order of Dismissal was entered on the plaintiff's notice of voluntary dismissal without prejudice.

Subsequent to the filing of the securities class action complaint described above, four separate purported shareholder derivative complaints were filed based on substantially the same facts as the securities class action complaint described above (the Derivative Complaints). The Derivative Complaints name Amyris, Inc. as a nominal defendant and name a number of the Company's current officers and directors as additional defendants. The lawsuits seek to recover, on the Company's behalf, unspecified damages purportedly sustained by the Company in connection with allegedly misleading statements and/or omissions made in connection with the Company's securities filings. The Derivative Complaints also seek a series of changes to the Company's corporate governance policies, restitution to the Company from the individual defendants, and an award of attorneys' fees. Two of the Derivative Complaints were filed in the U.S. District Court for the Northern District of California (together, the Federal Derivative Cases): Bonner v. John Melo, et al., Case No. 4:17-cv-04719, filed August 15, 2017, and Goldstein v. John Melo, et al., Case No. 3:17-cv-04927, filed on August 24, 2017. On September 19, 2017, an order was entered consolidating the Federal Derivative Cases into a single consolidated action, captioned: In re Amyris, Inc., Shareholder Derivative Litigation, Lead Case No. 2:15-cv-04719, and ordering plaintiffs to file a consolidated complaint or designate an operative complaint by November 3, 2017. On November 3, 2017, the plaintiffs in the Federal Derivative Cases filed a Notice of Designation of Operative Complaint designating the complaint filed in the Bonner case as the operative complaint. On December 21, 2017, the defendants filed a motion to dismiss the Federal Derivative Cases. By Order dated March 9, 2018, the Court granted defendants' motion to dismiss the Federal Derivative Cases, and on March 29, 2018, the plaintiffs filed an amended complaint with the Court. The remaining two Derivative Complaints were filed in the Superior Court for the State of California (the State Derivative Cases): Gutierrez v. John G. Melo, et al., Case. No. BC 665782, filed on June 20, 2017, in the Superior Court for the County of Los Angeles, and Soleimani v. John G. Melo, et al., Case No. RG 17865966, filed on June 29, 2017, in the Superior Court for the County of Alameda. On August 31, 2017, the Gutierrez case was transferred to the Superior Court for the State of California, County of Alameda and assigned case number RG17876383. These state cases are in the initial pleadings stage. We believe the Derivative Complaints lack merit, and intend to defend ourselves vigorously. Given the early stage of these proceedings, it is not yet possible to reliably determine any potential liability that could result from this matter.

The Company is subject to disputes and claims that arise or have arisen in the ordinary course of business and that have not resulted in legal proceedings or have not been fully adjudicated. Such matters that may arise in the ordinary course of business are subject to many uncertainties and outcomes are not predictable with reasonable assurance and therefore an estimate of all the reasonably possible losses cannot be determined at this time. Therefore, if one or more of these legal disputes or claims resulted in settlements or legal proceedings that were resolved against the Company for amounts in excess of management's expectations, the Company's consolidated financial statements for the relevant reporting period could be materially adversely affected.

10. Significant Revenue Agreements

For the years ended December 31, 2017, 2016 and 2015, the Company recognized revenue in connection with significant revenue agreements and from all other customers as follows:

Years Ended December 31, (In thousands)	2017				2016				2015			
	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL
Revenue from significant revenue agreements with:												
DSM (related party)	$ —	$57,972	$ 1,679	$ 59,651	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Firmenich	9,621	1,199	5,803	16,623	9,660	745	7,513	17,918	1,425	259	11,000	12,684
Nenter & Co., Inc.	12,057	2,633	—	14,690	6,236	—	—	6,236	—	—	—	—
DARPA	—	—	12,333	12,333	—	—	9,697	9,697	—	—	80	80
Ginkgo	—	—	—	—	—	15,000	—	15,000	—	—	—	—
Subtotal revenue from significant revenue agreements	21,678	61,804	19,815	103,297	15,896	15,745	17,210	48,851	1,425	259	11,080	12,764
Revenue from all other customers	20,692	2,673	16,783	40,148	9,614	94	8,633	18,341	13,081	131	8,177	21,389
Total revenue from all customers	$42,370	$64,477	$36,598	$143,445	$25,510	$15,839	$25,843	$67,192	$14,506	$390	$19,257	$34,153

Renewable Products

Firmenich Agreements

In 2013, the Company entered into a collaboration agreement with Firmenich SA (Firmenich) (as amended, the Firmenich Collaboration Agreement), for the development and commercialization of multiple renewable flavors and fragrances compounds. In 2014, the Company entered into a supply agreement with Firmenich (the Firmenich Supply Agreement) for compounds developed under the Firmenich Collaboration Agreement. The Firmenich Collaboration Agreement and Firmenich Supply Agreement (the Firmenich Agreements) are considered for revenue recognition purposes to comprise a single multiple-element arrangement.

In July 2017, the Company and Firmenich entered into an amendment of the Firmenich Collaboration Agreement, pursuant to which the parties agreed to exclude certain compounds from the scope of the agreement and to amend certain terms connected with the supply and use of such compounds when commercially produced. In addition, the parties agreed to (i) fix at a 70/30 basis (70% for Firmenich) the ratio at which the parties will share profit margins from sales of two compounds; (ii) set at a 70/30 basis (70% for Firmenich) the ratio at which the parties will share profit margins from sales of a distinct form of compound until Firmenich receives $15.0 million more than the Company in the aggregate from such sales, after which time the parties will share the profit margins 50/50 and (iii) a maximum Company cost of a compound where a specified purchase volume is satisfied, and alternative production and margin share arrangements in the event such Company cost cap is not achieved.

Pursuant to the Firmenich Collaboration Agreement, the Company agreed to pay a one-time success bonus to Firmenich of up to $2.5 million if certain commercialization targets are met. Such targets have not yet been met as of December 31, 2017. The one-time success bonus will expire upon termination of the Firmenich Collaboration Agreement, which has an initial term of 10 years and will automatically renew at the end of such term (and at the end of any extension) for an additional 3-year term unless otherwise terminated. At December 31, 2017, the Company had a $0.3 million liability associated with this one-time success bonus that has been recorded as a reduction to the associated collaboration revenue.

Nenter Agreements

In April 2016, the Company and Nenter & Co., Inc. (Nenter) entered into a renewable farnesene supply agreement (the Nenter Supply Agreement) under which the Company agreed to supply farnesene and provide certain exclusive purchase rights, and Nenter committed to purchase minimum quantities and make quarterly royalty payments to the Company representing a portion of Nenter's profit on the sale of products produced using farnesene purchased under the agreement. The agreement expires December 31, 2020 and will automatically renew for an additional five years unless otherwise terminated. In December 2017, the Company assigned the Nenter Supply Agreement to DSM in connection with the Company's sale of Amyris Brasil, which owns and operates the Brotas 1 production facility; see Note 13, "Divestiture" for details.

In October 2016, the Company and Nenter entered into a separate cooperation agreement. In May 2017, the parties terminated that agreement, and as consideration for the termination, the Company paid Nenter a $2.5 million fee, which is included in Sales, General and Administrative expense for the year ended December 31, 2017.

Licenses and Royalties

DSM Agreements

DSM July and September 2017 Collaboration and Licensing Agreements

In July and September 2017, the Company entered into three separate collaboration agreements with DSM (the DSM Collaboration Agreements) to jointly develop three new molecules in the Health and Nutrition field (the DSM Ingredients) using the Company's technology, which the Company would produce and DSM would commercialize. Pursuant to the DSM Collaboration Agreements, DSM will, subject to certain conditions, provide funding for the development of the DSM Ingredients and, upon commercialization, the parties would enter into supply agreements whereby DSM would purchase the applicable DSM Ingredients from the Company at prices agreed by the parties. The development services will be directed by a joint steering committee with equal representation by DSM and the Company. In addition, the parties will share profit margin from DSM's sales of products that incorporate the DSM Ingredients subject to the DSM Collaboration Agreements.

In connection with the entry into the DSM Collaboration Agreements, the Company and DSM also entered into certain license arrangements (the DSM License Agreements) providing DSM with certain rights to use the technology underlying the development of the DSM Ingredients to produce and sell products incorporating the DSM Ingredients. Under the DSM License Agreements, DSM agreed to pay the Company $9.0 million for a worldwide, exclusive, perpetual, royalty-free license to produce and sell products incorporating one of the DSM Ingredients in the Health and Nutrition field.

In addition, in connection with the entry into the DSM Collaboration Agreements, the Company and DSM entered into the DSM Credit Letter, pursuant to which the Company granted a credit to DSM in an aggregate amount of $12.0 million to be offset against future collaboration payments (in an amount not to exceed $6.0 million) and royalties receivable from DSM beginning in 2018. The fair value of the DSM Credit Letter was $7.1 million at inception. During the three months ended December 31, 2017, the Company and DSM terminated the DSM Credit Letter, eliminating the $12.0 million credit.

The Company received $34.0 million of fixed consideration resulting from the August 2017 DSM Offering and the DSM License Agreements and allocated this consideration to the various elements identified. The Company first allocated $33.3 million of the fixed consideration to the August 2017 DSM Cash Warrants, August 2017 DSM Dilution Warrants, the Make-Whole Payment, the August 2017 DSM Series B Preferred Stock and the DSM Credit Agreement. The remaining $0.7 million was recognized as revenue generated from the delivery of the intellectual property licenses to DSM. At December 31, 2017, there was $7.1 million of deferred revenue in connection with the DSM License and Collaboration Agreements, which became a component of the December 2017 multiple-element arrangement with DSM described below.

DSM Value Sharing Agreement

In December 2017, in conjunction with the Company's divestiture of its Brotas 1 production facility (see Note 13, "Divestiture"), the Company and DSM entered into a value sharing agreement (the Value Sharing Agreement), pursuant to which DSM will make certain royalty payments to the Company representing a portion of the profit on the sale of products produced using farnesene purchased under the Nenter Supply Agreement realized by Nenter and paid to DSM in accordance with the Nenter Supply Agreement. In addition, pursuant to the Value Sharing Agreement, DSM will guarantee certain minimum annual royalty payments for the first three calendar years of the Value Sharing Agreement, subject to future offsets in the event that the royalty payments to which the Company would otherwise have been entitled under the Value Sharing Agreement for such years fall below certain milestones. The fair value of the nonrefundable minimum annual royalty payments were determined to be fixed and determinable, and were included as part of the total arrangement consideration subject to allocation of the overall multiple-element transaction that occurred in December 2017 with DSM. Under the Value Sharing Agreement, the Company is required to use certain value share payments received by the Company with respect to the first three calendar years of the Value Sharing Agreement in excess of the guaranteed minimum annual value share payments for such years, if any, to repay amounts outstanding under the DSM Credit Agreement; see Note 4, "Debt". The Value Sharing Agreement will expire in December 2027, subject to the right of each of the parties to terminate for uncured material breach by the other party or in the event the other party is subject to bankruptcy proceedings, liquidation, dissolution or similar proceedings or other specified events. In March 2018, the Company and DSM amended the Value Sharing Agreement to provide for the use of estimates in calculating quarterly value share payments (subject to true-up) and modify how the guaranteed minimum annual value share payment for 2018 will be offset against value payments accruing during 2018.

DSM Performance Agreement

In December 2017, in connection with the Company's divestiture of its Brotas 1 production facility (see Note 13, "Divestiture"), the Company and DSM entered into a performance agreement (Performance Agreement), pursuant to which the Company will provide certain research and development services to DSM relating to the development of the technology underlying the farnesene-related products to be manufactured at the Brotas 1 facility in exchange for related funding, including certain bonus payments in the event that specific performance metrics are achieved. The Company will record the bonus payments as earned revenue upon the transfer of the developed technology to DSM. If the Company does not meet the established metrics under the Performance Agreement, the Company will be required to pay $1.8 million to DSM. The Performance Agreement will expire in December 2020, subject to the right of each of the parties to terminate for uncured material breach by the other party or in the event the other party is subject to bankruptcy proceedings, liquidation, dissolution or similar proceedings or other specified events.

DSM November 2017 Intellectual Property License Agreement

In November 2017, in connection with the Company's divestiture of its Brotas 1 production facility (see Note 13, "Divestiture"), the Company and DSM entered into a license agreement covering certain intellectual property of the Company useful in the performance of certain commercial supply agreements assigned by the Company to DSM relating to products currently manufactured at Brotas 1 (the DSM November 2017 Intellectual Property License Agreement). In December 2017, DSM paid the Company an upfront license fee of $27.5 million. In accounting for the Divestiture with DSM, a multiple-element arrangement, the license of intellectual property to DSM was identified as revenue deliverable with standalone value and qualified as a separate unit of accounting. The Company performed an analysis to determine the fair value for of the license, and allocated the non-contingent consideration based on the relative fair value. The Company determined that the license had been fully delivered, and, as such, license revenue of $57.3 million was recognized as revenue.

Ginkgo Agreements

Ginkgo Initial Strategic Partnership Agreement and Collaboration Agreement

In June 2016, the Company entered into a collaboration agreement (the Initial Ginkgo Agreement) with Ginkgo Bioworks, Inc. (Ginkgo), pursuant to which the Company licensed certain intellectual property to Ginkgo in exchange for a fee of $20.0 million to be paid by Ginkgo to the Company in two installments, and a 10% royalty on net revenue, including without limitation net sales, royalties, fees and any other amounts received by Ginkgo related directly to the license. The Company received the first installment of $15.0 million in 2016. However, the Company did not receive the second installment of $5.0 million.

In addition, pursuant to the Initial Ginkgo Agreement, (i) the Company and Ginkgo agreed to pursue the negotiation and execution of a detailed definitive partnership and license agreement setting forth the terms of a commercial partnership and collaboration arrangement between the parties (Ginkgo Collaboration), (ii) the Company agreed to issue to Ginkgo a warrant to purchase 333,334 shares of the Company's common stock at an exercise price of $7.50, exercisable for one year from the date of issuance, in connection with the execution of the definitive agreement for the Ginkgo Collaboration, (iii) the Company received a deferment of all scheduled principal repayments under the Senior Secured Loan Facility, the lender and administrative agent under which is an affiliate of Ginkgo, as well as a waiver of the Minimum Cash Covenant, through October 31, 2016 and (iv) in connection with the execution of the definitive agreement for the Ginkgo Collaboration, the parties would effect an amendment of the LSA (see Note 4, "Debt") to (x) extend the maturity date of all outstanding loans under the Senior Secured Loan Facility, (y) waive any required amortization payments under the Senior Secured Loan Facility until maturity and (z) eliminate the Minimum Cash Covenant under the Senior Secured Loan Facility.

In August 2016, the Company issued to Ginkgo the warrant described above. The warrant was issued prior to the execution of the definitive agreement for the Ginkgo Collaboration in connection with the transfer of certain information technology from Ginkgo to the Company. The warrant expired in August 2017 unexercised.

In September 2016, the Company and Ginkgo entered into a collaboration agreement (the Ginkgo Collaboration Agreement) setting forth the terms of the Ginkgo Collaboration, under which the parties would collaborate to develop, manufacture and sell commercial products, and Ginkgo would pay royalties to the Company. The Ginkgo Collaboration Agreement provided that, subject to certain exceptions, all third-party contracts for the development of chemical small molecule compounds whose manufacture is enabled by the use of microbial strains and fermentation technologies that are entered into by the Company or Ginkgo during the term of the Ginkgo Collaboration Agreement would be subject to the Ginkgo Collaboration and the approval of the other party (not to be unreasonably withheld). Responsibility for the engineering and small-scale process development of the newly developed products would be allocated between the parties on a project-by-project basis, and the Company would be principally responsible for the commercial scale-up and production of such products, with each party generally bearing its own respective costs and expenses relating to the Ginkgo Collaboration, including capital expenditures. Notwithstanding the foregoing, subject to the Company sourcing funding and breaking ground on a new production facility by March 30, 2017, Ginkgo would pay the Company a fee of $5.0 million; however, the Company did not receive the second installment payment.

Under the Ginkgo Collaboration Agreement, subject to certain exceptions, including excluded or refused products and cost savings initiatives, the profit on the sale of products subject to the Ginkgo Collaboration Agreement as well as cost-sharing, milestone and "value-creation" payments associated with the development and production of such products would be shared equally between the parties. The parties also agreed to provide each other with a license and other rights to certain intellectual property necessary to support the development and manufacture of the products under the Ginkgo Collaboration, and also to provide each other with access to certain other intellectual property useful in connection with the activities to be undertaken under the Ginkgo Collaboration Agreement, subject to certain carve-outs.

The initial term of the Ginkgo Collaboration Agreement was three years. $15.0 million was recognized as revenue upon receipt of cash in July 2016. The remaining $5.0 million was never received and was not recognized.

Ginkgo Partnership Agreement

In November 2017, the Company and Ginkgo entered into a partnership agreement (the Ginkgo Partnership Agreement) that supersedes the Ginkgo Collaboration Agreement. Under the Ginkgo Partnership Agreement, the Company and Ginkgo agreed:

- to continue to collaborate on limited research and development;
- to provide each other licenses (with royalties) to specified intellectual property for limited purposes;
- for the Company to pay Ginkgo quarterly fees of $0.8 million (Partnership Payments) beginning on December 31, 2018 and ending on September 30, 2022;
- to share profit margins from sales of a certain product to be developed under the Ginkgo Partnership Agreement on a 50/50 basis, subject to certain conditions, provided that net profits will be payable to Ginkgo for any quarterly period only to the extent that such net profits exceed the sum of (a) quarterly interest payments due under the November 2017 Ginkgo Note (see Note 4, "Debt") and (b) Partnership Payments due in such quarter; and
- for the Company to pay Ginkgo $0.5 million in connection with certain fees previously owed to Ginkgo under the Ginkgo Collaboration Agreement.

The Ginkgo Partnership Agreement provides for an initial term of two years and will automatically renew for successive one-year terms thereafter unless otherwise terminated.

Collaborations

DARPA Technology Investment Agreement

In September 2015, the Company entered into a technology investment agreement (the TIA) with The Defense Advanced Research Projects Agency (DARPA), under which the Company, with the assistance of specialized subcontractors, is working to create new research and development tools and technologies for strain engineering and scale-up activities. The agreement is being funded by DARPA on a milestone basis. Under the TIA, we and our subcontractors could collectively receive DARPA funding of up to $35.0 million over the program's four year term if all of the program's milestones are achieved. In conjunction with DARPA's funding, we and our subcontractors are obligated to collectively contribute approximately $15.5 million toward the program over its four year term (primarily by providing specified labor and/or purchasing certain equipment). For the DARPA agreement, the Company recognizes revenue using the milestone method, based upon achievement of milestones once acknowledged by DARPA.

11. Related Party Transactions

Related Party Divestiture

See Note 13, "Divestiture" for details regarding the sale of Amyris Brasil to DSM in December 2017.

Related Party Debt

See Note 4, "Debt" for details of these related party debt transactions:

- August 2013 Financing Convertible Notes
- 2014 Rule 144A Convertible Notes
- R&D Note (also see Note 18, "Subsequent Events")
- DSM Note (also see Note 13, "Divestiture")
- February 2016 Private Placement
- June 2016 and October 2016 Private Placements
- Maturity Treatment Agreement

Related party debt was as follows:

December 31, (in thousands)	2017 Principal	2017 Unamortized Debt (Discount) Premium	2017 Net	2016 Principal	2016 Unamortized Debt (Discount) Premium	2016 Net
Total						
R&D note	$ 3,700	$ (18)	$ 3,682	$ 3,700	$ (80)	$ 3,620
August 2013 financing convertible notes	21,711	897	22,608	19,781	2,033	21,814
2014 Rule 144A convertible notes	9,705	(1,538)	8,167	9,705	(2,986)	6,719
	35,116	(659)	34,457	33,186	(1,033)	32,153
DSM						
DSM note	25,000	(8,039)	16,961	—	—	—
Other DSM loan	393	—	393	—	—	—
	25,393	(8,039)	17,354	—	—	—
Biolding						
February 2016 private placement	2,000	—	2,000	2,000	(131)	1,869
Foris						
2014 Rule 144A convertible notes	5,000	(660)	4,340	5,000	(1,316)	3,684
February 2016 private placement	—	—	—	16,000	(1,047)	14,953
June and October 2016 private placements	—	—	—	11,000	—	11,000
	5,000	(660)	4,340	32,000	(2,363)	29,637
Naxyris						
February 2016 private placement	—	—	—	2,000	(131)	1,869
Temasek						
2014 Rule 144A convertible notes	10,000	(1,586)	8,414	10,000	(3,078)	6,922
	$77,509	$(10,944)	$66,565	$79,186	$(6,736)	$72,450

The fair value of the derivative liabilities related to the related party R&D Note, related party August 2013 Financing Convertible Notes and related party 2014 Rule 144A Convertible Notes as of December 31, 2017 and 2016 was $0.2 million and $0.8 million, respectively. The Company recognized gains from change in the fair value of these derivative liabilities of $0.6 million, $7.6 million and $10.5 million for the years ended December 31, 2017, 2016 and 2015, respectively; see Note 3, "Fair Value Measurement".

Related Party Revenue

The Company recognized revenue from related parties and from all other customers as follows:

Years Ended December 31, (In thousands)	2017				2016				2015			
	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL	Renewable Products	Licenses and Royalties	Grants and Collaborations	TOTAL
Revenue from related parties:												
DSM	$ —	$57,972	$ 1,679	$ 59,651	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Novvi	1,491	—	—	1,491	1,390	—	—	1,390	—	—	—	—
Total	(200)	—	—	(200)	172	—	—	172	865	—	—	865
Subtotal revenue from related parties	1,291	57,972	1,679	60,942	1,562	—	—	1,562	865	—	—	865
Revenue from all other customers	41,079	6,505	34,919	82,503	23,948	15,839	25,843	65,630	13,641	390	19,257	33,288
Total revenue from all customers	$42,370	$64,477	$36,598	$143,445	$25,510	$15,839	$25,843	$67,192	$14,506	$390	$19,257	$34,153

See Note 10, "Significant Revenue Agreements" for details of the Company's revenue agreements with DSM.

Related Party Accounts Receivable

Related party accounts receivable was as follows:

December 31, (In thousands)	2017	2016
DSM	$12,823	$ —
Novvi	$ 1,607	$ —
Total	$ 238	$805
Related party accounts receivable, net	$14,668	$805

In addition to the amounts shown above, there was a $7.9 million unbilled receivable from DSM included in noncurrent assets on the consolidated balance sheet at December 31, 2017.

Related Party Joint Ventures

See Note 7, "Variable-interest Entities and Unconsolidated Investments" for information about the Company's:

- Aprinnova joint venture with Nikko
- TAB joint venture with Total

Pilot Plant and Secondee Agreements

The Company and Total are parties to the following agreements:

- Pilot Plant Agreement, under which the Company leases space in its pilot plants to Total and provides Total with fermentation and downstream separations scale-up services and training to Total employees. In connection with this arrangement, the Company charged Total $0.4 million, $0.4 million and $0.9 million for the years ended December 31, 2017, 2016 and 2015, respectively, which were offset against the Company's cost and operating expenses.
- Secondee Agreement, under which Total assigns certain of its employees to the Company to provide research and development services. In connection with this agreement, Total charged the Company zero, $0.8 million and $0.9 million for the years ended December 31, 2017, 2016 and 2015, respectively.

In February 2017, the Company and Total amended these agreement to provide that the Company would not be charged for the cost of Total's employees on or after May 1, 2016, other than overhead charges. Net amounts payable to Total under these two arrangements were $1.4 million and $2.2 million as of December 31, 2017 and 2016, respectively. The Secondee Agreement expired on December 31, 2017, and the Pilot Plant Agreement expires in April 2019.

Office Sublease

The Company subleases certain office space to Novvi, for which the Company charged Novvi $0.5 million, $0.4 million (net of $0.4 million forgiven) and $0.7 million for the years ended December 31, 2017, 2016 and 2015, respectively.

12. Stock-based Compensation

Stock-based Compensation Expense Related to All Plans

Stock-based compensation expense related to all employee stock compensation plans, including options, restricted stock units and ESPP, was as follows:

Years Ended December 31, (In thousands)	2017	2016	2015
Research and development	$2,204	$1,948	$2,306
Sales, general and administrative	4,061	5,377	6,828
Total stock-based compensation expense	$6,265	$7,325	$9,134

Plans

2010 Equity Incentive Plan

The Company's 2010 Equity Incentive Plan (the 2010 Equity Plan) became effective on September 28, 2010 and will terminate in 2020. The 2010 Equity Plan provides for the granting of common stock options, restricted stock awards, stock bonuses, stock appreciation rights, restricted stock units and performance awards. It allows for time-based or performance-based vesting for the awards. Options granted under the 2010 Equity Plan may be either incentive stock options (ISOs) or non-statutory stock options (NSOs). ISOs may be granted only to Company employees (including officers and directors who are also employees). NSOs may be granted to Company employees, non-employee directors and consultants. The Company will be able to issue no more than 2,000,000 shares pursuant to the grant of ISOs under the 2010 Equity Plan. Options under the 2010 Equity Plan may be granted for periods of up to ten years. All options issued to date have had a ten year life. Under the plan, the exercise price of any ISOs and NSOs may not be less than 100% of the fair market value of the shares on the date of grant. The exercise price of any ISOs and NSOs granted to a 10% stockholder may not be less than 110% of the fair value of the underlying stock on the date of grant. The options granted to date generally vest over four to five years.

As of December 31, 2017 and 2016, options were outstanding to purchase 1,255,045 and 770,761 shares, respectively, of the Company's common stock granted under the 2010 Equity Plan, with a weighted-average exercise price per share of $26.29 and $45.76, respectively. In addition, as of December 31, 2017 and 2016, restricted stock units representing the right to receive 683,554 and 454,923 shares, respectively, of the Company's common stock granted under the 2010 Equity Plan were outstanding. As of December 31, 2017 and 2016, 252,107 and 552,392 shares, respectively, of the Company's common stock remained available for future awards that may be granted under the 2010 Equity Plan.

The number of shares reserved for issuance under the 2010 Equity Plan increases automatically on January 1 of each year starting with January 1, 2011, by a number of shares equal to 5% of the Company's total outstanding shares as of the immediately preceding December 31. However, the Company's Board of Directors or the Leadership Development and Compensation Committee of the Board of Directors retains the discretion to reduce the amount of the increase in any particular year.

2005 Stock Option/Stock Issuance Plan

In 2005, the Company established its 2005 Stock Option/Stock Issuance Plan (2005 Plan) which provided for the granting of common stock options, restricted stock units, restricted stock and stock purchase rights awards to employees and consultants of the Company. The 2005 Plan allowed for time-based or performance-based vesting for the awards. Options granted under the 2005 Plan were ISOs or NSOs. ISOs were granted only to Company employees (including officers and directors who are also employees). NSOs were granted to Company employees, non-employee directors, and consultants.

All options issued under the 2005 Plan had a ten year life. The exercise prices of ISOs and NSOs granted under the 2005 Plan were not less than 100% of the estimated fair value of the shares on the date of grant, as determined by the Board of Directors. The exercise price of an ISO and NSO granted to a 10% stockholder could not be less than 110% of the estimated fair value of the underlying stock on the date of grant as determined by the Board. The options generally vested over 5 years.

As of December 31, 2017 and 2016, options to purchase 79,322 and 100,260 shares, respectively, of the Company's common stock granted under the 2005 Plan remained outstanding and as a result of the adoption of the 2010 Equity Plan discussed above, zero shares of the Company's common stock remained available for future awards issuance under the 2005 Plan. The options outstanding under the 2005 Plan as of December 31, 2017 and 2016 had a weighted-average exercise price per share of $144.58 and $127.58, respectively.

2010 Employee Stock Purchase Plan

The 2010 Employee Stock Purchase Plan (the 2010 ESPP) became effective on September 28, 2010. The 2010 ESPP is designed to enable eligible employees to purchase shares of the Company's common stock at a discount. Offering periods under the 2010 ESPP generally commence on each May 16 and November 16, with each offering period lasting for one year and consisting of two six-month purchase periods. The purchase price for shares of common stock under the 2010 ESPP is the lesser of 85% of the fair market value of the Company's common stock on the first day of the applicable offering period or the last day of each purchase period. A total of 11,241 shares of common stock were initially reserved for future issuance under the 2010 Employee Stock Purchase Plan. During the life of the 2010 ESPP, the number of shares reserved for issuance increases automatically on January 1 of each year, starting with January 1, 2011, by a number of shares equal to 1% of the Company's total outstanding shares as of the immediately preceding December 31. However, the Company's Board of Directors or the Leadership Development and Compensation Committee of the Board of Directors retains the discretion to reduce the amount of the increase in any particular year. No more than 666,666 shares of the Company's common stock may be issued under the 2010 ESPP and no other shares may be added to this plan without the approval of the Company's stockholders.

Stock Option Activity

Stock option activity is summarized as follows:

Year ended December 31,	2017	2016	2015
Options granted	661,094	239,012	314,686
Weighted-average grant-date fair value per share	$ 3.26	$ 8.85	$ 18.15
Compensation expense related to stock options (in millions)	$ 3.3	$ 3.5	$ 6.0
Unrecognized compensation costs as of December 31 (in millions)	$ 2.7	$ 4.4	$ 8.0

The Company expects to recognize the December 31, 2017 balance of unrecognized costs over a weighted-average period of 2.5 years. Future option grants will increase the amount of compensation expense to be recorded in these periods.

Stock-based compensation expense for stock options and employee stock purchase plan rights is estimated at the grant date and offering date, respectively, based on the fair-value using the Black-Scholes option pricing model. The fair value of employee stock options is amortized on a straight-line basis over the requisite service period of the awards. The fair value of employee stock options was estimated using the following weighted-average assumptions:

Years Ended December 31,	2017	2016	2015
Expected dividend yield	—%	—%	—%
Risk-free interest rate	2.1%	1.4%	1.8%
Expected term (in years)	6.12	6.16	6.08
Expected volatility	84%	73%	74%

The Company uses third-party analyses to assist in developing the assumptions used in, as well as calibrating, its Black-Scholes model. The Company is responsible for determining the assumptions used in estimating the fair value of its share-based payment awards.

The expected life of options is based primarily on historical share option exercise experience of the employees for options granted by the Company. All options are treated as a single group in the determination of expected life, as the Company does not currently expect substantially different exercise or post-vesting termination behavior among the employee population. The risk-free interest rate is based on the U.S. Treasury yield for a term consistent with the expected life of the awards in effect at the time of grant. Expected volatility is based on the historical volatility of the Company's common stock. The Company has no history or expectation of paying dividends on common stock.

Stock-based compensation expense associated with options is based on awards ultimately expected to vest. At the time of an option grant, the Company estimates the expected future rate of forfeitures based on historical experience. These estimates are revised, if necessary, in subsequent periods if actual forfeiture rates differ from those estimates. If the actual forfeiture rate is lower than estimated the Company will record additional expense and if the actual forfeiture is higher than estimated the Company will record a recovery of prior expense.

The Company's stock option activity and related information for the year ended December 31, 2017 was as follows:

	Number of Stock Options	Weighted-average Exercise Price	Weighted-average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding – December 31, 2016	875,021	$55.20	6.70	$443
Options granted	661,094	$ 4.56		
Options exercised	—	$ —		
Options forfeited or expired	(197,748)	$33.46		
Outstanding – December 31, 2017	1,338,367	$33.40	7.71	$ 97
Vested or expected to vest after December 31, 2017	1,257,439	$33.40	7.62	$ 81
Exercisable at December 31, 2017	925,778	$43.48	7.18	$ 27

The aggregate intrinsic value of options exercised under all option plans was zero for the years ended December 31, 2017, 2016 and 2015, respectively, determined as of the date of option exercise.

Restricted Stock Units Activity and Expense

During the years ended December 31, 2017, 2016 and 2015, 523,167, 326,523 and 332,569 restricted stock units (RSUs), respectively, were granted with a weighted-average service-inception date fair value per unit of $5.51, $9.15 and $27.30, respectively. The Company recognized a total of $2.8 million, $3.6 million, and $2.8 million, respectively, for the years ended December 31, 2017, 2016 and 2015 in stock-based compensation expense for restricted stock units granted. As of December 31, 2017 and 2016, there were unrecognized compensation costs of $5.0 million and $5.4 million, respectively, related to these restricted stock units.

Stock-based compensation expense for RSUs is measured based on the closing fair market value of the Company's common stock on the date of grant.

The Company's RSU and restricted stock activity and related information for the year ended December 31, 2017 was as follows:

	Number of Restricted Stock Units	Weighted-average Grant-date Fair Value	Weighted-average Remaining Contractual Life (in years)
Outstanding – December 31, 2016	454,923	$17.48	1.4
Awarded	523,167	$ 5.51	
Vested	(191,844)	$18.71	
Forfeited	(102,692)	$13.00	
Outstanding – December 31, 2017	683,554	$ 8.66	1.4
Vested or expected to vest after December 31, 2017	533,670	$ 8.92	1.3

ESPP Activity and Expense

During the years ended December 31, 2017 and 2016, 47,045 and 22,405 shares, respectively, of the Company's common stock were purchased under the 2010 ESPP. At December 31, 2017 and 2016, 80,594 and 127,669 shares, respectively, of the Company's common stock remained reserved for issuance under the 2010 ESPP.

During the years ended December 31, 2017, 2016 and 2015, the Company also recognized stock-based compensation expense related to its 2010 ESPP of $0.1 million, $0.1 million, and $0.3 million, respectively.

The valuation of employee stock purchase rights and the related assumptions are for the employee stock purchases made during the respective fiscal years.

13. Divestiture

On December 28, 2017, the Company completed the sale of Amyris Brasil, which operated the Company's Brotas 1 production facility, to DSM and concurrently entered into a series of commercial agreements and a credit agreement with DSM. At closing, the Company received $33.0 million in cash for the capital stock of Amyris Brazil, which is subject to certain post-closing working capital adjustments; and reimbursements contingent upon DSM's utilization of certain Brazilian tax benefits it acquired with its purchase of Amyris Brasil. The Company used $12.6 million of the cash proceeds received to repay certain indebtedness of Amyris Brasil. The total fair value of the consideration to be received by the Company for Amyris Brasil was $56.9 million and resulted in a pretax gain of $5.7 million from continuing operations.

Concurrent with the sale of Amyris Brasil, the Company and DSM entered into a series of commercial agreements including (i) a license agreement to DSM of its farnesene product for DSM to use in the Vitamin E, lubricant, and flavor and fragrance markets; (ii) a value share agreement that DSM will pay the Company specified royalties representing a portion of the profit on the sale of Vitamin E produced from farnesene under the Nenter Supply Agreement assigned to DSM; (iii) a performance agreement for the Company to perform research and development to optimize farnesene for production and sale of farnesene products; and (iv) a transition services agreement for the Company to provide finance, legal, logistics, and human resource services to support the Brotas 1 facility under DSM ownership for a six-month period with a DSM option to extend for six additional months. At closing, DSM paid the Company a nonrefundable license fee of $27.5 million and a nonrefundable royalty payment (previously referred to as value share) of $15.0 million. DSM will also pay the Company nonrefundable minimum annual royalty payments in 2018 and 2019. The future nonrefundable minimum annual royalty payments were determined to be fixed and determinable with a fair value of $17.8 million, and were included as part of the total arrangement consideration subject to allocation of this overall multiple-element divestiture transaction. See Note 10, “Significant Revenue Agreements”, for a full listing and details of agreements entered into with DSM. Additionally, the Company and DSM entered into a $25.0 million credit agreement that the Company used to repay all outstanding amounts under the Guanfu Note (see Note 4, “Debt”).

The Company accounted for the sale of Amyris Brasil as a sale of a business. The agreements entered into concurrently with the sale of Amyris Brasil including the license agreement, value share agreement, performance agreement, transition services agreement, and credit agreement contain various elements and, as such, are deemed to be an arrangement with multiple deliverables as defined under U.S. GAAP. The Company performed an analysis to determine the fair value for all elements in the agreements with DSM and separated the elements between the non-revenue and revenue elements. After allocating the total fair value of the non-revenue elements from the fixed and determinable consideration received, the Company allocated the remaining fixed and determinable consideration to the revenue elements based on relative fair value. As such, the Company recognized $57.3 million of license revenue and $2.1 million of deferred revenue related to the performance and transition services agreements with DSM as of December 31, 2017.

Results from the operations of Amyris Brasil are included in our Consolidated Statements of Operations for 2017, 2016 and 2015 and we have not segregated the results of operations or net assets of Amyris Brasil on our financial statements for any period presented. The disposition of the assets and liabilities of Amyris Brasil did not qualify for classification as a discontinued operation as it did not represent a strategic shift that will have a major effect on the Company’s operations and financial results.

14. Goodwill

At December 31, 2017 and December 31, 2016, the Company carried $0.6 million of goodwill on its consolidated balance sheet, in the line captioned “Other Assets”.

15. Income Taxes

The components of loss before income taxes, loss from investments in affiliates and net loss attributable to noncontrolling interest are as follows:

Years Ended December 31, (In thousands)	2017	2016	2015
United States	$(68,777)	$(101,210)	$(188,943)
Foreign	(3,257)	4,429	(24,457)
Loss before income taxes and loss from investments in affiliates	$(72,034)	$ (96,781)	$(213,400)

The components of the provision for income taxes are as follows:

Years Ended December 31, (In thousands)	2017	2016	2015
Current:			
Federal	$ —	$ —	$ —
State	—	—	—
Foreign	964	553	468
Total current provision	964	553	468
Deferred:			
Federal	(669)	—	—
State	—	—	—
Foreign	—	—	—
Total deferred provision (benefit)	(669)	—	—
Total provision for income taxes	$ 295	$553	$468

A reconciliation between the statutory federal income tax and the Company's effective tax rates as a percentage of loss before income taxes and loss from investments in affiliates is as follows:

Years Ended December 31,	2017	2016	2015
Statutory tax rate	(34.0)%	(34.0)%	(34.0)%
State taxes, net of federal tax benefit	—%	—%	(0.3)%
Stock-based compensation	0.1%	—%	0.1%
Federal R&D credit	(1.0)%	(0.8)%	(0.6)%
Derivative liabilities	1.7%	1.4%	3.6%
Nondeductible interest	6.2%	5.0%	5.5%
Other	(0.4)%	(3.2)%	0.1%
Foreign losses	17.6%	0.5%	(1.2)%
Change in U.S. federal tax rate	57.0%	—%	—%
IRC Section 382 limitation	5.0%	—%	—%
Change in valuation allowance	(51.9)%	31.7%	27.1%
Effective income tax rate	0.3%	0.6%	0.3%

Temporary differences and carryforwards that gave rise to significant portions of deferred taxes are as follows:

December 31, (In thousands)	2017	2016	2015
Net operating loss carryforwards	$ 23,877	$ 236,741	$ 207,241
Property, plant and equipment	4,195	12,917	10,519
Research and development credits	10,702	17,348	16,612
Foreign tax credit	2,669	2,452	1,899
Accruals and reserves	10,754	30,303	26,366
Stock-based compensation	11,417	17,184	19,048
Capitalized start-up costs	—	9,182	9,568
Capitalized research and development costs	34,973	65,962	63,339
Intangible and others	3,932	6,714	9,999
Total deferred tax assets	102,519	398,803	364,591
Debt discount and derivative	(6,616)	(11,936)	(4,402)
Total deferred tax liabilities	(6,616)	(11,936)	(4,402)
Net deferred tax assets prior to valuation allowance	95,903	386,867	360,189
Less: valuation allowance	(95,903)	(386,867)	(360,189)
Net deferred tax assets	$ —	$ —	$ —

Recognition of deferred tax assets is appropriate when realization of such assets is more likely than not. Based on the weight of available evidence, especially the uncertainties surrounding the realization of deferred tax assets through future taxable income, the Company believes that it is more likely than not that the net deferred tax assets will not be fully realizable. Accordingly, the Company has provided a full valuation allowance against its net deferred tax assets as of December 31, 2017, 2016 and 2015. The valuation allowance decreased by $291.0 million during the year ended December 31, 2017 primarily due to the partial write-off of federal net operating loss (NOL) carryforwards as described below. The valuation allowance increased by $26.7 million and $47.9 million during the years ended December 31, 2016 and 2015, respectively.

On January 1, 2017, the Company adopted ASU 2016-09, which simplifies several aspects of accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, statutory tax withholding requirements and classification in the statement of cash flows.

Adoption of ASU 2016-09 did not have an impact on our consolidated balance sheet, results of operations, cash flows or statement of stockholders' deficit, because we have a full valuation allowance on our deferred tax assets. Upon adoption, the Company recognized previously unrecognized excess tax benefits using the modified retrospective transition method. The previously unrecognized excess tax effects were recorded as a deferred tax asset, which was fully offset by a valuation allowance. Without the valuation allowance, the Company's deferred tax assets would have increased by $40.1 million.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Act) was signed into law, making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017.

The Company has calculated its best estimate of the impact of the Act in its year-end income tax provision in accordance with its understanding of the Act and guidance available as of the date of this filing. The provisional amount related to the remeasurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future was approximately $37.7 million, with a corresponding and fully offsetting adjustment to our valuation allowance for the year ended December 31, 2017. The Company does not expect a material impact related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings.

On December 22, 2017, Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP in situations when a company does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. Because the Company is still in the process of analyzing certain provisions of the Act in accordance with SAB 118, the Company has determined that the adjustment to its deferred taxes was a provisional amount and a reasonable estimate at December 31, 2017. The Act creates a new requirement that certain income (i.e., "GILTI") earned by controlled foreign corporations (CFCs) must be included currently in the gross income of the CFCs' U.S. shareholder. The Company's selection of an accounting policy with respect to the new GILTI tax rules will depend, in part, on analyzing its global income to determine whether it expects to have future U.S. inclusions in taxable income related to GILTI and, if so, what the impact is expected to be. Because whether the Company expects to have future U.S. inclusions in taxable income related to GILTI depends on not only its current structure and estimated future results of global operations, but also its intent and ability to modify its structure and/or its business, the Company is not yet able to reasonably estimate the effect of this provision of the Act. Therefore, the Company has not made any adjustments related to potential GILTI tax in its financial statements and has not made a policy decision regarding whether to record deferred taxes on GILTI.

Given that the Company is still in the transition period for the accounting for income tax effects of the Act, the current assessment on deferred tax assets is based on currently available information and guidance. If in the future any element of the tax reform changes the related accounting guidance for income tax, such change could affect the Company's income tax position, and the Company might need to adjust the provision for income taxes accordingly.

As of December 31, 2017, the Company had federal net operating loss carryforwards of $136.5 million, and state net operating loss carryforwards of $111.7 million, available to reduce future taxable income, if any. The Internal Revenue Code of 1986, as amended, imposes restrictions on the utilization of net operating losses in the event of an "ownership change" of a corporation. Accordingly, a company's ability to use net operating losses may be limited as prescribed under Internal Revenue Code Section 382 (IRC Section 382). Events that may cause limitations in the amount of the net operating losses that the Company may use in any one year include, but are not limited to, a cumulative ownership change of more than 50% over a three-year period. During the year ended December 31, 2017, the Company experienced a cumulative ownership change of greater than 50%. As such, net operating losses generated prior to that change are subject to an annual limitation on their use. Due to the limitations imposed, the Company wrote-off $438.1 million of federal NOL carryover that is expected to expire before it can be utilized. Additionally, the Company wrote-off $14.2 million of its historical federal research and development credit carryovers as a result of the limitations.

As of December 31, 2017, the Company had federal research and development credits of $0.7 million and California research and development credit carryforwards of $12.7 million.

If not utilized, the federal net operating loss carryforward will begin expiring in 2025, and the California net operating loss carryforward will begin expiring in 2028. The federal research and development credit carryforward will begin expiring in 2038 if not utilized. The California tax credits can be carried forward indefinitely.

During the year ended December 31, 2015, unrecognized tax benefits of $8.5 million were resolved in connection with the outcome of a California Supreme Court case involving another taxpayer, which concluded on a methodology that follows that certain of the Company's net operating losses cannot be sustained. The decision had no impact on the Company's gross deferred tax assets as presented, as the Company's deferred tax asset for net operating losses was previously reported, net of a reserve for this same item.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

(In thousands)	
Balance at December 31, 2014	$17,081
Decreases in tax positions for prior period	(9,404)
Increases in tax positions during current period	957
Balance at December 31, 2015	8,634
Decreases in tax positions for prior period	(314)
Increases in tax positions during current period	781
Balance at December 31, 2016	9,101
Increases in tax positions for prior period	50
Increases in tax positions during current period	8,029
Balance at December 31, 2017	$17,180

The Company's policy is to include interest and penalties related to unrecognized tax benefits within the provision for income taxes. The Company determined that no accrual for interest and penalties was required as of December 31, 2017, 2016 or 2015.

None of the unrecognized tax benefits, if recognized, would affect the effective income tax rate for any of the above years due to the valuation allowance that currently offsets deferred tax assets. The Company does not anticipate that the total amount of unrecognized income tax benefits will significantly increase or decrease in the next 12 months.

The Company's primary tax jurisdiction is the United States. For United States federal and state tax purposes, returns for tax years 2005 and forward remain open and subject to tax examination by the appropriate federal or state taxing authorities. Brazil tax years 2010 through the current remain open and subject to examination.

As of December 31, 2017, the U.S. Internal Revenue Service (the IRS) has completed its audit of the Company for tax year 2008 and concluded that there were no adjustments resulting from the audit. While the statutes are closed for tax year 2008, the U.S. federal tax carryforwards (net operating losses and tax credits) may be adjusted by the IRS in the year in which the carryforward is utilized.

16. Geographical Information

The chief operating decision maker is the Company's Chief Executive Officer, who makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis. There are no segment managers who are held accountable by the chief operating decision maker, or anyone else, for operations, operating results, and planning for levels or components below the consolidated unit level. Accordingly, the Company has determined that it has a single reportable segment and operating segment structure.

Revenue by geography is based on the location of the customer. The following tables set forth revenue and property, plant and equipment by geographic area:

Revenue

Years Ended December 31, (In thousands)	2017	2016	2015
United States	$ 94,060	$30,942	$ 7,122
Europe	23,823	23,612	16,049
Asia	23,290	12,055	5,907
Brazil	2,159	488	5,004
Other	113	95	71
	$143,445	$67,192	$34,153

Property, Plant and Equipment

December 31, (In thousands)	2017	2016	2015
United States	$10,357	$ 9,342	$18,401
Brazil	3,357	44,153	41,093
Europe	178	240	303
	$13,892	$53,735	$59,797

17. Quarterly Results of Operations Data (Unaudited)*

Years Ended December 31, (In thousands)	2017 Fourth Quarter	2017 Third Quarter	2017 Second Quarter	2017 First Quarter	2016 Fourth Quarter	2016 Third Quarter	2016 Second Quarter	2016 First Quarter
Revenue								
Renewable products	$ 13,445	$ 10,996	$ 9,892	$ 8,037	$ 11,215	$ 6,619	$ 4,711	$ 2,965
Licenses and royalties	57,703	1,022	5,497	255	252	15,201	211	175
Grants and collaborations	9,440	12,179	10,291	4,688	10,771	4,724	4,677	5,671
Total revenue	$ 80,588	$ 24,197	$ 25,680	$ 12,980	$ 22,238	$ 26,544	$ 9,599	$ 8,811
Gross profit (loss) from product sales	$ (1,584)	$ (6,641)	$ (7,387)	$ (4,731)	$ (11,290)	$ (8,056)	$ (2,969)	$ (8,038)
Net income (loss)	$ (1,717)	$ (33,861)	$ 620	$ (37,371)	$ (48,755)	$ (19,705)	$ (13,566)	$ (15,308)
Net loss attributable to Amyris, Inc. common stockholders:								
For basic loss per share	$ (2,914)	$ (42,819)	$ (10,265)	$ (37,371)	$ (48,755)	$ (19,705)	$ (13,566)	$ (15,308)
For diluted loss per share	$ (2,914)	$ (42,819)	$ (10,265)	$ (37,371)	$ (48,755)	$ (19,705)	$ (29,245)	$ (30,273)
Net loss per share attributable to common stockholders:								
Basic	$ (0.06)	$ (1.14)	$ (0.44)	$ (1.93)	$ (2.67)	$ (1.19)	$ (0.91)	$ (1.11)
Diluted	$ (0.06)	$ (1.14)	$ (0.44)	$ (1.93)	$ (2.67)	$ (1.19)	$ (1.67)	$ (1.74)
Weighted-average shares of common stock outstanding used in computing net loss per share of common stock:								
Basic	47,895,238	37,529,694	23,155,874	19,335,948	18,227,100	16,612,690	14,874,135	13,813,305
Diluted	47,895,238	37,529,694	23,155,874	19,335,948	18,227,100	16,612,690	17,526,410	17,395,474

* Certain amounts rounded to reconcile to year-to-date amounts previously reported in Quarterly Reports on Form 10-Q. Amounts in columns may not sum to annual amounts presented in consolidated statements of operations, due to rounding.

18. Subsequent Events

R&D Note Extension

On March 30, 2018, the Company and Total amended the R&D Note to extend the maturity from March 31, 2018 to May 31, 2018, with accrued and unpaid interest payable on March 31, 2018 and May 31, 2018.

Senior Secured Loan Facility Extension

On March 30, 2018, the Company and Stegodon amended the Senior Secured Loan Facility to extend the date for a $5.5 million principal payment from March 31, 2018 to May 31, 2018. Under the extension, the interest rate from April 1, 2018 through the date of payment for the $5.5 million principal will be the previously agreed interest rate plus 5.0%.

DSM Value Sharing Agreement Amendment

On March 30, 2018, the Company and DSM amended the Value Sharing Agreement to provide for the use of estimates in calculating quarterly royalty (previously referred to as value share) payments (subject to true-up) and clarify how the guaranteed minimum annual royalty payment for 2018 will be offset against royalty payments accruing during 2018.

Warrants Exchange and Exercise

On April 12, 2018, the Company issued warrants to purchase an aggregate of 3,616,174 shares of common stock, exercisable at a price of $7.00 per share and for a term of fifteen months, to certain holders of the May 2017 Warrants (see Note 6, "Stockholders' Deficit") in exchange for such holders exercising for cash their May 2017 Cash Warrants, representing an aggregate of 3,616,174 shares issued and gross proceeds to the Company of $15.9 million, and surrendering their May 2017 Dilution Warrants, which were not currently exercisable for any shares, for cancellation, pursuant to warrant exercise agreements entered into with such holders. The new warrants have substantially similar terms to the May 2017 Cash Warrants, other than the exercise price and term, except that the new warrants do not contain any non-standard anti-dilution protection and only permit "cashless" exercise after six months and only to the extent there is no effective registration statement covering the shares issuable upon exercise. In connection with the transaction, the Company agreed that it would not issue common stock or securities convertible or exercisable into common stock, and the holders agreed to not sell any shares of common stock in excess of their pro rata share (among all holders participating in the transaction) of 30% of the daily average composite trading volume of the Company's common stock, in each case for a period of thirty trading days.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the Exchange Act) that are designed to provide reasonable assurance that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer (CEO) and principal financial officer (CFO) and, as appropriate, to allow timely decisions regarding required disclosures.

In connection with the preparation of this Form 10-K, we carried out an evaluation under the supervision of and with the participation of management, including our CEO and CFO, as of December 31, 2017, of the effectiveness of the design and operation of our disclosure controls and procedures. Based upon this evaluation, our CEO and CFO concluded that as of December 31, 2017, our disclosure controls and procedures were not effective because of the material weakness in our internal control over financial reporting described below.

However, after giving full consideration to this material weakness, and the additional analyses and other procedures that we performed to ensure that our consolidated financial statements included in this Annual Report on Form 10-K were prepared in accordance with U.S. GAAP, our management has concluded that our consolidated financial statements included in this Annual Report on Form 10-K present fairly, in all material respects, our financial position, results of operations and cash flows for the periods disclosed in conformity with U.S. GAAP.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for the assessment of the effectiveness of internal control over financial reporting as defined in Rule 13a-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed by and under the supervision of our CEO and CFO and effected by our board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the financial statements in accordance with U.S. GAAP, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

A "material weakness" is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

Management, under the supervision of our CEO and CFO, and oversight of the Board of Directors, conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2017, based on the criteria set forth in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this assessment, management has identified the material weakness described below:

- The Company's control environment was not effective because the Company lacked a sufficient number of trained resources with assigned responsibility and accountability over the design and operation of internal controls related to complex, significant non-routine transactions as well as routine transactions and financial statement presentation and disclosure;

- The Company did not have an effective risk assessment process to identify and analyze necessary changes in significant accounting policies and practices that were responsive to: (i) changes in business operations resulting from complex significant non-routine transactions, (ii) implementation of new accounting standards and related disclosures, and (iii) completeness and adequacy of required disclosures; and

- The Company did not have an effective information and communication process to ensure that the processes and controls were effectively documented and disseminated to enable financial personnel to effectively carry out their roles and responsibilities.

As a consequence, the Company did not have effective process level control activities over the following:

- The Company did not adequately design and document controls over complex, significant non-routine transactions that included various financing arrangements and a business divestiture, all which involved multiple components including revenue elements; and

- The Company's controls over account reconciliations, review and approval of manual journal entries, and timely and complete financial statement presentation and disclosure did not operate effectively

The material weakness described above resulted in material misstatements in the gain or loss on extinguishment, gain or loss from change in fair value of derivative liabilities, derivative liabilities, collaboration revenue, and additional paid-in capital in the preliminary consolidated financial statements that were corrected prior to the issuance of the consolidated financial statements as of and for the year ended December 31, 2017. However, the material weakness creates a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements that would not be prevented or detected on a timely basis. Therefore, we concluded that our internal control over financial reporting is not effective as of December 31, 2017.

This annual report does not include an attestation report of the Company's registered public accounting firm due to the established rules of the Securities and Exchange Commission.

Remediation Plan

We are addressing the identified material weakness by taking the following actions:

- Augmenting our accounting staff with additional personnel, as well as evaluating our personnel in key accounting positions;

- Documenting and augmenting key policies and internal control procedures to strengthen our identification of and accounting for complex, significant non-routine transactions and routine transactions; and

- Implementing a program for training of internal staff members covering: (i) the Company's accounting policies and procedures, (ii) roles and responsibilities of the Company's finance department, and (iii) new and existing financial accounting issues.

Management believes that the foregoing efforts will effectively remediate the material weakness. As we continue to evaluate and work to improve our internal control over financial reporting, management may determine to take additional measures to address control deficiencies or determine to modify the remediation plan described above. We cannot be certain, however, that we will effectively remediate such material weakness or when we will do so, nor can we be certain of whether additional actions will be required or the costs of any such actions.

Changes in Internal Control over Financial Reporting

Except for the remediation matters discussed above in this Item 9A, there were no changes in our internal control over financial reporting during the fourth quarter of 2017 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating disclosure controls and procedures and internal control over financial reporting, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures and internal control over financial reporting must reflect the fact that there are resource constraints and that management is required to apply judgement in evaluating the benefits of possible controls and procedures relative to their costs.

ITEM 9B. OTHER INFORMATION

None.

PART III

Certain information required by Part III is omitted from this Form 10-K because the registrant will file with the U.S. Securities and Exchange Commission a definitive proxy statement pursuant to Regulation 14A of the Exchange Act in connection with the solicitation of proxies for the Company's 2018 Annual Meeting of Stockholders (the 2018 Proxy Statement) within 120 days after the end of the fiscal year covered by this Form 10-K, and certain information included therein is incorporated herein by reference.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required under this Item 10 is incorporated by reference to the 2018 Proxy Statement, as well as set forth above under the heading "Executive Officers of the Registrant" in Part I, Item 1 of this Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required under this Item 11 is incorporated by reference to the 2018 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required under this Item 12 is incorporated by reference to the 2018 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required under this Item 13 is incorporated by reference to the 2018 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required under this Item 14 is incorporated by reference to the 2018 Proxy Statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE

We have filed the following documents as part of this Form 10-K:

1. Financial Statements: See "Index to Consolidated Financial Statements" in Part II, Item 8 of this Form 10-K.

2. Financial Statement Schedule: See "Schedule II — Valuation and Qualifying Accounts" (below) within Item 15 of this Form 10-K.

3. Exhibits: See "Index to Exhibits" immediately following the signature page of this Form 10-K.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

(In thousands)	Balance at Beginning of Year	Provisions	Recoveries (Write-offs), Net	Balance at End of Year
Allowance for doubtful accounts:				
Year Ended December 31, 2017	501	141	—	642
Year Ended December 31, 2016	969	—	(468)	501
Year Ended December 31, 2015	479	490	—	969

(In thousands)	Balance at Beginning of Year	Additions	Reductions/ Charges	Balance at End of Year
Deferred tax assets valuation allowance:				
Year Ended December 31, 2017	386,867	13,567	(294,877)	105,557
Year Ended December 31, 2016	360,189	26,678	—	386,867
Year Ended December 31, 2015	312,323	47,866	—	360,189

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMYRIS, INC.

By: /s/ JOHN G. MELO

John G. Melo
President and Chief Executive Officer
April 17, 2018

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John G. Melo and Kathleen Valiasek, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant, in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JOHN G. MELO **John G. Melo**	Director, President and Chief Executive Officer (Principal Executive Officer)	April 17, 2018
/s/ KATHLEEN VALIASEK **Kathleen Valiasek**	Chief Financial Officer (Principal Financial Officer)	April 17, 2018
/s/ TINA MALONEY **Tina Maloney**	Chief Accounting Officer (Principal Accounting Officer)	April 17, 2018
/s/ JOHN DOERR **John Doerr**	Director	April 17, 2018
/s/ GEOFFREY DUYK **Geoffrey Duyk**	Director	April 17, 2018
/s/ PHILIP EYKERMAN **Philip Eykerman**	Director	April 17, 2018
/s/ CHRISTOPH GOPPELSROEDER **Christoph Goppelsroeder**	Director	April 17, 2018
/s/ HH SHEIKH ABDULLAH BIN KHALIFA AL THANI **HH Sheikh Abdullah bin Khalifa Al Thani**	Director	April 17, 2018
/s/ FRANK KUNG **Frank Kung**	Director	April 17, 2018
/s/ CAROLE PIWNICA **Carole Piwnica**	Director	April 17, 2018
/s/ FERNANDO REINACH **Fernando Reinach**	Director	April 17, 2018
/s/ CHRISTOPHE VUILLEZ **Christophe Vuillez**	Director	April 17, 2018
/s/ R. NEIL WILLIAMS **R. Neil Williams**	Director	April 17, 2018
/s/ PATRICK YANG **Patrick Yang**	Director	April 17, 2018

INDEX TO EXHIBITS

Exhibit No.	Description
2.01[a]	Quota Purchase Agreement, dated November 17, 2017, among registrant, AB Technologies LLC and DSM Produtos Nutricionais Brasil S.A.
2.02	Amendment No. 1, dated December 28, 2017, to the Quota Purchase Agreement, dated November 17, 2017, among registrant, AB Technologies LLC and DSM Produtos Nutricionais Brasil S.A.
3.01	Restated Certificate of Incorporation
3.02	Certificate of Amendment, dated May 9, 2013, to Restated Certificate of Incorporation
3.03	Certificate of Amendment, dated May 12, 2014, to Restated Certificate of Incorporation
3.04	Certificate of Amendment, dated September 18, 2015, to Restated Certificate of Incorporation
3.05	Certificate of Amendment, dated May 18, 2016, to Restated Certificate of Incorporation
3.06	Certificate of Amendment, dated June 5, 2017, to Restated Certificate of Incorporation
3.07	Form of Certificate of Designation of Preferences, Rights and Limitations of Series A 17.38% Convertible Preferred Stock (found at Exhibit A-1, herein)
3.08	Form of Certificate of Designation of Preferences, Rights and Limitations of Series B 17.38% Convertible Preferred Stock (found at Exhibit A-2, herein)
3.09	Form of Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (found at Exhibit A-3, herein)
3.10	Form of Certificate of Designation of Preferences, Rights and Limitations of Series D Convertible Preferred Stock (found at Exhibit E, herein)
3.11	Restated Bylaws
4.01	Specimen of Common Stock Certificate
4.02	Form of certificate representing the Series A 17.38% Convertible Preferred Stock (found at Exhibit D, herein)
4.03	Form of certificate representing the Series B 17.38% Convertible Preferred Stock (found at Exhibit D, herein)
4.04	Form of certificate representing the Series C Convertible Preferred Stock (found at Exhibit D, herein)
4.05	Form of certificate representing the Series D Convertible Preferred Stock
4.06[a]	Amended and Restated Letter Agreement re: Certain Registration Rights dated May 8, 2014 between registrant and the purchasers listed therein
4.07	Warrant to Purchase Stock, dated December 23, 2011, issued to ATEL Ventures, Inc.
4.08[a]	Side Letter, dated June 21, 2010, between registrant and Total Gas & Power USA, SAS
4.09	Agreement, dated February 23, 2012, among registrant, Maxwell (Mauritius) Pte Ltd, Naxyris SA, Biolding Investment S.A., and Sualk Capital Ltd.
4.10	Securities Purchase Agreement, dated February 24, 2012, among registrant and certain investment funds affiliated with Fidelity Investments Institutional Services Company, Inc. listed therein (each, a Fidelity Purchaser)
4.11	Form of Unsecured Senior Convertible Promissory Note issued by registrant to the Fidelity Purchasers in the amounts set forth next to each Fidelity Purchaser's name on Schedule I of Exhibit 4.10 hereof
4.12	Registration Rights Agreement, dated February 27, 2012, among registrant and the Fidelity Purchasers

Exhibit No.	Description
4.13	Exchange Agreement, dated December 28, 2016, among registrant and certain Fidelity Purchasers
4.14[c]	Form of Common Stock Purchase Agreement among registrant and certain investors
4.15	Securities Purchase Agreement, dated July 30, 2012, between registrant and Total Gas & Power USA, SAS
4.16	Registration Rights Agreement, dated July 30, 2012, between registrant and Total Gas & Power USA, SAS
4.17[a]	1.5% Senior Secured Convertible Note issued July 29, 2015 (RS-9) by registrant to Total Energies Nouvelles Activités USA (f.k.a. Total Gas & Power USA, SAS)
4.18	1.5% Senior Convertible Note issued March 21, 2016 (RS-10) by registrant to Total Energies Nouvelles Activités USA
4.19	First Amendment, dated February 27, 2017, issued to 1.5% Senior Convertible Note, dated March 21, 2016 (RS-10) by registrant to Total Energies Nouvelles Activités USA
4.20	Second Amendment, dated May 15, 2017, to 1.5% Senior Convertible Note, issued March 21, 2016 (RS-10) by registrant to Total Energies Nouvelles Activités USA
4.21[a]	Securities Purchase Agreement, dated December 24, 2012, between registrant and certain investors listed therein
4.22[a]	Follow-On Investment Agreement, dated December 24, 2012, between registrant and Biolding Investment SA
4.23	Securities Purchase Agreement, dated March 27, 2013, between registrant and Biolding Investment SA
4.24	Securities Purchase Agreement (including Form of Tranche I Senior Convertible Note and Form of Tranche II Senior Convertible Note), dated August 8, 2013, between registrant, Maxwell (Mauritius) Pte Ltd and Total Energies Nouvelles Activités USA
4.25[a]	Amendment No. 1, dated October 16, 2013, to the Securities Purchase Agreement, dated August 8, 2013, between registrant and other parties named therein
4.26	Tranche I Senior Convertible Note Amendment and Amendment No. 2, dated December 24, 2013, to the Securities Purchase Agreement, dated August 8, 2013, between registrant and other parties named therein
4.27[ad]	Tranche I Senior Convertible Note issued October 16, 2013 by registrant to Total Energies Nouvelles Activités USA
4.28[ae]	Tranche II Senior Convertible Note issued January 15, 2014 by registrant to Total Energies Nouvelles Activités USA
4.29	Securities Purchase Agreement, dated September 20, 2013, between registrant and Naxyris S.A.
4.30	Securities Purchase Agreement, dated March 28, 2014 between registrant and Kuraray Co. Ltd.
4.31	Loan and Security Agreement, dated March 29, 2014 between registrant and Hercules Technology Growth Capital, Inc.
4.32	First Amendment, dated June 12, 2014, to Loan and Security Agreement, dated March 29, 2014, between registrant and Hercules Technology Growth Capital, Inc.
4.33	Second Amendment, dated March 31, 2015, to Loan and Security Agreement, dated March 29, 2014, between registrant and Hercules Technology Growth Capital, Inc.
4.34	Third Amendment, dated November 30, 2015, to Loan and Security Agreement, dated March 29, 2014, between registrant and Hercules Technology Growth Capital, Inc.

Exhibit No.	Description
4.35	Fourth Amendment, dated October 6, 2016, to Loan and Security Agreement, dated March 29, 2014, between registrant and Stegodon Corporation, as assignee of Hercules Capital, Inc. (f.k.a. Hercules Technology Growth Capital, Inc.)
4.36	Fifth Amendment, dated January 10, 2017, to Loan and Security Agreement, dated March 29, 2014, between registrant and Stegodon Corporation, as assignee of Hercules Capital, Inc.
4.37	Sixth Amendment, dated December 28, 2017, to Loan and Security Agreement, dated March 29, 2014, between registrant and Stegodon Corporation, as assignee of Hercules Capital, Inc.
4.38	Indenture, dated May 29, 2014, between registrant and Wells Fargo Bank, National Association, as Trustee
4.39	6.50% Convertible Senior Note due 2019 issued May 29, 2014 by registrant to Morgan Stanley & Co. LLC
4.40[f]	6.50% Convertible Senior Note due 2019, issued May 29, 2014, by registrant to Maxwell (Mauritius) Pte Ltd
4.41	Securities Purchase Agreement, dated July 24, 2015, between registrant and the Purchasers listed therein
4.42[g]	Warrant to Purchase Stock issued July 29, 2015 by registrant to Total Energies Nouvelles Activités USA
4.43	Exchange Agreement, dated July 29, 2015, between registrant and the investors listed therein
4.44	Maturity Treatment Agreement, dated July 29, 2015, between registrant and the Investors listed therein
4.45	Letter Agreement, dated May 4, 2017, between registrant and Maxwell (Mauritius) Pte Ltd
4.46	Letter Agreement, dated May 12, 2017, between registrant and Total Raffinage Chimie S.A., as assignee of Total Energies Nouvelles Activités USA
4.47	Letter Agreement dated as of July 29, 2015 among registrant and registrant's security holders listed therein
4.48	Warrant to Purchase Stock issued July 29, 2015 by registrant to Total Energies Nouvelles Activités USA
4.49	Warrant to Purchase Stock issued July 29, 2015 by registrant to Total Energies Nouvelles Activités USA
4.50	Warrant to Purchase Stock issued July 29, 2015 by registrant to Maxwell (Mauritius) Pte Ltd
4.51	Warrant to Purchase Stock issued July 29, 2015 by registrant to Maxwell (Mauritius) Pte Ltd
4.52	Warrant to Purchase Stock issued July 29, 2015 by registrant to Maxwell (Mauritius) Pte Ltd
4.53	Indenture, dated October 20, 2015, between registrant and Wells Fargo Bank, National Association, as Trustee
4.54	9.50% Convertible Senior Note due 2019 issued October 20, 2015 by registrant to Cede & Co.
4.55	First Supplemental Indenture, dated January 11, 2017, between registrant and Wells Fargo Bank, National Association, as Trustee
4.56	9.50% Convertible Senior Note due 2019 issued January 11, 2017 by registrant to Cede & Co.
4.57	Registration Rights Agreement dated October 20, 2015 between registrant and registrant's security holders listed therein
4.58	Note and Warrant Purchase Agreement, dated February 12, 2016, between registrant and the purchasers listed therein
4.59[h]	Unsecured Promissory Note issued February 12, 2016 by registrant to Foris Ventures, LLC
4.60[i]	Warrant to Purchase Stock issued February 12, 2016 by registrant to Foris Ventures, LLC

Exhibit No.	Description
4.61	First Amendment, dated May 15, 2017, to the Unsecured Promissory Note issued February 12, 2016 by registrant to Biolding Investment SA
4.62	Second Amendment, dated November 13, 2017, to the Unsecured Promissory Note issued February 12, 2016 by registrant to Biolding Investment SA
4.63	Form of Convertible Note issued May 10, 2016 by registrant to the purchaser thereof
4.64	Form of Additional Note issued September 2, 2016 and October 13, 2016 by registrant to the purchaser thereof
4.65	Note Purchase Agreement, dated June 24, 2016, between registrant and Foris Ventures, LLC
4.66	Secured Promissory Note issued June 24, 2016 by registrant to Foris Ventures, LLC
4.67	Warrant to Purchase Common Stock issued August 6, 2016 by registrant to Ginkgo Bioworks, Inc.
4.68	Note Purchase Agreement, dated October 21, 2016, between registrant and Foris Ventures, LLC
4.69	Secured Promissory Note issued October 21, 2016 by registrant to Foris Ventures, LLC
4.70[a]	Credit Agreement, dated October 26, 2016, between registrant and Guanfu Holding Co., Ltd.
4.71	Note issued December 31, 2016 by registrant to Wutian Supply Chain Corporation Limited
4.72	Note Purchase Agreement, dated October 27, 2016, between registrant and Ginkgo Bioworks, Inc.
4.73	Secured Promissory Note issued October 27, 2016 by registrant to Ginkgo Bioworks, Inc.
4.74	Secured Promissory Note issued April 13, 2017 by registrant to Ginkgo Bioworks, Inc.
4.75	Warrant to Purchase Stock issued November 16, 2016 by registrant to Nenter & Co., Inc.
4.76	Form of Convertible Note issued December 2, 2016 by registrant to the purchaser thereof (found at Exhibit A, herein)
4.77	Purchase Money Promissory Note issued December 5, 2016 by registrant to Salisbury Partners, LLC
4.78	Purchase Money Promissory Note issued December 19, 2016 by registrant to Nikko Chemicals Co. Ltd.
4.79	Form of Convertible Note issued April 17, 2017 by registrant to the purchaser thereof (found at Exhibit A, herein)
4.80	Form of Amended and Restated December 2016 Note (found at Exhibit A, herein)
4.81	Form of Amended and Restated April 2017 Note issued June 30, 2017 and December 5, 2017 by registrant to the purchaser thereof (found at Exhibit B, herein)
4.82	Form of Common Stock Purchase Warrant (Cash Warrant) issued May 11, 2017 by registrant to the purchasers thereof (found at Exhibit C-1, herein)
4.83	Form of Common Stock Purchase Warrant (Dilution Warrant) issued May 11, 2017 by registrant to the purchasers thereof (found at Exhibit C-2, herein)
4.84	Form of Common Stock Purchase Warrant (Cash Warrant) issued August 7, 2017 by registrant to DSM International B.V. (found at Exhibit B-1, herein)
4.85	Form of Common Stock Purchase Warrant (Dilution Warrant) issued August 7, 2017 by registrant to DSM International B.V. (found at Exhibit B-2, herein)
4.86	Form of Common Stock Purchase Warrant (Cash Warrant) issued August 3, 2017 by registrant to affiliates of Vivo Capital LLC (found at Exhibit A herein)
4.87	Form of Common Stock Purchase Warrant (Dilution Warrant) issued August 3, 2017 by registrant to affiliates of Vivo Capital LLC (found at Exhibit B, herein)

Exhibit No.	Description
4.88	Form of Stockholder Agreement dated August 3, 2017 between registrant and affiliates of Vivo Capital LLC (found at Exhibit C, herein)
4.89	Voting Agreement, dated May 4, 2017, between registrant and Total Raffinage Chimie
4.90	Voting Agreement, dated May 5, 2017, between registrant and Maxwell (Mauritius) Pte Ltd
4.91	Voting Agreement, dated May 8, 2017, between registrant and the investors listed therein
4.92	Common Stock Purchase Warrant (Cash Warrant), issued May 31, 2017, by registrant to the investor named therein
4.93	Common Stock Purchase Warrant (Dilution Warrant), issued May 31, 2017, by registrant to the investor named therein
4.94[a]	Stockholder Agreement, dated May 11, 2017, between registrant and DSM International B.V.
4.95[a]	Amended and Restated Stockholder Agreement, dated August 7, 2017, between registrant and DSM International B.V.
4.96	Promissory Note issued November 13, 2017 by registrant to Ginkgo Bioworks, Inc.
4.97	Note issued December 28, 2017 by registrant to DSM Finance BV
10.01[aj]	Agreement for Credit Opening, dated November 16, 2011, between Amyris Brasil Ltda. and Banco Nacional de Desenvolvimento Econômico e Social — BNDES
10.02[aj]	Amendment No. 1, dated June 28, 2013 to Agreement for Credit Opening, dated November 16, 2011, between Amyris Brasil Ltda. and Banco Nacional de Desenvolvimento Econômico e Social — BNDES
10.03[aj]	Amendment No. 2, dated September 16, 2015, to Agreement for Credit Opening, dated November 16, 2011, between Amyris Brasil Ltda. and Banco Nacional de Desenvolvimento Econômico e Social — BNDES
10.04[a]	Corporate Guarantee, dated November 28, 2011, issued by registrant to Banco Nacional de Desenvolvimento Econômico e Social — BNDES
10.05[j]	Bank Credit Agreement, dated December 21, 2011, between Amyris Brasil Ltda. and Banco Pine S.A.
10.06[j]	Addendum to the Banking Credit Form, dated February 17, 2012, between Amyris Brasil Ltda. and Banco Pine S.A.
10.07[j]	Addendum to the Banking Credit Form, dated May 17, 2012, between Amyris Brasil Ltda. and Banco Pine S.A.
10.08[j]	Note of Bank Credit, dated June 21, 2012, between Amyris Brasil Ltda. and Banco Pine S.A.
10.09[aj]	Global Derivatives Contract (swap agreement), dated June 15, 2012, between Amyris Brasil Ltda. and Banco Pine S.A.
10.10[j]	Global Derivatives Contract Annex, dated October 8, 2015, between Amyris Brasil Ltda. and Banco Pine S.A. (AB as purchaser)
10.11[j]	Global Derivatives Contract Annex, dated October 8, 2015, between Amyris Brasil Ltda. and Banco Pine S.A. (Pine as purchaser)
10.12[aj]	Note of Bank Credit, dated July 13, 2012, between Amyris Brasil Ltda. and Nossa Caixa Desenvolvimento
10.13[aj]	Note of Bank Credit, dated July 13, 2012, between Amyris Brasil Ltda. and Banco Pine S.A.
10.14[j]	Fiduciary Conveyance of Movable Goods Agreement, dated July 13, 2012, among Amyris Brasil Ltda., Nossa Caixa Desenvolvimento and Banco Pine S.A.
10.15	Corporate Guarantee, dated July 13, 2012, issued by registrant to Nossa Caixa Desenvolvimento
10.16	Corporate Guarantee, dated July 13, 2012, issued by registrant to Banco Pine S.A.

Exhibit No.	Description
10.17[j]	Credit Facility Agreement, dated October 11, 2010, between Financiadora de Estudos E Projetos — FINEP and Anyris Brasil S.A.
10.18	Lease, dated August 22, 2007, between registrant and ES East Associates, LLC
10.19	First Amendment, dated March 10, 2008, to Lease, dated August 22, 2007, between registrant and ES East Associates, LLC
10.20	Second Amendment, dated April 25, 2008, to Lease, dated August 22, 2007, between registrant and ES East Associates, LLC
10.21	Third Amendment, dated July 31, 2008, to Lease, dated August 22, 2007, between registrant and ES East Associates, LLC
10.22	Fourth Amendment, dated November 14, 2009, to Lease, dated August 22, 2007, between registrant and ES East Associates, LLC
10.23	Fifth Amendment, dated October 15, 2010, to Lease, dated August 22, 2007, between registrant and ES East, LLC
10.24	Sixth Amendment, dated April 30, 2013, to Lease, dated August 22, 2007, between registrant and ES East, LLC
10.25	Lease dated April 25, 2008 between registrant and EmeryStation Triangle, LLC
10.26	Letter, dated April 25, 2008, amending Lease between registrant and EmeryStation Triangle, LLC
10.27	Second Amendment, dated February 5, 2010, to Lease, dated April 25, 2008, between registrant and EmeryStation Triangle, LLC
10.28	Third Amendment, dated May 1, 2013, to Lease, dated April 25, 2008, between registrant and EmeryStation Triangle, LLC
10.29	Pilot Plant Expansion Right Letter dated December 22, 2008 between registrant and EmeryStation Triangle, LLC
10.30	Lease Agreement, dated August 10, 2011, between Amyris Brasil Ltda. and Techno Park Empreendimentos e Administração Imobiliária Ltda.
10.31	First Amendment, dated July 31, 2015, to Lease Agreement, dated August 10, 2011, between Amyris Brasil Ltda. and Techno Park Empreendimentos e Administração Imobiliária Ltda.
10.32	Second Amendment, dated October 31, 2015, to Lease Agreement, dated August 10, 2011, between Amyris Brasil Ltda. and Techno Park Empreendimentos e Administração Imobiliária Ltda.
10.33	Third Amendment, dated March 30, 2016, to Lease Agreement, dated August 10, 2011, between Amyris Brasil Ltda. and Techno Park Empreendimentos e Administração Imobiliária Ltda.
10.34	Private Instrument of Non-Residential Real Estate Lease Agreement, dated March 31, 2008, between Lucio Tomasiello and Amyris Brasil S.A. (including Amendment No. 1, dated July 5, 2008, and Amendment No. 2, dated October 30, 2008)
10.35[aj]	Third Amendment, dated October 1, 2012, to the Private Instrument of Non Residential Real Estate Lease Agreement, dated March 31, 2008, between Lucio Tomasiello and Amyris Brasil Ltda.
10.36[aj]	Fourth Amendment, dated March 3, 2015, to the Private Instrument of Non-Residential Real Estate Lease Agreement, dated March 31, 2008, by and among Amyris Brasil Ltda., Lucius Tomasiello and Mauricio Tomasiello
10.37[j]	Fifth Amendment, dated September 22, 2015, to the Private Instrument of Non-Residential Real Estate Lease Agreement, dated March 31, 2008, by and among Amyris Brasil Ltda., Lucius Tomasiello and Mauricio Tomasiello

Exhibit No.	Description
10.38[j]	Sixth Amendment, dated October 17, 2016, to the Private Instrument of Non-Residential Real Estate Lease Agreement, dated March 31, 2008, by and among Amyris Brasil Ltda., Lucius Tomasiello and Mauricio Tomasiello
10.39	Seventh Amendment, dated September 25, 2017, to the Private Instrument of Non-Residential Real Estate Lease Agreement, dated March 31, 2008, by and among Amyris Brasil Ltda., Lucius Tomasiello and Mauricio Tomasiello
10.40[j]	Lease Agreement, dated May 1, 2010, between São Martinho S/A and SMA — Industria Quimca S/A
10.41[j]	Amendment No. 2, dated August 31, 2015, to the Lease Agreement, dated May 1, 2010, between São Martinho S/A, SMA — Industria Quimca
10.42[j]	Amendment No. 3, dated September 1, 2016, to the Lease Agreement, dated May 1, 2010, between São Martinho S/A, SMA — Industria Quimca Ltda. (f.k.a. SMA Indústria Química S.A.)
10.43[j]	Amendment No. 4, dated December 26, 2017, to the Lease Agreement, dated May 1, 2010, between São Martinho S/A, SMA — Industria Quimca, Ltda.
10.44	At Market Issuance Sales Agreement, dated March 8, 2016, among registrant, FBR Capital Markets & Co. and MLV & Co. LLC
10.45	Securities Purchase Agreement, dated April 8, 2016, between registrant and the Bill & Melinda Gates Foundation
10.46	Letter Agreement re Charitable Purposes and Use of Funds, dated April 8, 2016, between registrant and the Bill & Melinda Gates Foundation
10.47	Form of Securities Purchase Agreement, dated May 10, 2016, between registrant and the other party thereto
10.48[a]	Initial Strategic Partnership Agreement, dated June 28, 2016, between registrant and Gingko Bioworks, Inc.
10.49[a]	Collaboration Agreement, dated September 30, 2016, between registrant and Ginkgo Bioworks, Inc.
10.50[b]	Partnership Agreement, dated October 20, 2017, between registrant and Ginkgo Bioworks, Inc.
10.51	Purchase and Sale Agreement, dated November 10, 2016, among registrant, Glycotech, Inc., and Salisbury Partners, LLC
10.52[a]	Cooperation Agreement, dated October 26, 2016, between registrant and Nenter & Co., Inc.
10.53[a]	Letter Agreement, dated April 23, 2017, terminating Cooperation Agreement, dated October 26, 2016, between registrant and Nenter & Co., Inc.
10.54	Form of Securities Purchase Agreement, dated December 2, 2016, between registrant and the other party thereto
10.55	Form of Securities Purchase Agreement, dated April 17, 2017, between registrant and the other party thereto
10.56	Form of Amendment Agreement, dated May 2, 2017, between registrant and the other party thereto
10.57	Form of Securities Purchase Agreement, dated May 8, 2017, between registrant and the other parties thereto
10.58	Amendment No. 1, dated May 30, 2017 to Securities Purchase Agreement, dated May 8, 2017, between registrant and the other parties thereto
10.59	Securities Purchase Agreement, dated May 31, 2017, between registrant and the investor named therein

Exhibit No.	Description
10.60	Engagement Letter, dated April 18, 2017, by and between registrant and Rodman & Renshaw, a unit of H.C. Wainwright & Co., LLC
10.61	Amendment, dated May 9, 2017, to Engagement Letter, dated as of April 18, 2017, by and between registrant and Rodman & Renshaw, a unit of H.C. Wainwright & Co., LLC
10.62	Form of Security Holder Agreement, dated May 8, 2017, between registrant and the other parties thereto
10.63	Securities Purchase Agreement, dated August 2, 2017, between registrant and DSM International B.V.
10.64	Securities Purchase Agreement, dated August 2, 2017, among registrant, Vivo Capital Fund VIII, L.P. and Vivo Capital Surplus Fund VIII, L.P.
10.65	Credit Agreement, dated December 28, 2017, between registrant and DSM Finance BV
10.66[a]	Joint Venture Agreement, dated December 12, 2016, among registrant, Nikko Chemicals Co. Ltd., and Nippon Surfactant Industries Co., Ltd.
10.67[a]	First Amended and Restated LLC Operating Agreement of Aprinnova, LLC (f.k.a. Neossance, LLC) dated December 6, 2016
10.68[k]	Offer Letter dated September 27, 2006 between registrant and John Melo
10.69[k]	Amendment, dated December 18, 2008, to Offer Letter, dated September 27, 2006, between registrant and John Melo
10.70[k]	Offer Letter, dated September 30, 2008, between registrant and Joel Cherry
10.71[k]	Amendment, dated December 19, 2008, to Offer Letter, dated September 30, 2008, between registrant and Joel Cherry
10.72[k]	Offer Letter, dated October 23, 2014, between registrant and Raffi Asadorian
10.73[k]	Offer Letter, dated November 23, 2016, between registrant and Kathleen Valiasek
10.74[kl]	Amendment, dated March 6, 2017, to Offer Letter, dated November 23, 2016, between registrant and Kathleen Valiasek
10.75[k]	Offer Letter, dated June 5, 2017, between registrant and Nicole Kelsey
10.76[k]	Amendment, dated September 18, 2017, to Offer Letter, dated June 5, 2017, between registrant and Nicole Kelsey
10.77[k]	Offer Letter, dated October 5, 2017, between registrant and Eduardo Alvarez
10.788 k	2005 Stock Option/Stock Issuance Plan, as amended on July 19, 2011
10.79[k]	Form of Notice of Grant of Stock Option under registrant's 2005 Stock Option/Stock Issuance Plan
10.80[k]	Form of Notice of Grant of Stock Option (non-Exempt) under registrant's 2005 Stock Option/Stock Issuance Plan
10.81[k]	Form of Notice of Grant of Stock Option (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan
10.82[k]	Form of Stock Option Agreement under registrant's 2005 Stock Option/Stock Issuance Plan
10.83[k]	Form of Stock Option Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan
10.84[k]	Form of Stock Purchase Agreement under registrant's 2005 Stock Option/Stock Issuance Plan
10.85[k]	Form of Stock Purchase Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan
10.86[k]	2010 Equity Incentive Plan and forms of award agreements thereunder

Exhibit No.	Description
10.87[k]	2010 Employee Stock Purchase Plan and form of subscription agreements thereunder
10.88[k]	Amendment Number One, dated, February 16, 2017, to registrant's 2010 Employee Stock Purchase Plan
10.89[k]	Executive Severance Plan, effective November 6, 2013
10.90[k]	Compensation arrangements between registrant and its non-employee directors
10.91[k]	Compensation arrangements between registrant and its executive officers
10.92[k]	Form of Indemnity Agreement between registrant and its directors and executive officers
16.1	Letter of PricewaterhouseCoopers LLP dated June 15, 2017
21.01	List of subsidiaries
23.01	Consent of KPMG LLP, independent registered public accounting firm
23.02	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm
24.01	Power of Attorney (included on signature page to this Form 10-K)
31.01	Certification of Chief Executive Officer pursuant to Securities Exchange Act Rules 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.02	Certification of Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.01[m]	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.02[m]	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.1	Section 13(r) Disclosure
101[n]	The following materials from registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Operations; (ii) the Consolidated Balance Sheets; (iii) the Consolidated Statements of Comprehensive Income; (iv) the Consolidated Statements of Convertible Preferred Stock, Redeemable Noncontrolling Interest and Equity (Deficit); (v) the Consolidated Statements of Cash Flows; and (vi) Notes to Consolidated Financial Statements

a Portions of this exhibit, which have been granted confidential treatment by the Securities and Exchange Commission, have been omitted.

b Portions of this exhibit have been omitted pending a determination by the Securities and Exchange Commission as to whether these portions should be granted confidential treatment.

c Substantially identical Common Stock Purchase Agreements, each dated May 18, 2012, were entered into with five separate investors. Registrant has filed the form of such Common Stock Purchase Agreements, which is substantially identical in all material respects to all of such Common Stock Purchase Agreements, except as to the parties thereto and the number of shares being purchased.

d Registrant issued substantially identical 5% Unsecured Convertible Notes (the "5% Notes") to Total Gas & Power USA, SAS ("Total'), FIAM Target Date Large Cap Stock Commingled Pool (formerly known as Fidelity Pyramis Lifecycle Large Cap Stock Commingled Pool. Fidelity Variable Insurance Products Fund Ill: Growth & Income Portfolio, Fidelity Hastings Street Trust: Fidelity Advisor Series Growth & Income Fund. Fidelity Securities Fund: Fidelity Growth & Income Portfolio Fidelity Hastings Street Trust: Fidelity Series Growth & Income Fund. Fidelity Commonwealth Trust: Fidelity Large Cap Stock Fund, and Maxwell (Mauritius) Pte Ltd on October 16. 2013. Registrant has filed the 5% Note issued to Total. and has included with Exhibit 4.04 a schedule (Schedule A to Exhibit 4.04 of registrant's Form 10-Q filed on May 9, 2014) identifying each of the 5% Notes and setting forth the material detail in which the other 5% Note(s) differ from the filed 5% Note (i.e. the Purchasers. the amounts of the 5% Notes. and the conversion price).

e Registrant issued substantially identical 10% Unsecured Convertible Notes (the" 10% Notes") to Total Wolverine Flagship Fund Trading Limited and Maxwell (Mauritius) Pte Ltd on January 15 2014. Registrant has filed the 10% Note issued to Total and has included with Exhibit 4.06. a schedule (Schedule A to Exhibit 4.06 of registrant's Form 10-Q filed on May 9, 2014) identifying each of the 10% Notes and setting forth the material details in which the other 10% Note(s) differ from the filed 10% Note (i.e. the purchasers and the amounts of the 10% Notes).

f Registrant issued substantially identical 6.50% Senior Convertible Notes due 2019 (the "6.50% Notes") to Maxwell (Mauritius) Pte Ltd. ("Temasek"), Total Energies Nouvelles Activités USA, and Foris Ventures, LLC on May 29, 2014. Registrant has filed the 6.50% Note issued to Temasek, and has included, with such exhibit, a schedule (Schedule A to Exhibit 4.03 of registrant's Form 10-Q filed August 8, 2014) identifying each of the 6.50% Notes and setting forth the material details in which the other 6.50% Notes differ from the filed 6.50% Note (i.e., the note number, the purchasers, and the amounts of the 6.50% Notes).

g Registrant issued substantially identical warrants to the purchasers under that certain Securities Purchase Agreement entered into on July 24, 2015~ Registrant has filed the warrant issued to Total Energies Nouvelles Activites USA and has included with such Exhibit a schedule (Schedule A to Exhibit 4.03 of registrants Form 10-Q filed on August 8, 2015) identifying each of the warrants and setting forth the material details in which the other warrants differ from the filed form of warrant (i.e. the names of the purchasers. the certificate numbers and the respective amounts of shares underlying the warrants).

h Substantially identical Unsecured Promissory Notes were entered into with three separate investors. Registrant has filed the Note entered into by registrant and Foris Ventures LLC, which is substantially identical in all material respects to all of such Notes except as to the parties thereto, the issue date and the value of the Notes.

i Substantially identical Warrants to Purchase Stock were entered into with three separate investors. Registrant has filed the Warrant entered into by registrant and Foris Ventures LLC, which is substantially identical in all material respects to all of such Warrants, except as to the parties thereto, the issue date and the amount of underlying shares.

j Translation to English from Portuguese or Dutch, as applicable, in accordance with Rule 12b-12(d) of the regulations promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

k Indicates management contract or compensatory plan or arrangement.

l Originally filed as Exhibit 10.08 to registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 15, 2017, but contained a non-substantive typographical error. The contents of such exhibit were described in registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 10, 2017.

m This certification shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that Section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

n Pursuant to applicable securities laws and regulations, registrant is deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and is not subject to liability under any anti-fraud provisions of the federal securities laws as long as registrant has made a good faith attempt to comply with the submission requirements and promptly amends the interactive data files after becoming aware that the interactive data files fails to comply with the submission requirements. These interactive data files are not deemed filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act, are not deemed filed for purposes of section 18 of the Exchange Act and are not otherwise subject to liability under these sections.

EXHIBIT 31.01

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John G. Melo, certify that:

1. I have reviewed this annual report on Form 10-K of Amyris, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 17, 2018

/s/ JOHN G. MELO

John G. Melo
President and Chief Executive Officer

EXHIBIT 31.02

CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kathleen Valiasek, certify that:

6. I have reviewed this annual report on Form 10-K of Amyris, Inc.;

7. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

8. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

9. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   e) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   f) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   g) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   h) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

10. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   c) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   d) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 17, 2018

/s/ KATHLEEN VALIASEK

Kathleen Valiasek
Chief Financial Officer

EXHIBIT 32.01

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, John G. Melo, President and Chief Executive Officer of Amyris, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2017 (Report) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: April 17, 2018

/s/ JOHN G. MELO

John G. Melo
President and Chief Executive Officer

EXHIBIT 32.02

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

I, Kathleen Valiasek, Chief Financial Officer of Amyris, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2017 (Report) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: April 17, 2018

/s/ KATHLEEN VALIASEK

Kathleen Valiasek
Chief Financial Officer

EXECUTIVE OFFICERS

John Melo
President and Chief Executive Officer

Kathleen Valiasek
Chief Financial Officer

Joel Cherry, Ph.D.
President of Research and Development

Eduardo Alvarez
Chief Operating Officer

Nicole Kelsey
General Counsel and Secretary

BOARD OF DIRECTORS

John Doerr
Director and Chair of the Nominating and Governance Committee

Geoffrey Duyk, M.D., Ph.D.
Director and Interim Chair of the Board

Philip Eykerman
Director

Christoph Goppelsroeder
Director

Frank Kung, Ph.D.
Director

John Melo
Director, President and Chief Executive Officer

Carole Piwnica
Director and Chair of the Leadership Development and Compensation Committee

Fernando Reinach, Ph.D.
Director

Christophe Vuillez
Director

R. Neil Williams
Director and Chair of the Audit Committee

HH Sheikh Abdullah bin Khalifa Al Thani
Director

Patrick Yang, Ph.D.
Director

STOCKHOLDER INFORMATION

Corporate Headquarters

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5885 Hollis Street, Ste. 100
Emeryville, CA 94608
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Main Fax: +1 (510) 225-2645

Brazil
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Campinas, Brasil
Rua John Dalton, 301 – Bloco B –
Edificio 3 – Condomínio
Techno Plaza
Campinas, SP 13069-330
Main Telephone: +55 (19) 3783 9450

Transfer Agent

EQ Shareowner Services
1110 Centre Pointe Curve Suite 101
Mendota Heights, MN 55120
+1 (855) 217-6361

Independent Auditor

KPMG LLP
San Francisco, California

Stock Listing

NASDAQ: AMRS

Annual Meeting

The 2018 Annual Meeting of Stockholders is scheduled to take place at 2:00 p.m. Pacific Time on Tuesday, May 22, 2018 at our headquarters in Emeryville, California.

Investor Relations

We welcome inquiries from our stockholders and other interested investors. To obtain a paper copy of our Annual Report on Form 10-K for fiscal year 2017, including the financial statements and the financial statement schedules contained in the Form 10-K, at no charge, please submit your request in writing by sending an e-mail request to Amyris Investor Relations at investor@amyris.com, calling (510) 740-7481, or writing to Amyris Investor Relations at 5885 Hollis Street, Suite 100, Emeryville, California 94608. We also make our Annual Report on Form 10-K, as well as our other SEC filings, available free of charge through the investor relations section of our website located at http://investors.amyris.com/index.cfm as soon as reasonably practicable after they are filed with or furnished to the Securities and Exchange Commission.

Certifications

The certifications by our Chief Executive Officer and Chief Financial Officer pursuant to Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 are filed as exhibits to our Annual Report on Form 10-K for fiscal year 2017. A copy of our Annual Report on Form 10-K for fiscal year 2017, including such certifications, is enclosed with this report.