UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2022

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: **001-38015**

SIGMA ADDITIVE SOLUTIONS, INC.
(Exact name of registrant as specified in its charter)

Nevada	**27-1865814**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

3900 Paseo del Sol
Santa Fe, New Mexico 87507
(Address of principal executive offices)

(505) 438-2576
(Registrant's telephone number, including area code):

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	SASI	The NASDAQ Stock Market LLC

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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).
Yes ☒. No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☐ No ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐. No ☒.

Based on the closing price of the registrant's common stock as reported on The NASDAQ Capital Market, the aggregate market value of the Registrant's common stock held by non-affiliates on June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately $13,340,270. Shares of common stock held by directors and executive officers and any ten percent or greater stockholders and their respective affiliates have been excluded from this calculation, because such stockholders may be deemed to be "affiliates" of the registrant. This is not necessarily determinative of affiliate status for other purposes. The number of outstanding shares of the registrant's common stock as of March 29, 2023 was 10,772,713.

Documents incorporated by reference: None

SIGMA ADDITIVE SOLUTIONS, INC.

FORM 10-K — FISCAL YEAR ENDED DECEMBER 31, 2022

TABLE OF CONTENTS

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Report, including any documents which may be incorporated by reference into this Report, 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, as amended. All statements other than statements of historical fact are forward-looking statements for purposes of these provisions, including, but not limited to, statements regarding our expectations about development and commercialization of our technology, any projections of revenues or statements regarding our anticipated revenues or other financial items, any statements of the plans and objectives of management for future operations, any statements concerning proposed new products or services, any statements regarding future economic conditions or performance, and any statements of assumptions underlying any of the foregoing. All forward-looking statements included in this document are made as of the date hereof and are based on information available to us as of such date. We assume no obligation to update any forward-looking statement. In some cases, forward-looking statements can be identified by the use of terminology such as "may," "will," "expects," "plans," "anticipates," "intends," "believes," "estimates," "potential," or "continue," or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, there can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Future financial condition and results of operations, as well as any forward-looking statements are subject to inherent risks and uncertainties, including any other factors referred to in our press releases and reports filed with the Securities and Exchange Commission ("SEC"). All subsequent forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by these cautionary statements. Certain factors that may have a direct bearing on our operating results are described under "Risk Factors" and elsewhere in this Report.

PART I

ITEM 1. BUSINESS.

The Company:

Sigma Additive Solutions, Inc. (the "Company," "Sigma," "Sigma Additive," "we," "us" and "our") is a software company that was founded by scientist-engineers composed of physicists and metallurgists then working at Los Alamos National Labs for the purpose of developing sophisticated metallurgical products. Since 2016, the Company's focus has been on solving the complex and challenging problem of how to best assure the high quality of metal parts manufactured in laser powder bed additive manufacturing, or 3D, printing, machines. Sigma and many others believe that until this problem was solved, 3D manufacturing of metal parts would not be scalable enough to grow past prototyping and mature into a major industry enjoying high quality yields and cost-efficient production runs. The solution that Sigma developed to solve this problem is In-Process-Quality-Assurance ("IPQA®") software known as PrintRite3D®.

In 2018, the Sigma team enhanced and added user features to its PrintRite3D® technology. In 2019, the Company began to productize and test PrintRite3D® on various 3D metal printers at customers' sites through the Company's Rapid Test and Evaluation ("RTE") program. Upon receiving favorable responses from the various RTEs, in 2020 the Company began to market PrintRite3D®. Although the worldwide COVID-19 pandemic adversely affected capital spending within the Company's targeted industries, the Company moved forward with its plan to market PrintRite3D® to the following industry segments: (1) global manufacturing companies with Additive Manufacturing ("AM") initiatives; (2) 3D printer Original Equipment Manufacturers ("OEMs") for purchases of licenses and generating fees and royalties thereafter; (3) additive manufacturing software venders for alliances and licenses for co-sales; and (4) research foundations, standards organizations and universities, all in service of Sigma's potential for setting the industry standard of measurement by providing data and analytics as a metrics-based quality standard of metal quality for all 3D laser powder bed manufactured parts, notwithstanding the design, metal, or brand of equipment upon which parts are manufactured. In 2022, we shifted our business model from selling perpetual licenses of our combined hardware and software solution to subscription-based licenses and began the development of a suite of software-only product offerings, which we believe will transform our business by providing a scalable, cost-effective solution to our customers that can be more broadly connected to OEM's, hardware, and software partners. With the change to our business model, and the desire to connect more fully to the full digital quality landscape, the business began to explore potential strategic investments and mergers and acquisitions. This is a major focus in 2023, as management seeks capital for operations, and to provide runway to future options, and to take Sigma to the next phase of our business.

Additive Metal Manufacturing and the role and need for Sigma's technology:

The use of 3D printing technology dates to the 1980s for polymer applications, but the ability to print functional parts from metal alloys has spurred significant interest and investment in AM in recent years. AM is now reshaping the product design process, entire supply chains, and the vast landscape of manufacturing. Engineers are embracing new design freedoms to realize valuable product performance improvements and cost efficiencies with lighter weight, better thermal management capability, better fluid mixing, customization, and the ability to make different structures and textures that yield better part integration.

We believe that there are several significant hurdles to be overcome for broader adoption of additive technologies for the production of industrial metal and polymer parts. Among these are lack of quality, consistency, and industry standards along with cost. The Company believes PrintRite3D® has the potential to contribute to widespread industrialization of 3D metal and polymer printing. Additionally, the disruption in complex and rigid supply chains caused by COVID-19 exposed the country's vulnerability to shortages in times of crisis. In response, manufacturers are devising strategies to be able to be more agile, increase their ability to manufacture mission critical parts on demand, with more customization, and closer to where the end part will be needed, and we believe quality systems to ensure consistency will play a critical role. Additionally, we believe that in-process data will play an important role in connecting the full digital quality landscape from raw materials to final part.

PrintRite3D® Technology and Product Family

The current version of PrintRite3D® is an integrated hardware and software edge computing platform, or in-process quality assurance system, that combines inspection, feedback, data collection and critical analysis. It is a 3D printer platform-independent solution that can be installed as a retrofit to an existing 3D printer or requested as a factory option from select 3D printer OEMs. PrintRite3D® provides a high-fidelity, accurate system that can confidently scale to multi-laser 3D metal and polymer printers. The PrintRite3D® system detects potential anomalies in real-time and incorporates machine learning in conjunction with developed metrics to map those metrics to live post-process data. This provides the ability to reduce manufacturing costs by identifying problems before post-production testing, while creating a certification framework that serves the needs of end-users, printer manufacturers, and standards organizations.

PrintRite3D was initially developed to work with industrial 3D metal printers using the Powder Bed Fusion ("PBF") process, which is the most widely used process for industrial metal applications. In 2020, we announced PrintRite3D for Direct Energy Deposition, or DED, for metal parts. PrintRite3D DED opened another segment of the industrial metal market for Sigma to sell and distribute our technology. In 2021, the Company introduced PrintRite3D Selective Laser Sintering, or SLS, for polymer materials. The polymer market is larger and more advanced than the metal market. There is an increasing need for quality and standards within the polymer market to support mission critical parts such as those being used in aerospace, space exploration, and defense. The Company's entry into this market was customer driven by a supplier of critical equipment to the space exploration market. The Company believes that PrintRite3D's ability to work across a different 3D printers, processes and materials gives it a competitive advantage and will help accelerate the adoption of 3D printing for industrial applications.

In 2022, we began the development of a new suite of software-only products, which we believe will allow us to scale into production across enterprises with large installations of production printers. These machine-health, process health, and part-health modules will be built into the PrintRite3D suite. These products will combine streaming health data from major OEM's and off-axis camera data, and thermal on-access melt pool technology to provide a centralized home for in-process quality solutions and reporting that can be connected to the broader digital quality ecosystem. We believe the connected and open data we are creating will allow users to simplify their quality operations, identify gross defects, utilize machine-learning and artificial intelligence platforms, and significantly improve production quality while lowering the cost of development.

Distribution Methods

Sigma employs a multi-channel distribution model for its IPQA products, including a direct sales force, value added resellers ("VARs") software and hardware partners, and 3D printer OEMs. In 2022, the majority of the Company's revenue was generated by direct sales in North America and Europe and through OEM relationships. VARs are currently used in Japan and India. The Company plans to extend its VAR channel outside of North America and Europe. Since 2020, the Company has moved to establish and extend relationships with 3D printer OEMs, software partners, and integrated hardware partners to expand our footprint and ability to scale our business.

The Company markets its products through webinars, email and social media campaigns, and participation, both in person and virtually, in industry events and tradeshows. In addition, the Company collaborates with international standards organizations in the establishment of standards for AM.

Sources and Availability of Parts and Materials

We have important relationships with several suppliers for critical components of our PrintRite3D® systems, in particular optics and data acquisition components, and development of our user interface. To-date, we have not experienced shortages of components; however, in some cases COVID-19 has resulted in increased lead times and cost for certain parts. We manage the risk of component shortages by sourcing backup suppliers, and in the case of our user interface, hiring engineers in-house and contractors to support the ongoing development and maintenance.

Dependence on a Few Major Customers and Partners

The Company has established agreements with several international 3D printer OEMs, software, and integrated hardware companies. The Company supports the OEM, software, and hardware relationships with joint marketing programs, field sales and technical support personnel to assist in the sale of its technology. It is the Company's intent and focus to expand our OEM and software channels through distribution relationships with existing and additional 3D printer OEMs, hardware, and software relationships in the future.

Competition

PrintRite3D® is a third-party, agnostic In-Process Quality Assurance system designed to provide a consistent, standards-based measurement and prediction of quality across a heterogeneous collection of 3D printers. Competition historically has been viewed as printer OEMs with their own monitoring system, usually as a separately priced option to its printers. However, with the move to software-only solutions and API connection options to machines, Sigma believes it can provide machine agnostic analytics and reporting software tools that help standardize digital quality in the industry. Additionally, we plan to work with OEMs to reduce costs of hardware, grow and expand their quality monitoring as a standard machine option, and provide a standard language for quality. We believe that the future of AM will consist of factories with various generations of printers from various manufacturers. The primary reasons that global manufacturers will have machines from various vendors is that certain machines and technologies are better suited for different applications than others. Additionally, as the industry progresses, innovation will accelerate, and new leaders will emerge. Finally, many believe that there will be a consolidation of 3D metal manufacturers and the number of vendors will decrease over the next decade from approximately 50 at present. Although standards for monitoring are slowly being set by various international standards organizations, it is highly unlikely that printer OEMs will modify their monitoring systems to work with other OEMs machines. Therefore, we believe that the best way to produce parts with a consistent level of quality is with a third-party, agnostic, standards based IPQA system, such as PrintRite3D®. Over the past year or so, new competitors have entered the market with monitoring technology that follows Sigma's lead as a third-party agnostic system capable of working across 3D printer machine types. However, most of these solutions are point solutions addressing one specific item of quality. These have value, but do not provide the end user the full quality picture for regulators or customer needs. Sigma has expanded its quality footprint to be a home for holistic in-process quality data. We see a path to integrate with other point solutions if customers find interest in them, while still ensuring holistic quality for our end customers. Point solutions are useful; however, they fall short of determining root cause, and unlike PrintRite3D, are not capable of instructing the printer, through closed-loop control, to vary certain machine variables such as laser power to avoid creating the defects in the first place.

Intellectual Property

We regard our patents, trademarks, domain names, trade secrets, know-how, and other intellectual property as critical to our success. We rely on a combination of patent, trademark, trade secret, other intellectual property law, confidentiality procedures, and contractual provisions with employees, partners, and others to protect the technology and other proprietary rights, information and know-how that comprise the core of our business. The tables below summarize our issued patents. We are currently prosecuting foreign and U.S. patent applications related to our IPQA® technology and rapid qualification of additive manufacturing for metal parts. There is no guarantee, however, that the patent applications will result in issued patents or that if issued, any patents will offer adequate protection under applicable law.

Sigma Additive Solutions, Inc. Patent Portfolio as of December 31, 2022

Jurisdiction	Granted	In Process	Total
US	20	17	37
PCT	-	2	2
EP	-	4	4
Germany	3	9	12
China	4	4	8
Japan	1	4	5
Korea	1	-	1
Total	**29**	**40**	**69**

The Company believes that its patented PrintRite3D® technology is a significant barrier to entry to competitors attempting to replicate the Company's strategy.

Title	Type	Patent No. or Application No.	Expiration Date
Optical Manufacturing Process Sensing and Status Indication System	US Utility	10,317,294	5/2/2035
Optical Manufacturing Process Sensing and Status Indication System	US Utility	10,520,372	3/25/2035
Optical Manufacturing Process Sensing and Status Indication System	US Utility	11,073,431	3/25/2035
Method And System for Monitoring Additive Manufacturing Processes	US Utility	9,999,924	5/11/2036
Method And System for Monitoring Additive Manufacturing Processes	US Utility	11,135,654	8/21/2035
Multi-Sensor Quality Inference and Control For Additive Manufacturing Processes	US Utility	10,786,948	4/24/2037
Multi-Sensor Quality Inference and Control For Additive Manufacturing Processes	US Utility	11,478,854	11/18/2035
Material Qualification System and Methodology	US Utility	10,226,817	4/26/2037
Material Qualification System and Methodology	China Utility	ZL201680010333.X	1/13/2036
Material Qualification System and Methodology	US Utility	11,267,047	1/13/2036
Systems And Methods for Additive Manufacturing Operations	US Utility	10,207,489	6/20/2037
Systems And Methods for Additive Manufacturing Operations	US Utility	10,717,264	12/28/2038
Layer-Based Defect Detection Using Normalized Sensor Data	US Utility	11,072,043	1/26/2040
System And Method for Additive Manufacturing	China Utility	ZL201980027059.0	2/21/2039
Photodetector Array for Additive Manufacturing Operations	German Utility	112,019,000,521	2/21/2039
Photodetector Array for Additive Manufacturing Operations	US Utility	10,786,850	2/21/2039
Photodetector Array for Additive Manufacturing Operations	US Utility	11,260,456	2/21/2039
Correction of Non-Imaging Thermal Measurement Devices	US Utility	11,260,454	3/11/2040
Systems And Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	China Utility	ZL201880064101.1	8/1/2038
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	German Utility	112,018,001,597	8/1/2038
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	Japan Utility	7,024,981	8/1/2038
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	Korea Utility	10-2340573	8/1/2038
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	US Utility	10,479,020	8/1/2038
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	US Utility	11,390,035	8/1/2028
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	China Utility	ZL201980027181.8	2/21/2039
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	German Utility	112,019,000,498	2/21/2039
Systems and Methods for Measuring Radiated Thermal Energy During an Additive Manufacturing Operation	US Utility	10,639,745	2/21/2039
Methods and Systems for Quality Inference and Control for Additive Manufacturing Processes	US Utility	11,517,984	4/30/2041
Defect Identification Using Machine Learning in an Additive Manufacturing System	US Utility	11,536,671	7/30/2041

Government Regulations

Any contracts that we enter into with governmental agencies will be subject to a variety of federal, state and local laws and regulations. These regulations are aimed at preventing the inadvertent disclosure of munitions related data or the export of technical knowledge to foreign countries. The work we do with governmental units may also be subject to laws respecting the confidentiality of any classified or national security information we receive during the course of our activities under any government contract.

Additionally, our sales to U. S. government agencies are driven by pricing based on costs incurred to produce products or perform services. U.S. government contracts generally are subject to Federal Acquisition Regulations ("FAR"), agency-specific regulations that implement or supplement FAR, such as the se Defense Federal Acquisition Regulations and other applicable laws and regulations. These regulations impose a broad range of requirements, many of which are unique to government contracting, including various procurement, import and export, security, contract pricing and cost, contract termination and adjustment, and audit requirements. Our failure to comply with these regulations and requirements could result in reductions of the value of contracts, contract modifications or termination, and the assessment of penalties and fines and could lead to temporary or permanent suspension or debarment from government contracting or subcontracting. In addition, government contractors are subject to routine audits and investigations by U.S. government agencies such as the Defense Contract Audit Agency ("DCAA"). These agencies review a contractor's performance, cost structure, and compliance with applicable laws, regulations, and standards. The DCAA also reviews the adequacy of, and a contractor's compliance with, its internal control systems and policies, including the contractor's purchasing, property, estimating, compensation, and information systems.

As of March 29, 2023, we have several active contracts with government agencies, and, funding permitting, we plan to seek to increase government contracting in the future.

Human Capital

As of December 31, 2022, we had 25 full-time employees. We continue to balance a search for additional, qualified personnel to support our targeted growth in the area of IPQA® for AM, while ensuring that our operations are aligned towards our software focus and corresponding cost structure. We believe that our future success will depend, in part, upon our ability to attract and retain highly skilled employees and management and technical personnel. Employee engagement is important to us, and we strive to continuously enhance our corporate culture and further the growth and development of our employees.

All employees are responsible for upholding the Sigma Code of Ethics and Business Conduct, which is important in delivering on our strategy. We maintain a compliance hotline for the confidential reporting of any suspected policy violations or unethical business conduct on the part of our businesses, employees, officers, directors, suppliers, or customers.

Compensation and Benefits

We strive to provide competitive compensation and benefits to our employees. Our benefit programs include bonuses, stock-based compensation awards, a 401(k) plan with employer matching, healthcare and insurance benefits, flexible paid time off and other employee assistance programs.

COVID-19 Pandemic

The health and wellness of our employees is important to our success. We continue to follow guidance from health officials, and while COVID-19 restrictions have been relaxed in the U.S. and Europe, we have maintained a number of health-related measures including, but not limited to, a flexible work-from-home policy.

There continue to be isolated COVID-19 outbreaks in certain regions of the world, but these outbreaks have not had a significant impact on our operations. The extent to which the COVID-19 epidemic may impact our business, operations, financial condition, liquidity and results of operations in 2023 and beyond remains uncertain and unpredictable.

Russia - Ukraine Conflict

In February 2022, Russian forces invaded Ukraine. In response, the U.S., the European Union ("EU"), and several other countries imposed economic and trade sanctions and other restrictions (collectively, "global sanctions") targeting Russia and Belarus. Russia then imposed retaliatory economic measures against the U.S., the EU, and several other countries. We have no sales to Russia or Ukraine, nor do we have any assets, employees or third-party contractors in Russia or Ukraine. The duration of the conflict and further sanctions could have further impact on the global economy, financial markets and inflation. Due to the uncertainty around the duration or outcome of the conflict, we cannot predict its effect on our business.

Corporate Information

We were incorporated as Messidor Limited in Nevada on December 23, 1985 and changed our name to Framewaves Inc. in 2001. On September 27, 2010, we changed our name to Sigma Labs, Inc., and on August 9, 2022, we changed our name to Sigma Additive Solutions, Inc.

Our principal executive offices are located at 3900 Paseo del Sol, Santa Fe, New Mexico 87507, and our current telephone number at that address is (505) 438-2576. Our website address is www.sigmaadditive.com. The Company's annual reports, quarterly reports, current reports on Form 8-K and amendments to such reports filed or furnished pursuant to section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and other information related to the Company, are available, free of charge, on that website as soon as we electronically file those documents with, or otherwise furnish them to, the SEC. The Company's website and the information contained therein, or connected thereto, are not and are not intended to be incorporated into this Report.

Recent Developments

On March 20, 2023, we announced the expansion of our collaboration with Materialise, a global leader in 3D printing software and service solutions, to provide additive manufacturing (AM) users automated quality control by integrating the PrintRite3D® quality assurance solution into the new software solution Materialise Process Control. Combining multiple complementary data sources and analytic methods allows businesses to make faster, data-driven decisions, improving operational efficiency and driving revenue growth. Materialise Process Control allows manufacturers to analyze and correlate layer data from the 3D printing process. Sigma and Materialise collaborated to integrate PrintRite3D® into Process Control and to make it available in CO-AM, Materialise's end-to-end software platform for 3D printing. Sigma's PrintRite3D® suite provides in-process data, including thermal data from the melt pool, yielding layer data that can enable users to find the root cause of defects faster.

On March 6, 2023, we announced that we will partner with DyeMansion, the global leader in connected and integrated post-processing solutions for industrial polymer 3D-printing, to add an integrated hardware/software solution option that offers extra quality assurance for DyeMansion's post-processing solutions: DM60, Powershot Performance and Powerfuse S. DyeMansion's comprehensive solution, the Print-to-Product workflow and all components are applicable for Industry 4.0 and can be integrated seamlessly into various production processes. The real-time monitoring and data analytics from Sigma's Machine Health module will complement DyeMansion's systems by offering reduced cost per part, unmatched quality, and high sustainability.

On March 1, 2023, we announced that we had retained Lake Street Capital Markets as the Company's financial advisor in connection with our consideration of a range of strategic alternatives designed to enhance shareholder value, including a possible strategic investment, acquisition, merger, business combination, or similar transaction.

ITEM 1A. RISK FACTORS.

Our business is subject to numerous risks. We caution you that the following important factors, among others, could cause our actual results to differ materially from those expressed in statements made by us or on our behalf in filings with the SEC, press releases or communications with investors and others. Any or all of our statements in this Report and in any other public statements we make may turn out to be wrong. They can be affected by inaccurate assumptions or by known or unknown risks and uncertainties. The factors mentioned in the discussion below will be important in determining future results. Consequently, actual future results may vary materially from those anticipated in this Report or our other public statements. The occurrence of any of the events or developments described below could harm our financial condition, results of operations, business and prospects. In such an event, the market price of our securities could decline. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may have similar adverse effects on us.

Risks Related to Our Business

We will require additional financing to continue our operations, and there is substantial doubt regarding our ability to continue as a going concern.

As of December 31, 2022, we had cash of $2,845,931. Our existing cash on hand and anticipated revenues are sufficient to fund our remaining anticipated operating costs and capital expenditure requirements only through May 2023. We will need to raise additional financings to fund our operations, maintain compliance with the NASDAQ listing requirements and implement our business plan. There is no assurance as to the amount and availability of any required future financing or the terms thereof. Such financing, if in the form of equity, may be highly dilutive to our existing stockholders and may otherwise include onerous terms. If in the form of debt, such financing may include covenants and repayment obligations which may be difficult to meet and that could adversely affect our business operations. We have no current understanding or arrangement to obtain any additional financing. To the extent that funds are not available to us, we may be required to delay, limit, or terminate our business operations and may lose our NASDAQ listing.

In light of the foregoing, there is substantial doubt our ability to continue as a going concern, and the report of our registered independent public accounting firm on our financial statements as of and for the year ended December 31, 2022 contains a going concern qualification.

We are not profitable and may never become profitable.

We have incurred losses in every reporting period since we commenced business operations in 2010 and expect to continue to incur significant losses for the foreseeable future. Our net loss applicable to common stockholders for the years ended December 31, 2022 and 2021 was $8,749,304 and $7,488,172, respectively. As of December 31, 2022, our accumulated deficit was $49,342,484. There is no assurance that any revenues we generate will be sufficient for us to become profitable or to maintain profitability. Our revenues for the years ended December 31, 2022 and December 31, 2021 were $630,428 and $1,651,765, respectively, and our operating expenses for those periods were $9,029,502 and $9,571,185, respectively. Our current revenues are not sufficient to fund our operations. We cannot predict when, if ever, we might achieve profitability and we are not certain that we will be able to sustain profitability, if achieved. If we fail to achieve or maintain profitability, the market price of our securities is likely to be adversely affected.

Our operating history makes evaluation of our business difficult.

We are continuing to develop our technologies and to implement our business plan. Our ability to implement a successful business plan remains unproven, and there is no assurance that we will ever generate sufficient revenues to sustain our business. Our operating history, together with the other risks discussed in this "Risk Factors" section, may make it difficult for prospective investors and others to evaluate our business.

We face the risks normally associated with a new business.

We face all of the risks inherent in a business based upon emerging technologies, including the expenses, difficulties, complications and delays frequently encountered in connection with conducting new operations and efforts to develop and commercialize technologies. These uncertainties include developing our technologies and our brand name, raising capital to meet our working capital requirements, and expanding our customer base, among others. If we are not effective in addressing these risks, we will not be able to achieve profitability in the future, and we may not have adequate working capital to meet our obligations as they become due.

Our business may be adversely affected by a global economic downturn.

Any economic downturn generally could cause a drop in government spending and business investment, which could have a material adverse effect on our business. Further, as a result of the current global economic and geopolitical situation, there may be a disruption or delay in performance by our third-party contractors and suppliers. If such third parties are unable to adequately satisfy their contractual commitments to us in a timely manner, our business could be adversely affected.

We could incur significant damages if we are unable to adequately discharge our contractual obligations.

Our failure to comply with contract requirements or to meet our clients' performance expectations on a contract could materially and adversely affect our financial performance and our reputation. This, in turn, would impact our ability to compete for new clients and contracts. Our failure to meet contractual obligations could also result in substantial actual and consequential damages under the terms of such contracts. In addition, some of our contracts require us to indemnify clients for our failure to meet performance standards and/or contain liquidated damages provisions and financial penalties related to performance failures. Although we maintain liability insurance, the policy limits may not be adequate to provide protection against all such potential liabilities.

Some of our clients may terminate our contracts prior to completion, which could result in revenue shortfalls and reduce profitability or cause losses on contracts.

Some of our contracts with clients contain initial or base periods of one or more years, as well as option periods typically covering more than one-half of the contract's initial duration. However, such clients are under no obligation to exercise the option to extend the contract term. The profitability of some of our contracts could be adversely impacted if such options are not exercised and the contract term is not extended accordingly. Additionally, our contracts contain provisions permitting a client to terminate the contract on short notice, with or without cause. The unexpected termination of significant contracts could result in significant revenue shortfalls. If revenue shortfalls occur and are not offset by corresponding reductions in expenses, our business could be adversely affected. We cannot anticipate if, when or to what extent a client might terminate its contracts with us.

We may not be able to effectively control and manage our growth, which would negatively impact our operations.

We have operated our current line of business for approximately eleven years, and we expect to grow in the future as our business develops and becomes further established. If our business grows as we anticipate, it will be necessary for us to manage our expansion in an orderly fashion. Any significant growth in our activities or in the market for our services will require extension of our managerial, operational, marketing and other resources. Future growth will also impose significant additional responsibilities upon the members of management to identify, recruit, maintain, integrate, and motivate new employees. Our failure to manage growth effectively may lead to operational inefficiencies that will have a negative effect on our profitability. Additionally, if our growth comes at the expense of providing quality service and generating reasonable profits, our ability to successfully bid for contracts and our profitability will be adversely affected. We cannot assure investors that we will be able to effectively manage any future growth we may experience.

Failure to obtain adequate insurance coverage could put us at risk for uninsured losses.

Some or all of our customers may require insurance as a requirement to conduct business with us. Although we currently have product liability insurance, we may be unable to obtain or maintain adequate liability insurance on acceptable terms, if at all, and there is a risk that our insurance will not provide adequate coverage against our potential losses. Additionally, there are certain types of losses that may not be insurable at a cost that we can afford, and insurance may not be available at any cost with respect to certain losses. Claims or losses in excess of any insurance coverage we may obtain, or the lack of insurance coverage, could put us at risk of uninsured loss, which would have a material adverse effect on our business and financial condition.

We are dependent on key personnel, and the loss of any of these individuals could harm our business.

We depend on key scientific and other personnel. The loss of any of these individuals could harm our business and significantly delay or prevent the achievement of our business objectives. In addition, our delivery of services will be labor-intensive: when we are awarded a contract, we may need to quickly hire project leaders and project management personnel. The additional staff may also create a concurrent demand for increased administrative personnel. The success of our business will require that we attract, develop, motivate and retain:

- experienced and innovative executive officers;
- senior managers who have successfully managed or designed programs in the public sector; and
- information technology professionals who have designed or implemented complex information technology projects.

Innovative, experienced and technically proficient individuals are in great demand and are likely to remain a limited resource. We may be unable to continue to attract and retain desirable executive officers, senior managers, and technology professionals. Our inability to hire sufficient personnel on a timely basis or the loss of significant numbers of executive officers and senior managers could adversely affect our business.

We may be dependent on cash flow and payments from customers in order to meet our expense obligations.

A number of factors may cause our revenues, cash flow and operating results to vary from quarter to quarter, including the following:

- the progression of contracts;
- the rate of customer adoption of our new subscription pricing program;
- the commencement, completion or termination of contracts during any particular quarter;
- the schedules of government agencies and large multinational corporations for awarding contracts;
- the failure of our customers to fulfill their obligations under contracts with us; and
- the term of awarded contracts and potential acquisitions.

Changes in the volume of activity and the number of contracts commenced, completed or terminated during any quarter may cause significant variations in our cash flow from operations because a significant portion of our expenses are fixed. Fixed expenses include, rent, payroll, insurance, employee benefits, taxes and other administrative costs and overhead. Moreover, we expect to incur significant operating expenses during the start-up and early stages of large contracts and typically do not receive corresponding payments in that same quarter.

We may make acquisitions in the future that we are unable to effectively manage given our limited resources.

We may choose to grow our business by acquiring other entities. We may be unable to manage businesses that we acquire or to integrate them successfully without incurring substantial expenses, delays or other problems that could negatively impact our results of operations. Moreover, business combinations involve additional risks, including:

- diversion of management’s attention;
- loss of key personnel;
- our becoming significantly leveraged as a result of the incurrence of debt to finance an acquisition;
- assumption of unanticipated legal or financial liabilities;
- unanticipated operating, accounting or management difficulties in connection with the acquired entities;
- amortization of acquired intangible assets, including goodwill; and
- dilution to existing stockholders and our earnings per share.

Also, client dissatisfaction or performance problems with an acquired firm could materially and adversely affect our reputation as a whole. Further, the acquired businesses may not achieve the revenues and earnings that we anticipated.

We may be unable to develop or commercialize new and rapidly evolving technologies.

Many of our activities involve developing products or processes that are based upon new, rapidly evolving technologies. The ability to commercialize or further develop these technologies could fail for a variety of reasons, both within and outside of our control.

We may be unable to protect our intellectual property rights.

Our success in part depends on the ability to protect our intellectual property and proprietary technology. To do so, we will be required to prosecute patent applications and maintain patents, obtain new patents and pursue trade secret and other intellectual property protection. There can be no assurance that our program for protection of intellectual property and proprietary technology will be sufficient to protect our intellectual property and proprietary technology from competitors. Our business is also subject to the risk that our issued patents will not provide us with significant competitive advantages if, for example, a competitor was to independently develop or obtain similar or superior technologies. In addition, our issued patents may be challenged or infringed upon by third parties. The enforcement of intellectual property rights is subject to considerable uncertainty and can be expensive and time-consuming. Patent reform laws and court decisions interpreting such laws, may create additional uncertainty around our ability to obtain and enforce patent protection. Any significant impairment of our intellectual property rights could harm our business and our ability to compete. The unauthorized use of our intellectual property could make it more expensive to do business and harm our operating results. Proprietary trade secrets and unpatented know-how are also very important to our business; however, trade secrets are difficult to protect. Our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our confidential information to competitors, and confidentiality agreements may not provide an adequate remedy in the event of unauthorized disclosure of confidential or proprietary information.

We may be sued by third parties who claim that we have infringed their intellectual property rights.

We may be exposed to future litigation by third parties based on claims that our research, development and commercialization activities infringe the intellectual property rights of third parties to which we do not hold licenses or other rights, or that we have misappropriated the trade secrets of others. Any litigation or claims against us, whether or not valid, could result in substantial costs, and could place a significant strain on our financial and human resources. In addition, if successful, such claims could cause us to pay substantial damages. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

Our bylaws contain provisions for indemnifying our officers and directors.

Our bylaws contain provisions with respect to the indemnification of our officers and directors against all costs, charges and expenses actually and reasonably incurred by an officer or director paid to settle an action or satisfy a judgment in a civil, criminal or administrative action or proceeding to which he or she is made a party by reason of being or having been one of our directors or officers. To the extent that our directors' and officers' insurance policy does not provide reimbursement for such costs, charges, expenses and other amounts, we may incur substantial expenses in satisfying our indemnification obligations.

Our operating costs could be significantly higher than we expect, and this could reduce our future profitability.

In addition to general economic conditions, market fluctuations and international risks, significant increases in operating, development and implementation costs could adversely affect us due to numerous factors, many of which are beyond our control.

A cyber incident could result in information theft, data corruption, operational disruption and/or financial loss.

Businesses have become increasingly dependent on digital technologies to conduct day-to-day operations. At the same time, cyber incidents, including deliberate attacks or unintentional events, have increased. A cyber-attack could include gaining unauthorized access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or causing operational disruption or result in denial of service on websites. We depend on digital technology, including information systems and related infrastructure, to process and record financial and operating data, and communicate with our employees and business partners. Our technologies, systems, networks, and those of our business partners may become the target of cyber-attacks or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of proprietary and other information, or other disruption of our business operations. The consequences of such loss, possible misuse of our proprietary and confidential information, or operational disruptions could include, among other things, unfavorable publicity, damage to our reputation, difficulty marketing our products, customer allegations of breach-of-contract, claims and litigation by affected parties, investigations by and other proceedings involving governmental authorities and possible financial liabilities for damages, any of which could materially adversely affect our business, financial condition, reputation and relationships with customers and partners. We also rely on a number of third-party service providers to host, store or otherwise process information for us, or to provide other facilities or infrastructure that we make use of, including “cloud-based” providers of corporate infrastructure services relating to, among other things, human resources, electronic communication services and some financial functions, and we are therefore dependent on the security systems of these providers. Any security breaches or incidents or other unauthorized access to, or disruptions of, our service-providers’ systems or viruses, loggers, ransomware or other malfeasant code in their data or software, or unauthorized access to or acquisition of any data they process or otherwise maintain for us could expose us to information loss, corruption and unavailability, operational disruptions, and misappropriation of confidential information, and could have similar consequences to us as any incidents affecting our own systems or the data we process or maintain. We and our third parties face these threats from a variety of sources, including attacks from hackers, phishing and other forms of social engineering, and human error or employee or contractor malfeasance. Because the techniques used to obtain unauthorized access to or sabotage security systems change frequently and are often not recognized until after an attack, we and our third-party service providers may be unable to anticipate the techniques or implement adequate preventative measures, thereby exposing us to material adverse effects on our business, financial condition, results of operations and growth prospects. A security breach or other security incident impacting us or our third-party service providers could require a substantial level of financial resources to rectify and otherwise respond to, may be difficult to identify or address in a timely manner, and could result in claims, investigations, and inquires by private parties or governmental entities that may divert management’s attention and require the expenditure of significant time and resources, and which may cause us to incur substantial fines, penalties, or other liability and related legal and other costs. Any actual or perceived security breach or other security incident may also harm our reputation and market position. Any of the foregoing matters could harm our operating results and financial condition. Although to-date we have not experienced any losses relating to cyber-attacks, there is no assurance that we will not suffer such losses in the future. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities.

Our results of operations may be negatively impacted by the COVID-19 epidemic.

The potential reemergence of the coronavirus, which has caused a broad impact globally, including restrictions on travel and quarantine policies put in place by businesses and governments, may have a material economic effect on our business. Additionally, the coronavirus may result in disruption of financial markets, which may reduce our ability to access capital on favorable terms or at all.

Risks Related to Our Securities

The price of our securities is subject to volatility related or unrelated to our operations, which could result in substantial losses for our stockholders.

Between January 1, 2022 and December 31, 2022, the trading price of our common stock has ranged from a low of $0.40 to a high of $2.42 and could be subject to wide fluctuations in the future in response to various factors, some of which are beyond our control. These factors include those discussed previously in this “Risk Factors” section and others, such as:

- delays or failures in the commercialization of our current or future products and services;
- quarterly variations in our results of operations or those of our competitors;

- changes in our earnings estimates or recommendations by securities analysts or adverse publicity about us or our products or services;
- announcements by us or our competitors of new products and services, significant contracts, commercial relationships, acquisitions or capital commitments;
- adverse developments with respect to our intellectual property rights;
- commencement of litigation involving us or our competitors;
- any major changes in our Board of Directors or management;
- market conditions in our industry; and
- general economic conditions in the United States and abroad.

In addition, the stock market, in general, may experience broad market fluctuations, which may adversely affect the market price or liquidity of our securities.

We could be subject to securities class action litigation.

Any sudden decline in the market price of our securities could trigger securities class action lawsuits against us. If any of our stockholders were to bring such a lawsuit against us, we could incur substantial costs defending the lawsuit and the time and attention of our management would be diverted from our business and operations. We also could be subject to damages claims if we are found to be at fault in connection with a decline in our market price of our securities.

Historically, there has been a limited trading market in our common stock, and you may therefore have difficulty selling your securities at a price that you determine is satisfactory.

Our common stock is listed on The Nasdaq Capital Market. Historically, there has been a limited trading market for our common stock. There is no assurance that our common stock will actively trade in the public market at or above a price that you consider acceptable. If an active market for our common stock is not maintained, it may be difficult for you to sell your shares of common stock when you wish to sell them or at a price that you consider satisfactory. An inactive trading market may also impair our ability to raise capital to continue to fund operations by selling securities and may impair our ability to acquire other companies or technologies by using our securities as consideration.

There is no assurance that we will satisfy the continued listing requirements of The NASDAQ Capital Market.

On October 14, 2022, Nasdaq notified us that the closing bid price for our common stock had been below $1.00 per share for 30 consecutive business days, and that the Company therefore is not in compliance with the minimum bid price requirement for continued inclusion on The Nasdaq Capital Market under Nasdaq Listing Rule 5550(a)(2). The notice indicates that the Company has 180 calendar days, or until April 12, 2023, to regain compliance with this requirement. The Company can regain compliance with the $1.00 minimum bid price requirement if the closing bid price of the Company’s common stock is at least $1.00 for a minimum of ten consecutive business days during the 180-day compliance period. If the Company does not regain compliance during the initial compliance period, the Company may be eligible for additional time to regain compliance. To qualify, the Company will be required to meet the continued listing requirement for market value of its publicly held shares and all other Nasdaq initial listing standards, except the bid price requirement, and will need to provide written notice to Nasdaq of the Company’s intention to cure the deficiency during the second compliance period by effecting a reverse stock split, if necessary. If the Company meets these requirements, we expect that Nasdaq will grant the Company the additional 180 calendar days to regain compliance with the minimum bid price requirement.

If we fail to satisfy a Nasdaq requirement for continued listing, Nasdaq could provide notice that our common stock will become subject to delisting. In such event, Nasdaq rules would permit us to appeal the decision to reject our proposed compliance plan or any delisting determination to a Nasdaq Hearings Panel. If our securities are de-listed from The Nasdaq Capital Market, our stockholders could incur material adverse consequences such as reduced liquidity for their securities and reduced market prices for their securities. Following such de-listing, we could encounter increased difficulty in issuing additional securities at an attractive price, or at all, in order to fund our operations.

You may experience additional dilution as a result of future equity offerings.

In order to raise additional capital, we may sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be lower than the price per share that you paid for our common stock.

We have broad discretion in the use of the net proceeds of our securities offerings and may not use them effectively.

We intend to use our cash for the development of our products and services, and to pursue a possible strategic investment or other transaction. Our management has broad discretion in the use of cash and will have the right to use our cash in ways that differ substantially from our current plans. Management may spend our cash in ways that do not improve our results of operations or enhance the value of our securities. The failure by management to apply funds effectively could result in financial losses that could have a material and adverse effect on our business and cause the market price of our securities to decline.

Our outstanding warrants may result in further dilution to our stockholders.

Certain of our outstanding warrants to purchase a total of up to approximately 898,806 shares of our common stock contain so-called full-ratchet anti-dilution adjustments in the event we sell or issue shares of common stock or common stock equivalents at an effective price less than the exercise price of such warrants, subject to certain exceptions. Of these warrants, warrants with an aggregate exercise price of $956,015 also provide for a ratable increase in the number of shares purchasable upon exercise of the warrants in the event the exercise price per share of the warrants is reduced. These anti-dilution adjustments resulted in a reduction in the exercise price of such warrants to $0.58 per share and an increase of 1,265,896 shares in the number of underlying warrant shares due to the grant of stock options to our directors and officers in January 2023. The anti-dilution adjustments of our outstanding warrants would be triggered by future issuances of shares of our common stock at a price per share below the then-exercise price of such warrants, which adjustments would have a further dilutive effect on our stockholders.

We do not intend to pay dividends on our common stock, and your ability to achieve a return on your investment will depend on appreciation in the market price of our securities.

We currently intend to invest our future earnings, if any, to fund our growth and not to pay any cash dividends on our common stock. Since we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market price of our securities. There is no assurance that our securities will appreciate in price.

If securities or industry analysts do not publish research or reports about us, or if they issue adverse or misleading opinions regarding us or our securities, the market price of our securities and their trading volume could decline.

If we do not obtain and maintain research coverage by securities and industry analysts, the market price for our securities may be adversely affected. The market price of our securities also may decline if any analyst who covers us issues an adverse or erroneous opinion regarding us, our business model, our intellectual property or our performance. If one or more analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause the market price of our securities and their trading volume to decline and possibly adversely affect our ability to engage in future financings.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

As of December 31, 2022, we had 10,498,802 outstanding shares of common stock. Future sales of a large number of our shares or shares issuable upon exercise of our outstanding warrants and stock options, or the perception that a large number of shares may be sold, could have a material adverse effect on the trading price of our common stock.

We will incur significant costs to ensure compliance with U.S. and Nasdaq reporting and corporate governance requirements.

We incur significant costs associated with compliance with our SEC public company reporting requirements and with applicable U.S. and Nasdaq corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002. These rules and regulations may also make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be difficult for us to attract and retain qualified individuals to serve on our Board of Directors or as executive officers.

If we fail to maintain effective internal control over financial reporting, the market price of our securities may be adversely affected.

As a public reporting company, we are required to establish and maintain effective internal control over financial reporting. Failure to establish such internal control, or any failure of such internal control once established, could adversely impact our public disclosures regarding our business, financial condition or results of operations. Any failure of our internal control over financial reporting could also prevent us from maintaining accurate accounting records and discovering accounting errors and financial frauds.

Rules adopted by the SEC pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 require annual assessment of our internal control over financial reporting. The standards that must be met for management to assess the internal control over financial reporting as effective are complex, and require significant documentation, testing and possible remediation to meet the detailed standards. We may encounter problems or delays in completing activities necessary to make an assessment of our internal control over financial reporting. If we cannot assess our internal control over financial reporting as effective, investor confidence and share value may be negatively impacted. In addition, management's assessment of internal control over financial reporting may identify weaknesses and conditions that need to be addressed in our internal control over financial reporting or other matters that may raise concerns for investors. Any actual or perceived weaknesses and conditions that need to be addressed in our internal control over financial reporting (including those weaknesses identified in our periodic reports), or disclosure of management's assessment of our internal control over financial reporting may have an adverse impact on the price of our securities.

Provisions in our articles of incorporation and bylaws could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Our articles of incorporation and bylaws contain provisions that could delay or prevent changes in control or changes in our management without the consent of our Board of Directors. These provisions include the following:

- a classified Board of Directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of our Board of Directors;

- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;

- the exclusive right of our Board of Directors to elect a director to fill a vacancy created by the expansion of the Board of Directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our Board of Directors;

- the ability of our Board of Directors to alter our bylaws without obtaining stockholder approval;

- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend or repeal our bylaws or repeal the provisions of our articles of incorporation and bylaws regarding the election and removal of directors;

- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;

- the requirement that a special meeting of stockholders may be called only by the chairman of the Board of Directors, the chief executive officer, the president (in the absence of a chief executive officer) or the Board of Directors, which may delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors; and

- advance notice procedures that stockholders must comply with in order to nominate candidates to our Board of Directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

These provisions could inhibit or prevent possible transactions that some stockholders may consider attractive.

We could issue one or more additional series of shares of preferred stock with the effect of diluting existing stockholders and impairing their voting and other rights.

Our Board of Directors is authorized to issue up to 10,000,000 shares of preferred stock and may determine the terms of future preferred stock offerings without further action by our stockholders. If we issue preferred stock, it could affect your rights or reduce the value of our outstanding common stock. In particular, specific rights granted to future holders of preferred stock may include voting rights, preferences as to dividends and liquidation, conversion, and redemption rights, sinking fund provisions, and restrictions on our ability to merge with or sell our assets to a third party. As of December 31, 2022, 465 shares of our preferred stock are outstanding, consisting of 132 shares of Series D Preferred Stock and 333 shares of Series E Preferred Stock. In addition to the possible negative effect on the market price of our common shares resulting from the public sale or perceived sale of common shares issuable upon conversion or exercise of these securities, the Certificate of Designations for the Series D Preferred Stock provides that upon occurrence of certain triggering events described in the Certificate, including but not limited to, payment defaults, breaches of the transaction documents pertaining to the Series D Preferred Stock and failure to maintain listing on The Nasdaq Capital Market, the Series D Preferred Shares would become subject to redemption, at the option of the holder, at a 125% premium to the underlying value of the Series D Shares being redeemed.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

We lease approximately 3,300 square feet of space at 3900 Paseo del Sol, Santa Fe, New Mexico 87507, including 1,376 square feet of office space and 1,928 square feet of warehouse and production space, for a monthly rent expense of approximately $5,315. The leases expire on July 31, 2023, and are cancelable at any time upon 45 days written notice. We believe that our facilities are suitable for our current needs.

ITEM 3. LEGAL PROCEEDINGS.

We are not currently a party to any legal proceedings. However, we may become subject to legal proceedings and claims that arise in the ordinary course of our business.

ITEM 4. MINE SAFETY DISCLOSURES.

Not Applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information

Our common stock trades on The NASDAQ Capital Market under the symbol "SASI."

Shareholders

As of March 27, 2023, there were approximately 566 holders of record of our common stock based on information provided by our transfer agent.

Dividends

We have not paid any dividends on our common stock to date and do not anticipate that we will pay dividends in the foreseeable future. Any payment of cash dividends on our common stock in the future will be dependent upon the amount of funds legally available, our earnings, if any, our financial condition, restrictive covenants under outstanding preferred stock, our anticipated capital requirements, and other factors that our Board of Directors deem relevant. We have paid dividends on our preferred stock pursuant to an agreement with investors and may do so in the future pursuant to future financing agreements, if any. The Certificate of Designations of our Series D Preferred Stock prohibits us from declaring or paying any cash dividend or distribution on any of our capital stock, other than as required by the Certificate of Designations.

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Overview

Sigma is a leading provider of in-process quality assurance (IPQA®) software to the additive manufacturing industry. Sigma specializes in the development and commercialization of real-time monitoring solutions known as PrintRite3D® for 3D metal and polymer advanced manufacturing technologies. PrintRite3D detects and classifies defects and anomalies real-time during the manufacturing process, enabling significant cost-savings and production efficiencies. We work closely with international standards organizations, renowned universities, research organizations, advanced manufacturers, OEMs, and leading software companies. PrintRite3D is printer agnostic and works with most of the leading 3D metal printers, as well as a growing base of polymer printers.

Strategic Direction

2022 was a year of significant change for our Company, from our symbolic name change to the execution of a new approach to the market. We have a mission to accelerate the adoption of additive manufacturing by setting the industry standard for quality, and we have charted our path to deliver the first holistic digital quality experience for the additive industry with the following objectives:

- Simplifying the quality experience from up to twelve disparate software licenses and multiple manual spreadsheets, to a single user experience that is holistic and integrated with production workflow.

- Building strategic partnerships, expanding our partner ecosystem, and best ensuring success of existing customers as they move into production.

- Offering products that are easier to use and less expensive, both for initial purchases and as expansion opportunities.

- Attracting a strategic corporate investment partner with clear product, customer, and financial synergies.

A holistic digital quality experience connects in-process data upstream to CAD/CAM through the downstream inspection and material data. This digital quality journey begins by creating a new qualification framework for in-process data. The path to qualified parts and continued production relies on more than just melt pool monitoring; it also covers machine health, process health, and part health. Our customers require specific data for qualification and certification of parts and need a holistic approach to production quality, and further, require a way to simplify quality from 8-12 disparate software licenses and several manual spreadsheets to one user experience that is integrated into their production workflow.

In order to expand the number of OEMs distributing our technology, we launched a three-tiered OEM program directed to: (1) new OEMs without their own quality assurance or monitoring solution; (2) established OEMs with a quality monitoring offering, but who have customers with multiple printers from multiple OEMs and want a single third party quality and analytics solution with consistent quality metrics across printers, processes and materials; and (3) OEMs building open application programming interfaces, or APIs, to integrate components of Sigma's proprietary technology with their current offerings. We are now working with OEMs on their next generation printers to offer a software-only solution that will utilize the printer's computing infrastructure and dramatically reduce the overall cost of its technology, enabling the opportunity to move towards a software only embedded solution on every printer sold by partner OEMs. To further augment this initiative, we have also begun integrating with industry wide hardware providers, such as our recently announced relationship with a laser scanner provider.

We began offering our current PrintRite3D integrated hardware and software solution on a subscription basis in 2022. Among other things, the change reduced the initial upfront cost to a new user from over $100,000 to approximately $3,000-$5,000 per month. The combination of subscription pricing and the new software-only products that can be embedded into OEM and software partner offerings are intended to make our technology more affordable to acquire and easier to bundle, distribute and support in an effort to become the industry standard.

The shift in our business model adversely affected our revenues and near-term revenue growth as we increased our focus on building strategic partnerships, expanding our partner ecosystem, and ensuring the success of our existing customers as they move into production. In 2022, we relied primarily on retrofit work while the software only products were still under development. We expect that the percentage of the Company's revenue coming from OEMs will increase in 2023 and beyond, especially with the availability of a software-only product as we work to integrate into existing hardware, such as laser scanner technology and OEM's upstream designs for next generation systems. Our ability to generate revenues in the future will depend on our ability to further commercialize and increase market presence of our traditional PrintRite3D® technology, along with our new software-only offerings that start to link industry quality together. Additionally, it will depend on whether key prospective customers continue to move from additive manufacturing prototyping to production, which our products are intended to accelerate. However, we believe these changes to our business model will contribute to faster adoption of our product by end users and will result in more predictable and profitable revenues over the longer term.

Over the past twelve years, Sigma has invested its resources to solve the problem of in-process AM quality: melt pool analytics for the "part", which originated as a retrofit lab solution. Our prior product offering met the needs of materials scientists, but overlooked the production needs of shop floor technicians, process engineers, and operations teams. The addition of our "machine" and "process" software products for additive manufacturing will provide a holistic in-process quality base for us to connect to the broader digital quality ecosystem.

As part of our vision to build the future of connected digital quality and enhance shareholder value, we have undertaken an initiative to evaluate a range of strategic alternatives, including possible strategic investment, acquisition, merger, business combination, or similar transaction with clear product, customer, and financial synergies to Sigma. This work is focused on identified companies that connect to our long-term quality vision. This strategic initiative is focused on synergies and potential product integration to accelerate market visibility and customer adoption. To execute Sigma's vision and realize our potential, we will need to raise additional capital, or execute a strategic transaction, which may include, a possible strategic investment, acquisition, merger, business combination, or similar transaction.

We believe the industry is evolving. Application Programming Interfaces, or APIs, are opening up as some of our relationships with OEMs have become public. There is also a trend toward consolidation in additive manufacturing as companies align for profitability. Sigma has made demonstrable progress in 2022 connecting to other products in the AM digital quality stream, and a connection to a strategic partner paired with near term execution can augment our ability to scale, support the market, and create value. Further, alignment with a strategic investor or acquirer allows for common growth, vision, and funding of the Company to achieve its mission, but also provides an opportunity for other strategic relationships, including potential acquisitions that can further accelerate the execution of our digital quality vision.

To facilitate our ability to execute our strategic initiatives on the product, pricing, and partner fronts, we have taken several steps to conserve our cash by reducing our operating expenses. Compensation and benefits are our single largest expense, comprising approximately 53% of our total operating expenses for 2022. We reduced our total full-time headcount by a net of eight employees in 2022 and experienced a further reduction of six employees in 2023 as a result of furloughs and departures from the Company. As of March 29, 2023, our full-time employee headcount was 19. In addition to headcount reductions, we have reduced our spend on advertising, marketing and investor relations, consultants, and employee travel. We continue to evaluate our expenses and will consider further reductions as appropriate. Lastly, Sigma has developed a deep patent portfolio which we believe is widely applicable to the 3D printing industry. We have recently begun exploring an intellectual property licensing program, which we believe may facilitate a strategic transaction.

Covid-19 Business Update

The worldwide COVID-19 pandemic caused a reduction, and in some cases a freeze, in capital spending within the Company's targeted industries, which negatively affected our revenue in 2021. Additionally, this slowed the development of our technology based on prolonged budget reductions and delays at development partner sites. With slowed customer interaction, Sigma experienced some slowing of planned integrations and qualification into 2022. With the relaxing of COVID-19 restrictions in the U.S. and Europe in 2022, business activity began to return to near pre-pandemic levels, and we have resumed qualification and integration of our technology with partners and customers who experienced such prior delays. Regarding our supply chain, however, the Company continues to experience increased lead times for certain hardware components of PrintRite3D. The future impact of the outbreak, including variations of the virus, is highly uncertain so that no assurance can be given that the outbreak will not have a material adverse impact on the future results of the Company. It is also uncertain as to any further disruption of the financial markets, which may reduce our ability to access capital, either at all, or on favorable terms.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported assets, liabilities, sales and expenses in the accompanying financial statements. Critical accounting policies are those that require the most subjective and complex judgments, often employing the use of estimates about the effect of matters that are inherently uncertain. By their nature, changes in these assumptions and estimates could significantly affect our financial position or results of operations. Significant accounting estimates that may materially change in the near future are revenue recognition, impairment of long-lived assets, values of stock compensation awards and stock equivalents granted as offering costs, and allowance for bad debts and inventory obsolescence. Such critical accounting policies, including the assumptions and judgments underlying them, are disclosed in Note 1 to the Financial Statements included in this Annual Report. However, we do not believe that there are any alternative methods of accounting for our operations that would have a material effect on our financial statements.

The critical accounting policies and estimates addressed below reflect our most significant judgements and estimates used in the preparation of our financial statements.

Revenue Recognition - The Company's revenue is derived primarily from sales of our software and related hardware suite under perpetual licenses and from providing engineering services under contracts. The Company recognizes revenue in accordance with ASC Topic No. 606. In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 is a comprehensive revenue recognition standard that superseded nearly all existing revenue recognition guidance under prior GAAP and replaced it with a principles-based approach for determining revenue recognition. The core principle of the standard is the recognition of revenue upon the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In general, we determine revenue recognition by: (1) identifying the contract, or contracts, with our customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to performance obligations in the contract; and (5) recognizing revenue when, or as, we satisfy performance obligations by transferring the promised goods or services.

In January 2022, the Company began offering a subscription option to its customers pursuant to which we lease our PrintRite3D platform for terms between 12 and 36 months and provide technical support and maintenance for the term of the arrangement, as well as installation and training. The Company has determined these are leases because they relate to discrete pieces of equipment to which customers have the right to substantially all the economic benefit and exclusive right to use during the term of the arrangement. These leases are classified as operating leases and the Company retains title to the underlying equipment.

The leases may be renewed for successive one-year terms unless notice is given by either party of its intent not to renew at least 30 days before the end of the lease term. For leases with 36-month terms, the lessee may terminate the agreement after the first 18 months with 30-days written notice. Some, but not all, of the leases permit lessees to purchase the asset at any time at an amount that approximates fair value and are not reasonably certain to be exercised at the inception of the lease. There are no anticipated variable lease payments at the inception of the lease.

There are two non-lease components in the arrangement that consist of technical support and maintenance, and installation and training. The Company has elected the single component practical expedient to combine the technical support and maintenance with the lease as they have the same pattern of transfer. The installation and training component does not have the same pattern of transfer; therefore, this component is not eligible for the single component practical expedient. The lease consideration is allocated on a relative fair value basis of the underlying lease and non-lease components. The Company has estimated the residual value of the leased equipment based on its useful life, and the ability to refurbish and sell the equipment, as well as the Company's ability to componentize the hardware and utilize subassemblies in other products.

The Company is depreciating assets over their useful life of 7 years, but certain subassemblies and components may have a longer economic life.

Accounts Receivable and Allowance for Doubtful Accounts - Trade accounts receivable are carried at original invoice amount less an estimate made for doubtful accounts. We determine the allowance for doubtful accounts by identifying potential troubled accounts and by using historical experience and future expectations applied to an aging of accounts. Trade accounts receivable are written off when deemed uncollectible. Recoveries of trade accounts receivable previously written off are recorded as income when received.

Inflation - While we do not believe that inflation had a material effect on our business, financial condition or results of operations during the year ended December 31, 2022, we experienced increases in wages and other compensation costs, and costs for certain components of our PrintRite3D product. If our costs become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could materially adversely affect our business, financial condition and results of operations.

Inventory Valuation - Inventories consist of raw materials used in the production of customized parts, work-in-process and finished goods components which will be sold to customers. Inventories are valued at the lower of cost or net realizable value, using the first-in, first-out (FIFO) method. Charges for obsolete inventory are based on specific identification of inventory items resulting from regular, on ongoing reviews of our build of materials.

Leases - The Company primarily leases office space from third parties. The Company determines if a contract is a lease at inception. A contract contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The lease term begins on the commencement date, which is the date the Company takes possession of the asset and may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Leases are classified as operating or finance leases based on factors such as the lease term, lease payments, and the economic life, fair value and estimated residual value of the asset. Where leases include an option to purchase the leased asset at the end of the lease term, this is assessed as a part of the Company's lease classification determination. The Company only has short-term leases, with remaining lease terms of less than one year. The leases are cancelable at any time upon 45 days written notice. Therefore, the Company has elected the short-term lease recognition exemption for all leases, whereby leases are not recorded on the Company's balance sheet and lease payments are recognized as lease expense on a straight-line basis over the lease term.

Long-Lived and Intangible Assets – Long-lived assets and certain identifiable definite life intangibles to be held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company continuously evaluates the recoverability of its long-lived assets based on estimated future cash flows and the estimated liquidation value of such long-lived assets and provides for impairment if such undiscounted cash flows are insufficient to recover the carrying amount of the long-lived assets. If impairment exists, an adjustment is made to write the asset down to its fair value, and a loss is recorded as the difference between the carrying value and fair value. Fair values are determined based on quoted market values, discounted cash flows or internal and external appraisals, as applicable. Assets to be disposed of are carried at the lower of carrying value or estimated net realizable value. Utility patents are amortized over a 17-year period. Patents which are pending are not amortized.

Stock-Based Compensation – We measure the compensation costs of stock-based compensation arrangements based on the grant-date fair value and recognize the costs in the financial statements over the period during which employees are required to provide services. Stock-based compensation arrangements may include stock options, grants of shares of common stock with and without restrictions, performance-based awards, share appreciation rights and employee share purchase plans. Stock-based compensation is measured on the date of grant at its fair value.

Equity instruments issued to non-employees are recorded on the basis of the grant date fair value of the instruments. In general, the measurement date is either (a) when a performance commitment, as defined, is reached or (b) the earlier of the date that (i) the non-employee performance requirement is complete or (ii) the instruments are vested. The measured value related to the instruments is recognized over a period based on the facts and circumstances of each particular grant.

The grant date fair value of stock-based compensation and other equity instruments is calculated using the Black Scholes valuation model, and requires estimates of several inputs to the model, including risk-free interest rates, dividends, and expected volatility of our stock price.

Results of Operations

Year Ended December 31, 2022 Compared to the Year Ended December 31, 2021

We generate revenues through hardware and software licensing of our PrintRite3D® technology to customers that seek to improve their manufacturing production processes, and through ongoing annual software upgrades and maintenance fees. Additionally, we generate revenues from development work utilizing our metal AM equipment and engineering team. Our ability to generate revenues in the future will depend on our ability to further commercialize and increase market presence of our PrintRite3D® technologies, and it will depend on whether key prospective customers continue to move from AM metal prototyping to production.

Employees and Headcount

At December 31, 2022, our full time employee headcount was 25, as compared to 33 at December 31, 2021. The decrease of 8 employees was primarily related to the shift in our business model as we move away from selling expensive perpetual licenses for PrintRite3D, in which most of the cost comes from physical hardware, to setting up for our future software-only subscription model.

The labor market is extremely competitive, and our highly trained, skilled, and talented employees are heavily recruited by others. To that end, we have made additional investments in our employees designed to ensure we remain competitive in the marketplace. This also aligns well with, and reinforces, our "employee first" culture. In addition to salaries, we improved our benefits by offering a premium health care plan option and increasing the Company's contribution to premiums. We have also added a Company paid short-term disability insurance plan and optional long-term disability insurance plan. And finally, we have increased equity related compensation to everyone in our Company, from non-employee directors to executive management to employees and consultants. We believe that this is an important component of aligning shareholder, company, and employee interests and vests everyone in the growth and success of Sigma.

Infrastructure

In addition to the investments made to improve our manufacturing processes and engineering designs, in fiscal 2021 we added new software applications to assist us in achieving the leverage we need in our operations, both now and for the future. In particular, we added software subscriptions for a customer relationship management system (CRM"), a product lifecycle management system ("PLM"), and a project tracking and management system, all of which we believe will help us improve controls, efficiency and communication throughout the Company.

Revenue and Cost of Revenue

During the fiscal year ended December 31, 2022 ("fiscal 2022"), we generated $630,428 in revenues, as compared to $1,651,765 in the fiscal year ended December 31, 2021 ("fiscal 2021"). The decrease was due to a decrease in perpetual license sales of our PrintRite3D® units of $1,141,323 and decreased contract additive manufacturing revenue of $11,189. Partially offsetting these decreases were an increase in revenues of $31,177 from our subscription-based pricing program, increased revenues from our legacy Rapid Test and Evaluation ("RTE") program of $33,000, increased on-site installation and support revenue of $35,035, an increase in consulting service revenue of $4,500, and an increase in annual maintenance contract revenue of $27,463. Our cost of revenue for fiscal 2022 was $349,930, as compared to $559,965 for fiscal 2021, a decrease of $210,035, or 37.5%. The decrease was primarily attributable to fewer unit sales in 2022, partially offset by increased travel costs incurred related to installations from 2021 sales.

Gross Margin

In fiscal year 2022, our gross margin decreased to 44% from 66% in 2021 due primarily to an increase in the price of certain PrintRite3D system components as a result of configuration changes, discounted sales to universities and research institutions as members of our AcGovDustrial Network, and the aforementioned increase in travel costs incurred related to system installations.

Operating Expenses

Sigma's operating expenses for fiscal 2022 were $9,029,502 as compared to $9,571,185 for fiscal 2021, a decrease of $541,683, or 5.7%. The decrease was primarily attributable to a decrease in stock-based compensation, a decrease in operating and research and development costs, partially offset by increases in salary and benefits, office expenses due to a company-wide global conference held in May of 2022, and increased business travel in 2022 as further described below.

Salary and benefits costs were $4,740,437 for fiscal 2022, as compared to $4,286,368 for fiscal 2021, an increase of $454,069, or 10.5%. The increase was comprised of: (a) $534,963 in employee salary increases and average full-time employee headcount increasing by two; (b) a $79,289 increase in severance due to the termination of employment of six employees; and (c) increased taxes and benefits of $174,616. Partially offsetting these increases were: (1) a decrease in commissions of $24,815; (2) a decrease in incentive bonuses of 215,490; and (3) a decrease in stock appreciation rights expense of $94,494 due to the revaluation of the compensation liability as a result of the decrease in our stock price in fiscal 2022.

Stock-based compensation was $793,251 for fiscal 2022, as compared to $1,066,455 for fiscal 2021, a decrease of $273,204, or 25.6%. This decrease was primarily due to fewer stock options granted in fiscal 2022.

We incurred operations and research and development costs of $653,194 during fiscal 2022, as compared to $890,553 in fiscal 2021, a decrease of $237,359, or 26.7%. The decrease was primarily due to a decrease in operations costs of $224,335 and a decrease in research and development costs of $13,024. The decrease in operations expense was due to: (a) a decrease in charges for inventory obsolescence of $81,544; (b) equipment upgrades in 2021 in both our manufacturing facility and our 3D metal printer totaling $14,777; (c) a decrease in parts and material purchases of $107,936; and (d) a decrease in purchase of lab supplies of $20,078. The decrease in research and development costs was due to expenses associated with a simulation project in 2021 of $97,188, partially offset by an increase in consulting costs of $64,164 in connection with ongoing PrintRite3D software development and $20,000 for research on laser application of PrintRite3D for a new OEM.

We incurred investor, public relations, and marketing expenses of $422,645 during fiscal 2022, as compared to $503,823 during the same period in 2021. The decrease of $81,178, or 16.1%, was due to a decrease in investor relations consulting costs of $84,832 resulting from a revaluation of SARs at December 31, 2022 and lower advertising expenses of $11,301. Partially offsetting these decreases was an increase in tradeshow expenses of $14,955 as compared to 2021, when COVID-19 travel restrictions precluded attendance at such events.

Organizational costs for fiscal 2022 were $311,606, compared to $726,147 for fiscal 2021. The decrease of $414,541, or 57%, was primarily attributable to: (a) a decrease in non-employee director fees of $369,830, mostly as a result of a decrease in stock options issued; and (b) a decrease in stockholder services of $43,832, primarily due to expenses incurred in 2021 in connection with a special stockholders meeting.

Legal and professional fees in fiscal 2022 were $725,285, as compared to $915,530 during fiscal 2021, a decrease of $190,245, or 20.8%. This decrease was a result of a decrease in legal expenses of $25,757 due to one less stockholder meeting and fewer regulatory filings in fiscal 2022, a decrease in recruiting expenses of $109,061 related to new hires in 2021, a decrease in consulting expenses of $38,915 and a decrease in accounting fees of $16,089 due to the fulltime hire of former outside accounting personnel.

Office expenses for fiscal 2022 were $914,802, as compared to $734,386 for fiscal 2021, an increase of $180,416, or 24.6%. The increase resulted from: (a) an increase in travel and entertainment of $82,241 related to increased travel as compared to fiscal 2021 as a result of the easing of COVID-19 related travel restrictions; (b) an increase in expenses of $109,435 related to a Company-wide, global conference held in May of 2022; (c) an increase in payroll service fees of $10,735 related to new hires; (d) an increase in dues and subscriptions of $38,847 for new customer relationship management, product lifecycle management, and project management software; and (e) an increase in utilities expenses of $2,459. Partially offsetting these increases were decreases in postage and shipping of $47,580, and decreases in office supplies of $11,998 and education expenses of $3,723.

Other operating expenses were $352,115 for fiscal 2022, as compared to $353,818 for fiscal 2021, a decrease of $1,703. The decrease was due to: (a) a decrease in SEC filing fees of $6,102; (b) a decrease in licensing fees of $2,166; and (c) a decrease in bank fees, primarily credit card transaction fees of $9,325. These decreases were partially offset by an increase in insurance policy premiums for fiscal 2022 of $15,890.

In fiscal 2022, we realized net other income of $56,580, as compared to $1,094,780 in fiscal 2021. The decrease of $1,038,200, or 94.8%, was due to a gain in fiscal 2021 of $1,092,441 from the revaluation of the derivative liability related to our private placement of warrants, a foreign currency exchange loss of $15,927 in fiscal 2022 due to the strengthening of the US dollar against the Euro, and a decrease in interest income of $6,460. Partially offsetting these decreases was an increase of $76,628 in New Mexico state incentives in fiscal 2022.

Sigma's net loss before preferred dividends for fiscal 2022 increased by $1,307,819 and totaled $8,692,424, as compared to a net loss before preferred dividends of $7,384,605 for fiscal 2021. Net loss applicable to common stockholders for fiscal 2022 was $8,749,304, as compared to $7,488,172 for fiscal 2021. The fiscal 2022 net operating loss component of the overall loss was $269,619 higher than in fiscal 2021 and the other income component was $1,038,200 lower. Preferred stock dividends were $56,880 in fiscal 2022 and $103,567 in fiscal 2021.

Liquidity and Capital Resources

Due to uncertainties regarding our ability to meet our current and future operating and capital expenses, there is substantial doubt about our ability to continue as a going concern for 12 months from the date of the filing of this Annual Report, and the report of our registered independent public accounting firm on our financial statements as of and for the year ended December 31, 2022 included in Item 15 of this Annual Report contains a going concern qualification.

As of December 31, 2022, we had $2,845,931 in cash and working capital of $3,644,522, as compared to $11,447,047 in cash and working capital of $ 11,702,358 as of December 31, 2021.

We currently have no arrangement to obtain any additional financing. We have taken several steps to conserve our cash, including furloughing non-essential employees, reducing or eliminating certain marketing and advertising programs, limiting employee travel, and reducing investor relations expenses and certain consulting expenses. Our existing cash on hand and anticipated revenues are sufficient to fund our remaining anticipated operating costs and capital expenditure requirements only through May 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our capital resources sooner than we expect, or extend such resources longer than we expect.

Because of the numerous risks and uncertainties associated with the research, development, and commercialization of our products, we are unable to estimate the exact amount of our working capital requirements. Our future capital requirements will depend on many factors, including:

- The cost of expending, maintaining, and enforcing our intellectual property portfolio, including filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- The effect of competing technological and market developments;
- The revenue from the sales of our existing and future products;
- The cost of operating as a public company; and
- The other factors listed under Item 1A "Risk Factors."

Our major sources of funding have been proceeds from public and private offerings of our equity securities (both common stock and preferred stock), and from warrant exercises. In 2022, we did not raise any funds. In January 2021, the Company closed a public offering of 1,711,783 shares of common stock at $3.00 per share, resulting in net proceeds of approximately $4,532,444 after deducting underwriting discounts and commissions and other offering expenses payable by the Company. In March 2021, the Company closed a public offering of 2,190,000 shares of common stock at $4.445 per share, resulting in net proceeds to the Company of approximately $8,736,488 after deducting placement agent commissions and other offering costs payable by the Company. Concurrent with the public offering, the Company issued warrants to investors to purchase an aggregate of 2,190,000 shares of common stock to holders in a private placement. The warrants entitle the holders to purchase one share of our common stock at an exercise price equal to $4.32 per share commencing on May 24, 2021 and will expire two years from such date.

We will need to raise additional amounts to fund our operations, maintain compliance with the NASDAQ listing requirements and implement our business plan. There is no assurance as to the amount and availability of any required future financing or the terms thereof. Such financing, if in the form of equity, may be highly dilutive to our existing stockholders and may otherwise include onerous terms. If in the form of debt, such financing may include covenants and repayment obligations which may be difficult to meet and that could adversely affect our business and operations. To the extent that funds are not available to us, we may be required to delay, limit, or terminate our business and operations and lose our NASDAQ listing.

While we expect that continued enhancements of our IPQA®-enabled PrintRite3D® technology, together with transitioning to a subscription-based, software-only product offering will enable us to further commercialize this technology into the AM metal market in 2023, we will be unable to do so without additional funding. Should we be able to secure such funding, we plan to seek to continue funding our development activities and operating expenses by licensing our PrintRite3D® systems and supporting field services, as applicable, and providing PrintRite3D®-enabled engineering consulting services concerning our areas of expertise (materials and manufacturing quality assurance and process control technologies) and through the use of proceeds from sales of our securities and potential exercises of our outstanding warrants.

Net Cash Used in Operating Activities

During fiscal 2022, net cash used in operating activities was $8,212,154, which was the result of a net loss of $8,692,424 before preferred dividends and the use of cash for working capital of $543,280, partially offset by non-cash expenses of $1,023,550 related to depreciation and amortization of $116,167, and stock-based compensation of $907,383. Changes in working capital were driven by an increase in inventory of $240,863, a decrease in deferred revenue of $28,782, and a decrease in accounts payable and accrued expenses of $323,259, partially offset by a decrease in accounts receivable of $40,572. The increase in inventory was primarily due to stocking of certain components of our PrintRite3D systems with long order lead times, and an increase in contract assets resulting from PrintRite3D systems on our lease program. The decrease in accounts payable and accrued expenses was primarily due to a decrease in accrued bonuses in 2022.

During fiscal 2021, net cash used in operating activities was $6,298,959, driven by a net loss of $7,384,605 before preferred dividends, partially offset by non-cash expenses of $769,787 and cash generated from working capital of $315,859. Non-cash expenses were comprised of: (1) depreciation and amortization of $94,105; and (2) stock-based compensation of $1,768,123; partially offset by a gain on derivative liability of $1,092,441. Cash generated from working capital was driven by an increase in accounts payable and accrued expenses of $373,563 primarily as a result of increased accrued bonuses in 2021, and an increase in deferred revenue of $70,898, partially offset by increases in accounts receivable of $80,630 and inventory of $50,429. The increase in accounts receivable was due to increased sales, and the increase in inventory was primarily due to stocking of certain components of our PrintRite3D systems with long order lead times.

Net Cash Used by Investing Activities

Net cash used by investing activities in fiscal 2022 was $388,962, as compared to $359,750 in fiscal 2021. The increase was due to increased patent costs of $47,112, partially offset by a decrease in purchases of property, plant and equipment of $17,900.

Net Cash Provided by Financing Activities

No cash was provided by financing activities in fiscal 2022. In fiscal 2021, cash provided by financing activities was $14,404,942, consisting of net proceeds of $13,268,932 from financings and $1,136,010 in proceeds from the exercise of warrants.

We have no off-balance sheet arrangements as defined in Item 303(a) of Regulation S-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The financial statements included in Item 15 are incorporated herein by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

Rule 13a-15(e) under the Exchange Act defines the term “disclosure controls and procedures” as those controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and that such information is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f) under the Exchange Act. Our management, with the participation of our Chief Executive Officer, and Chief Financial Officer, conducted an evaluation of the effectiveness of our control over financial reporting based on the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on its evaluation under the framework, management has concluded that our internal control over financial reporting was effective as of December 31, 2022.

We continuously seek to improve and strengthen our control processes to ensure that our controls and procedures are adequate and effective. Any failure to implement and maintain improvements in the controls over our financial reporting could cause us to fail to meet our reporting obligations under the SEC's rules and regulations. Any failure to improve our internal controls to address the weakness we have identified could also cause investors to lose confidence in our reported financial information, which could have a negative impact on the trading price of our common stock.

This Report does not include an attestation report of the Company's registered independent public accounting firm regarding internal control over financial reporting, which is not required for smaller reporting companies.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the fourth quarter of the year ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Executive Officers

The following table sets forth the name, age and position of each of our executive officers as of March 29, 2023:

Name	Age	Position
Jacob Brunsberg	36	President and Chief Executive Officer
Frank Orzechowski	63	Chief Financial Officer, Treasurer and Corporate Secretary
Ronald Fisher	53	Vice President of Business Development
Stephan Kuehr	41	General Manager, European Operations

Jacob Brunsberg was appointed Senior Vice-President of Product Management and Strategic Relationships on September 20, 2021. On February 16, 2022, he was named President and Chief Operating Officer, and on April 1, 2022 he was named President and Chief Executive Officer. Prior to joining the Company, Mr. Brunsberg was a P&L leader for General Electric's Binder Jet Technology unit, with management responsibility for strategy, development, commercialization, and overall business performance. From 2017 to 2019 he served as Sr. Managing Director of the Central Region, tasked with helping establish the US sales infrastructure for post-acquisition integration of several additive manufacturing technology companies including Concept Laser, Arcam and GEonX into the newly formed GE Additive business entity. Prior to GE, Mr. Brunsberg worked for the American Roller Company in sales leadership and product marketing positions, responsible for the development and oversight of growth strategies, focused on advanced welding, cladding, thermal spray, and powder metallurgy technologies across a number of industrial markets. Mr. Brunsberg holds a Bachelor of Science degree in Material Science and Engineering from the University of Wisconsin-Madison

Frank Orzechowski has served as our Chief Financial Officer, Treasurer, principal accounting officer, principal financial officer, and Corporate Secretary since July 1, 2019. Prior to joining the Company, Mr. Orzechowski served as the Chief Financial Officer of StormHarbour Partners LP, an independent global markets and financial advisory firm since September 2013. From May 2013 to August 2013, Mr. Orzechowski served as a contract CFO for Etouches Inc., a cloud-based event management software company, to assist with financial matters in connection with that company's planned equity financing. Prior to that, he served as President and Owner/Operator of Four-O Technologies Inc. from August 2009 to December 2012, where he successfully launched and guided operations for two Cartridge World franchise units in Connecticut. From February 2006 to July 2009, Mr. Orzechowski served as President and Chief Financial Officer of Nikko Americas Holding Company Inc., where he was responsible for managing all of the support and infrastructure for that company's U.S. business, as well as investment manager selection and due diligence functions for its World Series Platform. Mr. Orzechowski began his career at Coopers & Lybrand in 1982, received his CPA certification in 1984 and received his Bachelor of Science in Business Administration with a major in Accounting from Georgetown University in 1982.

Ronald Fisher was appointed as Vice President of Business Development of Sigma on August 10, 2015 and leads the PrintRite3D® Operating Division. Mr. Fisher is a Mechanical Engineer with hands-on experience in quality, manufacturing, and product development. He has an MBA and has distinguished himself as a lead sales and marketing officer as well as a Chief Operating Officer. He was a Program Manager at Swagelok from 1988-2004, and Vice President and General Manager, Aftermarket and Geometry Systems, at Micropoise Measurement Systems from 2004 until 2013, and a Partner and COO of Laszeray Technology, LLC from 2013 until 2014. Mr. Fisher holds a bachelor's degree in Mechanical Engineering Technology from the University of Akron as well as an MBA from Kent State University.

Stephan Kuehr was appointed as General Manager of Sigma's European Operations in September 2022. In this role, Stephan leads the European region with responsibility for all direct and channel revenue activities, including management of the worldwide OEM and independent software vendor (ISV) network programs. Prior to joining Sigma Additive Solutions, Stephan spent the past 10 years in additive manufacturing as CEO and co-founder of 3YOURMIND, a leading manufacturing execution system (MES) software provider based in Berlin, Germany. In this position, he set up an international sales organization and led the company's funding, budget, structure and development efforts. Before 3YOURMIND, Stephan held leading positions in sales and operations with Vestas Wind Systems. Stephan Kuehr holds a Master's Degree in Physics and Business from Ulm University, Germany and Lund University, Sweden.

Board of Directors and Corporate Governance

The following table sets forth the names, ages as of March 29, 2023, and certain other information regarding our directors:

Directors	Class	Age	Position	Director Since	Current Term Expires
Mark K. Ruport	I	70	Chairman of the Board and Director	2019	2024
Jacob Brunsberg	II	36	Chief Executive Officer and Director	2022	2025
Salvatore Battinelli(1)	II	81	Director	2017	2025
Dennis Duitch(1)	III	78	Director	2017	2023
Kent Summers(1)	III	64	Director	2018	2023

(1) Member of our Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee.

Directors

Mark K. Ruport was appointed as Executive Chairman and as a director on December 3, 2019. Effective April 30, 2020, Mr. Ruport became our President and Chief Executive Officer. On February 16, 2022, Mr. Ruport resigned as President, and effective April 1, 2022 he resigned as Chief Executive Officer. Mr. Ruport remains a director on the Board of Directors and was appointed Chairman effective April 1, 2022. Mr. Ruport has more than 30 years of public and private company experience in the software sector. Prior to joining Sigma Additive Solutions, Mr. Ruport served since 2010 as the President of Step Function Consulting, LLC, a consulting firm that provides strategic consulting services to early and mid-stage portfolio software companies. Mr. Ruport also served from 2014 to 2017 as the Executive Chairman of the Board of Directors of Content Analyst Company, a leading developer of advanced analytics software for searching and analyzing unstructured text, and before that served as its Vice Chairman from 2012 to 2013. From 2005 to 2009, Mr. Ruport served as the President and Chief Executive Officer of Configuresoft, Inc., a venture-backed Enterprise Systems Management company, where he orchestrated an OEM agreement which later led to its acquisition by EMC Corp. Prior to Configuresoft, Mr. Ruport served from 2004 to 2005 as the Executive Vice President of Worldwide Operations at Stellent, Inc., which was subsequently acquired by Oracle, Inc., and from 1995 to 2005 as the President, Chief Executive Officer and Chairman of the Board of Directors of Optika, Inc., a venture-backed Enterprise Content Management Company that he led through its initial public offering and merger with Stellent, Inc. From 1990 to 1994, Mr. Ruport served as the President and Chief Executive Officer of Interleaf, Inc., a public software company. He also held various senior executive positions from 1985 to 1989 at Informix, Inc., a relational database management system company later acquired by IBM, and from 1985 to 1989 at Cullinet, Inc., a mainframe database management system and enterprise resource planning company later acquired by Computer Associates, Inc. Mr. Ruport received his Bachelor of Science degree and MBA from Bowling Green State University.Mr. Ruport received a Bachelor of Science in Business and an MBA from Bowling Green State University.

Our Board of Directors believes that Mr. Ruport is qualified to serve as a member of the board because of his extensive experience in management and leadership in the technology industry.

Jacob Brunsberg was appointed to our Board of Directors on April 1, 2022. He was appointed Senior Vice-President of Product Management and Strategic Relationships on September 20, 2021, on February 16, 2022, he was named President and Chief Operating Officer, and on April 1, 2022, he was named President and Chief Executive Officer. Prior to joining the Company, Mr. Brunsberg was a P&L leader for General Electric's Binder Jet Technology unit, with management responsibility for strategy, development, commercialization, and overall business performance. From 2017 to 2019 he served as Sr. Managing Director of the Central Region, tasked with helping establish the US sales infrastructure for post-acquisition integration of several additive manufacturing technology companies including Concept Laser, Arcam and GEonX into the newly formed GE Additive business entity. Prior to GE, Mr. Brunsberg worked for the American Roller Company in sales leadership and product marketing positions, responsible for the development and oversight of growth strategies, focused on advanced welding, cladding, thermal spray, and powder metallurgy technologies across a number of industrial markets. Mr. Brunsberg holds a Bachelor of Science degree in Material Science and Engineering from the University of Wisconsin-Madison.

Our Board of Directors believes that Mr. Brunsberg is qualified to serve as a member of the board because of his extensive experience in the additive manufacturing industry.

Salvatore Battinelli was appointed to our Board of Directors on August 16, 2017. Mr. Battinelli is currently the President and Chief Executive Officer of Bello e Preciso Co., a manufacturer and wholesaler of Italian-made fashion watches and has served in those roles since early 2017. Prior to joining Bello e Preciso Co., from 2011 to 2013, Mr. Battinelli served as Vice-President of Development and Long-Term Strategy of North American Management Corporation, a wealth management firm based in Boston, Massachusetts with over $2 billion in assets under management. From 1987 to 2011, Mr. Battinelli served as Executive Vice-President and acting Chief Executive Officer and Chief Operating Officer of Faneuil Hall Associates, Inc., a concierge boutique family office devoted to five interrelated ultra-high net-worth families. Mr. Battinelli's primary responsibilities while at Faneuil Hall Associates included providing planning and investment advice, the management of approximately 30 asset portfolios and more than 65 individual business entities; and assisting the families in their various business ventures worldwide while working closely with law, accounting and banking functions. During his tenure at Faneuil Hall Associates, Mr. Battinelli served as an executive officer or director for certain of the family-owned entities and successfully managed several portfolio company IPOs, as well as serving as CEO and COO for Designhouse International, a Scandinavian furniture company operating out of Atlanta, Georgia, which was previously listed on NASDAQ in 1983.

From 1970 to 1974, Mr. Battinelli served as Audit Manager for Deloitte & Touche (formally Touche Ross), where he specialized in management information systems. From 2002 to 2011, Mr. Battinelli also served as the Chairman of the Board of Directors of HealthLink Europe, BV, a logistics and services company that serves the healthcare industry. Mr. Battinelli is a Certified Public Accountant and received a BS in accounting and an MBA with an emphasis in international economics and accounting, both from Babson College.

Our Board of Directors believes that Mr. Battinelli is qualified to serve as a member of the board on the basis of his deep understanding of business acquisitions and sales, as well as his background and extensive company management and integration experience.

Dennis Duitch was appointed to our Board of Directors on August 8, 2017. Mr. Duitch has served as Managing Director of Duitch Consulting Group, a private consulting company, since 2003. Prior to that time, he practiced public accounting, business management, mediation and consultancy nationally, with expertise in strategic and operations management, finance, accounting, strategic planning and business operations for a wide spectrum of companies, including technology, manufacturing and distribution, marketing, real estate, entertainment, and professional practices. He has served in executive officer roles and as a director of public and private companies, not-for-profit organizations, including as Vice-Chairman for Accountants Global Network, and as a top-level advisor for public companies, closely held businesses, families and high-wealth individuals for over thirty years.

Mr. Duitch began his career with the international CPA firm Grant Thornton in its Chicago, San Francisco and Beverly Hills offices before founding Duitch & Franklin LLP, which evolved to become one of Southern California's largest independent CPA/Business Management/Consultancy practices, and which was acquired by a public company in 1998. He subsequently served as President for a consumer products company with direct responsibility for marketing, retail, and fulfillment operations, until forming Duitch Consulting Group in 2003 to serve clients in advisory, C-level, and board of director roles.

Mr. Duitch is a Certified Family Business and Estate Advisor, and mediator for matters including partner/shareholder agreements and disputes, business and marital property dissolution, and dysfunctional executive teams and boards of directors. He has lectured extensively in management, financial and accounting areas for the California CPA Foundation, business and professional groups, has instructed at several colleges and universities, and has authored technical articles in management and taxation for regional and national publications.

Mr. Duitch earned a B.B.A degree in Accounting from the University of Iowa and a Master of Business Administration in Finance from Northwestern University.

Our Board of Directors believes that Mr. Duitch is qualified to serve as a member of the board because of his extensive public accounting experience, which will assist the Board and the Audit Committee in addressing the numerous accounting-related issues, regulations and SEC reporting requirements to which we are subject, as well as his expertise in business management, finance and strategic planning.

Kent Summers was appointed to our Board of Directors on January 18, 2018. Mr. Summers was also appointed to serve as a member of the Company's Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee.

Mr. Summers currently divides his time among a number of independent activities which focus on early-stage technology company formation and development strategies, and sales planning and execution needs for emerging- and mid-market technology companies located primarily in the Boston metropolitan area, including: management consultant to private and family-owned businesses; volunteer Mentor and Instructor with the Massachusetts Institute of Technology Venture Mentoring Services program; regular lectures on enterprise, business-to-business sales to company founders and students enrolled at the Massachusetts Institute of Technology Sloan School of Management, the Harvard MBA Program, the Wharton School at the University of Pennsylvania, and a number of domestic and international entrepreneurship support organizations; and consultant to Fellows enrolled in the Harvard Advanced Leadership Initiative. Mr. Summers has served in those roles at various times from 2003 to the present. From 2009 to the present, Mr. Summers has served as the non-executive Chairman of CADNexus, Inc., and from 2017 to the present, as a director and Chairman of the Compensation Committee with iQ3 Connect, Inc. Mr. Summers also currently serves as Chairman, Board of Managers, Massachusetts Materials Technologies LLC.

From 2005 to 2017, Mr. Summers served as Managing Partner at Practical Computer Applications, Inc., a Boston-based database consulting and engineering services firm, where he was responsible for sales planning and execution activities. Prior to Practical Computer Applications, from 2001 to 2005, Mr. Summers provided independent merger & acquisition advisory services to support the sale of privately-owned companies. Over a prior 14-year period, Mr. Summers served in leadership roles at several software and internet start-ups, including: Chairman and CEO of Collego Corporation (acquired by MRO Software), founder and CEO of MyHelpDesk, Inc. (acquired by Support.com), founder of PCMovingVan.com (acquired by a PE firm), and Vice President of Marketing at Electronic Book Technologies, Inc. (acquired by INSO Corporation, formerly listed on Nasdaq).

Prior to the software industry, Mr. Summers served as Technology Analyst at Electronic Joint Venture Partners LLC and Associate Program Trader on the Options Trading Desk at Bear Stearns & Co. In 1986, Mr. Summers received a BA in English from the University of Houston.

Our Board of Directors believes that Mr. Summers is qualified to serve as a member of our Board on the basis of his deep understanding of early-stage business growth strategies, enterprise sales, business acquisitions, as well as his background and extensive company management and leadership experience.

Director Independence

Our Board of Directors currently consists of five members. As a result of his previous role as Chief Executive Officer, Mr. Ruport is not considered an independent director. As a result of his April 1, 2022 appointment as Chief Executive Officer, Mr. Brunsberg is also not considered an independent director. Our Board of Directors has determined that our other directors, Salvatore Battinelli, Dennis Duitch and Kent Summers, constituting a majority of our directors, are "independent" as that term is defined under Rule 5605(a)(2) of the Nasdaq marketplace rules. Pursuant to Nasdaq rules, our board must consist of a majority of independent directors.

The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our Board of Directors has made a subjective determination as to Messrs. Battinelli, Duitch and Summers, our independent directors, that no relationships exist, which, in the opinion of our Board of Directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our Board of Directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as they may relate to us and our management. There are no family relationships among any of our directors or executive officers.

Classified Board of Directors

In accordance with our amended and restated bylaws, our Board of Directors is divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors are classified as follows:

- the Class I director is Mark Ruport, with a term expiring at our 2024 annual meeting of stockholders;
- the Class II directors are Salvatore Battinelli and Jacob Brunsberg, with terms expiring at our 2025 annual meeting of stockholders; and
- the Class III directors are Dennis Duitch and Kent Summers, with terms expiring at our 2023 annual meeting of stockholders.

Our amended and restated bylaws provide that the authorized number of directors may be changed by resolution of the Board of Directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our Board of Directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our Company.

Leadership Structure of the Board

Any director or our Board of Directors as a whole may be removed with or without cause at any meeting of stockholders by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock entitled to vote in the election of directors. Our amended and restated bylaws provide our Board of Directors with flexibility in its discretion to combine or separate the positions of Chairman of the Board and Chief Executive Officer. Our Board of Directors believes it is important to select the Company's Chairman and Chief Executive Officer in the manner it considers in the best interests of the Company at any given time. Our Board of Directors believes that the Chairman and Chief Executive Officer positions may be filled by one individual or by two different individuals, as determined by our Board of Directors based on circumstances then in existence.

On April 1, 2022, our Board of Directors appointed Mr. Ruport as Chairman of the Board. The Chairman of the Board presides at all meetings of our Board of Directors and exercises and performs such other powers and duties as may be assigned to him from time to time by the Board or prescribed by our amended and restated bylaws. The Chairman of the Board is appointed by our Board of Directors on an annual basis.

Our Board of Directors has no established policy on whether it should be led by a Chairman who is also the Chief Executive Officer, and has in the past combined the roles of Chairman and Chief Executive Officer. Our Board currently is committed to the separated roles given the circumstances of our Company. However, our Board of Directors continually evaluates our leadership structure and could, in the future, decide to combine the Chairman and Chief Executive Officer positions if it believes that doing so would serve the best interests of our Company and our stockholders.

Board Meetings and Committees

During our fiscal year ended December 31, 2022, the Board of Directors held fourteen meetings, and each director attended at least 75% of the aggregate of (i) the total number of meetings of our Board of Directors held during the period he was a director and (ii) the total number of meetings held by all committees of our Board of Directors on which he served during the periods that he served.

Although we do not have a formal policy regarding attendance by members of our Board of Directors at annual meetings of stockholders, we encourage, but do not require, our directors to attend. Each of our then current directors attended our 2022 Annual Meeting of Stockholders.

Our Board of Directors has established three standing committees-audit, compensation, and nominating and corporate governance, each of which operates under a written charter that has been approved by our Board of Directors. Each committee charter has been posted on the Investors section of our website at www.sigmaadditive.com. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this Annual Report.

Audit Committee

The Audit Committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of reports from such firm;
- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures;
- establishing procedures for the receipt, retention and treatment of accounting related complaints and concerns;
- meeting independently with our registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and
- preparing the Audit Committee report required by SEC rules.

The members of our Audit Committee are Messrs. Duitch, Battinelli and Summers, and Mr. Duitch serves as the chairperson of the committee. Our Board of Directors has determined that each of Messrs. Duitch, Battinelli and Summers is an independent director under the applicable Nasdaq rules and under SEC Rule 10A-3. All members of our Audit Committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and Nasdaq. Our Board of Directors has determined that each member of our Audit Committee is an "audit committee financial expert" as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq rules and regulations. The Audit Committee met four times during 2022.

Compensation Committee

The Compensation Committee's responsibilities include:

- annually reviewing and approving corporate goals and objectives applicable to CEO compensation;
- determining our CEO's compensation;
- reviewing and approving, or making recommendations to our Board of Directors with respect to the compensation of our other executive officers;
- overseeing an evaluation of our senior executives;
- overseeing and administering our equity incentive plans;
- reviewing and making recommendations to our Board of Directors with respect to director compensation; and
- reviewing and discussing annually with management our "Compensation Discussion and Analysis" when it is required by SEC rules to be included in our Proxy Statements.

The members of our Compensation Committee are Messrs. Duitch, Battinelli and Summers, and Mr. Battinelli serves as the chairperson of the committee. Our Board of Directors has determined that each of Messrs. Duitch, Battinelli and Summers is independent under the applicable Nasdaq rules and regulations and is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee's responsibilities include:

- identifying individuals qualified to become board members;
- recommending to our board the persons to be nominated for election as directors and to each of the board's committees; and
- overseeing an annual evaluation of the board.

The members of our Nominating and Corporate Governance Committee are Messrs. Duitch, Battinelli and Summers, and Mr. Duitch serves as the chairperson of the committee. Our Board of Directors has determined that each of Messrs. Duitch, Battinelli and Summers is independent under the applicable Nasdaq rules and regulations.

Code of Ethics and Business Conduct

The Company has a code of ethics that applies to all employees, including the Company's principal executive officer, principal financial officer, and principal accounting officer, as well as to the members of the Board of Directors. The code is available on our website at www.sigmaadditive.com. The Company intends to disclose any changes in, or waivers from, this code by posting such information on the same website or by filing a Form 8-K, in each case to the extent such disclosure is required by rules of the SEC or Nasdaq. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this Annual Report.

Considerations in Evaluating Director Nominees

Our Nominating and Corporate Governance Committee uses a variety of methods for identifying and evaluating director nominees. In its evaluation of director candidates, our Nominating and Corporate Governance Committee will consider the current size and composition of our Board of Directors and the needs of our Board of Directors and the respective committees of our Board of Directors. Some of the qualifications that our Nominating and Corporate Governance Committee considers include, without limitation, issues of character, integrity, judgment, diversity of experience, independence, area of expertise, corporate experience, length of service, potential conflicts of interest and other commitments. Nominees must also have the ability to offer advice and guidance to our Chief Executive Officer based on past experience in positions with a high degree of responsibility and be leaders in the companies or institutions with which they are affiliated. Director candidates must have sufficient time available in the judgment of our Nominating and Corporate Governance Committee to perform all board of director and committee responsibilities. Members of our Board of Directors are expected to prepare for, attend, and participate in all board of director and applicable committee meetings. Other than the foregoing, there are no stated minimum criteria for director nominees, although our Nominating and Corporate Governance Committee may also consider such other factors as it may deem, from time to time, are in our and our stockholders' best interests.

Although our Board of Directors does not maintain a specific policy with respect to board diversity, our Board of Directors believes that our Board of Directors should be a diverse body, and our Nominating and Corporate Governance Committee considers a broad range of backgrounds and experiences. In making determinations regarding nominations of directors, our Nominating and Corporate Governance Committee may take into account the benefits of diverse viewpoints. Our Nominating and Corporate Governance Committee also will consider these and other factors as it oversees the annual Board of Director and committee evaluations. After completing its review and evaluation of director candidates, our Nominating and Corporate Governance Committee recommends to our full Board of Directors the director nominees for selection.

Stockholder Recommendations for Nominations to the Board of Directors

Our Nominating and Corporate Governance Committee will consider candidates for director recommended by stockholders so long as such recommending stockholder was a stockholder of record both at the time of giving notice and at the time of the annual meeting, and such recommendations comply with our amended and restated articles of incorporation and amended and restated bylaws and applicable laws, rules and regulations, including those promulgated by the SEC. The Nominating and Corporate Governance Committee will evaluate such recommendations in accordance with its charter, our amended and restated bylaws, our policies and procedures for director candidates, as well as the regular director nominee criteria described above. This process is designed to ensure that our Board of Directors includes members with diverse backgrounds, skills and experience, including appropriate financial and other expertise relevant to our business. Eligible stockholders wishing to recommend a candidate for nomination should contact the Secretary in writing. Our Nominating and Corporate Governance Committee has discretion to decide which individuals to recommend for nomination as directors.

Role of Board in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our Board of Directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks we face. Throughout the year, senior management reviews these risks with the Board of Directors at regular board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks. Our Board of Directors does not have a standing risk management committee, but rather administers this oversight function directly through the Board of Directors as a whole, as well as through standing committees of the Board of Directors that will address risks inherent in their respective areas of oversight. In particular, our Audit Committee is responsible for overseeing our major financial risk exposures and the steps our management has taken to monitor and control these exposures. The Audit Committee also monitors compliance with legal and regulatory requirements and considers and approves or disapproves any related-person transactions. Our Nominating and Governance Committee monitors the effectiveness of our corporate governance guidelines that we may adopt or amend from time to time. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking by our management.

Delinquent Section 16(a) Reports

Section 16(a) of the Exchange Act requires the Company's executive officers and directors, and persons who own more than 10% of a registered class of the Company's equity securities, to file reports of ownership and changes in ownership with the SEC. Executive officers, directors and greater than 10% stockholders are required by SEC regulations to furnish the Company with copies of all Section 16(a) forms they file.

The Company believes that during the fiscal year ended December 31, 2022, its executive officers, directors and greater than 10% stockholders timely filed all reports under Section 16(a).

ITEM 11. EXECUTIVE COMPENSATION

Processes and Procedures for Compensation Decisions

Our Compensation Committee is responsible for the executive compensation programs for our executive officers and reports to our Board of Directors on its discussions, decisions and other actions. Typically, our Chief Executive Officer makes recommendations to our Compensation Committee and is involved in the determination of compensation for the respective executive officers that report to him. Our Chief Executive Officer does not determine his own compensation. Our Chief Executive Officer makes recommendations to our Compensation Committee regarding short- and long-term compensation for all executive officers based on our results, an individual executive officer's contribution toward these results and performance toward individual goal achievement. Our Compensation Committee then reviews the recommendations and other data and makes decisions (or makes recommendations to the Board) as to total compensation for each executive officer as well as each individual compensation component.

The following table sets forth compensation for services rendered in all capacities to the Company: (i) for each person who served as the Company's Chief Executive Officer at any time during the past fiscal year, and (ii) for our two most highly compensated executive officers, other than our Chief Executive Officer, who were employed with the Company on December 31, 2022 (the foregoing executives are herein collectively referred to as the "named executive officers").

Summary Compensation Table

Name and Principal Position	Year	Salary ($) (1)	Bonus ($) (1)	Stock Awards ($)	Option Awards ($) (3)	All Other Compensation ($)	Total ($)
Jacob Brunsberg – Chief Executive Officer and Director	2022	250,000	-	-	597,722(4)	-	847,722
	2021	56,818	19,876(2)	-	264,352(5)	-	341,046
Mark Ruport – Former Chief Executive Officer and Current Chairman	2022	122,917	-	-	46,771(6)	-	169,687
	2021	250,000	208,333(2)	-	368,660(7)	-	826,993
Darren Beckett - Chief Technology Officer	2022	200,000	-	-	178,896(8)	-	378,896
	2021	185,000	25,800(2)	-	361,812(9)	-	572,612
Frank Orzechowski - Chief Financial Officer	2022	200,000	-	-	228,097(10)	-	428,097
	2021	185,000	26,500(2)	-	276,424(11)	-	487,924

(1) Actual amounts paid or accrued.

(2) On January 24, 2022, the Compensation Committee granted Messrs. Brunsberg, Ruport, Beckett, and Orzechowski performance bonuses of $19,876, $208,333, $25,800, and $26,500 respectively, for the fiscal year ended December 31, 2021 in accordance with the provisions of their incentive compensation plans.

(3) Includes option awards and stock appreciation rights awards. Stock appreciation rights awards are only payable in cash. As such, no shares of common stock were reserved in connection with the awards since no shares will be issued pursuant to exercise. The Fair Value of option and SARs awards are calculated in accordance with FASB ASC Topic 718. The amount recognized for all awards is calculated using the Black Scholes pricing model.

(4) On February 16, 2022, we granted Mr. Brunsberg an option to purchase up to 70,000 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50 and vests in equal monthly installments over three years. As of December 31, 2022, 19,443 shares were vested and exercisable. The option had a grant date fair value of $117,719. Also on February 16, 2022, we granted Mr. Brunsberg 30,000 SARs under our 2020 Stock Appreciation Rights Plan. The SARs have an exercise price of $2.50 and vests in equal monthly installments over three years. As of December 31, 2022, 8,330 SARs were fully vested and exercisable. The SARs had a grant date fair value of $50,451. On July 1, 2022, we granted Mr. Brunsberg an option to purchase up to 49,800 shares of common stock. The option has an exercise price of $2.50, and vests as follows: 25%, on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 17,635 shares were vested and exercisable. The option had a grant date fair value of $46,367. Also on July 1, 2022, we granted Mr. Brunsberg an option to purchase up to 15,200 shares of common stock. The option has an exercise price of $2.50, and vests as follows: 25%, on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 5,372 shares were vested and exercisable. The option had a grant date fair value of $14,152. Additionally, on July 1, 2022 we granted Mr. Brunsberg 194,940 SARs. The SARS have an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 69,040 SARs were vested and exercisable. The SARs had a grant date fair value of $181,503. Last, on July 1, 2022, we granted Mr. Brunsberg 181,947 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Brunsberg remains an employee of the Company on that date. The SARs had a grant date fair value of $187,530.

(5) On September 20, 2021, we granted Mr. Brunsberg an option to purchase up to 100,000 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.18 and is fully vested and exercisable. The option had a grant date fair value of $264,352.

(6) On July 1, 2022, the Company granted Mr. Ruport an option to purchase up to 19,242 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50 and vests as follows: 25%, on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 6,815 shares were vested and exercisable. The option had a grant date fair value of $17,916. Also on July 1, 2022, the Company granted Mr. Ruport an option to purchase up to 5,874 shares of our common stock. The option has an exercise price of $2.50 and vests as follows: 25%, on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 2,078 shares were fully vested and exercisable. The option had a grant date fair value of $5,469. Last, on July 1, 2022 the Company granted Mr. Ruport 25,117 SARs. The SARs have an exercise price of $2.50 and vest as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 8,914 SARs were fully vested and exercisable. The SARs had a grant date fair value of $23,386.

(7) On August 11, 2021, we granted Mr. Ruport an option to purchase 51,832 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and vests as follows: 25%, or 12,958 shares vested and became exercisable on August 11, 2021, and the remaining 38,874 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 30,238 shares were vested and exercisable. The option had a grant date fair value of $147,464. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Ruport 77,748 Stock Appreciation Rights (“SAR’s). The SAR’s have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 25,916 SARs were fully vested and exercisable. The SAR’s had an aggregate grant date fair value of $221,196.

(8) On July 1, 2022, we granted Mr. Beckett an option to purchase up to 15,849 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 5,603 shares were vested and exercisable. The option had a grant date fair value of $14,757. Also on July 1, 2022, we granted Mr. Beckett an option to purchase up to 51,927 shares of our common stock with an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 18,392 shares were fully vested and exercisable. The option had a grant date fair value of $48,348. Additionally, on July 1, 2022 we granted Mr. Beckett 16,944 SARs with an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 6,001 SARs were fully vested and exercisable. The SARs had a grant date fair value of $15,776. Last, on July 1, 2022, we granted Mr. Beckett 97,038 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Beckett remains an employee of the Company on that date. The SARs had a grant date fair value of $100,015.

(9) On August 11, 2021, we granted Mr. Beckett an option to purchase 50,869 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and vests as follows: 25%, or 12,718 shares vested and became exercisable on August 11, 2021, and the remaining 38,151 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 29,677 shares were vested and exercisable. The option had a grant date fair value of $144,724. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Beckett 76,304 Stock Appreciation Rights (“SAR’s). The SAR’s have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 25,435 SARs were vested and exercisable. The SAR’s had an aggregate grant date fair value of $217,088.

(10) On July 1, 2022, we granted Mr. Orzechowski an option to purchase up to 15,924 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 5,627 shares were vested and exercisable. The option had a grant date fair value of $14,826. Also on July 1, 2022, we granted Mr. Orzechowski an option to purchase up to 52,170 shares of our common stock with an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 18,477 shares were fully vested and exercisable. The option had a grant date fair value of $48,574. Additionally, on July 1, 2022 we granted Mr. Orzechowski 69,470 SARs with an exercise price of $2.50 and vests as follows: 25% on the date of the grant, and the remaining 75% in equal monthly installments over the subsequent thirty-six months. As of December 31, 2022, 24,603 SARs were fully vested and exercisable. The SARs had a grant date fair value of $64,682. Last, on July 1, 2022, we granted Mr. Orzechowski 97,038 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Orzechowski remains an employee of the Company on that date. The SARs had a grant date fair value of $100,015.

(11) On August 11, 2021, we granted Mr. Orzechowski an option to purchase 48,580 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and vests as follows: 25%, or 12,145 shares vested and became exercisable on August 11, 2021, and the remaining 36,435 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 28,337 shares were vested and exercisable. The option had a grant date fair value of $138,212. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Orzechowski 48,580 Stock Appreciation Rights ("SAR's). The SAR's have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 16,193 SARs were vested and exercisable. The SAR's had an aggregate grant date fair value of $138,212.

Named Executive Officer Employment Agreements

Jacob Brunsberg

On September 7, 2021, we entered into an "at-will' employment letter agreement with Jacob Brunsberg, effective as of September 20, 2021 (the "effective date"), pursuant to which Mr. Brunsberg agreed to serve as Senior Vice-President, Product Management and Strategic Relationships on an "at-will" basis. As of February 16, 2022, Mr. Brunsberg was appointed President and Chief Operating Officer, and as of April 1, 2022, Mr. Brunsberg was appointed President, Chief Executive Officer, and Principal Executive Officer of the Company. Additionally, Mr. Brunsberg was appointed to serve as a member of our Board of Directors, effective as of April 1, 2022, with a term expiring at the 2025 annual meeting of stockholders.

Under the employment letter agreement. Mr. Brunsberg is entitled to (i) an annual base salary of $200,000, which was increased to $250,000 effective February 16, 2022, and (ii) all benefits that we elect in our sole discretion to provide from time to time to our other executive officers,, and received a grant of a five-year stock option to purchase up to 100,000 shares of common stock of the Company, which has an exercise price equal to the closing price of the Company's common stock on the effective date, and vested and became exercisable in full on the effective date. The option is on such other terms and provisions as are contained in the Company's standard form nonqualified stock option agreement.

Additionally, during the term of his employment, Mr. Brunsberg is eligible to receive one or more bonuses relating to each fiscal year in recognition of his achievement of individual and Company goals established by the Board of Directors from time to time. However, the decision to provide any such bonuses and the amount and terms of any such bonuses is in the sole discretion of the Board of Directors. On January 24, 2022, Mr. Brunsberg was awarded a performance bonus of $19,876 for 2021.

Mark K. Ruport

On December 3, 2019, we entered into an "at-will' employment letter agreement with Mark Ruport, effective as of December 3, 2019 (the "effective date"), pursuant to which Mr. Ruport agreed to serve as our Executive Chairman on an "at-will" basis. Additionally, Mr. Ruport was appointed to serve as a member of our Board of Directors, effective as of December 3, 2019, with a term expiring at the 2021 annual meeting of stockholders. As of April 30, 2020, Mr. Ruport was appointed as President, Chief Executive Officer, and principal executive officer of the Company, and no longer serves as Executive Chairman. On February 16, 2022, Mr. Ruport resigned as President, and effective April 1, 2022, Mr. Ruport resigned as Chief Executive Officer. Mr. Ruport remained an employee of the Company until September 30, 2022. Mr. Ruport remains a member of our Board of Directors and was appointed Chairman of our Board effective April 1, 2022.

Darren P. Beckett

Mr. Beckett served as an employee of the Company from September 25, 2017, until March 1, 2023 pursuant to an "at will" employment agreement with the Company, under which he was engaged to serve as our Engineering Manager. On October 18, 2018, his title was changed from Vice President of Engineering to Chief Technology Officer of the Company. On October 18, 2018, the Company also increased the annual base salary of Mr. Beckett from $135,000 to $180,000, effective retroactive to September 16, 2018, and granted Mr. Beckett an option to purchase 2,000 shares of common stock under the 2013 Plan at an exercise price of $12.10 per share. The option has a term of five years and vests in equal annual installments over four years from the date of grant subject, in each case, to Mr. Beckett being in the continuous employ of the Company on the applicable vesting date. Under the agreement, Mr. Beckett is eligible to receive medical and dental benefits, life insurance, short and long-term disability coverage, and to participate in the Company's Section 125 cafeteria plan, vision plan and 401K plan. On October 13, 2017, in connection with his employment, Mr. Beckett was granted an option to purchase up to 1,500 shares of our common stock with an exercise price equal to $19.20 per share. Such option is fully vested and exercisable at December 31, 2022.

Frank D. Orzechowski

On July 1, 2019, we entered into an "at will" employment agreement, with Frank Orzechowski under which he was engaged to serve as our Chief Financial Officer, Treasurer, Principal Accounting Officer and Corporate Secretary of the Company. Under Mr. Orzechowski's employment agreement, he was entitled to receive an annual base salary of $135,000, which was increased to $155,000 effective March 1, 2020, which was increased to $180,000 on January 1, 2021, and which was increased to $200,000 on October 1, 2021. Pursuant to the employment agreement, Mr. Orzechowski was granted (1) a stock option to purchase up to 250 shares of common stock of the Company, at an exercise price equal to $14.00 per share, which was the closing market price of the Company's common stock on July 1, 2019 (i.e., the Effective Date), and (2) to purchase up to 6,000 shares of common stock of the Company, with an exercise price of $14.00, and will vest and become exercisable as follows: 387 shares vested and became exercisable on the one-year anniversary of the Effective Date, 900 shares vested and became exercisable on the second-year anniversary of the Effective Date, 1,413 shares will vest and become exercisable on the third-year anniversary of the Effective Date, and 3,300 shares will vest and become exercisable on the fourth-year anniversary of the Effective Date, provided, in each case, that Mr. Orzechowski remains an employee of the Company through such vesting dates. Further, Mr. Orzechowski is eligible to participate in the Company's 2013 Equity Incentive Plan, and is eligible to receive medical and dental benefits, life insurance, short and long-term disability coverage, and to participate in the Company's Section 125 cafeteria plan, vision plan and 401K plan.

Outstanding Equity Awards at 2022 Fiscal Year-End

The following table sets forth outstanding stock options granted under or outside of our 2013 Equity Incentive Plan and SARs under our 2020 Stock Appreciation Rights Plan that are held by our named executive officers as of December 31, 2022:

	Option Awards[1]			
Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price ($)	Option expiration date
Jacob Brunsberg[2]	100,000	-	$ 3.18	9/20/2026
	19,443	50,557	$ 2.50	2/16/2027
	8,330	21,670	$ 2.50	2/16/2027
	5,372	9,828	$ 2.50	7/1/2027
	17,635	32,165	$ 2.50	7/1/2027
	69,040	125,900	$ 1.30	7/1/2027
	-	181,947	$ 2.50	7/1/2027
Mark K. Ruport[3]	10,000	-	$ 11.20	12/3/2024
	40,000	-	$ 11.20	12/3/2024
	102,064	14,590	$ 2.50	6/14/2025
	40,062	20,032	$ 2.63	6/22/2025
	79,800	35,115	$ 2.55	11/24/2025
	30,238	21,594	$ 3.42	8/11/2026
	25,916	51,832	$ 3.42	8/11/2026
	2,078	3,796	$ 2.50	7/1/2027
	6,815	12,427	$ 2.50	7/1/2027
	8,894	16,223	$ 2.50	7/1/2027
Darren Beckett[4]	2,000	-	$ 12.10	10/18/2023
	282	93	$ 15.00	1/1/2024
	375	125	$ 12.40	7/18/2024
	5,000	-	$ 6.70	10/11/2024
	40,825	5,836	$ 2.50	6/14/2025
	16,026	8,012	$ 2.63	6/22/2025
	29,677	21,192	$ 3.42	8/11/2026
	25,435	50,869	$ 3.42	8/11/2026
	5,603	10,246	$ 2.50	7/1/2027
	6,001	10,943	$ 2.50	7/1/2027
	18,392	33,535	$ 2.50	7/1/2027
	-	97,038	$ 1.30	7/1/2027
	1,500	-	$ 15.60	2/26/2028
Frank Orzechowski[5]	250	-	$ 14.00	7/1/2024
	2,700	3,300	$ 14.00	7/1/2024
	30,619	4,377	$ 2.50	6/14/2025
	12,018.	6,010	$ 2.63	6/22/2025
	16,193	32,387	$ 3.42	8/11/2026
	28,337	20,243	$ 3.42	8/11/2026
	5,627	10,297	$ 2.50	7/1/2027
	18,477	33,693	$ 2.50	7/1/2027
	24,603	44,867	$ 2.50	7/1/2027
	-	97,038	$ 1.30	7/1/2027

(1) On June 23, 2020, we adopted the 2020 Stock Appreciation Rights Plan. The Plan provides for incentive awards in the form of stock appreciation rights ("SARs") payable in cash. No shares of common stock were reserved in connection with the adoption of the Plan since no shares will be issued pursuant to the Plan. Awards issued under the Plan are included in the table.

(2) On September 20, 2021, in conjunction with the hiring of Jacob Brunsberg, the Company's current President and Chief Executive Officer, the Company granted to Mr. Brunsberg an option to purchase 100,000 shares of our common stock with an exercise price of $3.18, which was fully vested and exercisable on the date of the grant. On February 16, 2022, the Company granted an option to Mr. Brunsberg to purchase up to 70,000 shares of common stock with an exercise price of $2.50, which will vest in equal monthly installments over three years. As of December 31, 2022, 19,443 shares were fully vested and exercisable. Also on February 16, 2022, the Company granted 30,000 SARs to Mr. Brunsberg, with an exercise price of $2.50, which will vest in equal monthly installments over three years. As of December 31, 2022, 8,330 SARs were fully vested and exercisable. On July 1, 2022, we granted Mr. Brunsberg an option to purchase up to 15,200 shares of our common stock with an exercise price of $2.50. 4,104 shares were fully vested and exercisable on the date of the grant, and the remaining 11,096 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 5,372 shares were fully vested and exercisable. Also on July 1, 2022, we granted Mr. Brunsberg an option to purchase up to 49,800 shares of our common stock with an exercise price of $2.50. 12,450 shares were fully vested and exercisable on the date of the grant, and the remaining 37,350 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 17,635 shares were fully vested and exercisable. Additionally, on July 1, 2022 we granted Mr. Brunsberg 194,940 SARs with an exercise price of $2.50. 48,735 SARs were fully vested and exercisable on the date of the grant, and the remaining 146,205 SARs will vest in equal monthly installments over the next three years. As of December 31, 2022, 69,040 SARs were fully vested and exercisable. Last, on July 1, 2022, we granted Mr. Brunsberg 181,947 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Brunsberg remains an employee of the Company on that date.

(3) On December 3, 2019, in conjunction with the hiring of Mark K. Ruport, the Company's former President and Chief Executive Officer, the Company granted to Mr. Ruport (i) an option to purchase 10,000 shares of our common stock with an exercise price of $11.20, which fully vested and became exercisable on January 3, 2020; and (ii) an option to purchase up to 40,000 shares of our common stock, with an exercise price of $11.20, which became fully vested and exercisable as of December 31, 2022. On May 28, 2020, we granted Mr. Ruport an option to purchase 116,654 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50 and as of December 31, 2022 102,064 shares were fully vested and exercisable, and the remaining 14,590 shares will vest in equal monthly installments over the next six months. On November 24, 2020, we granted Mr. Ruport an option to purchase up to 114,915 shares of our common stock. The option has an exercise price of $2.55 and vests over three years in equal monthly installments beginning one month from the grant date. As of December 31, 2022, 79,800 shares were vested and exercisable. On June 23, 2020, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Ruport 60,094 SARs. The SARs have an exercise price of $2.63 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 40,062 SARs were vested and exercisable. On August 11, 2021, we granted Mr. Ruport an option to purchase 51,832 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and as of December 31, 2022, 30,238 shares were fully vested and exercisable, and the remaining 21,594 shares will vest in equal monthly installments over the next twenty months. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Ruport 77,748 SARs. The SARs have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 25,916 SARs were fully vested and exercisable. On July 1, 2022, the Company granted Mr. Ruport an option to purchase up to 5,874 shares of our common stock with an exercise price of $2.50. 1,586 shares were fully vested and exercisable on the date of the grant, and the remaining 4288 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 2,078 shares were fully vested and exercisable. Also on July 1, 2022, the Company granted Mr. Ruport an option to purchase up to 19,242 shares of our common stock with an exercise price of $2.50. 4,810 shares were fully vested and exercisable on the date of the grant, and the remaining 14,432 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 6,815 shares were fully vested and exercisable. Additionally, on July 1, 2022 the Company granted Mr. Ruport 25,117 SARs. The SARs have an exercise price of $2.50. 6,279 SARs were fully vested and exercisable on the date of the grant, and the remaining 18,838 SARs will vest in equal monthly installments over the next three years. As of December 31, 2022, 8,894 SARs were fully vested and exercisable.

(4) On February 26, 2018 we granted Mr. Beckett an option to purchase up to 1,500 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price per share equal to $15.60 and is fully vested and exercisable. On October 18, 2018, we granted Mr. Beckett an option to purchase up to 2,000 shares of our common stock. The option has an exercise price per share equal to $12.10 and is fully vested and exercisable. On January 1, 2019, we granted Mr. Beckett an option to purchase up to 375 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price per share equal to $15.00, and vests in equal installments on the first through the fourth anniversaries of the grant. As of December 31, 2022, 282 shares are vested and exercisable. On July 18, 2019, we granted Mr. Beckett an option to purchase up to 500 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price per share equal to $12.40. The option vests and will become exercisable in equal installments on the first through the fourth anniversaries of the date of grant. As of December 31, 2022, the option was vested as to 375 shares. On October 11, 2019, we granted Mr. Beckett an option to purchase up to 5,000 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price per share equal to $6.70 and is fully vested and exercisable. On May 28, 2020, we granted Mr. Beckett an option to purchase 46,661 shares of our common stock. The option has an exercise price per share equal to $2.50 and as of December 31, 2022, 40,825 shares were fully vested and exercisable. The remaining 5,836 shares will vest in equal monthly installments over the next six months. On June 23, 2020, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Beckett 24,038 SARs. The SARs have an exercise price of $2.63 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 16,026 SARs were vested and exercisable. On August 11, 2021, we granted Mr. Beckett an option to purchase 50,869 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and as of December 31, 2022, 29,677 shares were fully vested and exercisable, and the remaining 21,192 shares will vest in equal monthly installments over the next twenty months. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Beckett 76,304 SARs. The SARs have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 25,435 shares were fully vested and exercisable. On July 1, 2022, we granted Mr. Beckett an option to purchase up to 15,849 shares of our common stock with an exercise price of $2.50. 4,279 shares were fully vested and exercisable on the date of the grant, and the remaining 10,246 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 5,603 shares were fully vested and exercisable. Also on July 1, 2022, we granted Mr. Beckett an option to purchase up to 51,927 shares of our common stock with an exercise price of $2.50. 12,982 shares were fully vested and exercisable on the date of the grant, and the remaining 38,945 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 18,392 shares were fully vested and exercisable. Additionally, on July 1, 2022 we granted Mr. Beckett 16,944 SARs with an exercise price of $2.50. 4,236 SARs were fully vested and exercisable on the date of the grant, and the remaining 12,708 SARs will vest in equal monthly installments over the next three years. As of December 31, 2022, 6,001 SARs were fully vested and exercisable. Last, on July 1, 2022, we granted Mr. Beckett 97,038 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Beckett remains an employee of the Company on that date.

(5) On July 1, 2019, in conjunction with the hiring of Frank Orzechowski, the Financial Officer, the Company granted to Mr. Orzechowski (i) an option to purchase 250 shares of our common stock with an exercise price of $14.00, which fully vested and became exercisable on July 1, 2019; and (ii) an option to purchase up to 6,000 shares of our common stock, with an exercise price of $14.00. As of December 31, 2022, 2,700 shares were fully vested and exercisable, and the remaining 3,300 shares will vest and become exercisable on July 1, 2023. .. On May 28, 2020, we granted Mr. Orzechowski an option to purchase 34,996 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $2.50. As of December 31, 2022, 30,619 shares were fully vested and exercisable, and the remaining 4,377 shares will vest in equal monthly installments over the next six months. On June 23, 2020, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Orzechowski 18,028 SARs. The SARs have an exercise price of $2.63 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 12,018 SARs were vested and exercisable. On August 11, 2021, we granted Mr. Orzechowski an option to purchase 48,580 shares of our common stock under our 2013 Equity Incentive Plan in connection with his employment arrangement. The option has an exercise price of $3.42 and as of December 31, 2022, 28,337 shares were fully vested and exercisable, and the remaining 20,243 shares will vest in equal monthly installments over the next twenty months. On August 11, 2021, pursuant to our 2020 Stock Appreciation Rights Plan, we granted Mr. Orzechowski 48,580 SARs. The SARs have an exercise price of $3.42 and will vest and become exercisable in three equal installments on each of the first, second, and third anniversaries of the grant date. As of December 31, 2022, 16,193 SARs were fully vested and exercisable. . On July 1, 2022, we granted Mr. Orzechowski an option to purchase up to 15,924 shares of our common stock with an exercise price of $2.50. 4,299 shares were fully vested and exercisable on the date of the grant, and the remaining 11,625 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 5,627 shares were fully vested and exercisable. Also on July 1, 2022, we granted Mr. Orzechowski an option to purchase up to 52,170 shares of our common stock with an exercise price of $2.50. 13,042 shares were fully vested and exercisable on the date of the grant, and the remaining 39,128 shares will vest in equal monthly installments over the next three years. As of December 31, 2022, 18,477 shares were fully vested and exercisable. Additionally, on July 1, 2022 we granted Mr. Orzechowski 69,470 SARs with an exercise price of $2.50. 17,368 SARs were fully vested and exercisable on the date of the grant, and the remaining 52,102 SARs will vest in equal monthly installments over the next three years. As of December 31, 2022, 24,603 SARs were fully vested and exercisable. Last, on July 1, 2022, we granted Mr. Orzechowski 97,038 SARs in connection with his employment retention agreement. The SARs have an exercise price of $1.30 and will vest and become exercisable on March 15, 2025 if Mr. Orzechowski remains an employee of the Company on that date.

Potential Payments Upon Termination or Change-in-Control

On July 1, 2022, our Board of Directors, upon the recommendation of the Compensation Committee, adopted retention bonus and change in control plans for certain of our named executive officers as described below.

Retention Bonus Plan

The retention bonus plan consists of the award of retention bonuses to Mr. Brunsberg, and Mr. Orzechowski as an incentive to remain in our employ through the end of the retention period. The retention bonus amount for Mr. Brunsberg is $375,000, which is equal to 150% of his base salary in effect on July 1, 2022, and the retention bonus amount for Mr. Orzechowski is $200,000, which is equal to 100% of his base salary in effect on July 1, 2022. The retention bonuses are payable 50% in cash and 50% in SARs for each executive.

The SARs will have an exercise price of $1.30 (*i.e*., the closing price of our common stock on the grant date) and will vest, in full, on March 15, 2025, subject to the executive remaining in our continuous employ through such date.

The cash component of the retention bonuses will be paid upon the end of the retention period coinciding with the filing of the Company's 2024 Annual Report on Form 10-K, subject to the executive's continuous employment by the Company through the filing date. In the event of a "change in control" of the Company prior to such filing, the executives would be entitled to payment in cash of a pro rata portion of their total respective bonuses. The balance of the retention bonuses would terminate**.** Assuming a change in control had occurred on December 31, 2022, the amount of retention bonuses payable to Mr. Brunsberg and Mr. Orzechowski would have been $67,164 and $35,821, respectively.

Change in Control Plan

The change in control plan adopted on July 1, 2022, as modified by our Board of Directors on January 24, 2023, provides that following a "Change in Control" of the Company, Messrs. Brunsberg and Orzechowski each would be entitled to a cash payment equal to two times his base annual salary in effect on July 1, 2022 (*i.e*., $500,000 for Mr. Brunsberg and $400,000 for Mr. Orzechowski), less any base salary payments received between the date of the "change in control" and the termination date, if his employment is terminated by the Company without "cause" or the executive resigns for "Good Reason" within two years following the "Change in Control". For purposes of the plan, "Change in Control" means: (i) a liquidation or dissolution of the Company; (ii) a merger or consolidation of the Company with or into another corporation or entity (other than a merger with a wholly owned subsidiary); (iii) a sale of all or substantially all of the assets of the Company; or (iv) a purchase or other acquisition of more than 50% of the outstanding stock of the Company by one person or by more than one person acting in concert. "Good Reason" means: (i) a reduction in the executive's annual base salary as in effect on the date immediately prior to the Change in Control or a failure to make any scheduled base salary payment within fifteen days after its due date, unless the Company's Board of Directors determines in good faith that such base salary reduction is more than offset by the aggregate value of any new compensation plans or other employment-related benefits that are provided to the Executive after the Change in Control; (ii) the Company's requirement that the executive perform his employment duties at an office that is more than 25 miles from the Company's office at which the executive was principally employed on the date immediately prior to the Change in Control; (iii) a change or diminution in executive's employment duties that is materially inconsistent with the duties usually associated with their position at a corporation; or (iv) a failure by the Company to continue for the benefit of the executive any material compensation plan in which the executive participated on the date immediately prior to the Change in Control, unless the discontinuation of such plan was outside the Company's reasonable control or unless the Company discontinues such plan for all of its executive officers.

Equity Awards

We offer stock options, stock appreciation rights, and stock awards to certain of our employees, including our executive officers, as the long-term incentive component of our compensation program. We generally grant equity awards to new hires upon their commencing employment with us. Our stock options allow employees to purchase shares of our common stock at a price per share equal to the fair market value of our common stock on the date of grant and may or may not be intended to qualify as “incentive stock options” for U.S. federal income tax purposes. Our stock appreciation rights allow employees to receive a cash payment for the difference between the market price of our common stock on the date of exercise and the strike price. We sometimes also offer stock options, stock appreciation rights and stock awards to our consultants in lieu of cash. Our stock options allow consultants to purchase shares of our common stock at a price per share equal to the fair market value of our common stock on the date of grant and are not intended to qualify as “incentive stock options” for U.S. federal income tax purposes. Our stock appreciation rights allow consultants to receive a cash payment for the difference between the market price of our common stock on the date of exercise and the strike price. Stock options, stock appreciation rights, and stock awards granted to our executive officers may be subject to accelerated vesting in certain circumstances.

Retirement Plans

We maintain a qualified 401(k) plan, in which all eligible employees may participate. We make safe harbor contributions to match 100% of each participant’s contribution up to 3% of salary, and 50% of the next 2% of salary contributed. Safe harbor contributions are 100% vested. We may also elect, on an annual basis, to make a discretionary contribution to the plan, but have not done so to date. Our elective matches and elective contributions vest to participant accounts as follows: 20% after two years of service, and 20% per year thereafter until the participant reaches 6 years of service, at which time, employer contributions vest 100%. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

No Tax Gross-Ups

We do not make gross-up payments to cover our executive officers’ personal income taxes that may pertain to any of the compensation paid or provided by our Company.

2013 Equity Incentive Plan

Plan Purpose

Our Board of Directors adopted the 2013 Plan, which terminated on March 15, 2023, to (1) encourage selected employees, officers, directors, consultants and advisers to improve our operations and increase our profitability, (2) encourage selected employees, officers, directors, consultants and advisers to accept or continue employment or association with us, and (3) increase the interest of selected employees, officers, directors, consultants and advisers in our welfare through participation in the growth in value of our common stock. All of our current employees, officers, directors and consultants were eligible to participate in the 2013 Plan.

Administration

The 2013 Plan is administered by the Board or by a committee to which administration of the Plan, or of part of thereof, is delegated by the Board. The 2013 Plan is currently administered by our Compensation Committee, which we refer to below as the “Administrator.” The Administrator is responsible for selecting the officers, employees, directors, consultants and advisers who will receive Options, Stock Appreciation Rights and Stock Awards. Subject to the requirements imposed by the 2013 Plan, the Administrator is also responsible for determining the terms and conditions of each Option and Stock Appreciation Right award, including the number of shares subject to the Option, the exercise price, expiration date and vesting period of the Option and whether the option is an Incentive Option or a Non-Qualified Option. Subject to the requirements imposed by the 2013 Plan, the Administrator is also responsible for determining the terms and conditions of each Stock Award, including the number of shares granted, the purchase price (if any), and the vesting, transfer and other restrictions imposed on the stock. The Administrator has the power, authority and discretion to make all other determinations deemed necessary or advisable for the administration of the 2013 Plan or of any award under the 2013 Plan.

The 2013 Plan is not subject to the Employee Retirement Income Security Act of 1974 and is not a qualified pension, profit sharing or bonus plan under Section 401(a) of the Internal Revenue Code.

Stock Subject to the 2013 Plan

As of March 29, 2023, there were 2,014,659 shares previously issued or subject to outstanding awards under the 2013 Plan. The plan expired on March 15, 2023 and therefore there are no shares available for future issuance under the 2013 Plan.

Vesting

Each Option, Stock Appreciation Right or Stock Award will become exercisable or non-forfeitable (that is, “vest”) under conditions specified by the Administrator at the time of grant. Vesting typically is based upon continued service as a director or employee but may be based upon any performance criteria and other contingencies that are determined by the Administrator. Shares subject to Stock Awards may be subject to specified restrictions concerning transferability, repurchase by the Company and forfeiture of the shares issued, together with such other restrictions as may be determined by the Administrator.

Expiration Date

Each Option or Stock Appreciation Right must be exercised by a date specified in the award agreement, which may not be more than ten years after the grant date. Except as otherwise provided in the relevant agreement, an Option or Stock Appreciation Right ceases to be exercisable ninety days after the termination of the holder’s service with us.

Transfers of Options

Unless otherwise determined by the Administrator, Options are not transferable except by will or the laws of descent and distribution.

Purchase Price Payment

Unless otherwise determined by the Administrator, the purchase price of common stock acquired under the 2013 Plan is payable by cash or check at the time of an Option exercise or acquisition of a Stock Award. The Company does not charge participants any fees or commissions in connection with their acquisition of common stock under the 2013 Plan. The Administrator also has discretion to accept the following types of payment from participants:

- A secured or unsecured promissory note, provided that this method of payment is not available to a participant who is a director or an executive officer;
- Shares of our Common Stock already owned by the Option or Stock Award holder as long as the surrendered shares have a fair market value that is equal to the acquired stock and have been owned by the participant for at least six months;
- The surrender of shares of Common Stock then issuable upon exercise of an Option; and
- A "cashless" option exercise in accordance with applicable regulations of the SEC and the Federal Reserve Board.

Withholding Taxes

At the time of his or her exercise of an Option or Stock Appreciation Right, an employee is responsible for paying all applicable federal and state withholding taxes. A holder of Stock Awards is responsible for paying all applicable federal and state withholding taxes once the shares covered by the award cease to be forfeitable or at any other time required by applicable law.

Securities Law Compliance

Shares of common stock will not be issued pursuant to the exercise of an Option or the receipt of a Stock Award unless the Administrator determines that the exercise of the Option or receipt of the Stock Award and the issuance and delivery of such shares will comply with all relevant provisions of law, including, without limitation, the Securities Act of 1933 (the "Securities Act"), applicable state and foreign securities laws and the requirements of any stock exchange on which our common stock is traded.

Effects of Certain Corporate Transactions

Except as otherwise determined by the Administrator, in the event of a "corporate transaction," all previously unexercised Options and Stock Appreciation Rights will terminate immediately prior to the consummation of the corporate transaction and all unvested Restricted Stock awards will be forfeited immediately prior to the consummation of the corporate transaction. The Administrator, in its discretion, may permit exercise of any Options or Stock Appreciation Rights prior to their termination, even if those awards would not otherwise have been exercisable, or provide that outstanding awards will be assumed or an equivalent Option or Stock Appreciation Right substituted by a successor corporation. The Administrator, in its discretion, may remove any restrictions as to any Restricted Stock awards or provide that all outstanding Restricted Stock awards will participate in the corporate transaction with an equivalent stock substituted by the successor corporation subject to the restrictions. In general, a "corporate transaction" means:

- Our liquidation or dissolution;
- Our merger or consolidation with or into another corporation as a result of which we are not the surviving corporation;
- A sale of all or substantially all of our assets; or
- A purchase or other acquisition of more than 50% of our outstanding stock by one person, or by more than one person acting in concert.

Other Adjustment Provisions

If the stock of the Company is changed by reason of a stock split, reverse stock split, stock dividend, recapitalization, combination or reclassification, appropriate adjustments shall be made by the Administrator, in its discretion, in (1) the number and class of shares of stock subject to the 2013 Plan and each Option and grant of Stock Awards outstanding under the 2013 Plan, and (2) the purchase price of each outstanding Option and (if applicable) Stock Award.

Termination of the Plan

The 2013 Plan terminated automatically on March 15, 2023, which was the tenth anniversary of the date of the 2013 Plan's adoption by our Board of Directors.

2020 Stock Appreciation Rights Plan

On June 23, 2020, our Board of Directors adopted the Sigma Labs, Inc. 2020 Stock Appreciation Rights Plan (the "Plan"). The purposes of the Plan are to: (i) enable the Company to attract and retain the types of employees, consultants, and directors (collectively, "Service Providers") who will contribute to the Company's long-range success; (ii) provide incentives that align the interests of Service Providers with those of the shareholders of the Company; and (iii) promote the success of the Company's business. The Plan only provides for incentive awards that are only made in the form of stock appreciation rights payable in cash ("SARs"). No shares of common stock were reserved in connection with the adoption of the Plan since no shares will be issued pursuant to the Plan.

Governance of the Plan

The Plan will be administered by the Compensation Committee of the Board or, in the Board's sole discretion, by the Board. The Compensation Committee will have the authority to, among other things, (i) construe and interpret the Plan and apply its provisions; (ii) promulgate, amend, and rescind rules and regulations relating to the administration of the Plan; (iii) delegate its authority to one or more persons who is an officer of the Company within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations promulgated thereunder with respect to SARs that do not involve "insiders" within the meaning of Section 16 of the Exchange Act; (iv) determine when SARs are to be granted under the Plan and the applicable grant date; (v) prescribe the terms and conditions of each SAR, including, without limitation, the exercise price and medium of payment and vesting provisions, and to specify the provisions of the SAR Agreement relating to such grant; (vi) amend any outstanding SARs, subject, in certain cases, to the participant's consent; and (vii) make all other determinations which may be necessary or advisable for the administration of the Plan.

Eligible Participants

SARS may be granted only to persons who are Service Providers, and those persons whom the Committee determines are reasonably expected to become Service Providers following the grant date. The Committee may from time to time designate those Service Providers, if any, to be granted SARs under the Plan, the number of SARs which will be granted to each such person, and any other terms or conditions relating to SARs as it may deem appropriate to the extent consistent with the provisions of the Plan. A participant who has been granted a SAR may, if otherwise eligible, be granted additional incentive awards at any time.

Grant. The Committee may grant SARs to any Service Provider. A SAR is the right to receive an amount equal to the Spread with respect to a share of the Company's common stock upon the exercise of the SAR. The "Spread" is the difference between the exercise price per share specified in a SAR agreement on the date of grant and the fair market value per share on the date of exercise of the SAR.

General Provisions. The terms and conditions of each SAR will be evidenced by a SAR agreement. The exercise price per share will not be less than 100% of the fair market value of a Share on the date of grant of the SAR. The term of the SAR will be determined by the Committee but may not be greater than ten years from the date of grant.

Exercise. SARs are exercisable subject to such terms and conditions as the Committee may specify in the SAR agreement for the SAR. A SAR may be exercised by the delivery of a signed written notice of exercise to the Company, which must be received and accepted by the Company as of a date set by the Company in advance of the effective date of the proposed exercise. The notice must set forth the number of SARs being exercised, together with any additional documents the Company may require.

Settlement. Upon exercise of a SAR, the Grantee will receive an amount equal to the Spread. The Spread, less applicable withholdings, will be payable only in cash. In no event may any SAR be settled in any manner other than by delivery of a cash payment from the Company.

Form of SAR Agreement

Each participant to whom a SAR is granted will be required to enter into a SAR agreement with the Company, in such a form as is provided by the Committee. The SAR agreement will contain specific terms as determined by the Committee, in its discretion, with respect to the participant's particular SAR. Such terms need not be uniform among all participants or any similarly situated participants. The SAR agreement may include, without limitation, vesting, forfeiture and other provisions particular to the particular participant's SAR, as well as, for example, provisions to the effect that the participant must abide by all the terms and conditions of the Plan and such other terms and conditions as may be imposed by the Committee. A SAR will include such terms and conditions as are determined by the Committee, in its discretion, to be appropriate with respect to any participant.

The Committee may specify in a SAR agreement that the participant's rights, payments, and benefits with respect to a SAR will be subject to forfeiture upon the occurrence of certain specified events, in addition to any otherwise applicable vesting or performance conditions of the incentive award. Such events may include, but are not limited to, termination with cause or other conduct by the participant that is detrimental to the business or reputation of the Company.

Termination of Employment

Unless otherwise expressly provided in the participant's SAR agreement, if the participant's employment is terminated for any reason other than due to cause, death or disability, any non-vested portion of any outstanding SAR at the time of such termination will automatically expire and terminate and no further vesting will occur after the termination date. In such event, except as otherwise expressly provided in the SAR agreement, the participant will be entitled to exercise such participant's rights only with respect to the portion of the SAR that was vested as of the termination date for a period that will end on the earlier of (i) the expiration date set forth in the SAR agreement or (ii) ninety days after the date of termination.

Termination for Cause

Unless otherwise expressly provided in the participant's SAR agreement, in the event of the termination of a participant's employment for cause, all vested and non-vested SARs granted to such participant will immediately expire, and will not be exercisable to any extent.

Disability or Death

Unless otherwise expressly provided in the participant's SAR agreement, upon termination of employment as a result of the participant's disability or death, (i) any non-vested portion of any outstanding SAR will immediately terminate upon termination and no further vesting will occur, and (ii) any vested SAR will expire on the earlier of either (A) the expiration date set forth in the SAR agreement or (B) 12 months following the participant's termination of employment.

Continuation

Subject to the conditions and limitations of the Plan and applicable law, in the event that a participant ceases to be an employee, outside director or consultant, as applicable, for whatever reason, the Committee and participant may mutually agree with respect to any outstanding SAR then held by the participant (i) for an acceleration or other adjustment in any vesting schedule applicable to the SAR award; (ii) for a continuation of the exercise period following termination for a longer period than is otherwise provided under such SAR; or (iii) to any other change in the terms and conditions of the SAR. In the event of any such change to an outstanding SAR, a written amendment to the participant's SAR agreement will be required. No amendment to a participant's SAR will be made to the extent compensation payable pursuant thereto as a result of such amendment would be considered deferred compensation that is not excepted from taxation or penalties under Code Section 409A, unless otherwise determined by the Committee.

SARs granted under the Plan are not transferable other than to a designated beneficiary upon the Participant's death or by will or the laws of descent and distribution.

Change in Control

Unless otherwise provided in a SAR Agreement, notwithstanding any contrary provision in the Plan, in the event of a Change in Control (as defined in the Plan), all outstanding SARs will become 100% vested and immediately exercisable.

Amendment

The Board at any time, and from time to time, may amend or terminate the Plan. The Committee at any time, and from time to time, may amend the terms of any one or more SAR agreements, except that the Committee may not affect any amendment which would otherwise constitute an impairment of the rights under any SAR unless the participant consents in writing.

As of March 29, 2023, there were 991,631 SARs outstanding under the 2020 Plan.

Director Compensation

We believe that a combination of cash and equity compensation is appropriate to attract and retain the individuals we desire to serve on our Board of Directors. Our cash compensation policies are designed to encourage frequent and active interaction between directors and our executives both during and between formal meetings as well as compensate our directors for their time and effort. Further, we believe it is important to align the long-term interests of our non-employee directors (i.e., directors who are not employed by us as officers or employees) with those of the Company and its stockholders, and that awarding equity compensation to, and thereby increasing ownership of our common stock by, our non-employee directors is an appropriate means to achieve this alignment. Directors who are also employees of our company do not receive compensation for their service on our Board of Directors.

Under our director compensation program for 2022, each non-employee director received annual compensation of $30,000, and an option to purchase 14,000 shares of our common stock, which is fully vested. All cash fees are paid quarterly. Also, each non-employee director may be reimbursed for his reasonable expenses incurred in the performance of his duties as a director as our Board of Directors determines from time to time. Our Compensation Committee intends to evaluate our director compensation program and determine whether any changes should be recommended to the Board.

The following table sets forth certain information concerning the compensation paid to non-employee directors in 2022 for their services as directors of the Company. The compensation of Mr. Brunsberg, who serves as a director and our President and Chief Executive Officer, is described in the Summary Compensation Table of Executive Officers. Our non-employee directors do not receive fringe or other benefits.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)[6]	Total ($)
Mark K. Ruport[1]	7,500	1,871	9,371
John Rice [2]	22,500	21,721	44,221
Salvatore Battinelli[3]	30,000	21,721	51,721
Dennis Duitch[4]	30,000	21,721	51,721
Kent Summers[5]	30,000	21,721	51,721

(1) The fees shown were paid to Mr. Ruport for services as a non-employee director from October 1, 2022 through December 31, 2022. On October 1, 2022, the Company granted Mr. Ruport an option to purchase up to 3,500 shares of the Company's common stock in connection with his service as a director. The exercise price of the option is equal to $2.50 per share, is fully vested, and had a grant date fair value of $1,871. The compensation of Mr. Ruport for the period January 1, 2022 through September 30, 2022, during which time he served as President and Chief Executive Officer from January 1, 2022 through March 31, 2022, in addition to his service as a director, is described in the Summary Compensation Table of Executive Officers

(2) The fees shown were paid to Mr. Rice for services as a director. On March 31, 2022, the Company granted Mr. Rice an option to purchase up to 14,000 shares of the Company's common stock in connection with his service as a director. The exercise price of the option is equal to $2.50 per share, is fully vested, and had a grant date fair value of $21,721. Mr. Rice resigned from the Board of Directors on September 16, 2022.
(3) The fees shown were paid to Mr. Battinelli for services as a director. On March 31, 2022, the Company granted Mr. Battinelli an option to purchase up to 14,000 shares of the Company's common stock in connection with his service as a director. The exercise price of the option is equal to $2.50 per share, is fully vested, and had a grant date fair value of $21,721.
(4) The fees shown were paid to Mr. Duitch for services as a director. On March 31, 2022, the Company granted Mr. Duitch an option to purchase up to 14,000 shares of the Company's common stock in connection with his service as a director. The exercise price of the option is equal to $2.50 per share, is fully vested, and had a grant date fair value of $21,721.
(5) The fees shown were paid to Mr. Summers for services as a director. On March 31, 2022, the Company granted Mr. Summers an option to purchase up to 14,000 shares of the Company's common stock in connection with his service as a director. The exercise price of the option is equal to $2.50 per share, is fully vested, and had a grant date fair value of $21,721.
(6) These columns represent the aggregate grant date fair value of stock awards and stock options computed in accordance with FASB ASC Topic 718. These amounts do not correspond to the actual value that will be recognized by the named directors from these awards.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information regarding beneficial ownership of our common stock as of March 29, 2023 (a) by each person known by us to own beneficially 5% or more of any class of our common stock, (b) by our named executive officers and each of our directors (and director nominees) and (c) by all executive officers and directors of the Company as a group.

The number of shares beneficially owned by each stockholder is determined in accordance with SEC rules. Under these rules, beneficial ownership includes any shares as to which a person has sole or shared voting power or investment power. Percentage ownership is based on 10,772,713 shares of our common stock outstanding on March 29, 2023. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of common stock subject to stock options, warrants or other rights held by such person that are currently convertible or exercisable or will become convertible or exercisable within 60 days of March 29, 2023 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned[1]
Named Executive Officers and Directors:		
Jacob Brunsberg[2]	222,522	2.02%
Frank Orzechowski[3]	144,721	1.33%
Mark Ruport[4]	378,189	3.41%
Salvatore Battinelli[5]	111,106	1.02%
Dennis Duitch[6]	105,523	*
Kent J. Summers[7]	104,774	*
All executive officers and directors as a group (8 persons)[8]	1,189,859	10.03%
5% Beneficial Holders:		
AWM Investment Company, Inc.[9]	1,118,194	9.99%

*Less than 1%.

(1) Based on 10,772,713 shares outstanding at March 29, 2023.
(2) Includes 220,622 shares issuable upon the exercise of stock options.
(3) Includes 143,752 shares issuable upon the exercise of stock options.

(4) Includes (a) 313,899 shares issuable upon the exercise of stock options; (b) 6,166 shares issuable upon the conversion of the shares of the Company's Series E Preferred Stock; and (c) 4,855 shares issuable upon exercise of Class A Warrants.
(5) Includes (a) 92,274 shares issuable upon the exercise of stock options, (b) 3,082 shares issuable upon the conversion of shares of the Company's Series E Preferred Stock, and (c) 2,428 shares issuable upon exercise of Class A Warrants.
(6) Includes 92,274 shares issuable upon the exercise of stock options.
(7) Includes 92,274 shares issuable upon the exercise of stock options.
(8) Includes (a) 1,076,794 shares issuable upon the exercise of stock options, (b) 9,248 shares issuable upon the conversion of the shares of the Company's Series E Preferred Stock, and (c) 7,283 shares issuable upon exercise of Class A Warrants.
(9) AWM Investment Company, Inc. is the investment advisor to Special Situations Technology Fund. L.P. ("Tech") and Special Situations Technology Fund II ("Tech II") and holds sole voting and investment power over 105,089 shares and 90,029 warrants to purchase shares held by Tech, and 592,696 shares and 507,756 warrants to purchase shares held by Tech II. Such warrants may only be exercised to the extent that the total number of shares then beneficially owned does not exceed 9.99% of the outstanding shares. AWM Investment Company, Inc.'s address is c/o Special Situations Funds, 527 Madison Avenue, Suite 2600, New York, NY 10022.

Equity Compensation Plan Information

The following table provides certain information with respect to our equity compensation plans as of December 31, 2022.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted-average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
2013 Equity Incentive Plan[1]	1,749,053	$ 3.55	436,506
Equity compensation plans not approved by security holders[2]	-	$ 2.21	-
Chief Executive Officer Inducement Options[3]	50,000	$ 11.20	-

(1) On March 15, 2013, the Company's Board of Directors approved the Company's 2013 Equity Incentive Plan. The 2013 Equity Incentive Plan was approved by our stockholders on October 10, 2013. On August 9, 2022, an amendment to our 2013 Equity Incentive Plan was approved by our stockholders to increase the number of shares of our common stock subject to the 2013 Equity Incentive Plan to 2,265,000. The Plan automatically expired on March 15, 2023, which was the tenth anniversary of the adoption of the Plan by the Company's Board of Directors.

(2) On June 23, 2020, our Board of Directors adopted the Sigma Labs, Inc. 2020 Stock Appreciation Rights Plan (the "Plan"). The purposes of the Plan are to: (i) enable the Company to attract and retain the types of employees, consultants, and directors who will contribute to the Company's long-range success; (ii) provide incentives that align the interests of Service Providers with those of the shareholders of the Company; and (iii) promote the success of the Company's business. The Plan only provides for incentive awards in the form of stock appreciation rights payable in cash ("SARs"). No shares of common stock are reserved in connection with the adoption of the Plan since no shares will be issued pursuant to the Plan. As of December 31, 2022, the Company had awarded 1,157,787 SARs pursuant to the Plan.

(3) On December 3, 2019, in conjunction with the hiring of Mark K. Ruport, the Company's former President and Chief Executive Officer, the Company granted to Mr. Ruport (i) an option to purchase 10,000 shares of our common stock with an exercise price of $11.20, which fully vested and became exercisable on January 3, 2020; and (ii) an option to purchase up to 40,000 shares of our common stock, with an exercise price of $11.20, which fully vested and became exercisable on December 3, 2022. In accordance with Nasdaq Listing Rule 5635(c)(4), such options were granted to Mr. Ruport as an inducement award outside of the 2013 Equity Incentive Plan.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Except as described below in this section, since the beginning of our last fiscal year, there has not been, nor is there currently proposed, any transaction or series of similar transactions to which we were a party other than equity and other compensation, termination, change in control and other arrangements, which are described under "Executive Compensation" and "Director Compensation" above:

- in which the amount involved exceeds the lesser of $120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years; and
- in which any director, executive officer, or other stockholder of more than 5% of our common stock or any member of their immediate family had or will have a direct or indirect material interest.

Transactions with Directors and Officers

We have entered into an "at-will" employment agreement, effective as of September 15, 2022, with Stephan Kuehr under which he serves as General Manager of European Operations. Mr. Kuehr is entitled to an annual base salary of €200,000, and an annual incentive bonus of up to €75,000 depending on individual and Company performance against certain specified goals. Pursuant to the employment agreement, Mr. Kuehr was granted an option to purchase up to 50,000 shares of common stock of the Company, with an exercise price of $2.50, and vested as to 25,000 shares on January 1, 2023, and will vest as to 25,000 shares on January 1, 2024, provided that Mr. Kuehr remains an employee of the Company through such vesting date. In addition, in connection with his employment, on January 26, 2023 Mr. Kuehr was granted an option to purchase up to 74.206 shares of common stock of the Company, with an exercise price of $0.58 which vested as to 37,103 shares on January 26, 2023, and will vest as to the remaining 37,103 shares in equal monthly installments beginning February 28, 2023 through December 31, 2024, provided, in each case, that Mr. Kuehr remains an employee of the Company through such vesting dates.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us to indemnify each director and executive officer to the fullest extent permitted by Nevada law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in the right of us, arising out of the person's services as a director or executive officer.

Policies and Procedures for Related Person Transactions

Our Audit Committee is responsible for reviewing and approving, as appropriate, all transactions with related persons (other than compensation-related matters, which should be reviewed by our Compensation Committee), in accordance with its Charter and the Nasdaq marketplace rules. In reviewing and approving any such transactions, our Audit Committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Audit Fees

The following is a summary of the fees billed to the Company by Haynie & Company for professional services rendered with respect to the years ended December 31, 2022 and 2021:

	2022	2021
Audit Fees	$ 89,000	$ 76,500
Audit Related Fees	5,000	14,800
Tax Fees	2,200	4,000
	$ 96,200	$ 95,300

In the above table, in accordance with the SEC's definitions and rules, "audit fees" are fees that we paid for professional services for the audit of our financial statements included in our Form 10-K and review of the interim financial statements included in quarterly reports, and for services that are normally provided by the registered public accounting firm in connection with statutory and regulatory filings or engagements; "audit-related fees" are fees for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements; and "tax fees" are fees for tax compliance, tax advice and tax planning.

The Audit Committee's pre-approval policies and procedures and other protocols are discussed in its written charter which can be found at www.sigmaadditive.com under the tab "Investors." Before our independent registered public accounting firm is engaged by the Company to render audit or non-audit services, the Audit Committee must pre-approve the engagement. Audit Committee pre-approval of audit and non-audit services are not required if the engagement for the services is entered into pursuant to pre-approval policies and procedures established by the Audit Committee regarding the Company's engagement of the independent registered public accounting firm, provided the policies and procedures are detailed as to the particular service, the Audit Committee is informed of each service provided and such policies and procedures do not include delegation of the Audit Committee's responsibilities under the Exchange Act to the Company's management. The Audit Committee may delegate to one or more designated members of the Audit Committee the authority to grant pre-approvals. If the Audit Committee elects to establish pre-approval policies and procedures regarding non-audit services, the Audit Committee must be informed of each non-audit service provided by the independent registered public accounting firm. Audit Committee pre-approval of non-audit services (other than review and attestation services) also will not be required if such services fall within available exceptions established by the SEC. The Audit Committee may not engage the independent registered public accounting firm to perform non-audit services prohibited by law or regulation. On an annual basis, our management reports to the Audit Committee all audit services performed during the previous 12 months and all fees billed by our independent registered public accounting firm for such services.

Auditor Independence

In our fiscal year ended December 31, 2022, Haynie & Company provided no professional services other than those described above that would require our Audit Committee to consider their compatibility with maintaining the independence of Haynie & Company.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

Our financial statements and related notes thereto are listed and included in this Annual Report beginning on page F-1. The following documents are furnished as exhibits to this Form 10-K.

Exhibit Number	Description
3.1	Amended and Restated Articles of Incorporation of the Company, as amended (previously filed by the Company as Exhibit 3.1 to the Company's Form 10-K filed on March 24, 2022 and incorporated herein by reference).
3.2	Certificate of Amendment to Amended and Restated Articles of Incorporation, as amended (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed August 12, 2022, and incorporated herein by reference).
3.3	Amended and Restated Bylaws of the Company, as amended. (filed by the Company as Exhibit 3.12 to the Company's Form 10-K, filed on March 24, 2021, and incorporated herein by reference).
3.4	Amendment No. 3 to Amended and Restated By-Laws of Sigma Additive Solutions, Inc. (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K filed December 16, 2022, and incorporated herein by reference).
4.1	Form of Common Stock Purchase Warrant (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed April 6, 2018, and incorporated herein by reference).
4.2	Form of Placement Agent Warrants (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed April 6, 2018, and incorporated herein by reference).
4.3	Form of Common Stock Purchase Warrant.(filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed June 26, 2018, and incorporated herein by reference).
4.4	Form of Common Stock Purchase Warrant (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed March 14, 2019, and incorporated herein by reference).
4.5	Form of Unit Purchase Option (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed March 14, 2019, and incorporated herein by reference).
4.6	Form of Common Stock Purchase Warrant.(filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed May 8, 2019, and incorporated herein by reference).
4.7	Form of Placement Agent Warrant (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed May 8, 2019, and incorporated herein by reference).
4.8	Form of Institutional Common Warrant (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K, filed January 30, 2020, and incorporated herein by reference).
4.9	Form of Class A Warrant(filed as Exhibit 10.8 to the Company's Current Report on Form 8-K, filed January 30, 2020, and incorporated herein by reference).
4.10	Form of Common Stock Purchase Warrants (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K filed April 3, 2020, and incorporated herein by reference).

4.11	Form of Underwriter Common Stock Purchase Warrant (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed January 12, 2021, and incorporated herein by reference).
4.12	Form of Warrant to Purchase Common Stock (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed January 12, 2021, and incorporated herein by reference).
4.13	Form of Warrant to Purchase Common Stock (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed March 30, 2021, and incorporated herein by reference).
4.14	Form of Placement Agent Warrant (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K filed March 30, 2021, and incorporated herein by reference).
4.15	Warrant to Purchase Common Stock issued January 26, 2023.**
4.16	Description of Common Stock (set forth under the heading "Description of Our Securities" in the prospectus contained in the Company's Registration Statement on Form S-1 (Registration No. 333-212735) filed on July 28, 2016, as amended, and incorporated by reference).
10.1	Form of Nonqualified Stock Option Agreement (previously filed by the Company as Exhibit 10.4 to the Company's Form 10-K, filed on April 1, 2019, and incorporated herein by reference)*
10.2	Form of Incentive Stock Option Agreement (filed as Exhibit 4.3 to the Company's Form S-8 Registration Statement, filed on July 24, 2014, and incorporated herein by reference).*
10.3	Form of Restricted Stock Agreement (previously filed by the Company as Exhibit 10.6 to the Company's Form 10-K, filed on April 1, 2019, and incorporated herein by reference).
10.4	Employment Offer Letter Agreement, effective August 10, 2015, between Sigma Labs, Inc. and Ronald Fisher (filed as Exhibit 10.12 to the Company's Form 10-K, filed on March 16, 2016, for the fiscal year ended December 31, 2015, and incorporated herein by reference).*
10.5	Form of Indemnification Agreement for directors and officers of Sigma Labs, Inc. (filed as Exhibit 10.12 to the Company's Registration Statement on Form S-1, filed on July 28, 2016, and incorporated herein by reference).*
10.6	Amendment No. 1, dated September 18, 2017, to Employment Offer Letter Agreement, effective August 10, 2015, between Sigma Labs, Inc. and Ronald Fisher (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed on September 20, 2017 and incorporated herein by reference).*
10.7	Amendment No. 2, dated February 21, 2018, to Employment Offer Letter Agreement between the Company and Ronald Fisher (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 27, 2018 and incorporated herein by reference).*
10.8	Securities Purchase Agreement, dated as of April 6, 2018, between Sigma Labs, Inc. and the Purchasers thereunder (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 6, 2018 and incorporated herein by reference).
10.9	Employment Agreement, effective as of September 25, 2017, between Darren Beckett and Sigma Labs, Inc. (filed as Exhibit 10.1 to the Company's Form 10-Q, filed on November 14, 2018, for the period ended September 30, 2018, and incorporated herein by reference).*
10.10	Securities Purchase Agreement, dated as of May 7, 2019, between the Company and the Purchaser (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed May 8, 2019, and incorporated herein by reference).
10.11	Employment letter agreement, effective as of July 1, 2019, between the Company and Frank D. Orzechowski. (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed August 14, 2019, and incorporated herein by reference) *
10.12	Securities Purchase Agreement (Institutional Investors) (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed January 27, 2020, and incorporated herein by reference).
10.13	Registration Rights Agreement (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K, filed January 27, 2020, and incorporated herein by reference).
10.14	Securities Purchase Agreement (Other Investors) (filed as Exhibit 10.6 to the Company's Current Report on Form 8-K, filed January 27, 2020, and incorporated herein by reference).
10.15	Private Placement Agreement (filed as Exhibit 10.9 to the Company's Current Report on Form 8-K, filed January 27, 2020, and incorporated herein by reference).
10.16	Securities Purchase Agreement, dated as of April 2, 2020, between the Company and Purchasers (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 3, 2020, and incorporated herein by reference).
10.17	Sigma Labs, Inc. 2020 Stock Appreciation Rights Plan (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 29, 2020 and incorporated herein by reference).*
10.18	Form of Stock Appreciation Rights Agreement (Employees; 2020 Stock Appreciation Rights Plan) (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed June 29, 2020 and incorporated herein by reference).*

10.19	Form of Stock Appreciation Rights Agreement (Non-employee Directors; 2020 Stock Appreciation Rights Plan) (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K filed June 29, 2020 and incorporated herein by reference).
10.20	Form of Waiver (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 12, 2021, and incorporated herein by reference).
10.21	Form of Securities Purchase Agreement (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed March 30, 2021, and incorporated herein by reference).
10.22	2021 and 2022 Corporate Goals – Cash and Equity Incentive Plan, dated June 10, 2021 (filed as an exhibit to the Company's Current Report on Form 8-K filed June 15, 2021, and incorporated herein by reference).*
10.23	2022 Corporate Goals – Cash and Equity Incentive Plan, dated July 1, 2023 (filed as an exhibit to the Company's Current Report on Form 8-K filed July 8, 2022, and incorporated herein by reference).*
10.24	Sigma Additive Solutions, Inc. 2013 Equity Incentive Plan, as Amended (filed as Exhibit 99.1 to the Company's Form S-8 Registration Statement, filed on October 19, 2022 and incorporated herein by reference).*
10.25	Sigma Labs, Inc. 2021 Employee Stock Purchase Plan (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed July 16, 2021 and incorporated herein by reference).*
10.26	Employment letter agreement, effective as of September 20, 2021, between Sigma Labs, Inc. and Jacob Brunsberg (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed October 21, 2021, and incorporated herein by reference).*
10.27	Amendment, dated February 16, 2022, to employment letter agreement, effective as of September 20, 2021, between Sigma Labs, Inc. and Jacob Brunsberg (filed by the Company as Exhibit 10.28 to the Company's Form 10-K, filed on March 24, 2022 and incorporated herein by reference).*
10.28	Amendment, dated February 16, 2022, to Amended and Restated Employment Agreement, dated June 10, 2021, between Sigma Labs, Inc. and Mark K. Ruport (filed by the Company as Exhibit 10.29 to the Company's Form 10-K, filed on March 24, 2022, and incorporated herein by reference).*
10.29	Amendment, effective as of April 1, 2022, to employment letter agreement, effective as of September 20, 2021, between Sigma Labs, Inc. and Jacob Brunsberg (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed August 5, 2022, and incorporated herein by reference).*
10.30	Retention Bonus and Change in Control Agreement, dated as of January 26, 2023, entered into by Sigma Additive Solutions, Inc. and Jacob Brunsberg.* **
10.31	Retention Bonus and Change in Control Agreement, dated as of January 26, 2023, entered into by Sigma Additive Solutions, Inc. and Frank Orzechowski.* **
23.1	Consent of Haynie & Company.**
31.1	Certificate of principal executive officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.**
31.2	Certificate of principal financial officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.**
32.1	Certificate of principal executive officer and principal financial officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.***
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Indicates a management contract or compensatory plan or arrangement.
** Filed herewith.
*** Furnished herewith.

ITEM 16. FORM 10-K SUMMARY.

We may voluntarily include a summary of information required by Form 10-K under this Item 16. We have elected not to include such summary information.

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.

SIGMA ADDITIVE SOLUTIONS, INC.

March 30, 2023	By: */s/ Jacob Brunsberg* Jacob Brunsberg President and Chief Executive Officer (Principal Executive Officer)
March 30, 2023	By: */s/ Frank Orzechowski* Frank Orzechowski Chief Financial Officer (Principal Financial and Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Jacob Brunsberg Jacob Brunsberg	President and Chief Executive Officer (Principal Executive Officer and Director)	March 30, 2023
/s/ Frank Orzechowski Frank Orzechowski	Chief Financial Officer (Principal Financial and Accounting Officer)	March 30, 2023
/s/ Mark K. Ruport Mark K. Ruport	Chairman, Director	March 30, 2023
/s/ Salvatore Battinelli Salvatore Battinelli	Director	March 30, 2023
/s/ Dennis Duitch Dennis Duitch	Director	March 30, 2023
/s/ Kent Summers Kent Summers	Director	March 30, 2023

Index to Financial Statements

Haynie & Company
Certified Public Accountants
& Management Consultants

1785 West 2320 South
Salt Lake City, UT 84119
801-972-4800
801-972-8941
www.HaynieCPAs.com

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.)

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Sigma Additive Solutions, Inc. (the Company) as of December 31, 2022 and 2021, and the related statements of operations, stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2022, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Consideration of the Company's Ability to Continue as a Going Concern

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the company has sustained recurring losses and negative cash flows from operations since inception. The Company will require additional funding in the public or private markets to continue operations for the next year. These factors 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.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. 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 audits 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 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 audits, 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 audits included performing procedures to assess the risks of material misstatement of the 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 financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition – Multiple Deliverables in Revenue Contracts

Description of the Matter:

As discussed in Note 1 to the financial statements, Sigma Additive Solutions, Inc.'s revenue is derived primarily from the sale of software, the related hardware suite, and engineering services. The Company's contracts with customers typically include the promise to transfer multiple goods and/or services to the customer. Management must assess whether each promised good or service is distinct for the purpose of identifying the performance obligations within the contract and must then determine and allocate the transaction price to the performance obligations. This assessment can be subjective and requires management to make judgments about the individual promised goods or services and whether such goods or services are separable and distinct from the other aspects of the contractual relationship.

Auditing management's assessment and recognition of revenue can be complex, involves judgment, and is based on a thorough understanding of the Company's offerings.

How we Addressed the Matter in Our Audit:

We obtained a thorough understanding of the controls the Company has in place to perform this assessment including walk-throughs of the key controls and analysis of the design and operating effectiveness of these controls. To evaluate Sigma Additive Solutions, Inc.'s assessment of performance obligations and allocation of price, our audit procedures included, among others, reading and evaluating management's assumptions used to determine the distinct performance obligations and price allocations. We compared the stand-alone price for each performance obligation to the allocated prices to ensure the allocation was reasonable. We also obtained confirmations from customers verifying the terms of the contracts.

/s/ Haynie & Company

Salt Lake City, Utah
March 30, 2023

We have served as the Company's auditor since 2018.

PrimeGlobal
An Association of Independent Accounting Firms

An independently owned member RSM US Alliance
RSM

Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.)
Balance Sheets

	December 31, 2022	December 31, 2021
ASSETS		
Current Assets:		
Cash	$ 2,845,931	$ 11,447,047
Accounts Receivable, net	371,620	412,192
Inventory	950,943	710,080
Prepaid Assets	105,226	114,278
Total Current Assets	**4,273,720**	**12,683,597**
Other Assets:		
Property and Equipment, net	304,903	232,282
Intangible Assets, net	1,125,285	925,111
Total Other Assets	**1,430,188**	**1,157,393**
TOTAL ASSETS	**$ 5,703,908**	**$ 13,840,990**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	$ 277,492	$ 206,442
Deferred Revenue	120,073	148,855
Accrued Expenses	231,633	625,942
Total Current Liabilities	**629,198**	**981,239**
TOTAL LIABILITIES	**629,198**	**981,239**
Commitments & Contingencies	-	-
Stockholders' Equity		
Preferred Stock, $0.001 par value; 10,000,000 shares authorized; 465 shares issued and outstanding	1	1
Common Stock, $0.001 par value; 24,000,000 shares authorized; 10,498,802 shares issued and outstanding	10,499	10,499
Additional Paid-In Capital	54,406,694	53,442,431
Accumulated Deficit	(49,342,484)	(40,593,180)
Total Stockholders' Equity	**5,074,710**	**12,859,751**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 5,703,908**	**$ 13,840,990**

See accompanying notes to financial statements

Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.)
Statements of Operations

	Year Ended	
	December 31, 2022	**December 31, 2021**
REVENUES	$ 630,428	$ 1,651,765
COST OF REVENUE	349,930	559,965
GROSS PROFIT	**280,498**	**1,091,800**
EXPENSES:		
Salaries & Benefits	4,740,437	4,286,368
Stock-Based Compensation	793,251	1,066,455
Operations and R&D Costs	653,194	890,553
Investor, Public Relations and Marketing	422,645	503,823
Organizational Costs	311,606	726,147
Legal & Professional Service Fees	725,285	915,530
Office Expenses	914,802	734,386
Depreciation & Amortization	116,167	94,105
Other Operating Expenses	352,115	353,818
Total Operating Expenses	**9,029,502**	**9,571,185**
LOSS FROM OPERATIONS	**(8,749,004)**	**(8,479,385)**
OTHER INCOME (EXPENSE)		
Interest Income	3,487	13,866
State Incentives	76,628	-
Exchange Rate Loss	(16,190)	(263)
Other Income	-	1,092,441
Interest Expense	(7,345)	(11,264)
Total Other Income (Expense)	**56,580**	**1,094,780**
LOSS BEFORE PROVISION FOR INCOME TAXES	**(8,692,424)**	**(7,384,605)**
Provision for Income Taxes	-	-
Net Loss	**$ (8,692,424)**	**$ (7,384,605)**
Preferred Dividends	56,880	103,567
Net Loss applicable to Common Stockholders	**$ (8,749,304)**	**$ (7,488,172)**
Net Loss per Common Share - Basic and Diluted	**$ (0.83)**	**$ (0.76)**
Weighted Average Number of Shares Outstanding - Basic and Diluted	**10,498,802**	**9,828,541**

See accompanying notes to financial statements

Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.)
Statement of Stockholders' Equity
For The Years Ended December 31, 2022 and 2021

	Preferred Shares Outstanding	Preferred Stock	Common Shares Outstanding	Common Stock	Additional Paid-in Capital	Accumulated Deficit	Total
Balances, December 31, 2020	715	$ 1	5,995,320	$ 5,995	$ 38,262,744	$ (33,105,008)	$ 5,163,732
Common Shares Sold in Public Offerings	-	-	3,901,783	3,902	14,865,997	-	14,869,899
Gain on Derivative Liability	-	-	-	-	(1,092,441)	-	(1,092,441)
Preferred Stock Dividends	-	-	19,000	19	103,548	(103,567)	-
Common Shares Issued for Conversion of Preferred Shares	(250)	-	100,000	100	(100)	-	-
Common Shares Issued for Exercise of Common Warrants	-	-	475,995	476	1,135,534	-	1,136,010
Securities Issued to Directors for Services	-	-	-	-	538,585	-	538,585
Securities Issued for Third Party Services	-	-	1,500	2	163,081	-	163,083
Securities Awarded to Employees	-	-	5,204	5	1,066,450	-	1,066,455
Offering Costs	-	-	-	-	(1,600,967)	-	(1,600,967)
Net Loss	-	-	-	-	-	(7,384,605)	(7,384,605)
Balances, December 31, 2021	465	$ 1	10,498,802	$ 10,499	$ 53,442,431	$ (40,593,180)	$ 12,859,751
Preferred Stock Dividends	-	-	-	-	56,880	(56,880)	-
Securities Issued to Directors for Services	-	-	-	-	88,756	-	88,756
Securities Issued for Third Party Services	-	-	-	-	25,376	-	25,376
Securities Awarded to Employees	-	-	-	-	793,251	-	793,251
Net Loss	-	-	-	-	-	(8,692,424)	(8,692,424)
Balances, December 31, 2022	465	$ 1	10,498,802	$ 10,499	$ 54,406,694	$ (49,342,484)	$ 5,074,710

See accompanying notes to financial statements

Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.)
Statements of Cash Flows

	Year Ended	
	December 31, 2022	**December 31, 2021**
OPERATING ACTIVITIES		
Net Loss	$ (8,692,424)	$ (7,384,605)
Adjustments to reconcile Net Loss to Net Cash used in operating activities:		
Noncash Expenses:		
Depreciation and Amortization	116,167	94,105
Gain on Derivative Liability	-	(1,092,441)
Stock Based Compensation - Employees	793,251	1,066,455
Stock Based Compensation - Third Party Services	25,376	163,083
Stock Based Compensation - Directors	88,756	538,585
Change in assets and liabilities:		
Accounts Receivable	40,572	(80,630)
Inventory	(240,863)	(50,429)
Prepaid Assets	9,052	2,457
Accounts Payable	71,050	77,505
Deferred Revenue	(28,782)	70,898
Accrued Expenses	(394,309)	382,127
Long-Term portion of Stock Appreciation Rights	-	(48,341)
Long-Term portion of Deferred Payroll Taxes under the CARES Act	-	(37,728)
NET CASH USED IN OPERATING ACTIVITIES	**(8,212,154)**	**(6,298,959)**
INVESTING ACTIVITIES		
Purchase of Property and Equipment	(164,622)	(182,522)
Purchase of Intangible Assets	(224,340)	(177,228)
NET CASH USED IN INVESTING ACTIVITIES	**(388,962)**	**(359,750)**
FINANCING ACTIVITIES		
Gross Proceeds from Public and Private Issuances of Securities	-	14,869,899
Less Offering Costs	-	(1,600,967)
Proceeds from Exercise of Warrants	-	1,136,010
NET CASH PROVIDED BY FINANCING ACTIVITIES	**-**	**14,404,942**
NET CHANGE IN CASH FOR PERIOD	**(8,601,116)**	**7,746,233**
CASH AT BEGINNING OF PERIOD	**11,447,047**	**3,700,814**
CASH AT END OF PERIOD	**$ 2,845,931**	**$ 11,447,047**
Supplemental Disclosures:		
Noncash investing and financing activities disclosure:		
Issuance of Common Shares for Preferred Dividends	$ -	$ 103,567
Other noncash operating activities disclosure:		
Issuance of Securities for Services	$ 114,132	$ 701,668
Disclosure of cash paid for:		
Interest	$ 7,345	$ 11,264
Income Taxes	$ -	$ -

See accompanying notes to financial statements

NOTE 1 – Summary of Significant Accounting Policies

Nature of Business – Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.), a Nevada corporation, ("Company," "Sigma," "we," "us" and "our"), was founded by a group of scientists, engineers and businessmen to develop and commercialize novel and unique manufacturing and materials technologies. Sigma believes that some of these technologies will fundamentally redefine conventional quality assurance and process control practices by embedding them into the manufacturing processes in real time, enabling process intervention and ultimately leading to closed loop process control. The Company anticipates that its core technologies will allow its clientele to combine advanced manufacturing quality assurance and process control protocols with novel materials to achieve breakthrough product potential in many industries including aerospace, defense, oil and gas, bio-medical, and power generation.

Basis of Presentation – The accompanying financial statements have been prepared by the Company in accordance with Generally Accepted Accounting Principles ("GAAP") in the United States of America. In the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to present fairly the financial position, results of operations and cash flows at December 31, 2022 and 2021 and for the periods then ended have been made.

Going Concern – The Company has sustained losses and had negative cash flows from operating activities since its inception. Commencing in 2017, the company committed itself to a focused initiative to transition its product and culture from research and development into an enterprise with a commercial industrial product and a business-oriented operation culture.

The Company did not raise any capital in 2022. In 2021, the Company relied on both public and private offerings to finance its operations. In January 2021, the Company closed a public offering of our common stock in which it issued 1,711,783 shares of common stock at $3.00 per share, resulting in net proceeds of approximately $4,532,444 after deducting underwriting discounts and commissions and other offering expenses payable by the Company. In March 2021, the Company closed a public offering of its securities in which it issued 2,190,000 shares of common stock at $4.445 per share, resulting in net proceeds to the Company of approximately $8,736,488 after deducting placement agent commissions and other offering costs payable by the Company. During the first quarter of 2021, the Company issued 454,404 shares of common stock pursuant to the exercise of warrants, resulting in net proceeds to the Company of $1,136,010.

The continuing operations of the Company are no longer solely dependent upon financing the cost of product development in the absence of revenues, but rather upon our abilities to finance our efforts to successfully ramp up commercialization, thus earning the product validation of both customer licensing and purchases and creating a dynamic in which public and private offerings facilitate the growth of revenues.

The Company currently has sufficient cash and working capital to fund operations through May 2023 and will require additional funding in the public or private markets in the near-term to be able to continue operations. The Company currently has no understanding or agreement to obtain such funding, and there is no assurance that we will be successful in obtaining additional funding. If we fail to obtain sufficient funding when needed, we will be forced to delay, scale back or eliminate all or a portion of our commercialization efforts and operations. As a result, there is substantial doubt about our ability to continue as a going concern.

Loss Per Share – The computation of loss per share is based on the weighted average number of shares outstanding during the period in accordance with ASC Topic No. 260, "Earnings Per Share." Shares underlying the Company's outstanding warrants, options or note conversion features were excluded due to the anti-dilutive effect they would have on the computation. At December 31, 2022 and 2021, the Company had the following common shares underlying these instruments:

	Year Ended December 31,	
	2022	2021
Warrants	3,823,279	3,987,931
Stock Options	1,799,053	1,395,882
Preferred Stock	148,918	148,918
Total Underlying Common Shares	5,771,250	5,532,731

Property and Equipment – Property and equipment are stated at cost. Expenditures for major renewals and betterments that extend the useful lives of property and equipment are capitalized upon being placed in service. Expenditures for maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated life has been determined to be five years unless a unique circumstance exists, which is then fully documented as an exception to the policy.

In accordance with its policy, the Company reviews the estimated useful lives of its fixed assets on an ongoing basis.

Income Taxes – The Company accounts for income taxes in accordance with ASC Topic No. 740, "Accounting for Income Taxes."

The Company has no tax positions at December 31, 2022 and 2021 for which the ultimate deductibility is highly uncertain but for which there is uncertainty about the timing of such deductibility.

The Company recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expenses. During the years ended December 31, 2022 and 2021, the Company recognized no interest and penalties. All tax years starting with 2018 are open for examination.

Accounts Receivable and Allowance for Doubtful Accounts - Trade accounts receivable are carried at original invoice amount less an estimate made for doubtful accounts. We determine the allowance for doubtful accounts by identifying potential troubled accounts and by using historical experience and future expectations applied to an aging of accounts. Trade accounts receivable are written off when deemed uncollectible. Recoveries of trade accounts receivable previously written off are recorded as income when received. There was no allowance for doubtful accounts at December 31, 2022 or 2021.

Long-Lived and Intangible Assets – Long-lived assets and certain identifiable definite life intangibles to be held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company continuously evaluates the recoverability of its long-lived assets based on estimated future cash flows and the estimated liquidation value of such long-lived assets and provides for impairment if such undiscounted cash flows are insufficient to recover the carrying amount of the long-lived assets. If impairment exists, an adjustment is made to write the asset down to its fair value, and a loss is recorded as the difference between the carrying value and fair value. Fair values are determined based on quoted market values, discounted cash flows or internal and external appraisals, as applicable. Assets to be disposed of are carried at the lower of carrying value or estimated net realizable value. No patents were written off in 2022, and three patents totaling $10,510 were written off in 2021. Utility patents are amortized over a 17-year period. Patents which are pending are not amortized.

Cash Equivalents - The Company considers all highly liquid investments with an original maturity of three months or less at date of purchase to be cash equivalents.

Fair Value of Financial Instruments – The carrying amounts reported in the balance sheets for the cash and cash equivalents, receivables, accounts payable, and accrued liabilities each qualify as financial instruments and are a reasonable estimate of fair value because of the short period of time between the origination of such instruments and their expected realization and their current market rate of interest.

The Company does not use derivative instruments for hedging of market risk or for trading or speculative purposes. On March 26, 2021, the Company closed an offering in which it issued warrants to purchase an aggregate of 2,190,000 shares of common stock in a private placement concurrently with a registered direct offering ("Registered Offering") of our common stock The warrants became exercisable on May 24, 2021, the date the Company obtained stockholder approval to increase its authorized common shares from 12,000,000 to 24,000,000 ("the Initial Exercise Date") and will expire two years after the Initial Exercise Date.

Pursuant to ASC 815.40.25.10, such warrants were accounted for as a derivative liability because the Company did not have sufficient authorized and unissued shares of common stock available to settle the warrants at the issue date. On May 24, 2021, upon receiving stockholder approval to increase its authorized common shares, the Company reclassified the warrant liability to equity pursuant to ASC 815.40.35.8.

For the twelve months ended December 31, 2021, the Company recorded a gain of $1,092,441 due to the change in the fair value of the derivative liability as measured on a recurring basis.

Concentration of Credit Risk - The Company maintains its cash in bank deposit accounts, which, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Stock Based Compensation – The Company recognizes compensation costs to employees under ASC Topic No. 718, "Compensation – Stock Compensation." Under ASC Topic No. 718, companies are required to measure the compensation costs of share-based compensation arrangements based on the grant-date fair value and recognize the costs in the financial statements over the period during which employees are required to provide services. Share based compensation arrangements may include stock options, grants of shares of common stock with and without restrictions, performance-based awards, share appreciation rights and employee share purchase plans. As such, compensation cost is measured on the date of grant at its fair value. Such compensation amounts, if any, are amortized over the respective vesting periods of the option or stock grants.

Equity instruments issued to non-employees are recorded on the basis of the fair value of the instruments, as required by ASC Topic No. 718. In general, the measurement date is either (a) when a performance commitment, as defined, is reached or (b) the earlier of the date that (i) the non-employee performance requirement is complete or (ii) the instruments are vested. The measured value related to the instruments is recognized over a period based on the facts and circumstances of each particular grant as defined in the FASB Accounting Standards Codification.

Amortization - Utility patents are amortized over a 17-year period. Patents which are pending are not amortized.

Accounting Estimates - The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities, the 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 estimated by management. Significant accounting estimates that may materially change in the near future are impairment of long-lived assets, values of stock compensation awards and stock equivalents granted as offering costs, and allowance for bad debts and inventory obsolescence.

Leases - The Company leases office space from third parties. The Company determines if a contract is a lease at inception. A contract contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The lease term begins on the commencement date, which is the date the Company takes possession of the asset and may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Leases are classified as operating or finance leases based on factors such as the lease term, lease payments, and the economic life, fair value and estimated residual value of the asset. Where leases include an option to purchase the leased asset at the end of the lease term, this is assessed as a part of the Company's lease classification determination. The Company only has short-term leases, cancelable upon 45 days' notice, and with remaining lease terms of less than one year. Therefore, the Company has elected the short-term lease recognition exemption for all leases, whereby leases are not recorded on the Company's balance sheet and lease payments are recognized as lease expense on a straight-line basis over the lease term.

Revenue Recognition – The Company's revenue is derived primarily from sales of our software and related hardware suite under perpetual licenses and from providing engineering services under contracts. The Company recognizes revenue in accordance with ASC Topic No. 606. In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 is a comprehensive revenue recognition standard that superseded nearly all existing revenue recognition guidance under prior U.S. GAAP and replaced it with a principles-based approach for determining revenue recognition. The core principle of the standard is the recognition of revenue upon the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In general, we determine revenue recognition by: (1) identifying the contract, or contracts, with our customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to performance obligations in the contract; and (5) recognizing revenue when, or as, we satisfy performance obligations by transferring the promised goods or services.

In January 2022, the Company began offering a subscription option to its customers, pursuant to which it leases its PrintRite3D platform for terms between 12 and 36 months and provide technical support and maintenance for the term of the arrangement, as well as installation and training. The Company has determined these are leases because they relate to discrete pieces of equipment to which customers have the right to substantially all the economic benefit from and exclusive right to use during the term of the arrangement. These leases are classified as operating leases and the Company retains title to the underlying equipment.

The leases may be renewed for successive one-year terms unless notice is given by either party of its intent not to renew at least 30 days before the end of the lease term. For leases with 36-month terms, the lessee may terminate the agreement after the first 18 months with 30-days written notice. Some, but not all, of the leases permit lessees to purchase the equipment at any time at an amount that approximates fair value and are not reasonably certain to be exercised at the inception of the lease. There are no anticipated variable lease payments at the inception of the lease.

There are two non-lease components in the arrangement that consist of technical support and maintenance, and installation and training. The Company has elected the single component practical expedient to combine the technical support and maintenance with the lease as they have the same pattern of transfer. The installation and training component does not have the same pattern of transfer; therefore, this component is not eligible for the single component practical expedient. The consideration has been allocated on a relative fair value basis of the underlying lease and non-lease components. The Company has estimated the residual value of the leased equipment based on its useful life, and the ability to refurbish and sell the equipment, as well as the Company's ability to componentize the hardware and utilize subassemblies in other products.

Revenue from these operating leases for the twelve months ended December 31, 2022 was $31,177.

Minimum Lease Payments Receivable

Minimum lease payments receivable for each of the succeeding years ending December 31 are as follows:

Year ending December 31,		**Amount**
2023	$	45,348
2024	$	8,503
2025		-
2026 and thereafter		-
Total	$	53,851

Equipment Underlying Operating Leases:

Equipment under operating leases as of December 31, 2022 was comprised of the following:

		December 31, 2022
PrintRite 3D Hardware	$	77,208
Accumulated Depreciation		(6,931)
Net Book Value	$	70,277

The Company is depreciating the underlying equipment over its useful life of 7 years, but certain subassemblies and components may have a longer economic life.

Deferred Stock Offering Costs – Costs related to stock offerings (if any) are deferred and will be offset against the proceeds of the offering in additional paid-in capital. In the event a stock offering is unsuccessful, the costs relating to the offering will be written-off directly to expense.

Inventory – Inventories consist of raw materials used in the production of customized parts, work-in-process and finished goods components which will be sold to customers. Inventories are valued at the lower of cost or net realizable value, using the first-in, first-out (FIFO) method.

Research and Development – Research and development costs are expensed as they are incurred. Research and development costs for the years ended December 31, 2022 and 2021 were $404,720 and $417,744, respectively.

NOTE 2 - Inventory

At December 31, 2022 and December 31, 2021, the Company's inventory was comprised of:

	December 31 2022	December 31, 2021
Raw Materials	$ 294,194	$ 202,015
Work in Process	140,723	224,079
Finished Goods	516,026	283,986
Total Inventory	$ 950,943	$ 710,080

NOTE 3 – Property and Equipment

The following is a summary of property and equipment, less accumulated depreciation, as of December 31, 2022 and 2021:

	Year Ended December 31,	
	2022	2021
Property and Equipment	$ 1,543,594	$ 1,378,972
Less: Accumulated Depreciation	(1,238,691)	(1,146,690)
Net Property and Equipment	$ 304,903	$ 232,282

Depreciation expense on property and equipment was $92,001 and $88,866 for the years ended December 31, 2022 and 2021, respectively.

NOTE 4 – Intangible Assets

The Company's intangible assets consist of patents and patent pending applications.

The Company capitalizes costs incurred in connection with acquiring its patents. These costs include registration, documentation, and legal fees associated with the application. Costs incurred with patents that have been granted are expensed as incurred.

Provisional patent applications are not amortized until a patent has been granted. Once a patent is granted, the Company will amortize the related costs over the estimated useful life of the patent. If a patent application is denied, then the costs will be expensed at that time.

During 2022, $206,110 of costs related to patents issued during 2022 were reclassified from provisional patent application to patent status and began to be amortized as of the date of issue.

The following is a summary of definite-life intangible assets less accumulated amortization as of December 31, 2022 and 2021, respectively:

	Year Ended December 31,	
	2022	2021
Provisional Patent Applications	$ 675,251	$ 675,291
Patents	524,750	300,370
Less: Accumulated Amortization	(74,716)	(50,550)
Net Intangible Assets	$ 1,125,285	$ 925,111

Amortization expense on intangible assets was $24,166 and $5,239 for the years ended December 31, 2022 and 2021, respectively.

The estimated aggregate amortization expense for each of the succeeding years ending December 31 is as follows:

2023	$ 29,570
2024	29,570
2025	29,570
2026	29,570
Thereafter	331,752
	$ 450,032

NOTE 5 – Deferral of Social Security Tax Payments

Pursuant to sections 2302(a)(1) and (a)(2) of the CARES Act, the Company elected to defer payments of its share of Social Security tax due during the "payroll tax deferral period". The payroll tax deferral period began on March 27, 2020 and ended on December 31, 2020. At December 31, 2022 the total remaining amount of the deferral of $37,728 was repaid.

NOTE 6 – Stockholders' Equity

Common Stock

During 2022, the Company did not issue any common stock.

In January 2021, the Company closed a public offering of its securities in which it issued 1,711,783 shares of common stock at $3.00 per share, resulting in net proceeds of approximately $4,532,445 after deducting underwriting commissions and other offering expenses payable by the Company. Pursuant to the Underwriting Agreement, the Company also issued to the Underwriter or its designee warrants to purchase 136,943 shares of common stock. Such warrants have a term of five years and an exercise price of $3.75 per share.

In February 2021, the Company issued 263,200 shares of common stock pursuant to the exercise of warrants issued in our January 2020 private placement.

In March 2021, the Company issued 119,000 shares of common stock in exchange for the conversion of 250 shares of Series D Convertible Preferred Stock, including 19,000 shares of common stock as in-kind payment of preferred stock dividends. Also in March 2021, the Company issued 191,204 shares of common stock pursuant to the exercise of warrants issued in our April 2020 offering, and 21,591 shares of common stock issued pursuant to the cashless exercise of placement agent warrants.

In March 2021, the Company closed a public offering of its securities in which it issued 2,190,000 shares of common stock at $4.445 per share, resulting in net proceeds to the Company of approximately $8,736,488 after deducting placement agent commissions and other offering costs payable by the Company. In a concurrent private placement under the Purchase Agreement, the Company issued to the purchasers warrants to purchase an aggregate of 2,190,000 shares of Common Stock at an exercise price of $4.32 per share. Each Warrant became exercisable on May 24, 2021, the date the Company obtained stockholder approval of an increase in the authorized shares of the Company's Common Stock and will expire two years from such date. The Company also issued to designees of the Placement Agent warrants to purchase up to 175,200 shares of Common Stock (the "Placement Agent Warrants") constituting 8% of the aggregate number of shares of Common Stock sold in the Registered Offering. The Placement Agent Warrants have substantially the same terms as the Warrants, except that the Placement Agent Warrants have an exercise price equal to 125% of the offering price per share (or $5.55625 per share). Upon any exercise of the Warrants for cash, we have also agreed to pay the Placement Agent warrants to purchase 8.0% of the number of shares of our Common Stock issued upon the cash exercise of the Warrants.

In March 2021, Company issued 1,500 shares of common stock valued at $4.99 per share to an investor relations firm as partial compensation for services previously rendered.

In September 2021, the Company granted 5,204 shares of common stock to non-executive employees pursuant to the 2013 Equity Incentive Plan.

Deferred Compensation

During 2022, the Company did not issue any shares of common stock to employees.

In 2021, the Company issued to various employees shares of the Company's common stock, subject to restrictions, pursuant to the 2013 Equity Incentive Plan (the "2013 Plan"). Such shares were valued at the fair value at the date of issue. The fair value was expensed as compensation over the vesting period and recorded as a reduction of stockholders' equity. The shares were fully vested as of December 31, 2021, and $19,255 of compensation cost related to these issues was recognized.

Preferred Stock

The Company is authorized to issue 10,000,000 shares of preferred stock, $0.001 par value. 465 shares of preferred stock were issued and outstanding at December 31, 2022 and 2021, respectively.

In January 2020, the Company entered into a Securities Purchase Agreement (the "SPA") with certain institutional investors (the "Institutional Private Placement"). Pursuant to the SPA, the Company issued and sold 1,640 shares of the Company's newly created Series D Convertible Preferred Stock (the "Series D Preferred Stock"). Under the Certificate of Designations for the Series D Preferred Stock, the Series D Preferred Stock has an initial stated value of $1,000 per share (the "Stated Value"). Dividends accrue at a dividend rate of 9% per annum (subject to increase upon the occurrence (and during the continuance) of certain triggering events described therein) and, on a monthly basis, shall be payable in kind by the increase of the Stated Value of the Series D Preferred Shares by said amount. The holders of the Series D Preferred Shares will have the right at any time to convert all or a portion of the Series D Preferred Shares (including, without limitation, accrued and unpaid dividends and make-whole dividends through the third anniversary of the closing date) into shares of the Company's Common Stock at the conversion price then in effect, which is $2.50 (subject to adjustment for stock splits, dividends, recapitalizations and similar events and full ratchet price protection). In addition, a holder may at any time, alternatively, convert all, or any part, of its Series D Preferred Shares at an alternative conversion price, which equals the lower of the applicable conversion price then in effect, and the greater of (x) $1.80 and (y) 85% of the average volume weighted average price ("VWAP") of the Common Stock for a five (5) trading day period prior to such conversion. Upon the occurrence of certain triggering events, described in the Certificate of Designations, including, but not limited to payment defaults, breaches of transaction documents, failure to maintain listing on the Nasdaq Capital Market, and other defaults set forth therein, the Series D Preferred Shares would become subject to redemption, at the option of a holder, at a 125% premium to the underlying value of the Series D Preferred Shares being redeemed.

At December 31, 2022, there were 132 shares of Series D Convertible Preferred stock outstanding, which if converted as of December 31, 2022, including the make-whole dividends, would have resulted in the issuance of 87,267 shares of common stock.

Concurrent with the Institutional Private Placement, the Company entered into a Securities Purchase Agreement (the "SPA") with certain of its directors and the Company's formerly largest shareholder (the "Other Private Placement"). Pursuant to the SPA, the Company issued and sold 333 shares of the Company's newly created Series E Convertible Preferred Stock (the "Series E Preferred Stock"). Dividends accrue at a dividend rate of 9% per annum and, on a monthly basis, shall be payable in kind by the increase of the Stated Value of the Series E Preferred Shares by said amount. The Series E Preferred Stock is initially convertible into 48,544 shares of Common Stock.

At December 31, 2022, all of the issued Series E Convertible Preferred Stock were outstanding, which if converted as of December 31, 2022, including the make-whole dividends, would have resulted in the issuance of 61,651 shares of common stock.

Stock Options

On August 9, 2022, at the Annual Meeting of Stockholders of the Company, the Company's stockholders approved an amendment to the 2013 Plan to increase the number of shares of the Company's common stock reserved for issuance under the 2013 Plan by 500,000 shares of our common stock to a total of 2,265,000 shares. As of December 31, 2022, there were 436,506 shares available for issuance under the 2013 Plan.

During 2022, the Company granted a total of 487,473 options to 14 employees, 5 directors, and 2 consultants with vesting periods ranging from immediately upon issue to three years beginning March 16, 2022. In 2022, 406,879 options vested and $907,373 of compensation cost was recognized during the year. As of December 31, 2022, there were options to purchase 1,799,053, shares issued and outstanding, 1,749,053 of which have been issued under the 2013 Plan. At December 31, 2022, there are vested options exercisable for 1,294,021 shares of common stock. No options to purchase shares of common stock were exercised during the year ended December 31, 2022.

During 2021, the Company granted a total of 698,831 options to 35 employees, 4 directors, and 4 consultants with vesting periods ranging from immediately upon issue to three years beginning January 4, 2021. In 2021, 598,789 options vested and $1,741,366 of compensation cost was recognized during the year. As of December 31, 2021, there were options to purchase 1,395,882, shares issued and outstanding, 1,345,882 of which have been issued under the 2013 Plan. At December 31, 2021, there are vested options exercisable for 941,934 shares of common stock. Options to purchase 5,204 shares of common stock were exercised during the year ended December 31, 2021.

The Company generally grants stock options to employees, consultants and directors at exercise prices equal to the fair market value of the Company's stock on the dates of grant. Stock options are typically granted throughout the year and generally vest over three years of service and expire five years from the date of the award, unless otherwise specified. The Company recognizes compensation expense for the fair value of the stock options over the requisite service period for each stock option award.

Total employee share-based compensation expense for the year ended December 31, 2022, was $793,251 all of which is related to stock options. Total employee share-based compensation for 2021 totaled $1,066,455, of which $1,047,200 is related to stock options. There was no capitalized share-based compensation cost as of December 31, 2022 or 2021, and there were no recognized tax benefits during the years ended December 31, 2022 and 2021.

To estimate the value of an award, the Company uses the Black-Scholes option-pricing model. This model requires inputs such as expected life, expected volatility and risk-free interest rate. The forfeiture rate also impacts the amount of aggregate compensation. These inputs are subjective and generally require significant analysis and judgment to develop. While estimates of expected life, volatility and forfeiture rate are derived primarily from the Company's historical data, the risk-free rate is based on the yield available on U.S. Treasury constant maturity rates with similar terms to the expected term of the stock option awards. The fair value of share-based awards was estimated using the Black-Scholes model with the following weighted-average assumptions for the years ended December 31, 2022 and 2021:

Assumptions:

	2022	2021
Dividend yield	0.00%	0.00%
Risk-free interest rate	0.95-3.88%	0.19-0.67%
Expected volatility	106.0 – 110.0%	117.0 – 124.0%
Expected life (in years)	5	5

Option activity for the year ended December 31, 2022 and 2021 was as follows:

	Options	Weighted Average Exercise Price ($)	Weighted Average Remaining Contractual Life (Yrs.)	Aggregate Intrinsic Value ($)
Options outstanding at December 31, 2020	713,010	5.15	4.40	477,802
Granted	698,831	3.29	4.39	46,800
Exercised	(5,204)	2.50	-	-
Forfeited or cancelled	(10,755)	3.49	-	-
Options outstanding at December 31, 2021	1,395,882	4.24	3.89	-
Options expected to vest in the future as of December 31, 2021	453,948	3.64	4.07	-
Options exercisable at December 31, 2021	941,934	4.53	3.81	-
Options vested, exercisable, and options expected to vest at December 31, 2021	1,395,882	4.24	3.89	-
Options outstanding at December 31, 2021	1,395,882	4.24	3.89	-
Granted	487,473	2.50	4.43	-
Exercised	-	-	-	-
Forfeited or cancelled	(84,302)	4.39	-	-
Options outstanding at December 31, 2022	1,799,053	3.76	3.30	-
Options expected to vest in the future as of December 31, 2022	505,032	2.83	3.98	-
Options exercisable at December 31, 2022	1,294,021	4.13	3.03	-
Options vested, exercisable, and options expected to vest at December 31, 2022	1,799,053	3.76	3.30	-

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of our common stock for those awards that have an exercise price below the $0.40 closing price of our Common Stock on December 31, 2022. All of the 2022 option grants have an exercise price above $0.40.

At December 31, 2022, there was $741,728 of unrecognized share-based compensation expense related to unvested stock options with a weighted average remaining recognition period of 1.81 years.

Stock Appreciation Rights

On June 23, 2020, the Board of Directors (the "Board") of the Company adopted the Sigma Labs, Inc. 2020 Stock Appreciation Rights Plan (the "Plan"). The purposes of the Plan are to: (i) enable the Company to attract and retain the types of employees, consultants, and directors (collectively, "Service Providers") who will contribute to the Company's long-range success; (ii) provide incentives that align the interests of Service Providers with those of the shareholders of the Company; and (iii) promote the success of the Company's business. The Plan provides for incentive awards that are only made in the form of stock appreciation rights payable in cash ("SARs"). No shares of common stock were reserved in connection with the adoption of the Plan since no shares will be issued pursuant to the Plan.

SARs may be granted to any Service Provider. A SAR is the right to receive an amount equal to the Spread with respect to a share of the Company's common stock ("Share") upon the exercise of the SAR. The "Spread" is the difference between the exercise price per share specified in a SAR agreement on the date of grant and the fair market value per share on the date of exercise of the SAR. The exercise price per share will not be less than 100% of the fair market value of a Share on the date of grant of the SAR. The administrator of the Plan will have the authority to, among other things, prescribe the terms and conditions of each SAR, including, without limitation, the exercise price and medium of payment and vesting provisions, and to specify the provisions of the SAR Agreement relating to such grant.

On January 3, 2022, the Company granted, pursuant to the Plan, 12,033 SARs to 11 employees. The exercise price of each SAR is $1.87, which was the closing price of the Company's common stock on the date of grant. Such SARs were fully vested and exercisable on the date of the grant, expire on the fifth anniversary of the grant date and may be settled only in cash.

On February 16, 2022, the company issued, pursuant to the Plan, 30,000 SARs to its Chief Executive Officer. The exercise price of each SAR is $2.50, expire on the fifth anniversary of the grant date and may be settled only in cash. The SARs will vest and become exercisable in equal monthly installments over three years, subject to the Chief Executive Officer being in the continuous employ of the Company on the applicable vesting date, and may be settled only in cash.

On July 1, 2022, the Company granted, pursuant to the Plan, (i) 194,940 SARs to its Chief Executive Officer, (ii) 25,117 SARs to its former Chief Executive Officer, (iii) 16,944 SARs to its Chief Technology Officer, and (iv) 69,470 SARs to its Chief Financial Officer. The exercise price of each such SAR is $2.50, expire on the fifth anniversary of the grant date and may be settled only in cash. The SARs will vest and become exercisable in equal monthly installments over three years, subject, in each case, to the applicable SAR holder being in the continuous employ of the Company on the applicable vesting date, and may be only settled in cash.

Also on July 1, 2022, the Company granted, pursuant to the Plan, and employee retention agreements (i) 181,947 SARs to its President and Chief Executive Officer, (ii) 87,335 SARs to its Vice President of Business Development, (iii) 97,038 SARs to its Chief Technology Officer, and (iv) 97,038 SARs to its Chief Financial Officer. The exercise price of each such SAR is $1.30, which was the closing price of the Company's common stock on the date of grant. The SARs expire on the fifth anniversary of the grant date and may be settled only in cash. The SARs will vest and become exercisable on March 15, 2025, subject, in each case, to the applicable SAR holder being in the continuous employ of the Company on the vesting date.

On March 31, 2022, we granted 3,000 SARs to a consultant as partial compensation for services pursuant to his consulting agreement. As of December 31, 2022, all such SARs had expired.

On August 11, 2021, the Company granted, pursuant to the Plan, (i) 77,748 SARs to its President and Chief Executive Officer, (ii) 30,313 SARs to its Vice President of Business Development, (iii) 76,304 SARs to its Chief Technology Officer, and (iv) 48,580 SARs to its Chief Financial Officer. The exercise price of each such SAR is $3.42, which was the closing price of the Company's common stock on the date of grant. Such SARs expire on the fifth anniversary of the grant date and may be settled only in cash. Additionally, each such SAR will vest and become exercisable in three equal (as closely as possible) installments on each of the first, second and third anniversaries of the grant date, subject, in each case, to the applicable SAR holder being in the continuous employ of the Company on the applicable vesting date.

In the event of a Change in Control (as defined in the Plan), all SARs will become immediately vested and exercisable as long as the holder is in the Company's employ immediately prior to the Change in Control, and will otherwise be on such terms set forth in our standard form Stock Appreciation Rights Agreement.

On July 29, 2021, we granted 10,000 SARs to a consultant as partial compensation for services pursuant to his consulting agreement, and on November 19, 2020, we granted 13,500 SARs to such consultant as partial compensation for services pursuant to his consulting agreement. As of December 31, 2022, all such SARs had expired.

The Company recognizes compensation expense and a corresponding liability for the fair value of the SARs over the requisite service period for each SAR award. The SAR's are revalued at each reporting date in accordance with ASC 718 "Compensation-Stock Compensation", and any changes in fair value are reflected in income as of the applicable reporting date.

The fair value of SAR awards was estimated using the Black-Scholes model with the following weighted-average assumptions for the twelve months ended December 31, 2022:

Assumptions:

	2022	2021
Dividend yield	0.00%	0.00%
Risk-free interest rate	0.82-2.79%	0.39-0.40%
Expected volatility	108.0-119.0%	123.0%
Expected life (in years)	5	5

SARs activity for the years ended December 31, 2022 and 2021 was as follows:

	SARs	**Weighted Average Exercise Price ($)**	**Weighted Average Remaining Contractual Life (Yrs.)**	**Aggregate Intrinsic Value ($)**
SARs outstanding at December 31, 2020	127,679	2.61	4.52	97,919
Granted	242,945	3.43	4.61	-
Exercised	-	-	-	-
Forfeited or cancelled	-	-	-	-
SARs outstanding December 31, 2021	370,624	3.15	4.24	-
SARs expected to vest in the future as of December 31, 2021	309,065	3.23	4.33	-
SARs exercisable at December 31, 2021	61,559	2.78	3.75	-
SARs vested, exercisable, and options expected to vest at December 31, 2021	370,624	3.15	4.24	-
SARs outstanding at December 31, 2021	370,624	3.15	4.24	-
Granted	814,862	1.81	4.48	-
Exercised	-	-	-	-
Forfeited or cancelled	(27,699)	2.91	-	-
SARs outstanding December 31, 2022	1,157,787	2.21	4.11	-
SARs expected to vest in the future as of December 31, 2022	876,319	2.03	4.25	-
SARs exercisable at December 31, 2022	281,468	2.76	3.68	-
SARs vested, exercisable, and options expected to vest at December 31, 2022	1,157,787	2.21	4.11	-

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of our common stock for those awards that have an exercise price below the $0.40 closing price of our common stock on December 31, 2022. All the SARs have an exercise price above $0.40.

At December 31, 2022, there was $982,519 of unrecognized share-based compensation expense related to unvested SARs with a weighted average remaining recognition period of 2.14 years.

Warrants

At December 31, 2022, the Company had outstanding warrants to purchase a total of 3,823,279 shares of common stock. The warrants have exercise prices that range from $2.50 to $17.50, which if not exercised, will expire between May 24, 2023 and January 8, 2026.

Warrant activity for the years ended December 31, 2022 and 2021 was as follows:

	Warrants	Weighted Average Exercise Price ($)	Weighted Average Remaining Contractual Life (Yrs.)
Warrants outstanding at December 31, 2020	1,881,429	7.57	4.16
Granted	2,602,143	4.36	1.63
Exercised	(495,641)	-	-
Forfeited or cancelled	-	-	-
Warrants outstanding at December 31, 2021	3,987,931	6.10	2.10
Granted	-	-	-
Exercised	-	-	-
Forfeited or cancelled	(164,652)	-	-
Warrants outstanding at December 31, 2022	3,823,279	4.66	1.19

NOTE 7 – Income Taxes

The Company accounts for income taxes in accordance with ASC Topic No. 740. This standard requires the Company to provide a net deferred tax asset or liability equal to the expected future tax benefit or expense of temporary reporting differences between book and tax accounting methods and any available operating loss or tax credit carryforwards. Income tax returns open for examination by the Internal Revenue Service consist of tax years ended December 31, 2019 through 2021.

The Company had available at December 31, 2022 unused operating loss carryforwards of approximately $41,128,000 which may be applied against future taxable income. Losses incurred between 2010 and 2017, which total $9,820,000 expire in various years through 2038, and the remainder of the losses, which total $31,308,000 can be carried forward indefinitely. However, if certain substantial changes in the Company's ownership should occur, there could be an annual limitation on the amount of net operating loss carryforward which can be utilized. The amount of and ultimate realization of the benefits from the operating loss carryforwards for income tax purposes is dependent, in part, upon the tax laws in effect, the future earnings of the Company and other future events, the effects of which cannot be determined. Because of the uncertainty surrounding the realization of the loss carryforwards, the Company has established a valuation allowance equal to the tax effect of the loss carryforwards and other temporary differences of approximately $8,575,900 and $6,771,000 at December 31, 2022 and 2021, respectively, and, therefore, no deferred tax asset has been recognized for the loss carryforwards.

Deferred tax assets are comprised of the following:

	2022	2021
Deferred tax assets:		
NOL carryover	$ 8,636,900	$ 6,729,300
Depreciation	(61,000)	41,700
Valuation allowance	(8,575,900)	(6,771,000)
Net deferred tax asset	$ -	$ -

The reconciliation of the provision for income taxes computed at the U.S. federal statutory tax rate (21%) to the Company's effective tax rate for the years ended December 31, 2022 and 2021 is as follows:

	2022	2021
Book Loss	$ (1,837,400)	$ (1,572,500)
Depreciation	(20,700)	(25,700)
Meals & Entertainment	-	500
Stock Compensation	(48,548)	340,521
Change in valuation allowance	1,906,648	1,257,179
Provision for Income Taxes	$ -	$ -

NOTE 8 – Loss Per Share

The following data show the amounts used in computing loss per share and the effect on income and the weighted average number of shares of dilutive potential common stock for the periods ended December 31, 2022 and 2021:

	Year Ended December 31	
	2022	2021
Loss from continuing Operations available to common stockholders (numerator)	$ (8,749,304)	$ (7,488,172)
Weighted average number of common shares Outstanding used in loss per share during the Period (denominator)	10,498,802	9,828,541

Dilutive loss per share was not presented as the Company's outstanding common and preferred warrants, stock options and preferred stock common equivalent shares for the periods presented would have had an anti-dilutive effect. At December 31, 2022, the Company had outstanding warrants to purchase 3,823,279 shares of common stock, and stock options exercisable for 1,799,053 shares of common stock, 132 shares of Series D Preferred Stock, convertible into 87,267 shares of common stock, and 333 shares of Series E Preferred Stock, which could be converted into 61,651 shares of common stock, resulting in a potential total additional 5,771,250 shares of common stock outstanding in the future. At December 31, 2021, the Company had outstanding common warrants which could be converted to 3,987,931 shares of common stock, and stock options exercisable for 1,395,882 shares of common stock, 132 shares of Series D Preferred Stock, convertible into 87,267 shares of common stock, and 333 shares of Series E Preferred Stock, convertible into 61,651 shares of common stock, resulting in a potential total additional 5,532,731 shares of common stock outstanding in the future.

NOTE 9 – Commitments and Contingencies

Operating Leases – The Company leases office and laboratory space under short term, cancelable operating leases. Expense relating to these operating leases was $108,099 and $101,004 for the years ended December 31, 2022 and 2021, respectively. The future minimum lease payments required under operating leases at December 31, 2022 were $7,233.

NOTE 10 – Concentrations

Revenues – During the years ended December 31, 2022 and 2021, the Company had the following significant customers who accounted for more than 10% each of the Company's revenue in at least one of the periods presented. The change in the composition of customers between the two years resulted primarily from the change of focus from sales to R&D customers to customers preparing to initiate commercial production.

Customer	2022	2021
A	12.85%	-
B	12.2%	-
C	-	27.81%
D	-	17.23%

Accounts Receivable – The Company had the following significant customers who accounted for more than 10% each of the Company's accounts receivable balance at December 31, 2022 and 2021, respectively.

Customer	2022	2021
A	31.11%	51.25%
B	24.49%	
C	22.58%	-
D	-	46.34%

NOTE 11 - Defined Contribution Plan

The Company has adopted a qualified 401(K) plan ("the Plan"), in which all employees over the age of 21 may participate. The Company makes a Safe Harbor contribution match of 100% of each participant's contribution up to 3% of salary, and 50% of the next 2% of salary contributed. The matching contributions were $99,341 in 2022 and $86,554 in 2021.

NOTE 12 – Related Party Transactions

As of December 31, 2022, there are no related party transactions.

NOTE 13 – Subsequent Events

On January 26, 2023, the Company agreed to issue to a holder of 132 shares of the Company's outstanding Series D Preferred Stock (the "Preferred Shares") a five-year warrant to purchase up to 225,000 shares of common stock of the Company at an initial exercise price of $0.58 per share, the closing price of the common stock as reported on the Nasdaq Capital Market on such date, which exercise price is subject to adjustment in the event of a stock split, reverse stock split and similar events. The warrant was issued in consideration of the holder's agreement to convert, in full, the Series D Shares in accordance with their terms into 270,828 shares of common stock, which equates to a conversion price of $0.58 per share. In addition, the Company's outstanding January 2020 warrants to purchase up to 516,400 shares of common stock and April 2020 warrants to purchase up to 383,306 shares of common stock, respectively, at an exercise price of $2.50 per share contain full-ratchet anti-dilution provisions that are triggered by the sale or issuance of common stock or common stock derivatives at an effective price per share below the exercise price of the warrants. As a result, the exercise price of each of the warrants was reduced to $0.58 per share and the number of shares purchasable upon exercise of the April 2020 warrants was increased to 1,648,302.

On January 18, 2023, pursuant to a conversion notice, we issued 3,083 shares of common stock to a holder of 16.67 shares of our Series E Preferred Stock, which includes the make-whole dividend and equates to a conversion price of $10.30 per share.

Exhibit 4.15

NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS.

SIGMA ADDITIVE SOLUTIONS, INC. COMMON STOCK PURCHASE WARRANT

Warrant Shares: 225,000 Initial Exercise Date: January 26, 2023

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, Brio Capital Master Fund Ltd. or registered assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and on or prior to the close of business on the five year anniversary of the Initial Exercise Date (the "Termination Date") but not thereafter, to subscribe for and purchase from SIGMA ADDITIVE SOLUTIONS, INC., a Nevada corporation (the "Company"), up to 225,000 shares (as subject to adjustment hereunder, the "Warrant Shares") of common stock, $0.001 par value, of the Company (the "Common Stock"). The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Exercise.

a) Subject to the Beneficial Ownership Limitation (as defined in Section 1(e)), exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed facsimile copy (or e-mail attachment) of the Notice of Exercise in the form annexed hereto. Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 1(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within two (2) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be $0.58, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder or for the resale of the Warrant Shares by the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. ("Bloomberg") as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) the Exercise Price; and

(X) the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the characteristics of this Warrant, and the holding period of such Warrant Shares may be tacked on to the holding period of this Warrant.

"Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the OTCQB or OTCQX (or any successors to any of the foregoing).

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Company

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"), so long as, no later than the applicable date in clause (i) or (ii), the Holder and the Holder's broker have provided to the Company or the Company's transfer agent (the "Transfer Agent") all customary documents and have taken all customary actions requested by the Company's transfer agent in connection with the foregoing delivery. Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 1(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right, at any time prior to issuance of such Warrant Shares, to rescind such exercise.

iv. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

v. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise.

vi. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 1 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 1(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 1(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 1(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within two Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 1(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 1(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 2. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 2(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Adjustment for Reclassification, Exchange and Substitution. If the Common Stock is changed into the same or a different number of shares of any class or classes of capital stock, whether by recapitalization, reclassification or otherwise (other than a subdivision or combination of shares or stock dividend or a reorganization, merger, consolidation or sale of assets provided for elsewhere in this Section 2), then and in such event the Holder shall have the right thereafter, upon exercise of this Warrant to receive the kind and amount of stock and other securities and property receivable upon such reorganization or other change in an amount equal to the amount that the Holder would have been entitled to have had it immediately prior to such reorganization, reclassification or change exercised this Warrant, but only to the extent this Warrant is actually exercised, all subject to further adjustment as provided herein.

c) Reorganization, Mergers, Consolidations or Sales of Assets. If at any time or from time to time there is a capital reorganization of the Common Stock (other than a recapitalization, subdivision, combination, reclassification or exchange of the Common Stock provided for elsewhere in this Section 2) or merger or consolidation of the Company with or into another corporation, or the sale of all or substantially all of the Company's properties and assets to any other person, then, as a part of such reorganization, merger, consolidation or sale, provision shall be made so that the Holder shall thereafter be entitled to receive upon exercise of this Warrant (and only to the extent this Warrant is exercised), the number of shares of stock or other securities or property of the Company, or of the successor corporation resulting from such merger or consolidation or sale, to which a holder of Common Stock or other securities deliverable upon the exercise of this Warrant would otherwise have been entitled on such capital reorganization, merger, consolidation or sale. In any such case, appropriate adjustments shall be made in the application of the provisions of this Section 2 (including adjustment of the Exercise Price then in effect and number of shares purchasable upon exercise of this Warrant) which shall be applicable after such events; provided, however, that any such adjustments shall be made so as to ensure that the provisions of this Section 2 applicable after such events shall, to the extent practicable, be equivalent to the provisions of this Section 2 applicable before such events.

d) Calculations. All calculations under this Section 2 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 2, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

e) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant this Section 2, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (C) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (D) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 3. Transfer of Warrant.

a) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 3(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

b) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

c) Representation by the Holder. The Holder, by the acceptance hereof, represents and warrants that it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 4. Miscellaneous.

a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof, except as expressly set forth in Section 2.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and non-assessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

e) Governing Law. This Warrant shall be governed by and construed and enforced in accordance with the laws of the State of Nevada, without giving effect to its conflicts of law principles.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder’s rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys’ fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. All notices, requests, consents, claims, demands, waivers, and other communications hereunder shall be in writing and shall be deemed to have been given: (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by facsimile or e-mail (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient; or (d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective parties at the addresses indicated below (or at such other address for a party as shall be specified in a notice given in accordance with this Section 4(h)).

If to the Company:	3900 Paseo del Sol, Santa Fe, New Mexico 87507 Email: frank.orzechowski@sigmaadditive.com Attention: Chief Financial Officer
If to the Holder:	c/o Brio Capital Management LLC 100 Merrick Road, Suite 401W Rockville Centre, NY 11570 Email: shaye@briocapital.com Attention: Director

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended, or the provisions hereof waived, with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

****

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

SIGMA ADDITIVE SOLUTIONS, INC.

By: */s/ Jacob Brunsberg*
Name: Jacob Brunsberg
Title: Chief Executive Officer

NOTICE OF EXERCISE

TO: [_]

(1) The undersigned hereby elects to purchase ________ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

□ in lawful money of the United States; or

□ if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 1(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 1(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

____

The Warrant Shares shall be delivered to the following address or DWAC Account Number:

____

____

____

(4) Accredited Investor. The undersigned is an "accredited investor" as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

[SIGNATURE OF HOLDER]

Name of Investing Entity: ____
Signature of Authorized Signatory of Investing Entity: ____
Name of Authorized Signatory: ____
Title of Authorized Signatory: ____
Date: ____

EXHIBIT B

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: ______________________________
(Please Print)

Address: ______________________________
(Please Print)

Phone Number: ______________________________

Email Address: ______________________________

Dated: _______________ __, ______

Holder’s Signature:____________________________

Holder’s Address:_____________________________

RETENTION BONUS AND CHANGE IN CONTROL AGREEMENT

This Retention Bonus and Change in Control Agreement is entered into on January 26, 2023 by and between Sigma Additive Solutions, Inc. (formerly, Sigma Labs, Inc.), a Nevada corporation (the "**Company**"), and Jacob Brunsberg (the "**Executive**"), with reference to the following:

RECITALS

A. The Company believes that it is in the best interests of the Company to foster the continuous employment of key management personnel such as the Executive.

B. The Company and the Executive desire to enter into this Agreement to induce the Executive to continue his employment with the Company during the Retention Period (as defined below) and any period in which the Company may be engaged in negotiations regarding a Change in Control (as defined below) and during the two-year period following a Change in Control.

C. This Agreement is entered into in connection with and as part of the retention bonus plan and change in control plan adopted by the Board of Directors of the Company on July 1, 2022 (the "**Effective Date**") and reported on Form 8-K filed by the Company with the Securities and Exchange Commission on July 8, 2022.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which hereby are acknowledged, the Company and the Executive hereby agree as follows:

ARTICLE 1
DEFINITIONS

For purposes of this Agreement, each of the following terms defined in this Article 1 shall have its defined meaning wherever used in this Agreement.

1.1 Agreement. "Agreement" means this Retention Bonus and Change in Control Agreement, as it may be amended from time to time as provided herein.

1.2 Cause. "Cause" means (i) the Executive's conviction of a felony that is injurious to the business of the Company, (ii) the Executive's willful and continued failure to perform his Employment duties, (iii) the Executive's willful misconduct that is injurious to the business of the Company, or (iv) the Executive's willful violation of any material provision of any employment policy of the Company; provided, however, that the Executive's inability to perform his or her duties because of a Disability shall not constitute a basis for the Company's termination of the Executive's Employment for Cause. Notwithstanding the foregoing, the Executive's Employment shall not be subject to termination for Cause without (w) the Company's delivery to the Executive of a notice of intention to terminate, such notice to describe the reasons for the proposed Employment termination and to be delivered to the Executive at least ten days prior to the actual termination date, (x) an opportunity for the Executive within the period prior to the proposed Employment termination to cure any such breach (if curable) giving rise to the proposed termination, and (y) an opportunity for the Executive, if he chooses, to be heard before the Board of Directors of the Company.

1.3 Change in Control. "Change in Control" means (i) a liquidation or dissolution of the Company; (ii) a merger or consolidation of the Company with or into another corporation or entity (other than a merger with a wholly owned subsidiary); (iii) a sale of all or substantially all of the assets of the Company; or (iv) a purchase or other acquisition of more than 50% of the outstanding stock of the Company by one person or by more than one person acting in concert.

1.4 Code. “Code” means the Internal Revenue Code of 1986, as amended.

1.5 Continuous Service. “Continuous Service” means that the Participant’s service with the Company or an Affiliate, as an Employee, Consultant or Director, is not interrupted or terminated. The Participant’s Continuous Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders service to the Company as an Employee, Consultant or Director, provided that there is no interruption or termination of the Participant’s Continuous Service; provided further that if any Award is subject to Section 409A of the Code, this sentence shall only be given effect to the extent consistent with Section 409A of the Code. For example, a change in status from an Employee of the Company to solely a Director will not constitute an interruption of Continuous Service. The Committee or its delegate, in its sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by that party, including sick leave, military leave or any other personal or family leave of absence. The Committee or its delegate, in its sole discretion, may determine whether a Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in a termination of Continuous Service for purposes of affected Awards, and such decision shall be final, conclusive, and binding.

1.6 **Disability**. “Disability” means a physical or mental disability of the Executive, as certified in a written statement from a licensed physician selected or approved by the Executive Committee, that results in the Executive being unable to perform his duties as an employee of the Company on a full-time basis (after reasonable accommodation by the Company) for (i) 120 consecutive days or (ii) 180 days (regardless of whether such days are consecutive) during any period of 365 consecutive days.

1.7 Employment. “Employment” means the Executive’s employment in any capacity with the Company.

1.8 Exchange Act. “Exchange Act” means the Securities Exchange Act of 1934, as amended.

1.9 Good Reason. “Good Reason” means the occurrence after a Change in Control of any of the following actions by the Company, unless the Executive, in his discretion, consents thereto in writing or the action by the Company is reversed or abandoned within 30 days after the Company receives from the Executive written notice of the Executive’s objection to the action: (i) a reduction in the Executive’s annual base salary as in effect on the date immediately prior to the Change in Control or a failure to make any scheduled base salary payment within fifteen days after its due date, unless the Company’s Board of Directors determines in good faith that such base salary reduction is more than offset by the aggregate value of any new compensation plans or other Employment-related benefits that are provided to the Executive after the Change in Control; (ii) the Company’s requirement that the Executive perform his Employment duties at an office that is more than 25 miles from the Company’s office at which the Executive was principally employed on the date immediately prior to the Change in Control; (iii) a change or diminution in Executive’s employment duties that is materially inconsistent with the duties usually associated with the office of the Chief Financial Officer of a corporation; or (iv) a failure by the Company to continue for the benefit of the Executive any material compensation plan in which the Executive participated on the date immediately prior to the Change in Control, unless the discontinuation of such plan was outside the Company’s reasonable control or unless the Company discontinues such plan for all of its executive officers. Notwithstanding the foregoing, Good Reason for the Executive to terminate his Employment shall not exist by reason of any of the Company’s actions described in the preceding sentence if the action is preceded by a written notice from the Company of an intention to terminate the Executive’s Employment for Cause or because of the Executive’s Disability and is then followed by a termination of Employment for Cause or Disability.]

1.10 **Person**. "Person" means any natural person, corporation, partnership, limited liability company or other association or entity.

1.11 **SARs**. "SARs" means stock appreciation rights under the Company's 2020 Stock Appreciation Rights, as amended, with respect to 181,947 shares of common stock of the Company with an exercise price of $1.30 and which will vest, in full, on March 15, 2025 (subject to the Executive's remaining in our Continuous Service through such date), unless earlier vested in connection with a Change in Control" of the Company as provided therein.

1.12 **Securities Act**. "Securities Act" means the Securities Act of 1933, as amended.

1.13 **Retention Bonus**. "Retention Bonus" means the SARs together with the cash bonus that the Company has granted and agreed to pay to the Executive pursuant to Article 2 upon the expiration of the Retention Period or the earlier occurrence of a Change in Control, as the case may be.

1.14 **Retention Period**. "Retention Period" means the period ending on the date of filing under the Exchange Act of the Company's 2024 Annual Report on Form 10-K.

1.15 **Severance Payment**. "Severance Payment" means the severance compensation that the Company has agreed to pay to the Executive pursuant to Article 3 upon the termination of the Executive's Employment by the Company Without Cause, or by the Executive for Good Reason, after a Change in Control.

1.16 **Without Cause**. "Without Cause" means the termination of the Executive's Employment by the Company other than for Cause and other than by reason of the death or Disability of the Executive.

1.17 **Other Definitions**. Any term defined in any other section of this Agreement shall have its defined meaning wherever used in this Agreement.

ARTICLE 2
RETENTION BONUS

2.1 **Right to a Retention Bonus**. The Company previously granted the Executive the SARs. The Executive shall be entitled to receive the cash component of the Retention Bonus in the amount specified in Section 2.2 if, but only if:

(a) The Executive remains in the Continuous Service of the Company as of the expiration of the Retention Period or the earlier occurrence of a Change in Control.

2.2 **Amount of the Retention Bonus**. If the Executive becomes entitled thereto as provided in Section 2.1, the cash component of the Retention Bonus shall be $187,500 (*i.e*., 75% of the Executive's base annual salary in effect on the Effective Date); provided, however, that in the event of a Change in Control prior to the expiration of the Retention Period the cash component of the Retention Bonus shall be a pro rata portion of $375,000 (i.e., 150% of the Executive's base annual salary on the Effective Date), determined based on the ratio that the number of days between the Effective Date and the occurrence of the Change in Control bears to the number of days between the Effective Date and the expiration of the Retention Period.

2.3 Payment of the Retention Bonus. The cash component of the Retention Bonus to which the Executive becomes entitled pursuant to Section 2.2 shall be paid within ten days following the expiration of the relevant Retention Period or upon a Change in Control, as applicable.

2.4 Withholding of Taxes. The Company may withhold from the cash component of the Retention Bonus all federal, state, local, FICA, Medicaid and similar taxes required by applicable law to be withheld by the Company. Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding, the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility.

ARTICLE 3
SEVERANCE PAYMENT

3.1 Right to a Severance Payment. In addition to the Retention Bonus to which the Executive is entitled under Section 2.1, the Executive shall be entitled to receive a Severance Payment in the amount specified in Section 3.3 if, but only if:

(a) A Change in Control occurs;

(b) The Executive is an employee of the Company immediately prior to the Change in Control; and

(c) (i) The Executive's Employment is terminated Without Cause within two years after the Change of Control or (ii) the Executive terminates his Employment for Good Reason after the Change in Control and within 60 days after the occurrence of the fact or event that permitted the Executive to terminate his Employment for Good Reason.

3.2 Notice of Termination. Any purported termination of the Executive's Employment after the occurrence of a Change in Control for Cause or Good Reason or because of the Executive's Disability shall be communicated to the other party by written notice of termination. The notice (i) shall be given at least 15 days prior to the Employment termination date, (ii) shall specify the Employment termination date (which shall not be more than thirty days after the delivery of the notice), and (iii) shall set forth in reasonable detail the facts claimed to provide a basis for the Employment termination for the specified reason.

3.3 Amount of the Severance Payment.

(a) If the Executive becomes entitled to a Severance Payment under this Agreement, the amount of the Severance Payment shall equal the product of two times the Executive's annual base salary that was in effect on the Effective Date; provided, however, that any base salary that is excluded from gross income for federal income tax purposes pursuant to Section 125 or 401(k) of the Code and any base salary that is deferred by the Executive pursuant to an employer-sponsored deferred compensation plan shall be included in the calculation of the Executive's base salary for purposes of this Section 3.3(a).

(b) The amount of the Severance Payment calculated under Section 3.3(a) above shall be reduced by the amount of base salary received between the date of the Change in Control and the Executive's termination date, and all cash severance-type payments which the Executive receives pursuant to any other severance plan, agreement, policy or program of the Company or any of the Company's subsidiaries. However, if the amount of the cash severance-type payments received under such other severance plan, agreement, policy or program is greater than the Severance Payment that is payable under this Agreement, the Executive shall be entitled to the amount payable under such other plan, agreement, policy or program in lieu of the Severance Payment under this Agreement. The payment to the Executive of the Retention Bonus or any amount under a stock option plan, stock incentive plan, shareholders' agreement or similar agreement in consideration for the Executive's equity ownership interest in the Company or any direct or indirect parent company shall not be construed as a "severance-type payment."

3.4 Payment of the Severance Payment; Release Agreement.

(a) Subject to the following paragraphs of this Section 3.4, the Severance Payment to which the Executive is entitled pursuant to Section 3.3 shall be paid in a lump sum concurrently with the termination of Employment of the Executive as described in Section 3.1(c).

(b) As a condition to the receipt of the Severance Payment, the Executive must execute and deliver to the Company a general release provided by the Company, to be in form and substance reasonably satisfactory to the Company, that releases the Company and its respective owners, directors, officers, managers, employees, subsidiaries and agents from any and all claims that the Executive may have against such released Persons, whether known or unknown, absolute or contingent, other than (i) claims under this Agreement, (ii) claims under any other written agreement to which the Executive is a party, (iii) claims under written employee benefit plans, (iv) claims for accrued but unpaid salary, bonuses, vacation pay and expense reimbursement obligations, and (v) claims that may not be waived or released under applicable law.

3.5 Excise Tax Limitation. Notwithstanding anything to the contrary in this Agreement, if the Company determines in good faith that any portion of the Retention Bonus or Severance Payment to which the Executive is entitled would be subject to the excise tax imposed by Section 4999 of the Code, then the Retention Bonus or Severance Payment, as the case may be, shall be reduced by the Company to the minimum extent necessary to avoid any such excise tax. All determinations required to be made pursuant to the preceding sentence shall be made by the Board of Directors of the Company, which shall provide supporting calculations and documentation to the Executive promptly following his request therefor.

3.6 Withholding of Taxes. The Company may withhold from the Severance Payment and any other amounts payable under this Agreement all federal, state, local, FICA, Medicaid and similar taxes required by applicable law to be withheld by the Company. Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding, the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility.

3.7 No Mitigation Duty. The Executive shall have no duty to mitigate the amount of the Severance Payment by seeking other employment or by taking any other action, and the amount of the Severance Payment shall not be reduced by any income that the Executive receives from subsequent employment.

3.8 <u>No Right to Receive Base Salary, Bonuses, Benefits and Perquisites After an Employment Termination</u>.

(a) Except as may otherwise be agreed to in writing between the Company and the Executive or as may be required by applicable law with respect to continued group health care coverage under COBRA, any obligation on the part of the Company to provide base salary, bonuses, life and health insurance coverage, other employee benefits, expense reimbursements and perquisites to the Executive shall terminate on the date of the termination of the Executive's Employment, regardless of the reason that the Executive's Employment terminated.

(b) Notwithstanding anything to the contrary in Section 3.9(a) or in any other provision of this Agreement, upon a termination of Employment for any reason (i) the Executive shall be entitled to receive any base salary that is accrued but unpaid as of the Employment termination date, (ii) to the extent provided by written Company policies or by applicable law, the Executive shall be entitled to receive any bonus or vacation pay that is accrued but unpaid as of the Employment termination date, (iii) the Executive shall be entitled to receive any compensation that he previously deferred in accordance with the terms of any written deferred compensation plan maintained by the Company, and (iv) the Executive shall remain entitled to be reimbursed for any business expenses that were properly incurred by him during the Executive's Employment in accordance with Company policies.

3.9 <u>No Payments or Benefits Prior to a Change in Control</u>. Prior to the expiration of the Retention Period or an earlier Change in Control, the Executive shall not be entitled to receive any Retention Bonus, Severance Payment or other payments or benefits under this Agreement. Except as provided below in Section 3.14, the Executive shall not be entitled to receive any Retention Bonus, Severance Payment or other payments or benefits under this Agreement if his Employment is terminated for any reason prior to the expiration of the Retention Period or earlier Change in Control and if a Change in Control subsequently occurs.

3.10 <u>No Death, Disability or Retirement Payments or Benefits Payable Under this Agreement</u>. Except as provided in Section 2.1 with respect to a Retention Bonus and in Section 3.8(b) with respect to accrued but unpaid salary, vacation time, bonuses and other specified accrued items, this Agreement does not provide the Executive with a right to receive a Severance Payment or any other payments or benefits if his Employment terminates before the expiration of the Retention Period or before or after the occurrence of a Change in Control by reason of Disability, death, retirement or for any other reason except a termination described in Section 3.1(c).

3.11 <u>Benefits Under Other Company Plans</u>. Except as provided above in Section 3.3(b), the Severance Payment shall not reduce any amounts otherwise payable to the Executive under, or in any way diminish any of the Executive's rights as an employee under, any written employee benefit, retirement or incentive plan or written employment agreement to which the Executive is now, or subsequently becomes, a party or a participant.

3.12 <u>At Will Employment</u>. Neither this Agreement nor the Retention Bonus or Severance Payment payable hereunder shall be deemed to limit, replace or otherwise affect the "at will" nature of the Executive's Employment, and this Agreement shall not be construed as an employment contract. Nothing contained in this Agreement shall be construed as creating any minimum period of Employment. Except as specifically provided (i) in this Agreement, (ii) in any written employment agreement or other written agreement that the Executive may enter into with the Company, or (iii) in any written employee manual, policy or benefit plan that the Company has provided to the Executive, the Company shall have no obligation to make any compensation, severance or other payments to the Executive, or to provide any other benefits to the Executive, after the date of the termination of the Executive's Employment for any reason. This Agreement does not provide a pension for the Executive, nor shall any payment hereunder be characterized as deferred compensation.

3.13 **Term of this Agreement**. This Agreement shall commence on the Effective Date. If a Change in Control has not occurred, either the Company or the Executive may terminate this Agreement and all obligations of the parties hereunder upon the delivery of at least one year's prior written notice to the other party; provided, however, that if a Change in Control occurs prior to the effective date of the termination notice described in the preceding sentence, this Agreement shall not terminate pursuant to such termination notice. Furthermore, this Agreement may be terminated after the occurrence of a Change in Control only by the written agreement of the Company and the Executive; provided, however, that the Executive shall be entitled to a Severance Payment hereunder only as provided in Section 3.1.

3.14 **Termination of Employment in Anticipation of a Change of Control**. Notwithstanding anything to the contrary in this Agreement, if the Executive's Employment is terminated within 90 days prior to the occurrence of a Change in Control, the Executive shall be entitled to claim that his Employment was terminated (i) by the Company Without Cause or by the Executive for Good Reason and (ii) because of the anticipated Change in Control. The Executive shall have the burden of proving such claim. The Retention Bonus in the amount described in Section 2.1 and the Severance Payment described in Section 3.3 shall be owed to the Executive if, but only if, (i) the Company in its discretion agrees with the Executive's claim or (ii) an arbitrator agrees with the Executive's claim and awards the Executive the Retention Bonus or the Severance Payment in an arbitration proceeding. All other provisions of this Article 3 shall be applicable to any Retention Bonus and Severance Payment payments to which the Executive becomes entitled under this Section 3.14.

3.15 **Confidential Information**. After the termination for any reason of the Executive's Employment, the Executive shall at no time, without the prior written consent of the Company or as may otherwise be required by a court of competent jurisdiction, (i) directly or indirectly divulge to any Person other than the Company or a Person designated in writing by the Company any confidential information or trade secrets regarding the Company or any of its subsidiaries or affiliated companies or (ii) directly or indirectly use any such confidential information or trade secrets for the Executive's personal benefit or the benefit of any Person other than the Company and its subsidiaries and affiliates in the Executive's performance of his employment duties.

ARTICLE 4
GENERAL PROVISIONS

4.1 **Successors and Assigns**. This Agreement shall be binding upon, and shall benefit, the personal representative, estate, beneficiaries (by will or by the laws of descent and distribution), and other successors and assigns of each party to this Agreement. However, this Agreement is personal to the Executive and may not be assigned by him other than by will or the laws of descent and distribution. The Company shall require any successor by purchase, merger or otherwise to all or substantially all the business and assets of the Company to assume and agree to perform the Company's obligations under this Agreement, in the same manner and to the same extent that the Company would be required to perform such obligations if no such succession had taken place.

4.2 **Expenses**. Except as otherwise provided in Sections 4.12 and 4.13 of this Agreement, each party to this Agreement shall bear its own costs and expenses incurred in connection with this Agreement.

4.3 **Notices**. All notices and other communications required or permitted by this Agreement to be given by one party to another party shall be delivered in writing, by registered or certified United States mail (postage prepaid and return receipt requested) or by reputable overnight delivery service, to the Company or the Executive, as applicable, at the address that appears on the signature page of this Agreement (or to such other address that one party gives the other in the foregoing manner). Any such notice or other communication that is sent in the foregoing manner shall be deemed to have been delivered three days after deposit in the United States mail or one day after delivery to an overnight delivery service.

4.4 Entire Agreement. This Agreement constitutes the entire agreement of the Company and the Executive relating to the subject matter of this Agreement and supersedes any and all other prior agreements and understandings (written or oral) relating to such subject matter.

4.5 Calculation of Time. Wherever in this Agreement a period of time is stated in a number of days, it shall be deemed to mean calendar days. However, when any period of time so stated would end upon a Saturday, Sunday, or legal holiday, such period shall be deemed to end upon the next day following that is not a Saturday, Sunday or legal holiday.

4.6 Further Assurances. Each party to this Agreement shall perform any further acts and execute and deliver any further documents that may be requested by another party and that are reasonably necessary to carry out the provisions of this Agreement.

4.7 Provisions Subject to Applicable Law. All provisions of this Agreement shall be applicable only to the extent that they do not violate any applicable law and are intended to be limited to the extent necessary so that they will not render this Agreement invalid, illegal or unenforceable under any applicable law. If any provision of this Agreement or any application thereof shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of other provisions of this Agreement or of any other application of such provision shall in no way be affected thereby.

4.8 Waiver of Rights. Neither party to this Agreement shall be deemed to have waived any right or remedy that it has under this Agreement unless this Agreement expressly provides a period of time within which such right or remedy must be exercised and such period has expired or unless such party has expressly waived the same in writing. The waiver by a party of a right or remedy hereunder shall not be deemed to be a waiver of any other right or remedy or of any subsequent right or remedy of the same kind.

4.9 Headings; Gender and Number. The headings contained in this Agreement are for reference purposes only and shall not affect in any manner the meaning or interpretation of this Agreement. Where appropriate to the context of this Agreement, use of the singular shall be deemed also to refer to the plural, and use of the plural to the singular, and pronouns of one gender shall be deemed to comprehend either or both of the other genders. The terms "hereof," "herein," "hereby," and variations thereof shall, whenever used in this Agreement, refer to this Agreement as a whole and not to any particular section hereof.

4.10 Amendment and Termination. This Agreement may be amended only pursuant to a writing executed by the Company and the Executive. This Agreement may be terminated only as provided above in Section 3.14 or pursuant to a writing executed by the Company and the Executive.

4.11 Counterparts. This Agreement may be executed in two counterparts, and by each party on a separate counterpart, each of which shall be deemed an original, but both of which taken together shall constitute but one and the same instrument. This Agreement may be executed by facsimile or other electronic signature.

4.12 **Representation of the Executive; Interpretation of This Agreement**. The Executive acknowledges that he has had an adequate opportunity to review this Agreement with the Executive's counsel, if any, prior to executing this Agreement. The terms of this Agreement have been negotiated by the Company and the Executive, and the language used herein was chosen by the parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the party causing the instrument to be drafted. The Executive further acknowledges that (i) TroyGould PC has served as counsel to the Company only (and not to the Executive) in connection with this Agreement, and (ii) neither the Company nor its agents or representatives has made any representations to the Executive regarding the tax consequences to him of any payments pursuant to this Agreement.

4.13 Arbitration. Any dispute or controversy arising under this Agreement relating to its interpretation or the breach hereof, including the arbitrability of any such dispute or controversy (each, a "Disputed Matter"), shall be determined and settled by arbitration in Santa Fe, New Mexico pursuant to the Rules of the American Arbitration Association in effect at the time the Disputed Matter arises. Any award rendered herein shall be final and binding on each and all of the parties, and judgment may be entered thereon in any court of competent jurisdiction. Notwithstanding the foregoing, the parties shall be entitled to seek injunctive relief in any court of competent jurisdiction.

4.14 Governing Laws. This Agreement shall be governed by, and construed and enforced in accordance with, the internal laws of the State of Nevada without giving effect to conflict-of-law principles.

[*Signature page follows*]

IN WITNESS WHEREOF, the undersigned have executed and delivered this Agreement as of the date first above written.

SIGMA ADDITIVE SOLUTIONS, INC.

By: */s/ Frank Orzechowski*
Frank Orzechowski
Chief Financial Officer

Address:

3900 Paseo Del Sol
Santa Fe, New Mexico 87507

/s/ Jacob Brunsberg
Executive's Signature

Jacob Brunsberg
Print Executive's Name

Executive's Address:

RETENTION BONUS AND CHANGE IN CONTROL AGREEMENT

This Retention Bonus and Change in Control Agreement is entered into on January 26, 2023 by and between Sigma Additive Solutions, Inc. (formerly, Sigma Labs, Inc.), a Nevada corporation (the "**Company**"), and Frank Orzechowski (the "**Executive**"), with reference to the following:

RECITALS

A. The Company believes that it is in the best interests of the Company to foster the continuous employment of key management personnel such as the Executive.

B. The Company and the Executive desire to enter into this Agreement to induce the Executive to continue his employment with the Company during the Retention Period (as defined below) and any period in which the Company may be engaged in negotiations regarding a Change in Control (as defined below) and during the two-year period following a Change in Control.

C. This Agreement is entered into in connection with and as part of the retention bonus plan and change in control plan adopted by the Board of Directors of the Company on July 1, 2022 (the "**Effective Date**") and reported on Form 8-K filed by the Company with the Securities and Exchange Commission on July 8, 2022.

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which hereby are acknowledged, the Company and the Executive hereby agree as follows:

ARTICLE 1
DEFINITIONS

For purposes of this Agreement, each of the following terms defined in this Article 1 shall have its defined meaning wherever used in this Agreement.

1.1 Agreement. "Agreement" means this Retention Bonus and Change in Control Agreement, as it may be amended from time to time as provided herein.

1.2 Cause. "Cause" means (i) the Executive's conviction of a felony that is injurious to the business of the Company, (ii) the Executive's willful and continued failure to perform his Employment duties, (iii) the Executive's willful misconduct that is injurious to the business of the Company, or (iv) the Executive's willful violation of any material provision of any employment policy of the Company; provided, however, that the Executive's inability to perform his or her duties because of a Disability shall not constitute a basis for the Company's termination of the Executive's Employment for Cause. Notwithstanding the foregoing, the Executive's Employment shall not be subject to termination for Cause without (w) the Company's delivery to the Executive of a notice of intention to terminate, such notice to describe the reasons for the proposed Employment termination and to be delivered to the Executive at least ten days prior to the actual termination date, (x) an opportunity for the Executive within the period prior to the proposed Employment termination to cure any such breach (if curable) giving rise to the proposed termination, and (y) an opportunity for the Executive, if he chooses, to be heard before the Board of Directors of the Company.

1.3 Change in Control. "Change in Control" means (i) a liquidation or dissolution of the Company; (ii) a merger or consolidation of the Company with or into another corporation or entity (other than a merger with a wholly owned subsidiary); (iii) a sale of all or substantially all of the assets of the Company; or (iv) a purchase or other acquisition of more than 50% of the outstanding stock of the Company by one person or by more than one person acting in concert.

1.4 Code. "Code" means the Internal Revenue Code of 1986, as amended.

1.5 Continuous Service. "Continuous Service" means that the Participant's service with the Company or an Affiliate, as an Employee, Consultant or Director, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders service to the Company as an Employee, Consultant or Director, provided that there is no interruption or termination of the Participant's Continuous Service; provided further that if any Award is subject to Section 409A of the Code, this sentence shall only be given effect to the extent consistent with Section 409A of the Code. For example, a change in status from an Employee of the Company to solely a Director will not constitute an interruption of Continuous Service. The Committee or its delegate, in its sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by that party, including sick leave, military leave or any other personal or family leave of absence. The Committee or its delegate, in its sole discretion, may determine whether a Company transaction, such as a sale or spin-off of a division or subsidiary that employs a Participant, shall be deemed to result in a termination of Continuous Service for purposes of affected Awards, and such decision shall be final, conclusive, and binding.

1.6 **Disability**. "Disability" means a physical or mental disability of the Executive, as certified in a written statement from a licensed physician selected or approved by the Executive Committee, that results in the Executive being unable to perform his duties as an employee of the Company on a full-time basis (after reasonable accommodation by the Company) for (i) 120 consecutive days or (ii) 180 days (regardless of whether such days are consecutive) during any period of 365 consecutive days.

1.7 Employment. "Employment" means the Executive's employment in any capacity with the Company.

1.8 Exchange Act. "Exchange Act" means the Securities Exchange Act of 1934, as amended.

1.9 Good Reason. "Good Reason" means the occurrence after a Change in Control of any of the following actions by the Company, unless the Executive, in his discretion, consents thereto in writing or the action by the Company is reversed or abandoned within 30 days after the Company receives from the Executive written notice of the Executive's objection to the action: (i) a reduction in the Executive's annual base salary as in effect on the date immediately prior to the Change in Control or a failure to make any scheduled base salary payment within fifteen days after its due date, unless the Company's Board of Directors determines in good faith that such base salary reduction is more than offset by the aggregate value of any new compensation plans or other Employment-related benefits that are provided to the Executive after the Change in Control; (ii) the Company's requirement that the Executive perform his Employment duties at an office that is more than 25 miles from the Company's office at which the Executive was principally employed on the date immediately prior to the Change in Control; (iii) a change or diminution in Executive's employment duties that is materially inconsistent with the duties usually associated with the office of the Chief Financial Officer of a corporation; or (iv) a failure by the Company to continue for the benefit of the Executive any material compensation plan in which the Executive participated on the date immediately prior to the Change in Control, unless the discontinuation of such plan was outside the Company's reasonable control or unless the Company discontinues such plan for all of its executive officers. Notwithstanding the foregoing, Good Reason for the Executive to terminate his Employment shall not exist by reason of any of the Company's actions described in the preceding sentence if the action is preceded by a written notice from the Company of an intention to terminate the Executive's Employment for Cause or because of the Executive's Disability and is then followed by a termination of Employment for Cause or Disability.]

1.10 Person. "Person" means any natural person, corporation, partnership, limited liability company or other association or entity.

1.11 SARs. "SARs" means stock appreciation rights under the Company's 2020 Stock Appreciation Rights, as amended, with respect to 97,038 shares of common stock of the Company with an exercise price of $1.30 and which will vest, in full, on March 15, 2025 (subject to the Executive's remaining in our Continuous Service through such date), unless earlier vested in connection with a Change in Control" of the Company as provided therein.

1.12 Securities Act. "Securities Act" means the Securities Act of 1933, as amended.

1.13 Retention Bonus. "Retention Bonus" means the SARs together with the cash bonus that the Company has granted and agreed to pay to the Executive pursuant to Article 2 upon the expiration of the Retention Period or the earlier occurrence of a Change in Control, as the case may be.

1.14 Retention Period. "Retention Period" means the period ending on the date of filing under the Exchange Act of the Company's 2024 Annual Report on Form 10-K.

1.15 Severance Payment. "Severance Payment" means the severance compensation that the Company has agreed to pay to the Executive pursuant to Article 3 upon the termination of the Executive's Employment by the Company Without Cause, or by the Executive for Good Reason, after a Change in Control.

1.16 Without Cause. "Without Cause" means the termination of the Executive's Employment by the Company other than for Cause and other than by reason of the death or Disability of the Executive.

1.17 Other Definitions. Any term defined in any other section of this Agreement shall have its defined meaning wherever used in this Agreement.

ARTICLE 2
RETENTION BONUS

2.1 Right to a Retention Bonus. The Company previously granted the Executive the SARs. The Executive shall be entitled to receive the cash component of the Retention Bonus in the amount specified in Section 2.2 if, but only if:

(a) The Executive remains in the Continuous Service of the Company as of the expiration of the Retention Period or the earlier occurrence of a Change in Control.

2.2 Amount of the Retention Bonus. If the Executive becomes entitled thereto as provided in Section 2.1, the cash component of the Retention Bonus shall be $100,000 (*i.e*., 50% of the Executive's base annual salary in effect on the Effective Date); provided, however, that in the event of a Change in Control prior to the expiration of the Retention Period the cash component of the Retention Bonus shall be a pro rata portion of $200,000 (i.e., 100% of the Executive's base annual salary on the Effective Date), determined based on the ratio that the number of days between the Effective Date and the occurrence of the Change in Control bears to the number of days between the Effective Date and the expiration of the Retention Period.

2.3 **Payment of the Retention Bonus**. The cash component of the Retention Bonus to which the Executive becomes entitled pursuant to Section 2.2 shall be paid within ten days following the expiration of the relevant Retention Period or upon a Change in Control, as applicable.

2.4 **Withholding of Taxes**. The Company may withhold from the cash component of the Retention Bonus all federal, state, local, FICA, Medicaid and similar taxes required by applicable law to be withheld by the Company. Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding, the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility.

ARTICLE 3
SEVERANCE PAYMENT

3.1 **Right to a Severance Payment**. In addition to the Retention Bonus to which the Executive is entitled under Section 2.1, the Executive shall be entitled to receive a Severance Payment in the amount specified in Section 3.3 if, but only if:

(a) A Change in Control occurs;

(b) The Executive is an employee of the Company immediately prior to the Change in Control; and

(c) (i) The Executive's Employment is terminated Without Cause within two years after the Change of Control or (ii) the Executive terminates his Employment for Good Reason after the Change in Control and within 60 days after the occurrence of the fact or event that permitted the Executive to terminate his Employment for Good Reason.

3.2 **Notice of Termination**. Any purported termination of the Executive's Employment after the occurrence of a Change in Control for Cause or Good Reason or because of the Executive's Disability shall be communicated to the other party by written notice of termination. The notice (i) shall be given at least 15 days prior to the Employment termination date, (ii) shall specify the Employment termination date (which shall not be more than thirty days after the delivery of the notice), and (iii) shall set forth in reasonable detail the facts claimed to provide a basis for the Employment termination for the specified reason.

3.3 **Amount of the Severance Payment**.

(a) If the Executive becomes entitled to a Severance Payment under this Agreement, the amount of the Severance Payment shall equal the product of two times the Executive's annual base salary that was in effect on the Effective Date; provided, however, that any base salary that is excluded from gross income for federal income tax purposes pursuant to Section 125 or 401(k) of the Code and any base salary that is deferred by the Executive pursuant to an employer-sponsored deferred compensation plan shall be included in the calculation of the Executive's base salary for purposes of this Section 3.3(a).

(b) The amount of the Severance Payment calculated under Section 3.3(a) above shall be reduced by the amount of base salary received between the date of the Change in Control and the Executive's termination date, and all cash severance-type payments which the Executive receives pursuant to any other severance plan, agreement, policy or program of the Company or any of the Company's subsidiaries. However, if the amount of the cash severance-type payments received under such other severance plan, agreement, policy or program is greater than the Severance Payment that is payable under this Agreement, the Executive shall be entitled to the amount payable under such other plan, agreement, policy or program in lieu of the Severance Payment under this Agreement. The payment to the Executive of the Retention Bonus or any amount under a stock option plan, stock incentive plan, shareholders' agreement or similar agreement in consideration for the Executive's equity ownership interest in the Company or any direct or indirect parent company shall not be construed as a "severance-type payment."

3.4 Payment of the Severance Payment; Release Agreement.

(a) Subject to the following paragraphs of this Section 3.4, the Severance Payment to which the Executive is entitled pursuant to Section 3.3 shall be paid in a lump sum concurrently with the termination of Employment of the Executive as described in Section 3.1(c).

(b) As a condition to the receipt of the Severance Payment, the Executive must execute and deliver to the Company a general release provided by the Company, to be in form and substance reasonably satisfactory to the Company, that releases the Company and its respective owners, directors, officers, managers, employees, subsidiaries and agents from any and all claims that the Executive may have against such released Persons, whether known or unknown, absolute or contingent, other than (i) claims under this Agreement, (ii) claims under any other written agreement to which the Executive is a party, (iii) claims under written employee benefit plans, (iv) claims for accrued but unpaid salary, bonuses, vacation pay and expense reimbursement obligations, and (v) claims that may not be waived or released under applicable law.

3.5 Excise Tax Limitation. Notwithstanding anything to the contrary in this Agreement, if the Company determines in good faith that any portion of the Retention Bonus or Severance Payment to which the Executive is entitled would be subject to the excise tax imposed by Section 4999 of the Code, then the Retention Bonus or Severance Payment, as the case may be, shall be reduced by the Company to the minimum extent necessary to avoid any such excise tax. All determinations required to be made pursuant to the preceding sentence shall be made by the Board of Directors of the Company, which shall provide supporting calculations and documentation to the Executive promptly following his request therefor.

3.6 Withholding of Taxes. The Company may withhold from the Severance Payment and any other amounts payable under this Agreement all federal, state, local, FICA, Medicaid and similar taxes required by applicable law to be withheld by the Company. Notwithstanding any action the Company takes with respect to any or all income tax, social insurance, payroll tax, or other tax-related withholding, the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility.

3.7 No Mitigation Duty. The Executive shall have no duty to mitigate the amount of the Severance Payment by seeking other employment or by taking any other action, and the amount of the Severance Payment shall not be reduced by any income that the Executive receives from subsequent employment.

3.8 No Right to Receive Base Salary, Bonuses, Benefits and Perquisites After an Employment Termination.

(a) Except as may otherwise be agreed to in writing between the Company and the Executive or as may be required by applicable law with respect to continued group health care coverage under COBRA, any obligation on the part of the Company to provide base salary, bonuses, life and health insurance coverage, other employee benefits, expense reimbursements and perquisites to the Executive shall terminate on the date of the termination of the Executive's Employment, regardless of the reason that the Executive's Employment terminated.

(b) Notwithstanding anything to the contrary in Section 3.9(a) or in any other provision of this Agreement, upon a termination of Employment for any reason (i) the Executive shall be entitled to receive any base salary that is accrued but unpaid as of the Employment termination date, (ii) to the extent provided by written Company policies or by applicable law, the Executive shall be entitled to receive any bonus or vacation pay that is accrued but unpaid as of the Employment termination date, (iii) the Executive shall be entitled to receive any compensation that he previously deferred in accordance with the terms of any written deferred compensation plan maintained by the Company, and (iv) the Executive shall remain entitled to be reimbursed for any business expenses that were properly incurred by him during the Executive's Employment in accordance with Company policies.

3.9 No Payments or Benefits Prior to a Change in Control. Prior to the expiration of the Retention Period or an earlier Change in Control, the Executive shall not be entitled to receive any Retention Bonus, Severance Payment or other payments or benefits under this Agreement. Except as provided below in Section 3.14, the Executive shall not be entitled to receive any Retention Bonus, Severance Payment or other payments or benefits under this Agreement if his Employment is terminated for any reason prior to the expiration of the Retention Period or earlier Change in Control and if a Change in Control subsequently occurs.

3.10 No Death, Disability or Retirement Payments or Benefits Payable Under this Agreement. Except as provided in Section 2.1 with respect to a Retention Bonus and in Section 3.8(b) with respect to accrued but unpaid salary, vacation time, bonuses and other specified accrued items, this Agreement does not provide the Executive with a right to receive a Severance Payment or any other payments or benefits if his Employment terminates before the expiration of the Retention Period or before or after the occurrence of a Change in Control by reason of Disability, death, retirement or for any other reason except a termination described in Section 3.1(c).

3.11 Benefits Under Other Company Plans. Except as provided above in Section 3.3(b), the Severance Payment shall not reduce any amounts otherwise payable to the Executive under, or in any way diminish any of the Executive's rights as an employee under, any written employee benefit, retirement or incentive plan or written employment agreement to which the Executive is now, or subsequently becomes, a party or a participant.

3.12 At Will Employment. Neither this Agreement nor the Retention Bonus or Severance Payment payable hereunder shall be deemed to limit, replace or otherwise affect the "at will" nature of the Executive's Employment, and this Agreement shall not be construed as an employment contract. Nothing contained in this Agreement shall be construed as creating any minimum period of Employment. Except as specifically provided (i) in this Agreement, (ii) in any written employment agreement or other written agreement that the Executive may enter into with the Company, or (iii) in any written employee manual, policy or benefit plan that the Company has provided to the Executive, the Company shall have no obligation to make any compensation, severance or other payments to the Executive, or to provide any other benefits to the Executive, after the date of the termination of the Executive's Employment for any reason. This Agreement does not provide a pension for the Executive, nor shall any payment hereunder be characterized as deferred compensation.

3.13 Term of this Agreement. This Agreement shall commence on the Effective Date. If a Change in Control has not occurred, either the Company or the Executive may terminate this Agreement and all obligations of the parties hereunder upon the delivery of at least one year's prior written notice to the other party; provided, however, that if a Change in Control occurs prior to the effective date of the termination notice described in the preceding sentence, this Agreement shall not terminate pursuant to such termination notice. Furthermore, this Agreement may be terminated after the occurrence of a Change in Control only by the written agreement of the Company and the Executive; provided, however, that the Executive shall be entitled to a Severance Payment hereunder only as provided in Section 3.1.

3.14 Termination of Employment in Anticipation of a Change of Control. Notwithstanding anything to the contrary in this Agreement, if the Executive's Employment is terminated within 90 days prior to the occurrence of a Change in Control, the Executive shall be entitled to claim that his Employment was terminated (i) by the Company Without Cause or by the Executive for Good Reason and (ii) because of the anticipated Change in Control. The Executive shall have the burden of proving such claim. The Retention Bonus in the amount described in Section 2.1 and the Severance Payment described in Section 3.3 shall be owed to the Executive if, but only if, (i) the Company in its discretion agrees with the Executive's claim or (ii) an arbitrator agrees with the Executive's claim and awards the Executive the Retention Bonus or the Severance Payment in an arbitration proceeding. All other provisions of this Article 3 shall be applicable to any Retention Bonus and Severance Payment payments to which the Executive becomes entitled under this Section 3.14.

3.15 Confidential Information. After the termination for any reason of the Executive's Employment, the Executive shall at no time, without the prior written consent of the Company or as may otherwise be required by a court of competent jurisdiction, (i) directly or indirectly divulge to any Person other than the Company or a Person designated in writing by the Company any confidential information or trade secrets regarding the Company or any of its subsidiaries or affiliated companies or (ii) directly or indirectly use any such confidential information or trade secrets for the Executive's personal benefit or the benefit of any Person other than the Company and its subsidiaries and affiliates in the Executive's performance of his employment duties.

ARTICLE 4
GENERAL PROVISIONS

4.1 Successors and Assigns. This Agreement shall be binding upon, and shall benefit, the personal representative, estate, beneficiaries (by will or by the laws of descent and distribution), and other successors and assigns of each party to this Agreement. However, this Agreement is personal to the Executive and may not be assigned by him other than by will or the laws of descent and distribution. The Company shall require any successor by purchase, merger or otherwise to all or substantially all the business and assets of the Company to assume and agree to perform the Company's obligations under this Agreement, in the same manner and to the same extent that the Company would be required to perform such obligations if no such succession had taken place.

4.2 Expenses. Except as otherwise provided in Sections 4.12 and 4.13 of this Agreement, each party to this Agreement shall bear its own costs and expenses incurred in connection with this Agreement.

4.3 Notices. All notices and other communications required or permitted by this Agreement to be given by one party to another party shall be delivered in writing, by registered or certified United States mail (postage prepaid and return receipt requested) or by reputable overnight delivery service, to the Company or the Executive, as applicable, at the address that appears on the signature page of this Agreement (or to such other address that one party gives the other in the foregoing manner). Any such notice or other communication that is sent in the foregoing manner shall be deemed to have been delivered three days after deposit in the United States mail or one day after delivery to an overnight delivery service.

4.4 Entire Agreement. This Agreement constitutes the entire agreement of the Company and the Executive relating to the subject matter of this Agreement and supersedes any and all other prior agreements and understandings (written or oral) relating to such subject matter.

4.5 Calculation of Time. Wherever in this Agreement a period of time is stated in a number of days, it shall be deemed to mean calendar days. However, when any period of time so stated would end upon a Saturday, Sunday, or legal holiday, such period shall be deemed to end upon the next day following that is not a Saturday, Sunday or legal holiday.

4.6 Further Assurances. Each party to this Agreement shall perform any further acts and execute and deliver any further documents that may be requested by another party and that are reasonably necessary to carry out the provisions of this Agreement.

4.7 Provisions Subject to Applicable Law. All provisions of this Agreement shall be applicable only to the extent that they do not violate any applicable law and are intended to be limited to the extent necessary so that they will not render this Agreement invalid, illegal or unenforceable under any applicable law. If any provision of this Agreement or any application thereof shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of other provisions of this Agreement or of any other application of such provision shall in no way be affected thereby.

4.8 Waiver of Rights. Neither party to this Agreement shall be deemed to have waived any right or remedy that it has under this Agreement unless this Agreement expressly provides a period of time within which such right or remedy must be exercised and such period has expired or unless such party has expressly waived the same in writing. The waiver by a party of a right or remedy hereunder shall not be deemed to be a waiver of any other right or remedy or of any subsequent right or remedy of the same kind.

4.9 Headings; Gender and Number. The headings contained in this Agreement are for reference purposes only and shall not affect in any manner the meaning or interpretation of this Agreement. Where appropriate to the context of this Agreement, use of the singular shall be deemed also to refer to the plural, and use of the plural to the singular, and pronouns of one gender shall be deemed to comprehend either or both of the other genders. The terms “hereof,” “herein,” “hereby,” and variations thereof shall, whenever used in this Agreement, refer to this Agreement as a whole and not to any particular section hereof.

4.10 Amendment and Termination. This Agreement may be amended only pursuant to a writing executed by the Company and the Executive. This Agreement may be terminated only as provided above in Section 3.14 or pursuant to a writing executed by the Company and the Executive.

4.11 Counterparts. This Agreement may be executed in two counterparts, and by each party on a separate counterpart, each of which shall be deemed an original, but both of which taken together shall constitute but one and the same instrument. This Agreement may be executed by facsimile or other electronic signature.

4.12 **Representation of the Executive; Interpretation of This Agreement**. The Executive acknowledges that he has had an adequate opportunity to review this Agreement with the Executive's counsel, if any, prior to executing this Agreement. The terms of this Agreement have been negotiated by the Company and the Executive, and the language used herein was chosen by the parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the party causing the instrument to be drafted. The Executive further acknowledges that (i) TroyGould PC has served as counsel to the Company only (and not to the Executive) in connection with this Agreement, and (ii) neither the Company nor its agents or representatives has made any representations to the Executive regarding the tax consequences to him of any payments pursuant to this Agreement.

4.13 **Arbitration**. Any dispute or controversy arising under this Agreement relating to its interpretation or the breach hereof, including the arbitrability of any such dispute or controversy (each, a "Disputed Matter"), shall be determined and settled by arbitration in Santa Fe, New Mexico pursuant to the Rules of the American Arbitration Association in effect at the time the Disputed Matter arises. Any award rendered herein shall be final and binding on each and all of the parties, and judgment may be entered thereon in any court of competent jurisdiction. Notwithstanding the foregoing, the parties shall be entitled to seek injunctive relief in any court of competent jurisdiction.

4.14 **Governing Laws**. This Agreement shall be governed by, and construed and enforced in accordance with, the internal laws of the State of Nevada without giving effect to conflict-of-law principles.

[*Signature page follows*]

IN WITNESS WHEREOF, the undersigned have executed and delivered this Agreement as of the date first above written.

SIGMA ADDITIVE SOLUTIONS, INC.

By: */s/ Jacob Brunsberg*
Jacob Brunsberg
President and Chief Executive Officer

Address:

3900 Paseo Del Sol
Santa Fe, New Mexico 87507

/s/ Frank Orzechowski
Executive's Signature

Frank Orzechowski
Print Executive's Name

Executive's Address:

Exhibit 23.1

Haynie & Company
Certified Public Accountants
& Management Consultants

1785 West 2320 South
Salt Lake City, UT 84119
801-972-4800
801-972-8941
www.HaynieCPAs.com

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-174897, 333-197616, 333-212612, 333-222369, 333-228628, 333-233348, 333-250181, 333-258683, 333-259523, and 333-267943 on Form S-8, Registration Statement Nos. 333-225377, 333-232037, 333-236231, 333-239774, 333-256934, 333-257054, and 333-269683 on Form S-3, and Registration Statement Nos. 333-224621, 333-218021, and 333-212735 on Form S-1 of Sigma Additive Solutions, Inc. (formerly Sigma Labs, Inc.) of our report dated March 30, 2023, relating to our audits of the financial statements which appear in this Annual Report on Form 10-K of Sigma Additive Solutions, Inc. for the years ended December 31, 2022 and 2021.

/s/ Haynie & Company
Salt Lake City, Utah
March 30, 2023

Exhibit 31.1

Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Jacob Brunsberg, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sigma Additive Solutions, 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: March 30, 2023

By:	*/s/ Jacob Brunsberg*
Name:	Jacob Brunsberg
Title:	President and Chief Executive Officer (Principal Executive Officer)

Exhibit 31.2

Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Frank Orzechowski, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sigma Additive Solutions, 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: March 30, 2023

By:	*/s/ Frank Orzechowski*
Name:	Frank Orzechowski
Title:	Chief Financial Officer, Treasurer (Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the accompanying Annual Report of Sigma Additive Solutions, Inc., (the "Company") on Form 10-K for the period ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned officers of the Company certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to their knowledge:

(i) The Report fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(ii) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 30, 2023	By:	*/s/ Jacob Brunsberg*
	Name:	Jacob Brunsberg
	Title:	President and Chief Executive Officer (Principal Executive Officer)
Date: March 30, 2023	By:	*/s/ Frank Orzechowski*
	Name:	Frank Orzechowski
	Title:	Chief Financial Officer (Principal Financial and Accounting Officer)