Annual Report
and Accounts
2017

a deeper
understanding
of respiratory
biology

synairgen plc

Stock symbol: LSE:SNG
www.synairgen.com

Contents

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Operational highlights

- Successful completion of pre-clinical pharmacology and toxicology studies of PXS-5382A, a compound from the anti-fibrotic LOXL2 inhibitor programme, and initiation of a Phase I clinical trial
- Revision of collaboration terms for LOXL2 programme with Pharmaxis where Synairgen received a £5 million upfront payment and circa 17% of any future partnering proceeds from all fibrotic indications in return for Pharmaxis taking on full responsibility for the programme
- Synairgen regained full control of inhaled interferon beta programme from AstraZeneca, and conducted further analyses of the INEXAS trial in asthma leading to a new clinical development plan for the product in COPD

Financial highlights

- Revenues for the year ended 31 December 2017 were £5.03 million (2016: £nil)
- Research and development expenditure for the year was £2.06 million (2016: £2.42 million)
- Profit from operations for the year was £1.62 million (2016: loss of £3.44 million)
- Cash, cash equivalents and deposit balances of £6.85 million at 31 December 2017 (2016: £4.77 million). The Group remains debt free

Post period-end highlights

- First patients were dosed in the Company's Phase II trial of inhaled SNG001 in patients with COPD in February 2018

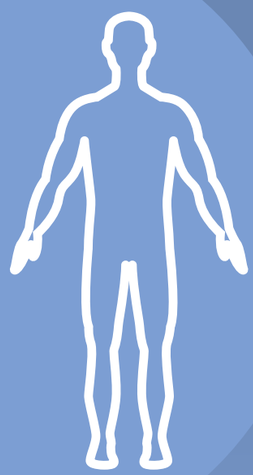
“One of the reasons why there have been few drug breakthroughs in asthma and COPD is that small animal models consistently fail to reproduce fully the diseases as they occur in humans.”

Prof. Stephen Holgate

Synairgen’s respiratory BioBank platform

Synairgen is located within Southampton General Hospital, a large regional hospital with particular expertise in respiratory disease and excellent clinical research facilities. Using its own clinical team and scientists, Synairgen has accumulated an extensive BioBank comprised of blood, sputum, nasal lavage, biopsies and lung cells from well-characterised volunteers with respiratory diseases (and relevant controls). These samples are stored in accordance with the requirements of Synairgen’s Human Tissue Authority Licence.

Using this resource, Synairgen has developed a number of advanced tissue models, including models of respiratory virus infection in asthma and COPD, and a fibroblastic focus model of lung fibrosis (IPF). These models have been key to the advancement of our interferon beta programme and our collaboration with Pharmaxis to develop inhibitors of LOXL2 for IPF and other fibrotic conditions.



Mouse

Animal models cannot truly replicate disease pathology and chronicity, or the impact of environmental factors such as viruses, cigarette smoke and other inflammatory agents.

Human

By measuring levels of potential drug targets in patients’ samples or inhibiting them in disease-relevant models using cells from patients, Synairgen is able to select the most promising targets for its drug development programmes. The cell-based models are also used to select the best drug candidates to move forwards into the clinic and to develop biomarkers, which help to show drug activity in the lungs and to assess dosing regimens.

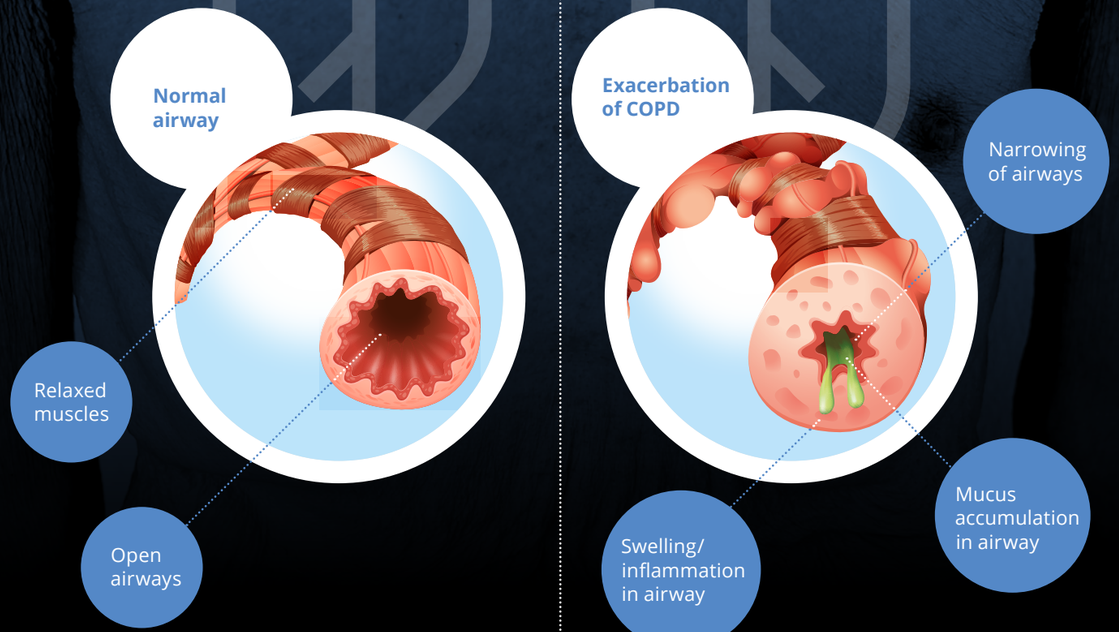
Synairgen is developing an inhaled interferon beta (IFN-β) therapy to reduce COPD exacerbations

Chronic obstructive pulmonary disease (COPD) is a progressive life-threatening lung disease that interferes with normal breathing, causing breathlessness. The majority of COPD is associated with long-term cigarette smoking.

According to the World Health Organisation (WHO), COPD is the only cause of death whose incidence is on the increase and is predicted to become the third leading cause of death worldwide (exceeded only by heart disease and stroke).

The Global Burden of Disease Study reports a prevalence of 251 million cases of COPD globally in 2016.

In 2010, the cost of COPD in the USA was projected to be approximately US$50 billion, which includes $20 billion in indirect costs and $30 billion in direct health care expenditures.[1]



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Focussing in on COPD

Why exacerbations of COPD matter?

Exacerbations represent a significant unmet medical need in COPD

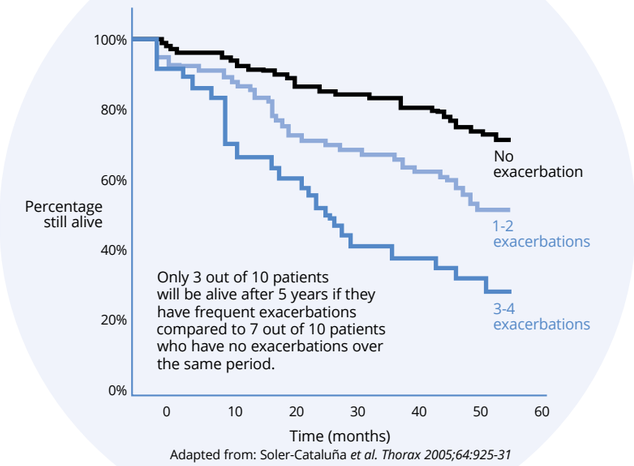
Exacerbations of COPD are defined as the worsening of COPD symptoms beyond normal day-to-day variations and are associated with irreversible loss of lung function and accelerated disease progression. Exacerbations severely impact on the patient's quality of life (patients typically take a number of weeks to recover) and are a major healthcare burden, and are the second most common cause of emergency admissions to hospital.[2] Exacerbations are currently treated with oral corticosteroids and antibiotics. Systemic administration of corticosteroids is associated with unwanted side effects and in addition there is a concerted drive to reduce antibiotic usage.

Cold and flu viruses are major drivers of COPD exacerbations

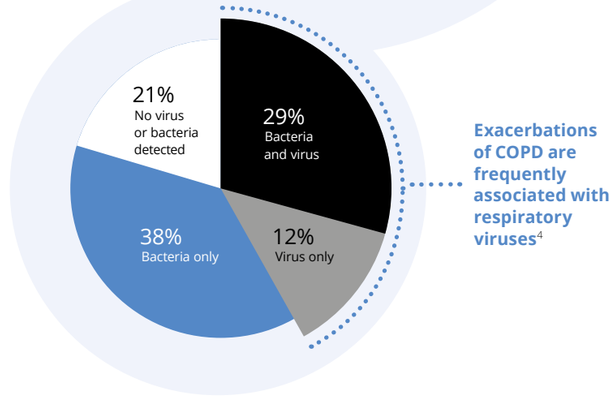
Respiratory viral infections, such as the common cold and flu, are a major driver of exacerbations in patients with lung disease when infections spread from the upper respiratory tract to the lungs to worsen pre-existing lung inflammation. Furthermore, there is growing evidence that virus infections increase susceptibility to follow on bacterial infections.

Patients with COPD can expect to get 2 to 4 respiratory virus infections (colds) per year.

The chance that a patient will exacerbate when they get a cold is approximately 50%[3] (much higher than for asthma at <10%).



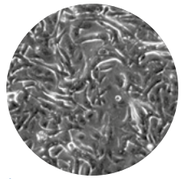
Adapted from: Soler-Cataluña *et al. Thorax 2005;64:925-31*



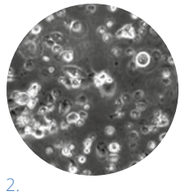
Exacerbations of COPD are frequently associated with respiratory viruses[4]

IFN-β as a treatment for COPD exacerbations

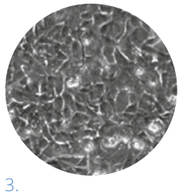
IFN-β is a naturally-occurring protein that orchestrates the body's antiviral defences. We have shown in *in vitro* models that IFN-β protects the lung cells of COPD patients when infected with viruses that cause exacerbations.



1. Lung lining cells from a COPD patient, grown in the laboratory have a cobblestone appearance.



2. Infected with the common cold virus, the cells burst open as they would in the lung, where this causes inflammation and worsening symptoms.



3. Pre-treatment with IFN-β to switch on the antiviral defences in the cells stops the spread of the infection. The cells therefore have a normal appearance.

Clinical development of inhaled IFN-β (SNG001)

SNG001 is a formulation of IFN-β being developed by Synairgen for the treatment and prevention of exacerbations of COPD. SNG001 has already been shown to improve lung function and symptoms in patients with severe asthma when they get a cold or flu infection. Synairgen has initiated a two-part Phase II clinical trial (commenced February 2018), and is assessing patient safety in 10 COPD patients without viral infections in Part 1 (anticipated to complete in Q2 2018), prior to assessing efficacy parameters in 80 COPD patients with confirmed virus in Part 2, who will be dosed for 14 days.

LOXL2 inhibitors for fibrotic indications

Inhibitors of LOXL2 to treat IPF, NASH and other fibrotic conditions

Synairgen has been collaborating with Pharmaxis Ltd to develop inhibitors of LOXL2 and has a share of circa 17% of any net licensing proceeds that Pharmaxis receives from the licensing of its LOXL2 inhibitors for fibrotic indications.

Hypothesis for treatment of IPF and NASH

LOXL2 is an enzyme which is increased in fibrotic disease and cross-links collagen (the major constituent of scar tissue) to stiffen tissue. In fibrotic diseases, the accumulation of scar tissue and resulting increases in tissue stiffness impairs organ function. It is intended that softening the tissue by inhibiting collagen cross-linking caused by this excessive LOXL2 can break the cycle of fibrosis.

Pre-clinical evidence to date

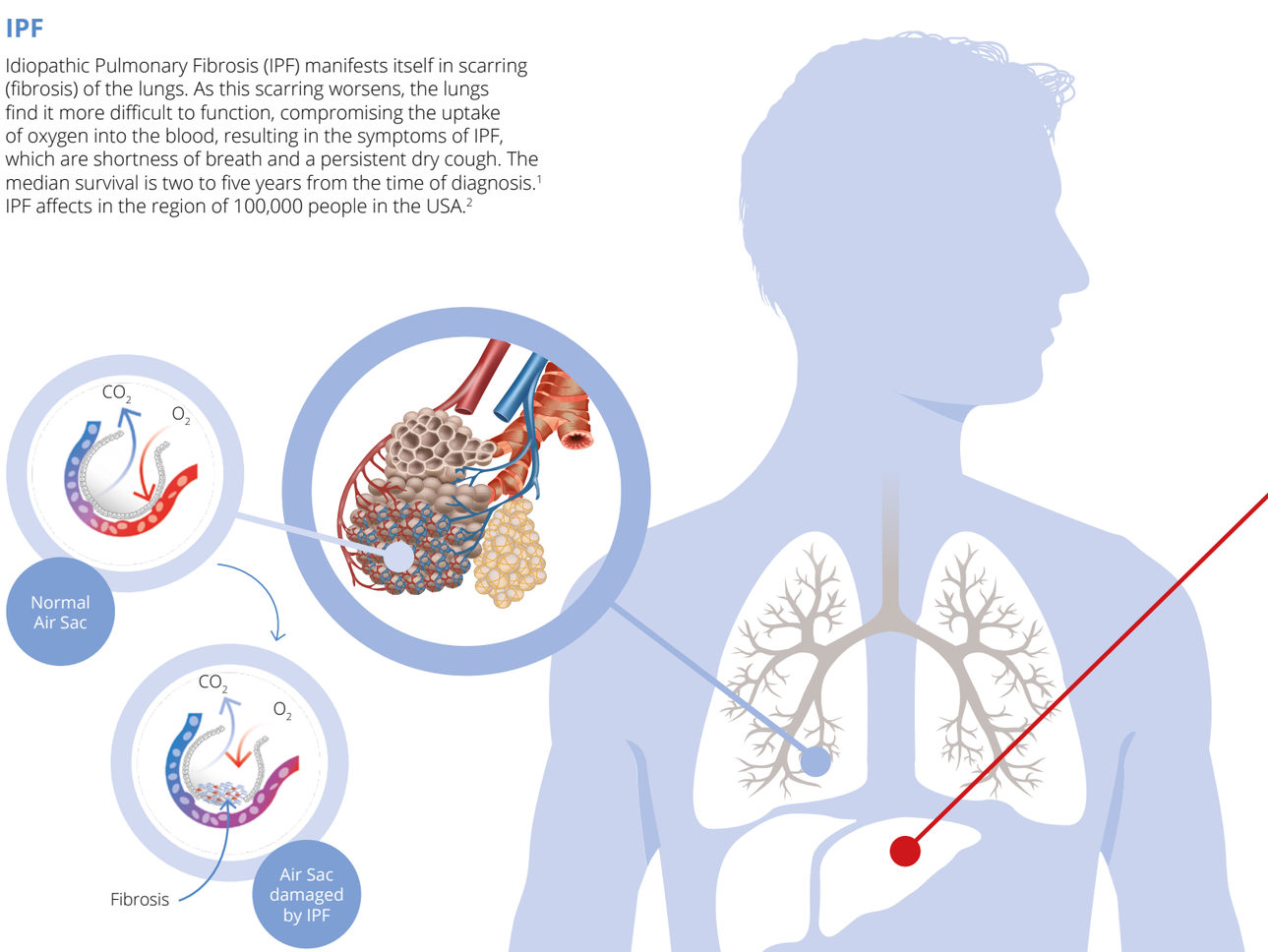
Data generated by Synairgen in *in vitro* and *in vivo* models of fibrosis has shown the potential of LOXL2 selective inhibitors to reduce the stiffness of fibrotic lung tissue. Data generated *in vivo* by Pharmaxis has shown the potential of LOXL2 selective inhibitors to limit disease in a progressive model of liver fibrosis.

Clinical status

Two small molecule LOXL2 selective inhibitors are currently in Phase I clinical trials, with results expected later in 2018.

IPF

Idiopathic Pulmonary Fibrosis (IPF) manifests itself in scarring (fibrosis) of the lungs. As this scarring worsens, the lungs find it more difficult to function, compromising the uptake of oxygen into the blood, resulting in the symptoms of IPF, which are shortness of breath and a persistent dry cough. The median survival is two to five years from the time of diagnosis.[1] IPF affects in the region of 100,000 people in the USA.[2]



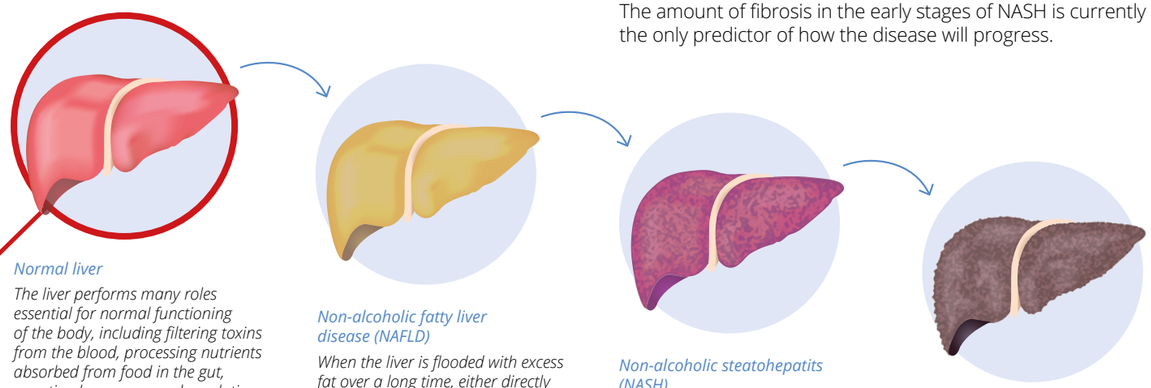
NASH

Non-alcoholic steatohepatitis (NASH) is a liver disease in which fat deposits in the liver lead to inflammation and tissue damage. Risk factors include obesity, insulin resistance and type 2 diabetes, high blood pressure and age. Worldwide, around 25% of adults[3] are estimated to have non-alcoholic fatty liver disease (NAFLD), with similar proportions in the USA and Europe, and occurrence is increasing with levels of obesity.

Diagnosis of NASH is difficult, but recent studies estimate that NASH may be present in up to 30% of people with NAFLD.[3] In some cases, NASH progresses to liver fibrosis and ultimately cirrhosis and possibly cancer, with some 600,000 people in the USA having progressed to NASH-related cirrhosis in 2012.[4]

NASH is projected to be the most common cause of liver transplant in the coming decade, yet there are currently no effective drug therapies available in the marketplace.[5]

The amount of fibrosis in the early stages of NASH is currently the only predictor of how the disease will progress.



Normal liver

The liver performs many roles essential for normal functioning of the body, including filtering toxins from the blood, processing nutrients absorbed from food in the gut, secreting hormones, and regulating the concentrations of sugar, fat and protein in the blood. Under normal conditions it is able to maintain a balance between absorbed nutrients and the requirements of the body, storing small amounts of carbohydrates and fat and releasing them as needed.

Non-alcoholic fatty liver disease (NAFLD)

When the liver is flooded with excess fat over a long time, either directly from the diet, released from insulin-resistant fatty tissue, or converted from sugars in the liver, the liver cells accumulate large fat deposits and become enlarged, a process called steatosis. This process can be reversed if fat intake is reduced.

Non-alcoholic steatohepatits (NASH)

In some cases, enlarged fatty liver cells become stressed and start to die, leading to inflammation of the liver and scarring, as the liver cells are replaced by the cells and collagen that form scar tissue. This is known as NASH, and may develop in up to 30% of people with NAFLD.

Cirrhosis

As fibrosis progresses, large areas of the liver are replaced by very stiff scar tissue, greatly impairing the function of the liver. This is known as cirrhosis, and can result in liver failure and increases the risk of developing liver cancer.

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Strategic Report

The directors present their Strategic Report for the year ended 31 December 2017.

Principal activities and strategy

Synairgen plc (the 'Company') is the holding company for Synairgen Research Limited, a respiratory drug discovery and development company.

Synairgen leverages its deep understanding of respiratory biology to discover and develop novel therapies in areas of high unmet respiratory medical need, including severe asthma, chronic obstructive pulmonary disease (COPD) and idiopathic pulmonary fibrosis (IPF). Using our BioBank platform (consisting of human tissue models of respiratory disease), and our clinical trial capabilities, Synairgen's strategy is to identify novel drug targets, progress them through early stage clinical trials and license them to partners to advance through to commercialisation. A glossary on pages 51 to 53 provides additional explanation of some of the more detailed scientific and clinical terminology.

Operating Review

Summary

We closed 2017 in a strong position, having met a number of challenges during the year. AstraZeneca returned rights to the inhaled interferon beta (IFN-β) asset, enabling Synairgen to progress the programme for COPD, where there is significant unmet medical need. We also made good progress with Pharmaxis, successfully taking a LOXL2 inhibitor through pre-clinical activities into a Phase I clinical trial. In response to considerable interest in the role of LOXL2 as a molecular target in non-lung indications, we updated the collaboration agreement, with Pharmaxis assuming all future development, licensing and financing responsibilities. Synairgen received £5 million and a 17% interest in any future licence income received by Pharmaxis across all potential fibrotic indications.

Inhaled interferon beta programme

Clinical need and identification of high risk patients

Respiratory viruses (e.g. those responsible for common cold and flu infections) do not often cause serious illness in healthy people. In contrast, in patients with asthma and COPD these infections are much more likely to spread to the lungs, worsening pre-existing lung inflammation, and exacerbating disease symptoms. There is a great need for an antiviral therapy that can be delivered directly to the lungs when patients are at risk from these common respiratory viruses.

Inhaled IFN-β to boost the lungs' antiviral defences

IFN-β is a natural protein made by lung cells when a virus is detected. IFN-β 'orchestrates' many antiviral pathways. *In vitro* experiments have shown IFN-β production to be deficient or insufficient in asthma and COPD patients' lung cells, compared with cells from healthy individuals when infected by respiratory viruses. This makes these patient groups more susceptible to infection. Synairgen has progressed inhaled IFN-β into clinical trials as a drug to be given at the time of respiratory virus infection to boost the lung's defences.

Asthma or COPD

Both asthma and COPD patients suffer from exacerbations (acute worsening) of their disease. These exacerbations are strongly linked to common viral infections. COPD patients can also exacerbate due to bacterial lung infections and other environmental factors. Up until recently, the difficulty of excluding bacterial infections in COPD led us to advancing inhaled IFN-β for asthma over COPD, even though the health economic impact of viral infections is much greater for COPD.

Asthma

Inhaled IFN-β has boosted markers of antiviral defence in the lungs in three clinical trials in asthma, confirming successful delivery to the target organ and demonstrating proof of activation of the mechanism. In all clinical trials completed so far, inhaled IFN-β has been well tolerated. In the two Phase II clinical trials that have been conducted in asthma (SG005 by Synairgen and INEXAS by AstraZeneca) the drug has significantly accelerated a recovery in lung function in patients who have been infected with a respiratory virus. In both trials, a subset of more difficult to treat patients had better asthma control during viral infection. However, the rate of exacerbation (defined as requiring oral steroids or hospitalisation) was too low (less than 10%) to determine whether the drug was providing benefit. This rate of exacerbation was similar to a 2017 trial conducted by Aviragen where the rate was found to be approximately 7%.[1] Thus exacerbations, when they do occur in asthma, are strongly linked to viral cold infections (up to 80% being caused by colds[2]), however the chance that a patient is going to exacerbate when they get their next cold was deemed likely to be too low to support an attractive pricing point for the drug, making progression in asthma challenging. AstraZeneca returned the asset to Synairgen for 'strategic reasons'.

The move towards COPD

In all trials undertaken to date in asthma, the biomarker responses and the clinical effect were encouraging, particularly the positive improvements in lung function. The issue was that the asthma population, whilst easier to characterise for trial enrolment purposes, did not see a sufficient number of exacerbations to properly measure the impact of drug. Synairgen has long identified COPD as a disease where virally-driven exacerbations are recognised to be a significant health economic burden. COPD is the second most common cause of unplanned hospitalisation after cardiovascular disease,[3] and it is no coincidence that most of these exacerbations occur in the winter months.

Hitherto, the challenge in COPD was to identify patients who were infected with a virus rather than bacteria or other causes of exacerbation. The upshot of this was that the trial size required in order to have sufficient evidence of the drug's effect would have resulted in an excessively long duration, high cost and would still have run the risk of significant numbers of non-virally infected patients being treated, thereby potentially diluting the results of the trial.

Substantial progress was made on both of these elements in 2017:

- First, two papers were published which clarify the interaction of viruses with COPD. One paper shows that, when looking at all colds in the study period, the risk that a cold will cause an exacerbation of COPD is around 50%,[4] much greater than the <10% figure in asthma. The second paper[5] shows that there is a strong interaction between seasonal viruses and bacteria which permanently colonise the COPD patients' lungs, greatly increasing the chance that a patient will exacerbate. These papers both establish, what most hospitals know through experience, that COPD sufferers are significantly more likely to have severe virus-induced exacerbations than asthmatics.
- Second, a new point of care diagnostic test has been launched in 2017 which enables the confirmation of the presence of a respiratory virus in less than 60 minutes. This test will be used in clinical trials to confirm the presence of the virus. This makes clinical trials in COPD feasible as we can exclude patients who present to healthcare providers with only bacterial or environmental drivers of their condition. It also makes the trials more efficient and less costly to run; in the two asthma trials we were able to confirm the presence of a virus in 63% of patients in SG005, and 48% of patients in the INEXAS trial. In the recently started COPD trial, 100% of patients in the efficacy analysis will have a confirmed viral infection prior to initiation of treatment. This will allow the drug to show its activity against the target viral infections without the dilutive effect of trial subjects who are exacerbating for some other reason (bacterial or environmental).

COPD development

We are progressing inhaled IFN-β in COPD. Starting with a two-part Phase II clinical trial (commenced February 2018), we are assessing patient safety in 10 COPD patients without viral infections in Part 1 (anticipated to complete in Q2 2018), prior to assessing efficacy parameters in 80 COPD patients with confirmed virus in Part 2, who will be dosed for 14 days. All of the patients in Part 2 will be tested for the presence of virus prior to dosing. This trial, which is anticipated to finish during the 2018/19 winter season, is designed to pave the way for a pivotal Phase IIb clinical trial. Preparatory work for the Phase IIb clinical trial will commence in 2018.

LOXL2 collaboration with Pharmaxis

LOXL2 in fibrosis

LOXL2 is an enzyme which 'knits together' collagen fibres, increasing the rigidity of tissue as a component of the fibrosis pathology. LOXL2 is implicated in major fibrotic diseases such as the liver disease NASH (Non-alcoholic Steatohepatitis), heart fibrosis, kidney fibrosis and the lung disease idiopathic pulmonary fibrosis (IPF).

Collaboration with Pharmaxis

In the collaboration with Pharmaxis, Synairgen assisted in the development and selection of compounds for progression, and used our BioBank and *in vitro* model platform to generate compelling data to support the development of compounds for IPF. This included generating data from a fibroblastic focus model (developed in collaboration with the University of Southampton) using cells from IPF patients, in which we showed that treatment with LOXL2 inhibitors had the potential to reduce lung tissue stiffness. Lung tissue stiffness is a key factor in IPF as it makes it increasingly difficult for a patient to breathe.

Synairgen completed the pre-clinical package for PXS-5382 and commenced a Phase I trial in Q4 2017.

Large pharma interest in non-IPF indications and renegotiation of collaboration agreement

During the year, it became evident that potential large pharma partners were very interested in the collaboration's compounds. However, that interest was not solely in IPF but included significant other non-respiratory indications, particularly NASH. Pharmaxis generated persuasive data in pre-clinical models showing that the inhibitors could reduce liver fibrosis and improve liver function. It became increasingly important that we reconfigure the collaboration with Pharmaxis to allow the lifting of certain constraints in the collaboration agreement to allow Pharmaxis to pursue a multi-compound multi-indication deal. In December 2017 we permanently passed full development, financial and licensing responsibilities to Pharmaxis in return for £5 million and a retained interest in the programme of 17% of the fibrotic indication licensing revenue received by Pharmaxis. In its half yearly report for the six months ended 31 December 2017 dated 15 February 2018, Pharmaxis stated that it plans to partner the LOXL2 program in the second half of 2018 following Phase I trial readout. For more information on the development and licensing of the LOXL2 inhibitors visit www.pharmaxis.com.

New opportunities

The LOXL2 programme is an example of the type of collaboration we seek. It is a demonstration of the value of our approach and technology. In this collaboration we contributed expertise and used our human biology based approach which utilised our BioBank-based *in vitro* model platform and the strong ties we have with the University of Southampton to add value in a collaboration. We are actively assessing new opportunities with similar potential.

Key performance indicators (KPIs)

The Board considers that the most important KPIs are non-financial and relate to the progress of the scientific programmes which are discussed in the preceding section of this report.

The most important financial KPIs are the cash position and operating result of the Group. At 31 December 2017 cash and deposit balances amounted to £6.85 million (2016: £4.77 million) and were above budgeted levels. The operating profit of £1.62 million (2016: loss of £3.44 million) was also favourable to the budgeted result for the year.

Financial Review

The Financial Review should be read in conjunction with the consolidated financial statements of the Company and Synairgen Research Limited (together the 'Group') and the notes thereto on pages 29 to 42. The consolidated financial statements are presented under International Financial Reporting Standards as adopted by the European Union.

The financial statements of the Company, set out on pages 43 to 46, are prepared in accordance with Financial Reporting Standard 101 *Reduced Disclosure Framework*.

Statement of Comprehensive Income

The profit from operations for the year ended 31 December 2017 was £1.62 million (2016: loss £3.44 million). Revenues of £5.03 million (2016: £nil) comprised the £5 million payable by Pharmaxis as consideration for the change in terms (as discussed above) and the balance of revenues are attributable to materials provided to AstraZeneca. Research and development expenditure for the year amounted to £2.06 million (2016: £2.42 million), and was focussed primarily on two programmes, namely the LOXL2 programme and preparation for the interferon beta Phase II clinical trial in COPD.

Other administrative costs for the year amounted to £1.35 million (2016: £1.02 million), with the increase being attributable to higher staff costs on account of bonuses. As the Group was in profit, there was a reduction in the research and development tax credit from £0.59 million to £0.13 million. The profit after tax for 2017 was £1.76 million (2016: loss of £2.82 million) and the basic earnings per share amounted to 1.93p (2016: basic loss per share of 3.08p).

Statement of Financial Position and cash flows

At 31 December 2017, net assets amounted to £6.56 million (2016: £4.69 million), including net funds of £6.85 million (2016: £4.77 million).

The principal elements of the £2.08 million increase over the year ended 31 December 2017 (2016: £2.94 million decrease) in net funds were:

- Cash generation from operations of £1.45 million (2016: £3.32 million used in operations); and
- Research and development tax credits received of £0.62 million (2016: £0.33 million).

The increase in trade and other receivables (2017: £0.63 million, 2016: £0.09 million) is attributable to amounts billed or billable to Pharmaxis at 31 December 2017 as a result of the transaction referred to above. The increase in trade and other payables (2017: £1.10m, 2016: £0.86m) is attributable to the bonus accrual at 31 December 2017 (2016: £nil).

Principal risks and uncertainties

The Board considers that the principal risks and uncertainties facing the Group may be summarised as follows:

- *Reliance on the interferon beta and LOXL2 programmes*

  The Group currently has an interest in two programmes: the interferon beta programme for COPD, which post period-end has entered into Phase II, and the LOXL2 programme (which is now operationally controlled by Pharmaxis), which is in Phase I.

  The Group continues to review additional development opportunities, sourced inter alia through its Key Opinion Leader network, which it hopes will enable it to broaden and diversify its portfolio further. However there can be no guarantee that either the Group's due diligence activities will be satisfactorily complete or that the Group will be able to in-license such opportunities on reasonable commercial terms.

- *Failure to generate innovative discoveries*

  There can be no guarantee that the Group will successfully develop new pharmaceutical products.

- *Loss of the BioBank*

  The Group's BioBank of well-characterised human tissue, which has been built up over many years, is a significant element of its technology platform and is important in relation to the evaluation and development of future opportunities. Rebuilding the BioBank would take time and incur cost.

  The Group follows a defined policy to minimise the chances of loss of the BioBank, including storing it in a number of different locations at Southampton General Hospital.

- *Pre-clinical development, clinical development and regulatory risk*

  The development of pharmaceutical drugs requires that, upon satisfactory completion of pre-clinical work, the necessary safety and efficacy be demonstrated in clinical programmes in order to meet the requirements of the appropriate regulatory bodies. There can be no guarantee that the necessary safety or efficacy will be demonstrated or that the clinical trials will not be delayed or extended. There can be no guarantee that any of the Group's therapies will be able to obtain or maintain the necessary regulatory approvals.

  The Group seeks to reduce this risk by seeking advice from toxicology experts, closely monitoring the progress of recruitment on clinical trials, drawing on the experience of its Founders, seeking advice from regulatory advisers, holding consultations with the appropriate regulatory bodies, and consulting with its collaboration partners.

- *Intellectual property risk*

  The commercial success of the Group depends on its ability to obtain patent protection for its pharmaceutical discoveries in the US, Europe and other countries and to preserve the confidentiality of its know-how. There is no guarantee that patent applications will succeed or be broad enough to provide protection for the Group's intellectual property rights and exclude competitors with similar pharmaceutical products. The success of the Group is also dependent on non-infringement of patents, or other intellectual property rights, held by third parties. Competitors and third parties may hold intellectual property rights which the Group may not be able to license upon favourable terms, potentially inhibiting the Group's ability to develop and exploit its own business. Litigation may be necessary to protect the Group's intellectual property which may result in substantial costs.

  The Group seeks to reduce this risk by seeking patent attorney advice that patent protection will be available prior to investing in a project, by seeking patent protection where appropriate and by minimising disclosure to third parties.

- *Commercial risk*

  There can be no guarantee that the Group will succeed in securing and maintaining the necessary contractual relationships with licensing partners for its programmes under development. Even if the programmes are successfully out-licensed and pharmaceutical products are brought to market by a partner, there is no guarantee that such products will succeed in the marketplace.

  The Group seeks to reduce this risk by structuring its development programmes to meet the needs and requirements of its potential partners and by engaging with partners who have the appropriate experience, resource and interest to bring such pharmaceutical products to the global marketplace.

- *Competition risk*

  The Group's current and potential competitors include pharmaceutical and biotechnology companies and academic institutions, many of whom have significantly greater financial resources than the Group. There can be no assurance that competitors will not succeed in developing products that are more effective or economic than any developed by the Group, or which would render the Group's products non-competitive or obsolete.

- *Funding risk*

  The Group continues to consume cash resources. Until the Group generates positive net cash inflows from successful out-licensing transactions and commercialisation of its products, it remains dependent upon securing additional funding through the injection of capital from share issues. The Group may not be able to generate positive net cash flows in the future or attract such additional funding required at all, or on suitable terms. In such circumstances, the Group's discovery and development programmes may be delayed or cancelled and the business operations curtailed.

  The Group seeks to reduce this risk through tight financial control, prioritising programmes which will generate the best returns and keeping shareholders informed on progress.

- *Dependence on Founders, senior management and key staff*

  The Founders and certain members of staff are highly skilled scientists and clinicians. The Group has deliberately pursued a lean headcount policy to conserve financial resources. Failure to continue to attract and retain such individuals could adversely affect operational results.

  The Group seeks to reduce this risk by appropriate incentivisation of staff through participation in long term equity incentive schemes.

- *Brexit*

  Following the referendum vote in June 2016 the UK government started the withdrawal process from the European Union in March 2017, putting the UK on course to leave by April 2019.

  At this stage it still remains unclear as to what the long term impact will be.

Outlook

We closed the financial year in a strong position. We have full possession of the inhaled IFN-β programme which is being progressed to prevent or attenuate exacerbations of COPD caused by respiratory viruses and remain very excited by this asset. We also have a lasting interest in the potentially high value LOXL2 programme being progressed by Pharmaxis. In addition, we have a number of potentially attractive new programmes under review which gives us confidence in further development of our collaborative pipeline in the coming periods.

By order of the Board

John Ward
Company Secretary

14 March 2018

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Synairgen's Founders

Prof. Stephen Holgate CBE is MRC Clinical Professor of Immunopharmacology at the University of Southampton

Prof. Donna Davies is Professor of Respiratory Cell and Molecular Biology at the University of Southampton

Prof. Ratko Djukanovic is Professor of Medicine at the University of Southampton

Directors

Simon Shaw
Non-executive Chairman

Simon Shaw joined Synairgen as executive Chairman on its inception in June 2003 and became non-executive Chairman in October of that year. He is Group Chief Financial Officer of Savills plc. He was Chief Financial Officer of Gyrus Group PLC from 2003 until its sale to Olympus Corporation in 2008, having previously been Chief Operating Officer of Profile Therapeutics plc between 1998 and 2003. Between 1991 and 1997 he was a corporate financier, latterly at Hambros Bank Limited. He is a chartered accountant.

Dr Phillip Monk
Chief Scientific Officer

Phillip Monk joined Synairgen in October 2006 as Head of Bioscience Development and was appointed to the Board as Chief Scientific Officer in September 2009. Phillip was previously Director of the Respiratory and Inflammation Biology group at Cambridge Antibody Technology ('CAT'). Prior to joining CAT, he worked at Bayer AG within the respiratory disease therapeutic area, focusing on the development of novel therapies for asthma, COPD and cystic fibrosis.

Iain Buchanan
Non-executive Director

Iain Buchanan was appointed as a non-executive director in June 2010 and brings to the company over 40 years of management experience in the pharmaceutical and biotech industries. Most recently he was CEO of NOXXON Pharma AG based in Berlin and previously he was CEO of Novexel S.A. based in Paris. He joined Novexel from Vertex Pharmaceuticals where he established the European affiliate. Prior to Vertex, Iain managed the international licensee business of Cilag AG - a subsidiary of Johnson and Johnson - based in Switzerland. Iain serves as Chairman of the Board for Adapsyn Bioscience Inc. and as a non-executive director for Allecra Therapeutics GmbH.

Dr Bruce Campbell
Non-executive Director

Bruce Campbell joined Synairgen as a non-executive Director in April 2006. He has 45 years of drug development experience and has developed many drugs in a wide range of indications which are now on the market. He currently acts as a consultant to various companies including Proximagen Limited. Formerly he was Senior VP of International Development at Neurocrine Biosciences, Inc. ('Neurocrine'). Prior to joining Neurocrine he worked for 27 years at Servier (United Kingdom), latterly as Scientific Director. In addition, he has also been a director and European Chairman of the Drug Information Association, a member of the European ICH Safety Working Party and a scientific advisor to IP Group plc. He is a visiting Professor in Pharmacology at King's College, London.

Richard Marsden
Chief Executive Officer

Richard Marsden joined Synairgen in a consulting role as General Manager in November 2003, was appointed to the Board as Managing Director in June 2004 and appointed Chief Executive Officer in September 2009. Between 1998 and 2003 he worked as Projects Manager and Cystic Fibrosis Business Development Manager at Profile Therapeutics plc, where he managed the Cystic Fibrosis business and played a major role in the development of its proprietary pharmaceutical unit, Profile Pharma Limited. Prior to this, he worked for Zimmer Limited, Genentech (UK) Limited and Roche Products Limited.

John Ward
Finance Director

John Ward joined Synairgen in October 2004 as Finance Director. From December 1999 to July 2004 he was Chief Financial Officer and Company Secretary of Profile Therapeutics plc and was appointed to the Profile Therapeutics board in March 2003. From 1996 to 1999 he was Finance Director of Rapid Deployment Group Limited, the UK holding company for the healthcare operations of Ventiv Health, Inc. Prior to joining Rapid Deployment he was a Director of Corporate Finance at Price Waterhouse. He is a chartered accountant.

Paul Clegg
Non-executive Director

Paul Clegg was appointed as a non-executive director of Synairgen in September 2009. He is Chief Executive Officer of Accsys Technologies PLC, Chairman of Tricoya Technologies Ltd and a non-executive director of Peel Hunt LLP. Paul was previously Managing Director and Chief Executive Officer of Cowen International Limited and director of Cowen Asset Management Limited until June 2008. After over twenty years working in the investment banking industry, Paul joined Accsys Technologies PLC, a company quoted on AIM and the Amsterdam Euronext Exchange, which has developed the process and the commercial industrialisation of wood acetylation, as Chief Executive Officer in August 2009.

Prof. Stephen Holgate CBE
Non-executive Director

Stephen Holgate is a co-founder of Synairgen and was appointed a non-executive director in June 2003. After qualifying in Medicine at Charing Cross Hospital Medical School, London he has pursued an academic career leading to his appointment in 1987 to his current position as Medical Research Council Clinical Professor of Immunopharmacology at the University of Southampton. His research interests have been largely focused on the cellular and molecular mechanisms of asthma that has involved use of both epidemiological and genetic approaches. He has published over 1000 papers in peer-reviewed literature. He is Member of the Science Europe Medical Science Committee and Horizon 2020 Health Science Panel; Board Chair of the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs); Chairman of Defra's Hazardous Substances Advisory Committee; Trustee and Chair of the Research Strategy Committee of Cancer Research UK; Chair of the research committee of the British Lung Foundation (and Trustee); Trustee and Chair of The Kennedy Trust for Rheumatology Research; and Member of the UK Research & Innovation NERC Council. He serves on a number of Advisory Committees in industry including scientific board member or advisor to a number of companies, including Teva and Novartis.


Simon Shaw


Richard Marsden


Dr Phillip Monk


John Ward


Iain Buchanan


Dr Bruce Campbell


Paul Clegg


Prof. Stephen Holgate CBE

Directors' Report

The directors present their report and the audited financial statements for Synairgen plc (the 'Company') and its subsidiary (together the 'Group') for the year ended 31 December 2017.

The review of future developments is covered in the Strategic Report. Details of directors' remuneration and share options are given in the Directors' Remuneration Report.

Research and development

During the year ended 31 December 2017, the Group has invested £2,061,000 (2016: £2,418,000) in research and development activities and a review of this expenditure is included in the Strategic Report.

Capital structure and funding

The Group is funded by equity capital, reflecting the early stage nature of its discovery and development programmes.

The Group considers its capital to be its total equity, which at 31 December 2017 amounted to £6.56 million (2016: £4.69 million). The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns to equity holders of the Company and benefits to other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Group manages this objective through tight control of its cash resources and, upon reaching significant drug development programme milestones (to decrease investment risk), by raising additional equity from shareholders to meet its forecast future cash requirements.

Net funds held by the Group at 31 December 2017 amounted to £6.85 million and comprised short-term deposits (with original maturities of greater than three months and less than one year) and cash and cash equivalents as shown below.

	31 Dec				
	2017 £m	2016 £m	2015 £m	2014 £m	2013 £m
Short-term deposits	2.00	1.66	3.72	6.75	0.46
Cash and cash equivalents	4.85	3.11	3.99	2.85	0.83
Net funds	6.85	4.77	7.71	9.60	1.29

The Group did not have any bank borrowings as at 31 December 2017 (2016: £nil).

There have been seven significant issues of shares raising a total (net of costs) of £27.1 million, with the most recent raising £4.98 million in July 2014. The other major sources of funding received by the Group from the formation of the business until 31 December 2017 have been: revenues from licensing transactions of £9.25 million, research and development tax credits of £3.67 million, bank interest of £1.73 million, and revenues from collaborative work of £0.69 million.

Treasury policy and financial risk management

Credit risk

The Group follows a risk-averse policy of treasury management. Sterling deposits are held with one or more approved UK-based financial institutions and in the Institutional Cash Series plc Institutional Sterling Liquidity Fund managed by BlackRock Investment Management (UK) Limited. The Group's primary treasury objective is to minimise exposure to potential capital losses whilst at the same time securing prevailing market rates.

Interest rate risk

The Group's deposit balances are subject to the risk of fluctuating base rates. During the year under review some of the deposits were placed on fixed rate terms. The interest rate profile of financial assets is illustrated in note 16 to the financial statements.

Currency risk

During the year under review, the Group was exposed to Australian dollar, Canadian dollar, Euro and US dollar currency movement as the Pharmaxis collaboration involved expenditure in all these currencies. The largest exposure related to the Australian dollar as the Phase I clinical trial was conducted in Australia. To hedge against currency movement, the Group purchased Australian dollars before the payment was due.

Dividends

The directors do not propose the payment of a dividend.

Substantial shareholdings

As at 14 March 2018, the Company had been advised of the following shareholders with interests of 3% or more in its ordinary share capital:

Name of shareholder	Number of ordinary shares	% of share capital
Woodford Investment Management LLP	21,091,651	23.1%
Lansdowne Partners International Limited	16,923,111	18.5%
Richard Griffiths	13,416,112	14.7%
Leonard Licht	3,700,000	4.1%
Southampton Asset Management Limited	3,600,000	3.9%

Directors

The directors of the Company during the year ended 31 December 2017 were:

Executive directors:

Richard Marsden (Chief Executive Officer)
Dr Phillip Monk (Chief Scientific Officer)
John Ward (Finance Director)

Non-executive directors:

Simon Shaw (Chairman)
Iain Buchanan
Dr Bruce Campbell
Paul Clegg
Prof. Stephen Holgate CBE

Directors' interests in ordinary shares

The directors, who held office at 31 December 2017, had the following interests in the ordinary shares of the Company:

	1 January and 31 December 2017 Number of shares
Richard Marsden	154,432
Dr Phillip Monk	183,439
John Ward	276,506
Simon Shaw (i)	1,474,096
Iain Buchanan	112,741
Dr Bruce Campbell (ii)	294,259
Paul Clegg (iii)	204,244
Prof. Stephen Holgate (iv)	858,360

(i) Simon Shaw's shareholding includes 105,516 shares held in his pension plan.

(ii) Dr Bruce Campbell's shareholding includes 40,299 shares owned by his wife, Susan Campbell.

(iii) Paul Clegg's shareholding includes 180,149 shares held in his pension plan.

(iv) Prof. Stephen Holgate's shareholding includes 1,923 shares owned by his wife, Elizabeth Holgate.

Between 31 December 2017 and the date of this report there has been no change in the interests of directors in shares as disclosed in this report.

Directors' and officers' liability insurance

Qualifying indemnity insurance cover has been arranged in respect of the personal liabilities which may be incurred by directors and officers of the Group during the course of their service with the Group. This insurance has been in place during the year and on the date of this report.

Auditors

All of the current directors have taken all the steps that they ought to have taken to make themselves aware of any information needed by the Company's auditors for the purposes of their audit and to establish that the auditors are aware of that information. The directors are not aware of any relevant audit information of which the auditors are unaware.

By order of the Board

John Ward

Company Secretary

14 March 2018

Corporate Governance

The Board is accountable to the Company's shareholders for good corporate governance and it is the objective of the Board to attain a high standard of corporate governance. As an AIM-quoted company, full compliance with The UK Corporate Governance Code (the 'Code') is not a formal obligation. The Company has not sought to comply with the full provisions of the Code, however it has sought to adopt the provisions that are appropriate to its size and organisation and establish frameworks for the achievement of this objective. This statement sets out the corporate governance procedures that are in place.

We note that the AIM rules are due to be updated from later in 2018 to require a statement as to how we comply with a recognised corporate governance code. We believe that this section largely complies with those proposed modifications but will review the position once the rules are amended.

Board of Directors

On 31 December 2017 the Board of directors (the 'Board') consisted of a non-executive Chairman (Simon Shaw), three executive directors (Richard Marsden, Dr Phillip Monk and John Ward), and four non-executive directors (Iain Buchanan, Dr Bruce Campbell, Paul Clegg and Prof. Stephen Holgate). Brief details about the directors are given on pages 15 and 16. The responsibilities of the non-executive Chairman and the Chief Executive Officer are clearly divided. The non-executive directors bring relevant experience from different backgrounds and receive a fixed fee for their services and reimbursement of reasonable expenses incurred in attending meetings.

The Board retains full and effective control of the Group. This includes responsibility for determining the Group's strategy and for approving budgets and business plans to fulfil this strategy. There are a number of Scheduled Board meetings and the Board also meets on any other occasions it considers necessary. During the year ended 31 December 2017, the Board met five times for Scheduled Board meetings, with each member attending as follows:

Director	Number of meetings held whilst a Board member	Number of meetings attended
Simon Shaw	5	5
Richard Marsden	5	5
Dr Phillip Monk	5	5
John Ward	5	5
Iain Buchanan	5	5
Dr Bruce Campbell	5	5
Paul Clegg	5	5
Prof. Stephen Holgate	5	3

In addition there were twelve other meetings, to which Board members were invited, during the year.

It is the duty of the Chairman to ensure that all directors are properly briefed on issues arising at Board meetings. Prior to each Board meeting, directors are sent an agenda and Board papers for each agenda item to be discussed. Additional information is provided when requested by the Board or individual directors.

The Company Secretary is responsible to the Board for ensuring that Board procedures are followed and that the applicable rules and regulations are complied with. All directors have access to the advice and services of the Company Secretary, and independent professional advice, if required, at the Company's expense. Removal of the Company Secretary would be a matter for the Board.

As appropriate, the Board has delegated certain responsibilities to Board committees.

Audit Committee

The Audit Committee currently comprises Simon Shaw (Chairman), Iain Buchanan and Dr Bruce Campbell. Whilst it is not normal in larger companies for the chairman of the Company to chair the Audit Committee, the Company considers it appropriate for Simon Shaw to be Chairman as he is considered to have the most significant, recent and relevant financial experience of the non-executive directors.

The committee has primary responsibility for ensuring that the financial performance of the Group is properly measured and reported on and it reviews the interim financial information and annual financial statements before they are submitted to the Board. The committee reviews accounting policies and material accounting judgements. The committee also reviews, and reports on, reports from the Group's auditors relating to the Group's accounting controls. It makes recommendations to the Board on the appointment of auditors and the audit fee. The committee monitors the scope, results and cost-effectiveness of the audit. It has unrestricted access to the Group's auditors. In certain circumstances it is permitted by the Board for the auditors to supply non-audit services (in the provision of tax advice, or on specific projects where they can add value). The committee has approved and monitored the application of this policy in order to safeguard auditor objectivity and independence. The overall fees paid to the auditors are not deemed to be of such significance to them as to impair their independence. The Group does not have an internal audit function, but the Board considers that this is appropriate, given the size of the Group. The committee keeps this matter under review annually. During the year ended 31 December 2017, the committee met twice with all members attending both meetings.

Remuneration and Nomination Committee

The Remuneration and Nomination Committee currently comprises Paul Clegg (Chairman), Dr Bruce Campbell and Simon Shaw. The committee is responsible for making recommendations to the Board on remuneration policy for executive directors and the terms of their service contracts, with the aim of ensuring that their remuneration, including any share options and other awards, is based on their own performance and that of the Group generally. The committee administers the Long-Term Incentive Plan, the staff share option scheme and the Qualifying Non-Employee Option Scheme and approves grants under all three schemes. It also advises on the remuneration policy for the Group's employees. The committee is responsible for all senior appointments that are made within the Group. During the year ended 31 December 2017, the committee met twice with all members attending both meetings.

Scientific Advisory Board

The Company established a Scientific Advisory Board ('SAB') in 2016. The purpose of the SAB is to provide strategic advice and input on scientific aspects of Synairgen's research and development projects.

The SAB currently comprises Dr Phillip Monk (Chairman), Iain Buchanan, Dr Bruce Campbell, and Synairgen's three academic founders (Professors Stephen Holgate, Donna Davies and Ratko Djukanovic). Other external experts and Synairgen employees attend meetings as required. The SAB meets biannually on a scheduled basis with extra meetings as required. Dr Bruce Campbell is responsible for feeding back the outputs from the SAB to the Company's Board.

Investor relations

The directors seek to build a mutual understanding of objectives between the Company and its shareholders by meetings with major institutional investors and analysts after the Company's preliminary announcement of its year-end results and its interim results. The Company also maintains investor relations pages on its website (www.synairgen.com) to increase the amount of information available to investors.

There is an opportunity at the Annual General Meeting for individual shareholders to question the Chairman, the Chairmen of the Audit and Remuneration and Nomination committees, and the executive directors. Notice of the meeting is sent to shareholders at least 21 clear days before the meeting. Shareholders are given the opportunity to vote on each separate issue. The Company counts all proxy votes and will indicate the level of proxies lodged on each resolution, after it has been dealt with by a show of hands. Details of the resolutions and explanations thereto are included with the notice, which is set out on pages 47 to 50 of this annual report.

Internal control

The directors are responsible for establishing and maintaining the Group's system of internal control and reviewing its effectiveness. The system of internal control is designed to manage, rather than eliminate, the risk of failure to achieve business objectives and can only provide reasonable but not absolute assurance against material misstatement or loss.

The main features of the internal control system are as follows:

- a control environment exists through the close management of the business by the executive directors. The Group has a defined organisational structure with delineated approval limits. Controls are implemented and monitored by personnel with the necessary qualifications and experience;
- a list of matters reserved for board approval;
- monthly management reporting and analysis of variances;
- financial risks for each major transaction are identified and evaluated by the Board; and
- standard financial controls operate to ensure that the assets of the Group are safeguarded and that proper accounting records are maintained.

By order of the Board

John Ward

Company Secretary

14 March 2018

Directors' Remuneration Report

This report is non-mandatory for AIM-quoted companies and has been produced on a voluntary basis. It includes and complies with the disclosure obligations of the AIM Rules.

Remuneration Committee

The Company's remuneration policy is the responsibility of the Remuneration and Nomination Committee (the 'Committee'), which was established in October 2004. The terms of reference of the Committee are outlined in the Corporate Governance Statement on page 20. The members of the Committee are Paul Clegg (Chairman), Dr Bruce Campbell and Simon Shaw.

The Committee, which is required to meet at least twice a year, met twice during the year ended 31 December 2017. The Chief Executive Officer and certain executives may be invited to attend meetings of the Committee to assist it with its deliberations, but no executive is present when his or her own remuneration is discussed.

During the year, the Committee has been advised on director remuneration by its retained independent remuneration adviser, FIT Remuneration Consultants LLP. No other advice has been provided to the Group by this firm during the year.

Remuneration policy

(i) Executive remuneration

The Committee has a duty to establish a remuneration policy which will enable it to attract and retain individuals of the highest calibre to run the Group. Its policy is to ensure that the executive remuneration packages of executive directors and the fee of the Chairman are appropriate given performance, scale of responsibility, experience, and consideration of the remuneration packages for similar executive positions in companies it considers to be comparable. Packages are structured to motivate executives to achieve the highest level of performance in line with the best interests of shareholders. A significant element of the total remuneration package, in the form of bonus and long term incentive plan ('LTIP') awards, is performance driven.

Executive remuneration currently comprises a base salary, an annual performance-related bonus, LTIP participation, a pension contribution to the executive director's individual money purchase scheme (at 9% of base salary), family private health cover, permanent health and life assurance.

The previous salary and benefit review took effect from 1 January 2016 and there was no review during 2017. Salaries and benefits have been reviewed in March 2018, taking into account Group and individual performance, external benchmark information and internal relativities.

As a consequence of the 2018 review, the following changes were made with effect from 1 January 2018:

	1 January 2016 to 31 December 2017			From 1 January 2018		
	Salary per annum (£000)	Employer pension contribution as a % of salary	Maximum bonus as a % of salary	Salary per annum (£000)	Employer pension contribution as a % of salary	Maximum bonus as a % of salary
Richard Marsden	182	9%	100%	186	9%	100%
Dr Phillip Monk	131	9%	100%	135	9%	100%
John Ward	141	9%	100%	145	9%	100%

Executive directors are also rewarded for improvements in the performance of the Group sustained over a period of years in the form of Long-Term Incentive Plan share awards granted on a discretionary basis by the Committee.

Directors' remuneration for the year ended 31 December 2017 is set out on page 24 of this document.

(ii) Chairman and non-executive director remuneration

The Chairman and the non-executive directors receive a fixed fee of £25,000 per annum. The fixed fee covers preparation for and attendance at meetings of the full Board and committees thereof. A fee of £5,000 per annum is also paid for chairing each of the audit and remuneration committees. The Chairman and the executive directors are responsible for setting the level of non-executive remuneration. The non-executive directors are also reimbursed for all reasonable expenses incurred in attending meetings.

(iii) Annual bonus plan

The Company operates a discretionary bonus scheme for executive directors for delivery of exceptional performance against pre-set relevant corporate objectives, which are subject to malus and clawback provisions. The following bonuses, representing 75% of annual salary, were awarded for the year ended 31 December 2017: Richard Marsden £136,000; Dr Phillip Monk £98,000; and John Ward £106,000, having regards to a balanced scorecard of measures particularly including operational objectives linked to the interferon beta COPD programme and the LOXL2 collaboration with Pharmaxis.

(iv) Equity-based incentive schemes

The Committee strongly believes that long term equity-based incentive schemes increase the focus of employees in improving Group performance, whilst at the same time providing a strong incentive for retaining and attracting individuals of a high calibre.

Long Term Incentive Plan (LTIP)

The Synairgen Long-Term Incentive Plan, comprising conditional (performance-related) share awards (technically structured as nominal cost options pursuant to which participants must pay 1p per share on the exercise of their awards) is the sole on-going long-term incentive vehicle for executive directors.

Senior executives and other employees may be granted an award which will normally vest if demanding performance conditions are achieved over a three-year period and if the grantee remains an employee of the Group.

Grants under the LTIP in any financial year are capped at a maximum of 100% of base salary.

No LTIP grants were made in 2017, largely due to the Company being in prohibited periods for much of the year. The last grant was made in October 2015 and the Committee intends to make an award (the 2018 award) during the six week period following the preliminary announcement of the results for the year ended 31 December 2017, with each of Richard Marsden, Phillip Monk and John Ward being granted awards over shares worth up to 65% of salary, with performance conditions as set out below.

Executive directors are expected to retain no fewer than 50% of shares acquired upon vesting of awards under the LTIP, net of shares sold to pay taxes, until such time as, in combination with any other shares the executives may have acquired, they hold shares with a value equivalent to 100% of base salary.

All awards will lapse at the end of the applicable performance period to the extent that the applicable performance criteria conditions have not been satisfied with no opportunity for retesting. In the event of a good leaver event or a change of control of the Company, the LTIP awards may vest early, but only to the extent that, in the opinion of the Committee, the performance conditions have been satisfied at that time. The awards will generally also be subject to a time pro-rated reduction to reflect the reduced period of time between the grant of the awards and the time of vesting although this reduction may not be applied in certain cases.

Performance conditions for the 2014 and 2015 LTIP awards

The performance conditions for both awards were the same. The awards are subject to two conditions. Firstly, awards will only vest to the extent that the percentage increase in the total shareholder return ('TSR', being the return earned by a shareholder over the performance period in terms of change in the share price and assuming re-investment of any dividends in more shares at the prevailing price on the relevant ex-dividend date) of the Company over the three year performance period is equal or greater than the percentage increase in the techMARK mediscience™ index over the same period as follows:

TSR growth over the performance period less percentage increase in the techMARK mediscience™ index over the same period	Vesting percentage of total number of shares subject to award
Less than 0%	0%
0%	25%
10%	50%
20%	100%
Performance between the steps	Pro-rata on a straight-line basis

Secondly, no award will vest unless the average annual growth in the TSR of the Company over the performance period is equal to or greater than RPI plus 2% or, for more than 75% of an award to vest, annual average TSR must exceed RPI by at least 5% rather than 2%.

Performance conditions for the 2018 LTIP award

The performance conditions will follow the same structure as set out above for the 2014 and 2015 awards, except that the first condition thresholds will be raised to the following:

TSR growth over the performance period less percentage increase in the techMARK mediscience™ index over the same period	Vesting percentage of total number of shares subject to award
Less than 10%	0%
10%	25%
20%	50%
30%	100%
Performance between the steps	Pro-rata on a straight-line basis

The second performance condition will remain unchanged.

No awards became exercisable during 2017 as the performance criteria conditions for the awards granted in 2014 were not met and accordingly these awards lapsed.

(v) Service contracts and letters of appointment

The executive directors have entered into service agreements which can be terminated on six months' notice by either party.

During the year ended 31 December 2017, the executive directors did not hold any non-executive directorships with other companies.

The Chairman and non-executive directors have entered into letters of appointment for an initial fixed period of twelve months, which renew automatically for a further twelve month period on the anniversary of commencement. The appointment can be terminated on three months' notice by either party.

Directors' Remuneration Report
(continued)

Directors' interests in share options

The interests of directors in share options over ordinary shares during the year were as follows:

Synairgen Long-Term Incentive Plan

Date of grant	At 1 January 2017	Lapsed during the year	At 31 December 2017	Exercise price	Earliest exercise date	Expiry date
Richard Marsden						
7 September 2009	605,000	–	605,000	1p	7 Sept 2012	6 Sept 2019
8 September 2010	246,889	–	246,889	1p	8 Sept 2013	7 Sept 2020
21 September 2011	538,063	–	538,063	1p	21 Sept 2014	20 Sept 2021
3 November 2014	313,827	(313,827)	–	1p	3 Nov 2017	2 Nov 2024
27 October 2015	387,931	–	387,931	1p	27 Oct 2018	26 Oct 2025
Dr Phillip Monk						
21 September 2011	400,212	–	400,212	1p	21 Sept 2014	20 Sept 2021
3 November 2014	233,425	(233,425)	–	1p	3 Nov 2017	2 Nov 2024
27 October 2015	280,172	–	280,172	1p	27 Oct 2018	26 Oct 2025
John Ward						
7 September 2009	100,000	–	100,000	1p	7 Sept 2012	6 Sept 2019
8 September 2010	224,445	–	224,445	1p	8 Sept 2013	7 Sept 2020
21 September 2011	489,148	–	489,148	1p	21 Sept 2014	20 Sept 2021
3 November 2014	285,297	(285,297)	–	1p	3 Nov 2017	2 Nov 2024
27 October 2015	301,724	–	301,724	1p	27 Oct 2018	26 Oct 2025

No options were exercised by directors during the year.

Synairgen Qualifying Non-Employee Option Scheme

Date of grant	At 1 January and 31 December 2017	Exercise price	Earliest exercise date	Expiry date
Iain Buchanan				
28 June 2010	212,765	23.5p	28 June 2013	27 June 2020
Paul Clegg				
7 September 2009	250,000	20p	7 Sept 2012	6 Sept 2019

These awards were granted under a legacy plan. The exercise of the options awarded in September 2009 (which vested in 2012) and in June 2010 (which vested in 2013) is subject to the rules of the scheme.

There were no other options granted to directors or which were exercised or lapsed during the year.

The mid-market price of the Company's shares at 31 December 2017 was 10.875p. During the year then ended, the mid-market price ranged from 6.875p to 31.25p. On 14 March 2018 the closing price was 13.75p.

Audited information

The following section (Directors' remuneration) contains the disclosures required by Schedule 5 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008, forms part of the financial statements for the year ended 31 December 2017 and has been audited by the Company's auditor, BDO LLP.

Directors' remuneration

The remuneration received by directors who served during the years ended 31 December 2017 and 2016 was as follows:

		Year ended 31 December 2017						Year ended 31 December 2016		
£000	Note	Salary/ fee	Bonus	Benefits	Total (excl. pension)	Pension	Total (incl. pension)	Total (excl. pension)	Pension	Total (incl. pension)
Executive Directors										
Richard Marsden	(i)	182	136	2	320	16	336	184	16	200
Dr Phillip Monk		131	98	–	229	12	241	131	12	143
John Ward		141	106	3	250	13	263	143	13	156
Non-executive Directors										
Simon Shaw		30	–	–	30	–	30	30	–	30
Iain Buchanan		25	–	–	25	–	25	25	–	25
Dr Bruce Campbell		25	–	–	25	–	25	25	–	25
Paul Clegg		30	–	–	30	–	30	30	–	30
Prof. Stephen Holgate		25	–	–	25	–	25	25	–	25
Total		589	340	5	934	41	975	593	41	634

(i) Richard Marsden was the highest paid director during the years ended 31 December 2017 and 2016. He did not exercise any options during either year.

(ii) The Company permits employees, including executive directors, to change their pension provision through an election under a flexible benefits arrangement. The reported numbers are before any personal elections.

(iii) The bonus awards included above are due to be paid after the completion of the statutory audit.

In respect of key management personnel, for the year ended 31 December 2017, the total share-based payment amounted to £98,000 (2016: £121,000) and total social security costs were £106,000 (2016: £59,000).

By order of the Board

Paul Clegg

Chairman of the Remuneration and Nomination Committee

14 March 2018

Statement of Directors' responsibilities in respect of the Annual Report and the Financial Statements

The directors are responsible for preparing the annual report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have elected to prepare the Group financial statements in accordance with International Financial Reporting Standards ('IFRSs') as adopted by the European Union and the Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of the profit or loss of the Group for that period. The directors are also required to prepare financial statements in accordance with the rules of the London Stock Exchange for companies trading securities on AIM.

In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether the Group financial statements have been prepared in accordance with IFRSs as adopted by the European Union and the Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company and the Group will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the requirements of the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Website publication

The directors are responsible for ensuring the annual report and financial statements are made available on a website. Financial statements are published on the Group's website in accordance with legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the Company's website is the responsibility of the directors. The directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

Going concern

The directors have prepared and reviewed financial forecasts. After due consideration of these forecasts and current cash resources, the directors consider that the Company and the Group have adequate financial resources to continue in operational existence for the foreseeable future (being a period of at least twelve months from the date of this report), and for this reason the financial statements have been prepared on a going concern basis.

By order of the Board

John Ward

Company Secretary

14 March 2018

Independent Auditor's Report to the members of Synairgen plc

Opinion

We have audited the financial statements of Synairgen plc (the 'parent company') and its subsidiary (the 'group') for the year ended 31 December 2017 which comprise the Consolidated Statement of Comprehensive Income, Consolidated Statement of Financial Position, Consolidated Statement of Changes in Equity, Consolidated Statement of Cash Flows, Parent Company Balance Sheet, Parent Company Statement of Changes in Equity and notes to the financial statements, including a summary of significant accounting policies.

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 101 Reduced Disclosure Framework (United Kingdom Generally Accepted Accounting Practice).

In our opinion:

- the financial statements give a true and fair view of the state of the group's and of the parent company's affairs as at 31 December 2017 and of the group's profit for the year then ended;
- the group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group and the parent company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Use of our report

This report is made solely to the parent company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the parent company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the parent company and the parent company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's or the parent company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) we identified, including those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters impacting the group financial statements

Revenue recognition

The group's revenue recognition policy is included within the accounting policies on page 33 and the components of revenue are set out in note 3.

During the financial year, the group renegotiated and amended its collaboration agreement in respect of one of its key development programmes (LOXL2).

Under the renegotiated terms, the group was due £5 million in consideration for changing its interest in future proceeds from the programme. Management has recorded this consideration as revenue in the financial statements, the impact of which is highly material.

There is complexity in the terms of the amended agreement, particularly in determining the specific amendments from the

Independent Auditor's Report to the members of Synairgen plc
(continued)

original collaboration agreement, whether any new performance obligations have arisen and whether there are any circumstances in which the consideration could be refunded. We therefore consider there to be an audit risk that the revenues should not be fully recognised in the current accounting period.

How We Addressed the Key Audit Matter in the Audit

We have reviewed in detail the terms and clauses in the amended agreement, with a particular focus on whether it established any new performance obligations on the group or whether there are any circumstances in which the consideration could be refundable.

We have also assessed the recognition and presentation of the transaction in accordance with IAS 18 and industry practice.

Key audit matters impacting the parent company financial statements only

Investment in subsidiary: impairment review

As at 31 December 2017, the company holds an investment of £20.1m in its subsidiary, Synairgen Research Limited (as set out in note 4 of the parent company financial statements). At each reporting date, management carries out an impairment review in accordance with IAS 36 and industry practice that involves assessing the recoverable amount of the investment by estimating future cash flows and discounting to present value. There is inherent uncertainty in estimating the timing and extent of future cash flows of a drug development company.

The degree of estimation and complexity involved in the impairment review, for example in determining the appropriate discount rate and clinical success probabilities to be applied to the cash flows, causes us to consider this to be an audit risk.

How We Addressed the Key Audit Matter in the Audit

We have challenged the impairment review prepared by management through assessing the appropriateness of the key assumptions such as the discount rate, the scale of the market opportunities and the risk-weighting of estimated future cash flows.

In so doing, we have reviewed third-party sources of information including market announcements, analyst assessments, the composition of transactions for similar drugs and medical journals.

We have assessed the methodology used in the preparation of the model with reference to the requirements of IAS 36 and established industry practice.

We have also performed sensitivity analysis to test whether a reasonably possible change could result in an impairment.

Our application of materiality

Group Materiality: £170,000 (2016: £240,000).
Parent Company materiality: £110,000 (2016: £150,000).

Our group materiality, for both the current and prior year, has been based upon 5% of the normalised loss for the year from research and development activities, having deducted the revenues from the amended agreement in establishing the 2017 materiality owing to its one-off nature. We consider normalised losses before tax to be one of the principal considerations for members of the company in assessing the financial performance of the group.

The audit of Synairgen Research Limited was performed to a materiality calculated on the same basis as that of the group, while materiality for Synairgen plc, as the holding company, was net-asset based.

We apply the concept of materiality both in planning and performing our audit, and in evaluating the effect of misstatements. We consider materiality to be the magnitude by which misstatements, including omissions, could influence the economic decisions of reasonable users that are taken on the basis of the financial statements. In order to reduce to an appropriately low level the probability that any misstatements exceed materiality, we use a lower materiality level, performance materiality, to determine the extent of testing needed. Importantly, misstatements below these levels will not necessarily be evaluated as immaterial as we also take account of the nature of identified misstatements, and the particular circumstances of their occurrence, when evaluating their effect on the financial statements as a whole.

Performance materiality was set at 75 per cent of the above materiality levels. In setting the level of performance materiality we considered a number of factors including the expected total value of known and likely misstatements based on past experience and other factors.

Where financial information from the two components was audited separately, component materiality levels were set for this purpose at lower levels varying from £110,000 to £150,000.

We agreed with the audit committee that we would report to the committee all individual audit differences identified during the course of our audit in excess of £8,500 (2016: £12,000). We also agreed to report differences below these thresholds that, in our view, warranted reporting on qualitative grounds.

An overview of the scope of our audit

The group's operations are based solely in Southampton, United Kingdom.

The scope of our group audit was established by obtaining an understanding of the group, including its control environment, and assessing the risks of material misstatement.

Both components, Synairgen plc and Synairgen Research Limited, are considered significant components and are subject to a full-scope audits by BDO LLP.

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Opinion on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the group and the parent company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report or the directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors

As explained more fully in the directors' responsibilities statement set out on page 25, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the group's and the parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the group or the parent company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Kim Hayward (senior statutory auditor)

For and on behalf of

BDO LLP, Statutory Auditor

Southampton, United Kingdom

14 March 2018

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

Consolidated Statement of Comprehensive Income

for the year ended 31 December 2017

	Notes	Year ended 31 December 2017 £000	Year ended 31 December 2016 £000
Revenue		**5,025**	–
Research and development expenditure		**(2,061)**	(2,418)
Other administrative expenses		**(1,349)**	(1,024)
Total administrative expenses		**(3,410)**	(3,442)
Profit/(Loss) from operations	4	**1,615**	(3,442)
Finance income	6	**14**	38
Profit/(Loss) before tax		**1,629**	(3,404)
Tax	7	**132**	587
Profit/(Loss) and total comprehensive income/(loss) for the period attributable to equity holders of the parent		**1,761**	(2,817)
Earnings/(Loss) per ordinary share	8		
Basic earnings/(loss) per share (pence)		**1.93p**	(3.08p)
Diluted earnings/(loss) per share (pence)		**1.87p**	(3.08p)

Consolidated Statement of Changes in Equity

for the year ended 31 December 2017

	Share capital £000	Share premium £000	Merger reserve £000	Retained deficit £000	Total £000
Note	18a	18b	18c	18d	
At 1 January 2016	913	25,771	483	(19,820)	7,347
Issue of ordinary shares	1	–	–	–	1
Recognition of share-based payments	–	–	–	154	154
Loss and total comprehensive loss for the year	–	–	–	(2,817)	(2,817)
At 31 December 2016	914	25,771	483	(22,483)	4,685
Recognition of share-based payments	–	–	–	113	113
Profit and total comprehensive income for the year	–	–	–	1,761	1,761
At 31 December 2017	**914**	**25,771**	**483**	**(20,609)**	**6,559**

Consolidated Statement of Financial Position

as at 31 December 2017

	Notes	31 December 2017 £000	31 December 2016 £000
Assets			
Non-current assets			
Intangible assets	9	**45**	62
Property, plant and equipment	10	**12**	13
		57	75
Current assets			
Inventories	11	**56**	55
Current tax receivable		**71**	560
Trade and other receivables	12	**633**	90
Other financial assets – bank deposits	13	**2,000**	1,661
Cash and cash equivalents	14	**4,845**	3,104
		7,605	5,470
Total assets		**7,662**	5,545
Liabilities			
Current liabilities			
Trade and other payables	15	**(1,103)**	(860)
Total liabilities		**(1,103)**	(860)
Total net assets		**6,559**	4,685
Equity			
Capital and reserves attributable to equity holders of the parent			
Share capital	17	**914**	914
Share premium	17	**25,771**	25,771
Merger reserve	18	**483**	483
Retained deficit	18	**(20,609)**	(22,483)
Total equity		**6,559**	4,685

The financial statements on pages 29 to 42 were approved and authorised for issue by the Board of directors on 14 March 2018 and signed on its behalf by:

Richard Marsden
Chief Executive Officer

John Ward
Finance Director

Consolidated Statement of Cash Flows

for the year ended 31 December 2017

	Year ended 31 December 2017 £000	Year ended 31 December 2016 £000
Cash flows from operating activities		
Profit/(Loss) before tax	**1,629**	(3,404)
Adjustments for:		
Finance income	**(14)**	(38)
Depreciation	**7**	9
Amortisation	**17**	19
Share-based payment charge	**113**	154
Cash flows from operations before changes in working capital	**1,752**	(3,260)
(Increase)/Decrease in inventories	**(1)**	1
(Increase)/Decrease in trade and other receivables	**(548)**	17
Increase/(Decrease) in trade and other payables	**243**	(76)
Cash generated from/(used in) operations	**1,446**	(3,318)
Tax credit received	**621**	330
Net cash generated from/(used in) operating activities	**2,067**	(2,988)
Cash flows from investing activities		
Interest received	**19**	43
Purchase of property, plant and equipment	**(6)**	(5)
(Increase)/Decrease in other financial assets	**(339)**	2,061
Net cash (used in)/generated from investing activities	**(326)**	2,099
Cash flows from financing activities		
Proceeds from issuance of ordinary shares	**–**	1
Net cash generated from financing activities	**–**	1
Increase/(Decrease) in cash and cash equivalents	**1,741**	(888)
Cash and cash equivalents at beginning of the period	**3,104**	3,992
Cash and cash equivalents at end of the period	**4,845**	3,104

Notes to the Consolidated Financial Statements

for the year ended 31 December 2017

1. Accounting policies

Basis of preparation

The Group financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations (collectively 'IFRSs') as adopted by the European Union ('Adopted IFRSs') and with those parts of the Companies Act 2006 applicable to companies preparing their financial statements under IFRSs.

The accounting policies adopted are consistent with those of the previous financial year.

New standards and interpretations not applied

There are three major new IFRSs issued by the IASB which are mandatory for periods shown below:

IFRS	Title	Effective for periods beginning on or after
IFRS 9	Financial Instruments	1 January 2018
IFRS 15	Revenue from Contracts with Customers	1 January 2018
IFRS 16	Leases	1 January 2019

IFRS 9 Financial Instruments

The Directors have reviewed the impact of IFRS 9 and consider that it will not have any material impact on the Group's financial statements for the following reasons:

- Typically, the Group's trade receivables are not material;
- The Group does not expect the expected credit loss impairment model to have a material effect on the Group, as the investments are held with banks that have a good credit status; and
- The Group has no financial assets that are likely to be affected by the revised classification and measurement rules.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 supersedes IAS 11 (Construction Contracts), IAS 18 (Revenue), and a number of IFRICs, and establishes a single framework for revenue recognition through a five step approach. The Directors have considered the impact of IFRS 15 on its revenues recognised in 2017 and its potential future revenue streams from licensing revenues and consider that the adoption of IFRS 15 will not change the way in which the Group's performance obligations to customers are identified or deemed to be satisfied and, therefore, no material impact on revenues recognised in the financial statements is anticipated. The Group will not be restating comparatives on adoption of the standard and the Directors believe that the revenue reported in 2017 will not be subject to change in subsequent years.

IFRS 16 Leases

Under the provisions of IFRS 16 most leases, including the majority of those previously classified as operating leases, will be brought onto the statement of financial position, as both a right-of-use asset and a largely offsetting lease liability. The right-of-use asset and lease liability are both based on the present value of lease payments due over the term of the lease, with the asset being depreciated and the liability increased for the accretion of interest and reduced by lease payments.

The Group currently has one operating lease with its landlord, the University of Southampton, as disclosed in note 19, which has a two year life upon renewal, which will be impacted by IFRS 16. Whilst there will be an increase in depreciation and interest charges combined with a decrease in rental charges following adoption, the Directors consider that the net impact on the income statement will not be material. The Directors also consider that the recognition of a right-to-use asset and the lease liability will not materially impact the net assets of the Group.

The Directors do not anticipate that the adoption of the other new standards and interpretations will have a material impact on the Group's financial statements in the period of initial application.

The Group financial statements are presented in Sterling.

1. Accounting policies (continued)

Basis of consolidation
The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (as detailed in note 4 to the Parent Company Financial Statements on page 46) made up to the reporting date. Control is achieved when power can be exercised over the investee; there is exposure, or rights, to variable returns from involvement with the investee; and the ability to exercise power over the investee affects returns. All intra-group transactions, balances, income and expenses are eliminated on consolidation. Business combinations that took place prior to 1 July 2006, the date of transition to IFRS, have not been restated as permitted by IFRS 1 "First-time Adoption of International Financial Reporting". The consolidated financial statements have been prepared using the merger method of accounting.

Revenue
Revenue is stated net of value added tax and is recognised when products or services are supplied. Revenues from licensing agreements or the renegotiation of collaboration agreements where no further performance obligations are created, including up-front, milestone and royalty payments, are recognised where the milestone has been accomplished, the payments are non-refundable, the Group's obligations in respect of the revenues have been discharged and their collection is reasonably assured, and the transfer of risk has occurred.

Research and development
All ongoing research expenditure is currently expensed in the period in which it is incurred. Due to the regulatory and other uncertainties inherent in the development of the Group's products, the criteria for development costs to be recognised as an asset, as set out in IAS 38 "Intangible Assets", are not met until a product has been submitted for regulatory approval and it is probable that future economic benefit will flow to the Group. The Group currently has no such qualifying expenditure.

Employee benefits
All employee benefit costs, notably salaries, holiday pay, bonuses and contributions to personal defined contribution pension schemes are charged to the consolidated statement of comprehensive income on an accruals basis.

Share-based payments
The Group has fair-valued option and LTIP awards using appropriate share valuation models. At each reporting date, the Group revises its estimate of the number of options that are expected to become exercisable. The credit for any charge is taken to equity.

Intangible assets
Intangible assets are stated at cost less any accumulated amortisation and any accumulated impairment losses. Patent and licence costs are amortised over ten years on a straight-line basis and the amortisation cost is charged to research and development expenditure in the consolidated statement of comprehensive income.

Property, plant and equipment
Property, plant and equipment are stated at cost less any accumulated depreciation and any accumulated impairment losses. Depreciation is provided on a straight-line basis at rates calculated to write off the cost of property, plant and equipment less their estimated residual value over their expected useful lives, which are as follows:

Computer equipment:	3 years
Laboratory and clinical equipment:	5 years

The carrying values of property, plant and equipment are reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable.

Inventories
Inventories are stated at the lower of cost and net realisable value.

Financial instruments
Financial assets and financial liabilities are recognised on the Group's consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets
The Group classifies its financial assets as loans and receivables. These assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are initially recognised at fair value plus transaction costs that are directly attributable to their acquisition or issue, and are subsequently carried at amortised cost using the effective interest rate method, less provision for impairment. Impairment provisions are recognised when there is objective evidence (such as significant financial difficulties on the part of the counterparty or default or significant delay in payment) that the Group will be unable to collect all of the amounts due under the terms receivable; the amount of such a provision being the difference between the net carrying amount and the present value of the future expected cash flows associated with the impaired receivable.

Notes to the Consolidated Financial Statements
for the year ended 31 December 2017 (continued)

1. Accounting policies (continued)

The Group's loans and receivables comprise trade and other receivables, other financial assets and cash and cash equivalents in the consolidated statement of financial position. Other financial assets comprise short-term deposits not meeting the IAS 7 definition of a cash equivalent. Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term bank deposits with a maturity period of three months or less from the date of initial deposit.

Financial liabilities
The Group classifies its financial liabilities as financial liabilities held at amortised cost. Trade payables are initially recognised at fair value and subsequently carried at amortised cost using the effective interest rate method.

Leased assets
Where substantially all of the risks and rewards incidental to ownership are not transferred to the Group (an 'operating lease'), the total rentals payable under the lease are charged to the consolidated statement of comprehensive income on a straight-line basis over the lease term.

Taxation
Income tax is recognised or provided at amounts expected to be recovered or to be paid using the tax rates and tax laws that have been enacted or substantively enacted at the reporting date. Research and development tax credits are included as an income tax credit under current assets.

Deferred tax balances are recognised in respect of all temporary differences that have originated but not reversed by the reporting date except for differences arising on:

- investments in subsidiaries where the Group is able to control the timing of the reversal of the difference and it is probable that the difference could not reverse in the foreseeable future; and
- the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting or taxable profit.

The amount of the asset or liability is determined using tax rates that have been enacted or substantively enacted by the reporting date and are expected to apply when the deferred tax liabilities/(assets) are settled/(recovered).

Recognition of deferred tax assets is restricted to those instances where it is probable that a taxable profit will be available against which the temporary difference can be utilised. Deferred tax balances are not discounted.

Foreign currencies
Transactions entered into by Group entities in a currency other than the currency of the primary economic environment in which they operate (their "functional currency") are recorded at the rates ruling when the transactions occur. Foreign currency monetary assets and liabilities are translated at the rates ruling at the reporting date. Exchange differences arising on the retranslation of unsettled monetary assets and liabilities are recognised immediately in the consolidated statement of comprehensive income.

The functional currency of all entities in the Group is Sterling.

2. Critical accounting estimates and judgements

Critical accounting estimates, assumptions and judgements are continually evaluated by management based on available information and experience. As the use of estimates is inherent in financial reporting, actual results could differ from these estimates.

There are no critical accounting estimates and judgements.

3. Segmental analysis

The Group operates in one area of activity, namely drug discovery and development. All assets of the Group are located within the United Kingdom and all profits/(losses) were generated in that territory. The revenue generated in 2017 was generated from two customers: £5 million from Pharmaxis Ltd as consideration for the change in terms of the collaboration agreement and the balance for materials provided to AstraZeneca.

4. Profit/(Loss) from operations

The profit/(loss) from operations has been arrived at after charging:

	2017 £000	2016 £000
Depreciation of property, plant and equipment	**7**	9
Amortisation of intangible assets	**17**	19
Operating lease rentals payable		
Land and buildings	**71**	70
Other operating lease rentals	**93**	93

The fees of the Group's auditor, BDO LLP, for services provided are analysed below:	2017 £000	2016 £000
Fees payable to the Company's auditor for the audit of the Group and Company financial statements	**15**	17
Fees payable to the Company's auditor for other services:		
The audit of the Company's subsidiary, pursuant to legislation	**15**	11
Audit-related assurance services	**5**	5
Tax compliance services	**8**	11
Tax advisory services	**14**	3
Total fees	**57**	47

5. Employee benefit expense

The average monthly number of employees (including executive directors) was:

	2017	2016
Research	**8**	9
Administration	**3**	3
	11	12

Their aggregate remuneration comprised:	2017 £000	2016 £000
Wages and salaries	**1,091**	766
Social security costs	**138**	95
Pension costs – defined contribution plans	**102**	80
Total cash-settled remuneration	**1,331**	941
Accrued holiday pay	**5**	5
Share-based payment	**113**	154
Total remuneration	**1,449**	1,100

For the purpose of presentation in the Consolidated Statement of Comprehensive Income, remuneration costs of £668,000 (2016: £580,000) are included in research and development expenditure and £781,000 (2016: £520,000) are included in other administrative expenses.

Key management compensation

The directors represent the key management personnel and details of their remuneration are given in the Directors' Remuneration Report.

In respect of directors' remuneration, the disclosures required by Schedule 5 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 are included in the detailed disclosures in the audited section of the Remuneration Report on page 24, which are ascribed as forming part of these financial statements.

Notes to the Consolidated Financial Statements
for the year ended 31 December 2017 (continued)

6. Finance income

For the years ended 31 December 2017 and 2016 Finance income represents bank interest receivable.

7. Taxation

Current tax

	2017 £000	2016 £000
UK corporation tax credit on profit/(loss) for the year	**(71)**	(560)
Adjustment in respect of prior years	**(61)**	(27)
Total income tax credit	**(132)**	(587)

The tax assessed on the profit/(loss) on ordinary activities for the year is different to the standard rate of corporation tax in the UK of 19.25% (2016: 20%). The differences are reconciled below:	2017 £000	2016 £000
Profit/(Loss) on ordinary activities before tax	**1,629**	(3,404)
Profit/(Loss) on ordinary activities before tax multiplied by the standard rate of corporation tax in the UK	**314**	(681)
Effects of:		
Tax relief on share option exercises	**–**	(2)
Expenses not deductible for tax purposes	**22**	31
Enhanced research & development relief	**(452)**	(471)
Variable rates on tax losses surrendered for research & development tax credit	**23**	212
Movement in unrecognised losses and temporary differences	**22**	351
Overprovision in respect of previous years	**(61)**	(27)
Total tax credit for the current year	**(132)**	(587)

Deferred taxation

Changes in tax rates and factors affecting the future tax charge

Finance Act 2015 included provision for the main rate of corporation tax to reduce from 20% to 19% on 1 April 2017. Finance Act 2016 included provision for the rate to reduce further to 17% on 1 April 2020. This will reduce the Company's future tax charge accordingly. The 17% tax rate was substantively enacted on 15 September 2016. Accordingly, deferred tax balances have been recognised at 17%, being the rate of corporation tax expected to be in force at the time these timing difference are expected to reverse.

Recognised deferred taxation	2017 £000	2016 £000
Accelerated capital allowances	**1**	1
Other temporary differences	**(1)**	(1)
Charge for the year	**–**	–

Unrecognised deferred taxation

At 31 December 2017 the Group has trading losses carried forward which are available for offset against future profits of the Group amounting to £12,978,000 (2016: £13,341,000) and non-trading losses of £2,016,000 (2016: £1,812,000). At 31 December 2017 the Group has an unrecognised deferred tax asset in respect of these losses of £2,549,000 (2016: £2,576,000). The full utilisation of these losses in the foreseeable future is uncertain and no deferred tax asset has therefore been recognised.

In addition to the deferred tax asset on losses, the Group has a potential future tax deduction on share options of £369,000 (2016: £535,000) and a deferred tax asset of £63,000 (2016: £91,000) thereon. The additional tax deduction will crystallise at the point the options are exercised. As the utilisation of this additional deduction against taxable profits in the Group is uncertain, no deferred tax asset has been recognised in respect of the future tax deduction on share options.

7. Taxation (continued)

The movement on the unrecognised deferred tax asset comprises the following:

	2017 £000	2016 £000
Unrecognised deferred tax asset at the start of the year	**(2,667)**	(2,596)
Movement in year	**55**	(71)
Unrecognised deferred tax asset at the year-end	**(2,612)**	(2,667)

8. Earnings/(Loss) per ordinary share

Basic earnings/(loss) per share is calculated by dividing the profit/(loss) attributable to ordinary equity holders of the parent company by the weighted average number of ordinary shares in issue during the year.

For diluted earnings per share, the weighted number of ordinary shares in issue is adjusted to assume conversion of dilutive potential ordinary shares, being share options where the exercise price is less than the average market price of the Company's ordinary shares during the year and where performance conditions have been met or, in the case of options where the performance period is not completed, are being met.

Where there is a loss (as for the year ended 31 December 2016), the loss attributable to ordinary shareholders and weighted average number of ordinary shares for the purpose of calculating the diluted earnings per ordinary share are identical to those used for basic loss per share. This is because the exercise of share options would have the effect of reducing the loss per ordinary share and is therefore antidilutive under the terms of IAS 33.

The earnings/losses and the number of weighted average number of shares used in the calculations are as follows:

	Earnings £000	Shares 000	2017 EPS pence	Losses £000	Shares 000	2016 LPS pence
Basic earnings/(loss) per share	1,761	91,363	1.93	(2,817)	91,351	(3.08)
Effect of additional shares under option	–	2,873	(0.06)	–	–	–
Diluted earnings/(loss) per share	**1,761**	**94,236**	**1.87**	**(2,817)**	**91,351**	**(3.08)**

9. Intangible assets

	Patent and licence costs £000
Cost	
At 1 January 2016, 31 December 2016 and 2017	**212**
Amortisation	
At 1 January 2016	131
Charge for the year	19
At 31 December 2016	150
Charge for the year	17
At 31 December 2017	**167**
Net book amount	
At 31 December 2017	**45**
At 31 December 2016	62
At 1 January 2016	81

At 31 December 2017 £45,000 (31 December 2016: £62,000) of the net book amount relates to interferon beta patent costs.

10. Property, plant and equipment

	Computer equipment £000	Laboratory and clinical equipment £000	Total £000
Cost			
At 1 January 2016	36	131	167
Additions	1	4	5
At 31 December 2016	37	135	172
Additions	3	3	6
At 31 December 2017	**40**	**138**	**178**
Depreciation			
At 1 January 2016	26	124	150
Charge for the year	6	3	9
At 31 December 2016	32	127	159
Charge for the year	5	2	7
At 31 December 2017	**37**	**129**	**166**
Net book value			
At 31 December 2017	**3**	**9**	**12**
At 31 December 2016	5	8	13
At 1 January 2016	10	7	17

11. Inventories

	2017 £000	2016 £000
Raw materials	**56**	55

Raw materials comprises the Group's BioBank.

12. Trade and other receivables

Amounts receivable within one year:	2017 £000	2016 £000
Trade receivables	**292**	**–**
Other tax and social security	**69**	49
Prepayments and accrued income	**272**	41
	633	90

The trade receivables balance is not past due or impaired.

13. Other financial assets – bank deposits

Amounts receivable within one year:	2017 £000	2016 £000
Sterling floating rate deposit of greater than three months' maturity at inception	**2,000**	–
Sterling fixed rate deposits of greater than three months' maturity at inception	**–**	1,661
	2,000	1,661

14. Cash and cash equivalents

	2017 £000	2016 £000
Cash available on demand	**4,845**	3,104

At 31 December 2017, £1,000,000 was on 32 days' notice. At 31 December 2016, £100,000 was on a fixed deposit until 22 March 2017.

15. Trade and other payables

	2017 £000	2016 £000
Trade payables	**282**	356
Social security and other taxes	**94**	41
Accrued expenses and deferred income	**727**	463
	1,103	860

16. Financial instruments

An explanation of the Group's objectives, policies and strategies for financial instruments and analysis of the capital structure and capital funding of the Group can be found on page 17 in the Directors' Report.

	Notes	2017 Book and fair value £000	2016 Book and fair value £000
Financial assets			
Loans and receivables			
Trade and other receivables	(i)	**512**	4
Other financial assets (less than one year)		**2,000**	1,661
Cash and cash equivalents (less than one year)		**4,845**	3,104
Total		**7,357**	4,769
Financial liabilities			
Other financial liabilities			
Trade and other payables (less than one year)	(ii)	**1,009**	809

(i) Trade and other receivables shown above excludes prepayments and other taxes, which are not a contractual obligation to receive cash, amounting to £121,000 (2016: £86,000).

(ii) Trade and other payables shown above excludes amounts due in respect of social security and other taxes and deferred income, which are not a contractual obligation to pay cash, amounting to £94,000 (2016: £51,000).

The objective of holding financial instruments is to have access to finance for the Group's operations and to manage related risks. The main risks arising from holding these instruments are interest rate risk, liquidity risk, and credit risk.

16. Financial instruments (continued)

Interest rate risk

Interest rate risk profile of financial assets, excluding short-term debtors:

	2017 Floating rate financial assets £000	2016 Floating rate financial assets £000
Australian Dollar	**1**	15
Canadian Dollar	**–**	1
Euro	**1**	33
Sterling	**6,843**	4,677
US Dollar	**–**	39
	6,845	4,765

Short-term deposits are placed with banks for periods of up to twelve months and are categorised as floating-rate financial assets. Contracts in place at 31 December 2017 had a weighted average period to maturity of 95 days and a weighted average annualised rate of interest of 0.70% (2016: 45 days, 0.85%).

Sensitivity analysis

It is estimated that an increase of quarter of one percentage point in interest rates would have increased/decreased the Group's profit/(loss) before taxation by approximately £9,000 (2016: £15,000).

Liquidity risk

The Group's policy is to maintain adequate cash resources to meet liabilities as they fall due. All Group payable balances as at 31 December 2017 and 31 December 2016 fall due for payment within one year. Cash balances are placed on deposit for varying periods with reputable banking institutions to ensure there is limited risk of capital loss. The Group does not maintain an overdraft facility.

Credit risk

The Group's credit risk is attributable to its banking deposits. The Group places its deposits with reputable financial institutions to minimise credit risk.

17. Share capital, share premium and share-based payment

	Notes	Number of shares	Ordinary shares of 1p each £000	Share premium £000	Total £000
At 1 January 2016		91,316,671	913	25,771	26,684
Issuance of ordinary shares	(i)	45,941	1	–	1
At 31 December 2016 and 2017		**91,362,612**	**914**	**25,771**	**26,685**

(i) 45,941 ordinary shares of 1p were issued on 30 March 2016 at par following the exercise of share options under the Company's long term incentive plan (LTIP).

At the Company's 2015 Annual General Meeting held on 22 June 2015 shareholders passed a special resolution removing the restriction on the Company's share capital and amending the articles of association of the Company so that the number of shares the Company can allot and issue became unlimited.

All issued shares are fully paid.

17. Share capital and share premium (continued)

Options

At 31 December 2017 there were options outstanding over 4,529,237 un-issued ordinary shares, equivalent to 5.0% of the issued share capital, as follows:

Date of grant	Number of shares	Exercise price	Earliest exercise date	Latest exercise date
7 September 2009 (LTIP)	705,000	1p	7 September 2012	6 September 2019
7 September 2009 (QNEOS)	250,000	20p	7 September 2012	6 September 2019
28 June 2010 (QNEOS)	212,765	23.5p	28 June 2013	27 June 2020
8 September 2010 (LTIP)	471,334	1p	8 September 2013	7 September 2020
21 September 2011 (LTIP)	1,696,609	1p	21 September 2014	20 September 2021
27 October 2015 (LTIP)	1,193,539	1p	27 October 2018	26 October 2025
	4,529,237			

The Group has no legal or constructive obligation to repurchase or settle the options in cash. The movement in the number of share options is set out below:

	2017 Number	2017 Weighted average exercise price	2016 Number	2016 Weighted average exercise price
Outstanding at start of year	**5,629,647**	**2.9p**	6,587,094	3.8p
Exercised during the year	**–**	**n/a**	(45,941)	1.0p
Lapsed during the year	**(1,100,410)**	**2.0p**	(911,506)	9.4p
Number of outstanding options at year-end	**4,529,237**	**3.1p**	5,629,647	2.9p

At 31 December 2017, 3,335,708 share options were capable of being exercised, with exercise prices ranging from 1p to 23.5p (2016: 3,353,500, with exercise prices ranging from 1p to 61.5p). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of 4.2 years (2016: 5.7 years). Vesting conditions are disclosed in the Directors' Remuneration Report.

18. Capital and reserves

18a Share capital

Share capital represents the nominal value of shares issued.

18b Share premium

Share premium represents amounts subscribed for share capital in excess of nominal value less the related costs of share issues.

18c Merger reserve

The merger reserve represents the reserve arising on the acquisition of Synairgen Research Limited on 11 October 2004 via a share for share exchange accounted for as a Group reconstruction using merger accounting under UK GAAP.

18d Retained deficit

The retained deficit represents cumulative net gains and losses recognised in the consolidated statement of comprehensive income, adjusted for cumulative recognised share-based payments.

19. Commitments under operating leases

The total future value of minimum lease payments committed at the balance sheet date under non-cancellable operating leases is due as follows:

	2017 £000	2016 £000
Land, buildings and other		
Not later than one year	**41**	95

20. Related party transactions and balances

Details of key management personnel and their compensation are given in note 5 and on page 24 of the Directors' Remuneration Report.

Parent Company Balance Sheet

as at 31 December 2017

Company number: 5233429

	Notes	31 December 2017 £000	31 December 2016 £000
Fixed assets			
Investments	4	**20,072**	22,256
Current assets			
Debtors	5	**124**	102
Investments: short-term deposits		**2,000**	1,661
Cash at bank and in hand		**4,792**	3,063
		6,916	4,826
Creditors: amounts falling due within one year	6	**(38)**	(41)
Net current assets		**6,878**	4,785
Total assets less current liabilities		**26,950**	27,041
Capital and reserves			
Called up share capital		**914**	914
Share premium account		**25,771**	25,771
Retained earnings		**265**	356
Shareholders' funds		**26,950**	27,041

As permitted by Section 408 of the Companies Act 2006, the Company's profit and loss account has not been included in these financial statements. The Company's loss for the year ended 31 December 2017 was £204,000 (2016: loss of £206,000).

The financial statements on pages 43 to 46 were approved and authorised for issue by the Board of directors on 14 March 2018 and signed on its behalf by:

Richard Marsden
Chief Executive Officer

John Ward
Finance Director

Parent Company Statement of Changes in Equity

for the year ended 31 December 2017

	Share capital £000	Share premium account £000	Retained earnings £000	Shareholders' funds £000
At 1 January 2016	913	25,771	408	27,092
Issuance of ordinary shares	1	–	–	1
Loss for the year and total comprehensive loss	–	–	(206)	(206)
Share-based payment credit	–	–	154	154
At 31 December 2016	914	25,771	356	27,041
Loss for the year and total comprehensive loss	–	–	(204)	(204)
Share-based payment credit	–	–	113	113
At 31 December 2017	**914**	**25,771**	**265**	**26,950**

Notes to the Parent Company Financial Statements

for the year ended 31 December 2017

1. Accounting policies

Basis of preparation

The financial statements have been prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ('FRS 101').

Disclosure exemptions adopted

In preparing these financial statements the Company has taken advantage of all disclosure exemptions conferred by FRS 101. Therefore these financial statements do not include:

- certain comparative information as otherwise required by EU-endorsed IFRS;
- certain disclosures regarding the Company's capital;
- a statement of cash flows;
- the effect of future accounting standards not yet adopted;
- the disclosure of the remuneration of key management personnel; and
- disclosures of related party transactions with other wholly-owned members of Synairgen plc group of companies.

In addition, and in accordance with FRS 101, further disclosure exemptions have been adopted because equivalent disclosures are included in the Company's consolidated financial statements. These financial statements do not include certain disclosures in respect of:

- share-based payments; or
- financial instruments.

Principal accounting policies

The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to all the years presented, unless otherwise stated.

Foreign currency

The financial statements are presented in UK pounds sterling, which is the Company's functional currency.

Transactions entered into by the Company in a currency other than the currency of the primary economic environment in which it operates (its 'functional currency') are recorded at the rates ruling when the transactions occur. Foreign currency monetary assets and liabilities are translated at the rates ruling at the reporting date. Exchange differences arising on the retranslation of unsettled monetary assets and liabilities are recognised immediately in profit or loss.

Investment in subsidiary undertakings

Investments in subsidiary undertakings where the Company has control are stated at cost less any provision for impairment.

Financial instruments

Financial assets and financial liabilities are recognised on the Company's balance sheet when the Company becomes a party to the contractual provisions of the instrument.

Financial assets

The Company classifies its financial assets as loans and receivables. These assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are initially recognised at fair value plus transaction costs that are directly attributable to their acquisition or issue, and are subsequently carried at amortised cost using the effective interest rate method, less provision for impairment. Impairment provisions are recognised when there is objective evidence (such as significant financial difficulties on the part of the counterparty or default or significant delay in payment) that the Company will be unable to collect all of the amounts due under the terms receivable; the amount of such a provision being the difference between the net carrying amount and the present value of the future expected cash flows associated with the impaired receivable.

The Company's loans and receivables comprise debtors, investments: short-term deposits and cash and cash equivalents in the balance sheet. Other financial assets comprise short-term deposits not meeting the definition of a cash equivalent. Cash and cash equivalents includes cash in hand, deposits held at call with banks and other short-term bank deposits with a maturity period of three months or less from the date of initial deposit.

Financial liabilities

The Company classifies its financial liabilities as financial liabilities held at amortised cost. Trade creditors are initially recognised at fair value and subsequently carried at amortised cost using the effective interest rate method.

1. Accounting policies (continued)

Share-based payments
When the Company grants options over equity instruments directly to the employees of a subsidiary undertaking, the effect of the share-based payment is capitalised as part of the investment in the subsidiary as a capital contribution, with a corresponding increase in equity.

Taxation
The charge for taxation is based on the loss for the period and takes into account taxation deferred.

Current tax is measured at amounts expected to be paid using the tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax balances are recognised in respect of all timing differences that have originated but not reversed by the balance sheet date, except that the recognition of deferred tax assets is limited to the extent that the Company anticipates making sufficient taxable profits in the future to absorb the reversal of the underlying timing differences.

Deferred tax balances are not discounted.

Share capital
The Group's ordinary shares are classified as equity instruments. Financial instruments issued by the Company are classified as equity only to the extent that they do not meet the definition of a financial liability or financial asset.

2. Critical accounting estimates and judgements

Critical accounting estimates, assumptions and judgements are continually evaluated by management based on available information and experience. As the use of estimates is inherent in financial reporting, actual results could differ from these estimates.

The Company holds a significant investment in its subsidiary, Synairgen Research Limited, of £20.1 million (2016: £22.3 million). In assessing the carrying value of this asset for impairment, the directors have exercised judgement in estimating its recoverable amount, including the value of the inferferon beta programme and the share of the LOXL2 collaboration with Pharmaxis. The determination of the valuation for both of these assets is based on the discounted estimated probability-adjusted future cash flows generated from out-licensing transactions. The valuation is derived from a financial model that evaluates a range of potential outcomes from what are considered the key variables, including the probability of the success of clinical trials, the expected licensing terms that will be negotiated and the anticipated peak sales values for the resultant drugs.

The most significant judgement in arriving at the valuation is the quantity and timing of forecast cash flows from future out-licensing. Given the level of headroom indicated by the impairment review, the discount rate assumption is not considered to be sufficiently sensitive to change to impact the conclusion of the review. At this stage of the product development, the key sensitivity is the probability of successful completion of clinical trials. Therefore, a failure in the development of either of the assets might result in an impairment of the investment in the subsidiary.

3. Profit and loss account

The only employees of the Company during 2017 and 2016 were the three executive directors. Their aggregate remuneration, which is borne by the Company's subsidiary undertaking, comprised:

	2017 £000	2016 £000
Wages and salaries	**785**	450
Social security costs	**106**	59
Pension costs – defined contribution plans	**52**	47
Total cash-settles remuneration	**943**	556
Accrued holiday pay	**5**	5
Share-based payment	**98**	121
Total Remuneration	**1,046**	682

In respect of directors' remuneration, the disclosures required by Schedule 5 to the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 are included in the detailed disclosures in the audited section of the Directors' Remuneration Report on page 24, which are ascribed as forming part of these financial statements.

Auditor's remuneration is disclosed in note 4 to the Group accounts on page 35.

Notes to the Parent Company Financial Statements
for the year ended 31 December 2017 (continued)

4. Investments

	Investment in subsidiary undertaking £000	Loan to subsidiary undertaking £000	Capital contribution £000	Total £000
At 1 January 2017	140	20,516	1,600	22,256
(Repayments)/Additions	–	(2,297)	113	(2,184)
At 31 December 2017	**140**	**18,219**	**1,713**	**20,072**

At 31 December 2017, the Company had an investment in the following subsidiary undertaking:

Name of company	Registered address	Proportion of voting rights and ordinary share capital held	Nature of business
Synairgen Research Limited	Mailpoint 810, Level F, South Block, Southampton General Hospital, Tremona Road, Southhampton SO16 6YD	100%	Drug discovery and development

5. Debtors

	2017 £000	2016 £000
Other tax and social security	**4**	2
Prepayments and accrued income	**120**	100
	124	102

All amounts fall due for payment within one year.

6. Creditors: amounts falling due within one year

	2017 £000	2016 £000
Trade creditors	**4**	5
Accruals and deferred income	**34**	36
	38	41

7. Share capital and share premium

Details of the Company's share capital, share premium, share option schemes and LTIP can be found in note 17 to the Group accounts on pages 40 and 41.

Notice of 2018 Annual General Meeting

Notice is hereby given that the 2018 Annual General Meeting ('AGM') of Synairgen plc (the 'Company') will be held at the offices of Fladgate LLP, 16 Great Queen Street, London WC2B 5DG on Friday, 22 June 2018 at 11.00 am to transact the following business:

Ordinary Business

To consider and, if thought fit, to pass the following resolutions, all of which will be proposed as Ordinary Resolutions:

1 To receive and adopt the audited accounts of the Company for the year ended 31 December 2017, together with the Strategic, Directors' and Auditor's reports in respect of such accounts.

2 To re-appoint as a Director Simon Shaw, who is retiring by rotation in accordance with Article 124 of the Company's Articles of Association and who, being eligible, offers himself for re-appointment.

3 To re-appoint as a Director Phillip Monk, who is retiring by rotation in accordance with Article 124 of the Company's Articles of Association and who, being eligible, offers himself for re-appointment.

4 To re-appoint as a Director Iain Buchanan, who is retiring by rotation in accordance with Article 124 of the Company's Articles of Association and who, being eligible, offers himself for re-appointment.

5 To re-appoint BDO LLP as the Company's Auditor to hold office from the conclusion of the meeting to the conclusion of the next meeting at which the accounts are laid before the Company and to authorise the Directors to determine its remuneration.

6 To approve the Directors' Remuneration Report for the year ended 31 December 2017.

7 That the Directors be and they are hereby generally and unconditionally authorised pursuant to section 551 of the Companies Act 2006 (the 'Act') to allot equity securities (within the meaning of section 560 of the Act) up to an aggregate nominal amount of £377,590. This authority shall, unless previously renewed, varied or revoked by the Company in general meeting, expire on the earlier of 30 June 2019 and the conclusion of the 2019 Annual General Meeting of the Company save that the Company may make an offer or agreement which would or might require equity securities to be allotted after the expiry of this authority and the Directors may allot equity securities pursuant to that offer or agreement as if this authority had not expired; and this authority shall be in substitution for any other authority to allot equity securities but without prejudice to the continuing authority of the Directors to allot equity securities in pursuance of an offer or agreement made before the expiry of the authority pursuant to which such offer or agreement was made.

Special Business

As special business, to consider and, if thought fit, to pass the following resolution, which will be proposed as a Special Resolution:

8 That, subject to and conditional upon Resolution 7 above being passed, the Directors be and they are hereby empowered pursuant to section 570 of the Companies Act 2006 (the 'Act') to allot equity securities (within the meaning of section 560 of the Act) for cash pursuant to the authority conferred by Resolution 7 above and to allot equity securities (including where such allotment constitutes an allotment of equity securities by virtue of section 560(2) of the Act) in each case as if section 561(1) of the Act did not apply to such allotment provided that this power shall be limited to:-

(i) the allotment of equity securities, whether by way of rights issue, open offer or otherwise, to holders of Ordinary Shares and to holders of other securities in the Company that by their terms are entitled to participate in such rights issue, open offer or otherwise in such a manner that the number of equity securities allotted to them is in proportion (as nearly as may be) to their respective holdings of such securities or in accordance with the rights attached thereto and the Directors may deal as they see fit with fractional entitlements, overseas shareholders and with the legal or practical problems or requirements of any regulatory body or stock exchange in any territory;

(ii) the allotment of equity securities up to an aggregate nominal amount of £4,628 upon the exercise of options granted by the Company other than pursuant to an employee share scheme as defined in the Act; and

(iii) (other than pursuant to sub-paragraphs (i) and (ii) above) the allotment or sale of equity securities up to an aggregate nominal amount of £91,432 (representing approximately 10% of the nominal value of the issued share capital of the Company at 1 May 2018);

and this power shall be in substitution for all such powers previously given but without prejudice to the continuing power of Directors to allot equity securities pursuant to an offer or agreement made by the Company before the date this resolution is passed and unless previously renewed, varied or revoked by the Company in general meeting shall expire on the earlier of 30 June 2019 and the conclusion of the Annual General Meeting of the Company to be held in 2019 save that the Company may, before such expiry, make an offer or agreement which would or might require equity securities to be allotted after such expiry and the Directors may allot equity securities (including where such allotment constitutes an allotment of equity securities by virtue of section 560(2) of the Act) in pursuance of such offer or agreement as if the authority conferred hereby had not expired.

By Order of the Board

Registered Office:
Mailpoint 810
Southampton General Hospital Tremona Road
Southampton SO16 6YD

John Ward
Company Secretary

1 May 2018

Explanatory Notes

Entitlement to attend and vote

1. Pursuant to Regulation 41 of the Uncertificated Securities Regulations 2001, the Company specifies that only those members registered on the Company's register of members at:
   - the close of business on 20 June 2018; or,
   - if this Meeting is adjourned, at the close of business on the day two business days prior to the adjourned meeting, shall be entitled to attend and vote at the Meeting.

Appointment of proxies

2. If you are a member of the Company at the time set out in note 1 above, you are entitled to appoint one or more proxies to exercise all or any of your rights to attend, speak and vote at the Meeting and you should have received a proxy form with this notice of meeting. You can only appoint a proxy using the procedures set out in these notes and the notes to the proxy form.

3. A proxy does not need to be a member of the Company but must attend the Meeting to represent you. Details of how to appoint the Chairman of the Meeting or another person as your proxy using the proxy form are set out in the notes to the proxy form. If you wish your proxy to speak on your behalf at the Meeting you will need to appoint your own choice of proxy (not the Chairman) and give your instructions directly to them.

4. A vote withheld is not a vote in law, which means that the vote will not be counted in the calculation of votes for or against the resolution. If you either select the "Discretionary" option or if no voting indication is given, your proxy will vote or abstain from voting at his or her discretion. Your proxy will vote (or abstain from voting) as he or she thinks fit in relation to any other matter which is put before the Meeting.

Appointment of proxy using hard copy proxy form

5. The notes to the proxy form explain how to direct your proxy how to vote on each resolution or withhold their vote. To appoint a proxy using the proxy form, the form must be:
   - completed and signed;
   - sent or delivered to Link Asset Services (PXS 1), 34 Beckenham Road, Beckenham BR3 4ZF; and
   - received by Link Asset Services no later than 11 am on 20 June 2018.

   In the case of a member which is a company, the proxy form must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company.

   Any power of attorney or any other authority under which the proxy form is signed (or a duly certified copy of such power or authority) must be included with the proxy form.

Explanatory Notes
(continued)

Appointment of proxy by joint members

6. In the case of joint holders, where more than one of the joint holders purports to appoint a proxy, only the appointment submitted by the most senior holder will be accepted. Seniority is determined by the order in which the names of the joint holders appear in the Company's register of members in respect of the joint holding (the first-named being the most senior).

Corporate representatives

7. In order to facilitate voting by corporate representatives at the Meeting, arrangements will be put in place at the Meeting so that (i) if a corporate shareholder has appointed the Chairman of the Meeting as its corporate representative with instructions to vote on a poll in accordance with the directions of all the other corporate representatives for that shareholder at the Meeting who have been appointed in respect of different parts of the holding of that corporate shareholder then on a poll those corporate representatives will give voting directions to the Chairman and the Chairman will vote (or withhold a vote) in respect of each different part of the shareholding as corporate representative in accordance with the directions he has received from such corporate representatives in relation to the respective parts of the shareholding in respect of which they are each appointed or (ii) if more than one corporate representative for the same corporate shareholder attends the Meeting but the corporate shareholder has not appointed the Chairman of the Meeting as its corporate representative, a designated corporate representative will be nominated, from those corporate representatives who attend, who will vote on a poll in accordance with the directions he receives from the other corporate representatives in respect of the parts of the corporate shareholders shareholding in respect of which such corporate representatives have each been appointed.

Changing proxy instructions

8. To change your proxy instructions simply submit a new proxy appointment using the methods set out above. Note that the cut-off time for receipt of proxy appointments (see above) also applies in relation to amended instructions; any amended proxy appointment received after the relevant cut-off time will be disregarded.

   Where you have appointed a proxy using the hard-copy proxy form and would like to change the instructions using another hard-copy proxy form, please contact Link Asset Services (PXS 1), 34 Beckenham Road, Beckenham BR3 4ZF.

   If you submit more than one valid proxy appointment, the appointment received last before the latest time for the receipt of proxies will take precedence.

Termination of proxy appointments

9. In order to revoke a proxy instruction you will need to inform the Company by sending a signed hard-copy notice clearly stating your intention to revoke your proxy appointment as above. In the case of a member which is a company, the revocation notice must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company.

   Any power of attorney or any other authority under which the revocation notice is signed (or a duly certified copy of such power or authority) must be included with the revocation notice.

   The revocation notice must be received by Link Asset Services no later than 11.00 am on 20 June 2018. If you attempt to revoke your proxy appointment but the revocation is received after the time specified then, subject to the paragraph directly below, your proxy appointment will remain valid.

   Appointment of a proxy does not preclude you from attending the Meeting and voting in person. If you have appointed a proxy and attend the Meeting in person, your proxy appointment will automatically be terminated.

Issued shares and total voting rights

10. As at 6.00 pm on 1 May 2018, the Company's issued share capital comprised 91,432,817 ordinary shares of 1p each. Each ordinary share carries the right to one vote at a general meeting of the Company and, therefore, the total number of voting rights in the Company as at 6.00 pm on 1 May 2018 was 91,432,817.

Documents available for inspection

11. The following documents will be available for inspection at the Company's registered office during normal business hours (Saturdays, Sundays and public holidays excepted) from the date of this notice until the conclusion of the AGM and will also be available for inspection at the place of the AGM for at least 15 minutes prior to and during the Meeting:
    - a statement or summary of transactions of Directors (and their family interests) in the share capital of the Company; and
    - copies of the service contracts of Directors.

The following notes summarise the purpose of each resolution being proposed.

Resolutions 1 to 7 comprise the ordinary business of the AGM and will be proposed as ordinary resolutions:

Resolution 1: Report and Accounts
The Directors are required to lay the Strategic Report, the Directors' Report, the audited accounts and the Auditor's Report before the Company in general meeting. The shareholders are therefore requested to receive and adopt the Report and Accounts for the year ended 31 December 2017.

Resolutions 2 to 4: Appointment of Directors
Article 124 of the Company's Articles of Association requires that, at the AGM, one third of Directors (excluding Directors retiring in accordance with Article 130) shall retire. Accordingly, Simon Shaw, Phillip Monk and Iain Buchanan shall retire and, being eligible, offer themselves for re-appointment. Resolutions 2, 3 and 4 propose their re-appointment.

Biographical details are given on pages 15 and 16 of this report.

Resolution 5: Appointment of Auditor
At each general meeting at which the accounts are laid before shareholders, the Company is required to appoint auditors to serve until the next such meeting. Resolution 5 proposes the re-appointment of BDO LLP as the Company's auditor and that the Directors be authorised to fix its remuneration.

Resolution 6: Approval of the Directors' Remuneration Report
Resolution 6 proposes the approval of the Directors' Remuneration Report for the year ended 31 December 2017, as set out on pages 21 to 24 of this report.

The Directors' Remuneration Report contains, amongst other things, a forward-looking statement of the Company's policy on Directors' remuneration for subsequent financial years, details of the Directors' service contracts and specific disclosures relating to each Director's remuneration.

Resolution 7: Authority to allot shares
By an ordinary resolution of the Company passed on 28 June 2017 at the 2017 AGM, shareholders authorised the Directors under section 551 of the Companies Act 2006 to issue equity securities without the prior consent of shareholders for a period from 28 June 2017 until the earlier of 30 June 2018 and the conclusion of the 2018 AGM. Resolution 7 proposes to authorise the Directors to allot equity securities up to a maximum nominal amount of £377,590 (which equates to 37,759,000 ordinary shares), which represents the sum of:

- £304,776, being approximately 33.3% of the nominal value of issued share capital of the Company at 1 May 2018; and
- £72,814, being the nominal value of shares under option.

Other than pursuant to the exercise of share options, including awards made under the Long Term Incentive Plan and the Qualifying Non-Employee Option Scheme, the Directors have no present intent to issue any ordinary shares. This authority will expire on the earlier of 30 June 2019 and the conclusion of the 2019 AGM.

Resolution 8 comprises the special business of the AGM and will be proposed as a special resolution:

Resolution 8: Disapplication of pre-emption rights
Also on 28 June 2017, a special resolution was passed under section 570 of the Companies Act 2006, empowering the Directors to allot equity securities for cash without first being required to offer such shares to existing shareholders in proportion to their existing holdings for a period from 28 June 2017 until the earlier of 30 June 2018 and the conclusion of the 2018 AGM. It is proposed that this authority also be renewed. The authority relates to: pre-emptive issues; the allotment of up to 462,765 ordinary shares on the exercise of options already granted by the Company other than pursuant to an employee share scheme (as defined in the Companies Act 2006); and 9,143,200 shares, which represents approximately 10% of the issued ordinary share capital of the Company as at 1 May 2018. This authority will expire on the earlier of 30 June 2019 and the conclusion of the 2019 AGM.

Corporate Directory

Company number
5233429

Directors
Executive: Richard Marsden, Dr Phillip Monk, John Ward

Non-executive: Simon Shaw (Chairman), Iain Buchanan, Dr Bruce Campbell, Paul Clegg, Prof. Stephen Holgate CBE

Secretary
John Ward

Head office and Registered office
Mailpoint 810, Level F, South Block, Southampton General Hospital, Tremona Road, Southampton SO16 6YD

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Website
www.synairgen.com

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Advisers

Independent auditor
BDO LLP
Arcadia House, Maritime Walk, Ocean Village, Southampton SO14 3TL

Bankers
HSBC Bank plc
165 High Street, Southampton SO14 2NZ

Financial public relations
Consilium Strategic Communications
41 Lothbury, London EC2R 7HG

Nominated adviser and broker
FinnCap Limited
60 New Broad Street, London EC2M 1JJ

Registrars
Link Asset Services
The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU

Solicitors
Fladgate LLP
16 Great Queen Street, London WC2B 5DG

Glossary

Acute
An acute disease is a disease with a rapid onset and/or a short course

Airways (or bronchial tubes)
The tubes that carry air in and out of the lungs

Allergen
A usually harmless substance capable of triggering a response that starts in the immune system and results in an allergic reaction

Antibiotic
A drug that inhibits bacterial growth or kills bacteria

Antiviral
Any substance that can either destroy viruses or suppress their growth

Apoptosis
A naturally-occurring form of programmed cell death

Assay
A laboratory test to determine parameters such as the strength of a solution, the proportion of a compound in a mixture, the potency of a drug or the purity of a preparation

Asthma
A disorder in which the airways become episodically narrowed, leading to wheeze, shortness of breath, cough and chest tightness

AZD-9412
Inhaled Interferon Beta-1a formulation used for the AstraZeneca INEXAS study. See INEXAS

BioBank
A collection of samples from clinically-characterised volunteers, comprising blood, induced sputum, bronchial biopsies and epithelial cells. These samples are used to develop the complex *in vitro* human disease models

Biomarker
A biochemical feature or facet that can be used to measure the progress of disease or the effects of treatment

British Thoracic Society (BTS) Step classification system
A stepwise treatment regime (from steps 1 to 5, with 5 being the most severe) for treating asthma in Britain aiming to achieve optimum control without excessive medication

Broad spectrum antibiotic
An antibiotic that acts against a wide range of disease-causing bacteria

Bronchodilators
Medicines which relax the muscles around the airways, helping the airways to open up, so making it easier to breathe. There are several types of bronchodilators, of which short-acting beta-agonist drugs are the most commonly used

Bronchospasm
A sudden contraction of airway smooth muscle resulting in a narrowing of the airways

Candidate
A candidate drug is a compound (e.g. small molecule, antibody, etc.) with strong therapeutic potential and whose activity and specificity have been optimised

CellScale MicroSquisher
A machine for measuring the stiffness of tissue

Chronic bronchitis
An inflammation of the airways accompanied by coughing and production of phlegm. The symptoms are present for at least three months in each of two consecutive years. See COPD

Chronic disease
A persistent or long-lasting condition

Clinical Trial Authorisation or CTA
An authorisation from the MHRA (see below) to conduct a clinical trial

Collagen
The main structural protein found in skin and other connective tissues

COPD
Chronic Obstructive Pulmonary Disease covers two conditions: chronic bronchitis and emphysema. COPD usually results from long-term exposure of irritants to the lungs, of which the most prevalent is tobacco smoke. Unlike asthma, where airflow obstruction varies, in COPD airflow obstruction is usually irreversible

Coronavirus
A virus that can cause respiratory disease such as the common cold or SARS (depending on the type of coronavirus) and gastroenteritis

Cross-link
A chemical bond that acts like a glue, holding collagen fibres together. Lysyl oxidase (LOX) enzymes catalyse this process

DNA
Nucleic acid that carries genetic information in the cell

Emphysema
A destructive process involving the air spaces (alveoli) of the lungs, which leads to over-inflation of the lung and, when sufficiently advanced, causes breathlessness and lack of oxygenation of blood. See COPD

Eosinophil
A type of white blood cell that has a role in allergy and asthma

Epithelium
In the lung, the epithelium is a thin layer of cells which lines airway tubes in order to protect and regulate the tissue underneath

Exacerbation
A rapid deterioration of a chronic disease that makes the symptoms worse

Fibroblast
A fibroblast is a type of cell that synthesizes the extracellular matrix and collagen, the structural framework for animal tissues, and plays a critical role in wound healing

Fibroblastic focus
A hallmark of IPF lung tissue characterised by dense collections of fibroblasts (the cells that secrete scar tissue)

Fibroblastic focus model
A laboratory model which uses cells from IPF patients that replicates the fibrotic lung

Fibrosis
The thickening and scarring of connective tissue, usually as a result of injury

Gene
A hereditary unit consisting of a sequence of DNA that determines a particular characteristic of a living organism

Idiopathic Pulmonary Fibrosis (IPF)
A disease in which tissue deep in the lungs becomes thick and stiff, or scarred, over time by unknown cause. The formation of scar tissue is called fibrosis. It usually affects middle-aged and older people

INEXAS
AstraZeneca's Phase IIa study entitled 'A Study in Asthma Patients to Evaluate Efficacy, Safety and Tolerability of 14 Days Once Daily Inhaled Interferon Beta-1a After the Onset of Symptoms of an Upper Respiratory Tract Infection'

Interferon beta (IFN-β)
Interferon beta is a natural protein found in the body which helps to regulate the immune system and fight off viruses. IFN-β is currently marketed by a number of companies as an injectable therapy for the treatment of multiple sclerosis

Influenza
A contagious viral infection of the respiratory tract, leading to fever, headaches, sore throat, congestion of the nose and body aches

In vitro
Carried out in the laboratory, e.g. in a test tube or culture plate

***In vitro* model (complex)**
A research model which contains more than one cell type and allows the study of interactions between different cell types and 'test' agents relevant to the disease or a therapy

Long acting beta agonist
An asthma drug that acts to relax (open) the airways for 12 or more hours

Lower airway
The airway tubes in the lung running from the throat down, ending in the air spaces (alveoli) where gas exchange occurs

Lysyl oxidase (LOX)
An enzyme responsible for the maintenance of collagen and elastin in tissues

Lysyl oxidase-like protein 2 (LOXL2), 3 (LOXL3), 4 (LOXL4)
Each is a member of a family of enzymes which catalyses cross-linking of collagen and elastin

Macrophages
Phagocytic (i.e. cells that can engulf other cells and cell components) white blood cells involved in cellular clearance and inflammation

MHRA
The Medicines and Healthcare Products Regulatory Agency; a UK government body tasked with ensuring that medicines and medical devices work and are safe

Morbidity
Incidence or prevalence of a disease

Mucus
A gelatinous substance normally produced by the airway cells to protect and hydrate the airway surface from harmful agents

Multiple sclerosis (MS)
A disease affecting nerves in the brain and spinal cord, causing problems with muscle movement, balance and vision

Non-alcoholic steatohepatitis (NASH)
A form of chronic liver disease in adults and children

Pandemic influenza
An influenza pandemic occurs when a new influenza virus appears against which the human population has no immunity, resulting in epidemics worldwide with enormous number of deaths and illness

Parainfluenza
A virus that can cause the common cold. Parainfluenza is also responsible for 75% of croup cases in children

Patent Cooperation Treaty or PCT
A system by which a patent application can be filed in many different countries at once. A single international application is filed initially at a receiving office. After a search and publication, the application may be converted to a series of national applications in different countries

Pathway
A signalling pathway is a group of molecules that work together in a cell to control one or more cell functions

Peak expiratory flow
A lung function test that measures a person's ability to breathe out air

Phase I Clinical Trial
A study conducted in volunteers to determine the biological effects of a drug, especially safety and tolerability

Phase II Clinical Trial
A study in patients with the aim of making a preliminary determination of the efficacy of a drug to provide proof of concept and/or to study drug dose ranges

Glossary (continued)

Phase IIa Clinical Trial
Used to describe a Phase II clinical trial evaluating efficacy, adverse effects and safety risks

Phase IIb Clinical Trial
Used to describe a subsequent Phase II clinical trial that also evaluates dosage tolerance and optimal dosage frequency in a larger number of patients than enrolled in a Phase IIa trial

Phase III Clinical Trial
A full scale clinical trial to determine drug efficacy and safety prior to seeking marketing approval

Phlegm
See Sputum

Placebo
An inactive substance or preparation used as a control/ comparator (in a clinical trial for example) to determine the effectiveness of a medicinal drug

Pre-candidate
A chemical compound that has pharmacological or biological activity likely to be therapeutically useful but which has not yet met all the criteria that are required to be a candidate drug

Pre-clinical
A stage of drug development preceding human clinical trials

Primary endpoint
The most important measure (endpoint) assessed in a clinical trial

Prognostic biomarker
A biomarker that can predict the future course of a disease or response to a therapy

Prophylaxis
A measure taken for the prevention of a disease or condition

Protein
Large molecules made of smaller biological units known as 'amino acids'. Proteins are responsible for the majority of the function and much of the structure of living things, including humans

Pulmonary
Relating to, functioning like, or associated with the lungs

Rhinovirus
Rhinoviruses are the most common viral infective agents in humans. The most well-known disease caused by rhinoviruses is the common cold

RNA
Nucleic acid that is involved in protein synthesis and transmission of genetic information

Safety study
See Phase I Clinical Trial

Seasonal Influenza
Seasonal influenza is a yearly outbreak of influenza infection, caused by influenza virus. The seasonal influenza is somewhat different every year, as influenza viruses are always changing

Secondary/exploratory endpoint
The second most important (or additional) measure (or endpoint) assessed in a clinical trial

Second harmonic generation imaging
A microscopic technique for generating images of collagen, the major constituent of scar tissue

Severe asthma
Asthma which requires treatment with high dose inhaled corticosteroids plus a second controller (and/or oral corticosteroids) to prevent it from becoming 'uncontrolled' or which remains 'uncontrolled' despite this therapy

SG005
A randomised, double-blind, placebo-controlled Phase II study, comparing the efficacy and safety of inhaled IFN-β to placebo administered to asthmatic subjects after the onset of a respiratory viral infection for the prevention or attenuation of asthma symptoms caused by respiratory viruses

SG015
A randomised, double-blind, placebo-controlled study, in COPD patients with and without a confirmed respiratory virus infection assessing antiviral biomarker responses of inhaled SNG001 compared to placebo

Sputum
The thick mucus which is coughed up by a person. Sputum contains cells and soluble substances secreted into the airways (bronchi), some of which can mediate disease if present in amounts different to normal. Sputum is also commonly called phlegm

Steroids
A group of chemicals that is produced naturally in the body by the adrenal gland. In asthma, steroids are given by inhalation or by mouth to reduce the inflammation of the airways

Systemic absorption
The fraction of drug that reaches the systemic circulation

Toxicology
The study of the nature and mechanisms of deleterious effects of chemicals on humans, animals and other biological systems

Translational medicine
The process of converting a scientific discovery into something that aims to improve the health of individuals and the community

Type I IFNs
A classification of interferon that includes IFN-β

Upper airway
The tubes in the nose and neck which conduct air into the lung

Virus
A virus is a non-living small particle that infects cells in biological organisms. Viruses can reproduce only by invading and controlling other cells as they lack the cellular machinery for self-reproduction

Wheeze
A whistling sound made by a person who has airflow obstruction when breathing

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