

Progress in a challenging year

Annual Report and Audited Accounts
For the year ended 31 December 2020

Our work transforms medical innovation into patient benefit

LifeArc exists to help transform early stage, promising science into medical interventions to improve human health and benefit society. Our impact can be seen in new companies, technologies and medicines used to treat patients with a wide range of diseases, including multiple sclerosis, rheumatoid arthritis, ulcerative colitis and cancer.

→ **Impact report**
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Highlights

Operational highlights

Despite the global disruption caused by COVID-19, LifeArc continued to provide scientific, advisory and funding support to the life sciences sector, while playing a key part in helping to understand and treat COVID-19.

| | |
|-----|--|
| 1 | Compound outlicensed for further development ULK compound targets autophagy; a critical component of the cellular recycling process which cancer cells rely on to outgrow surrounding cells. |
| 7 | New companies supported through our venture funding activities Funding and investment to facilitate life sciences businesses. |
| 14 | International drug repurposing projects funded as part of the global response to COVID-19 Investigating repurposing of existing medicines to reduce illness and death from COVID-19. |
| 114 | Patents granted to LifeArc client companies Includes 7 European patents plus 45 national patents, 3 Eurasian patents plus protection in 24 member states |

Financial highlights

In 2020 LifeArc expenditure totalled £49.7m. Return on investments totalled £60.8m, creating a solid foundation for long-term innovation and patient benefit.

| | |
|--------|--|
| £49.7m | Total expenditure An increase of £12.9m on 2019 (after extrapolating 2019 expenditure to 12 months). |
| £60.8m | Total returns on investment Helping to provide a sound foundation for long-term sustainability. |

Our purpose: To translate promising science into benefits for human health and society

What we do

LifeArc exists to help transform early stage, promising science into medical interventions that improve human health and benefit society.

As an independent, self-funded charity, we have been bridging the gaps in biomedical innovation for 25 years. We seek out innovation, primarily in academia, with significant potential for patient benefits. We help scientists progress their discoveries along the journey to becoming a medicine, diagnostic or intervention. We help advance this innovation through our own lab-based research, the support and advice we provide to our partners and the funding we make available.

How we do it

We collaborate with a broad range of groups including medical research charities, research organisations, industry and academic scientists.

We nurture talent, developing expertise and skills in our people through accredited training and project experience while also helping to develop others through our fellowship and industrial placement schemes.

We develop data-driven solutions to navigate the path to the patient.

Translational advice

Our expert teams support technology transfer by protecting and managing intellectual property, evaluating the translational potential of research portfolios and advising on funding, the development path and routes to market.

Translational science

Our translational science team conducts research to advance innovation into potential new medicines and diagnostics.

Our therapeutics team advances research into early stage drug discovery – from validating drug targets to developing molecules. We have an expertise in antibody engineering and small molecules.

Our diagnostics team collaborates on assay design and development and clinical validation for diagnostics. We add industry-recognised credibility and reduce the time to bring these assays to the clinic.

As a charity, LifeArc's primary focus is not on profitability but the identification of solutions to diagnose, treat and support patients in areas of particular need. Our projects are often picked up at an early stage and sometimes involve new technology; many of these projects therefore have a relatively low probability of success, but with high breakthrough potential if they are successful

Translational funding

We seek to use our capital responsibly to fund translational research, particularly addressing early stage funding gaps. Our approach is to provide support throughout the life sciences funding cycle. The intention is that the funding will be used to advance and de-risk projects, that could then attract onward development investment from others, particularly commercial partners.

LifeArc funds innovation in a number of key disease areas, both through our own funds and in partnership with like-minded organisations.

Philanthropic Fund

Provides grants to researchers for advancing new treatments for rare diseases. By incubating and de-risking projects, we aim to make investment in therapeutics for rare diseases more attractive.

Early ventures funding

LifeArc is currently developing a comprehensive strategy to cover our investment in the translation of life science innovation. The key to this strategy is 'investing for impact', targeting our activity to increase the potential patient benefit while contributing to our long-term sustainability.

A key element of that strategy is the ability to invest in early innovation from seed to Series A funding with the ability to further fund where there are exceptional opportunities in existing portfolio companies. We aim to bridge the gaps in life sciences innovation funding and incubate small start-ups to a point where they could attract onward investment.

Our impact

You can see our impact in new companies, technologies and medicines used to treat patients with a wide range of diseases, including multiple sclerosis, rheumatoid arthritis, ulcerative colitis and cancer. We also create the conditions for future life sciences innovation by creating and disseminating knowledge to our partners and other groups and by working with academic institutions to develop current and future, research and translational scientists.

The infographic opposite explains how we have measured our impact during 2020, in four key areas related to our translational activity.

→ Read more

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Our four impact areas

Because the process from lab to patient can involve many parties that don't directly connect with patients, we look broadly at how our work contributes to improving patients' lives. Taken together, these four areas of impact illustrate how we are transforming the way diseases are identified and treated, creating life-changing breakthroughs for patients and benefits for society.

① Research translation

Our core purpose is to **translate new research into new products, devices and services**, taking them closer to the point where they begin to change patients' lives for the better

② Stimulating new research

One of our key strategies is to **stimulate new research through funding and partnerships**, ensuring that key areas of patient need receive the focus and practical support that would not otherwise be accessible to them

④ Developing future scientists

We operate a range of programmes to **develop the human capacity to carry out and enable research**, helping to ensure future generations of scientists while instilling in them an understanding of the translation process

③ Knowledge generation

Our research and translational activity enables us to **generate new science and health knowledge**, expanding the range of life sciences knowledge and opening up new opportunities for future innovation

This Infographic has been designed using resources from Freepik.com

Dr John Stageman, OBE
Chair – LifeArc

In a year of challenge, LifeArc has responded rapidly and positively

As the world adjusted to the global pandemic, LifeArc has demonstrated how an integrated, collaborative approach can deliver impact.

I am proud to present our annual report and audited financial statements for January to December 2020.

As a charity, LifeArc exists to transform early stage, promising science into medical interventions that improve human health and benefit society. Our impact can be seen in new companies, technologies and medicines used to treat patients with a wide range of diseases, including multiple sclerosis, rheumatoid arthritis, ulcerative colitis and cancer.

For a charity with the long-term ambition of becoming a leader in transforming the way diseases are identified and treated, the pandemic could easily have undermined our foundations and disrupted our progress. However, over the year we have demonstrated the ability to respond proactively to unanticipated change while also continuing to strengthen our efficiency and governance.

Our *Keytruda* monetisation in 2019 generated an unprecedented one-off inflow of around £1bn for the charity. The challenge for us is to make best use of it, so we can continue to support the translation of medical innovations over the long term. During 2020 Graham Duce, our Chief Investment Officer, supported by members of the Board, put in place an investment strategy for the monetisation proceeds, which aims to generate financial returns to underpin long-term sustainability.

While our financial security enabled us to withstand the impact of COVID-19, our employees adapted excellently to the challenges of working from home. Our core expertise in translational science, advice and funding enabled us to contribute positively to the scientific research that would help navigate a path out of the pandemic. The CEO's review of our 2020 performance sets out our achievements in more detail, but I would like to highlight some of our major contributions to the fight against COVID-19.

Responding rapidly in a crisis

As a Board we felt that the charity should do all that it could in line with its charitable purpose to address the illness and death brought by COVID-19.

By February 2021 LifeArc had committed more than £27m to fund the search for new medicines and diagnostics to tackle COVID-19. This included £2m to Edinburgh University's STOPCOVID project; £10m for drug repurposing projects; £8m for a range of COVID-19 projects developed by teams within our organisation; £2m co-funding of CRUSH, a COVID-19 drug screening facility at Glasgow University's Centre for Virus Research; and £5m towards the GenOMICC Consortium, which, in conjunction with Genomics England, is using genomics to investigate why some people are affected more severely by COVID-19 and in so doing increase our understanding about the disease.

We also provided our expertise to groups like the UK BioIndustry Association's Therapeutic Antibody Taskforce and provided scientific due diligence for the UK Government's Therapeutics Taskforce, enabling them to prioritise candidates for COVID-19 treatments.

Two recent developments in the fight against COVID-19 serve to show how LifeArc is helping to improve patient health; one the result of a traditional, long-term development chain, the other much more immediate and indicative of a change in how promising science is brought forward.

Towards the end of 2020 news broke about the re-purposing of the rheumatoid arthritis monoclonal antibody tocilizumab, as a treatment to combat hyperinflammation in COVID-19 patients. While LifeArc was not responsible for this study or research, tocilizumab is one of the four marketed therapeutic antibodies we're involved in humanising. This is a poignant demonstration

Over the year LifeArc has demonstrated the ability to respond proactively to unanticipated change while also continuing to strengthen our efficiency and governance."

of the long-term nature of our work and how the impact on patients may extend well beyond the point where a project leaves our laboratories.

More recently University of Toronto's ATACC (Antithrombotic Therapy to Ameliorate Complications of COVID-19) programme is close to changing how COVID-19 patients with blood-clotting issues are treated. The ATACC project, which was co-funded by LifeArc as part of our drug repurposing funding call, has demonstrated the potential of the blood thinner heparin to address clotting in moderately ill COVID-19 patients and stave off progressive deterioration.

The future

LifeArc has a crucial and valuable role to play in identifying promising scientific innovations and facilitating their development as products for patient diagnosis, wellbeing and treatment. The challenges affecting life sciences and the medical research charity sector, made even more acute in the COVID-19 pandemic, will continue for years to come. We believe that our ability to support the translation of innovative research in this way, especially in the UK, will only become more essential.

The Board is determined that in future LifeArc should make an even more substantial contribution to the translation of UK innovation. LifeArc is deeply embedded in the UK academic sector and we will not only continue to support the translational needs of our partners in universities, institutes and medical charities but will seek to leverage and expand these relationships strategically, to help deliver greater impact. Our core translational offerings of advice, science and funding remain at the heart of what we do but we will increase their potential by growing existing strategic partnerships, establishing new ones both in the UK and beyond and seeking to focus on more substantive and complex patient needs.

Our COVID-19 experience has challenged us to bring our collective resources together to tackle the significant problems of the pandemic; in 2021 we will build on that experience to evolve the way we prioritise and deploy our formidable capabilities. Our goal is to ensure that our impact is visible, not just in the products, publications or tools we generate, but in the improvement of patients' lives.

I would like to thank our employees, our Executive Leadership Team and my fellow Trustees for their dedicated co-operation in overcoming the unique challenges of 2020 and setting the foundations for long-term success.

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Dr John Stageman OBE

Chair – LifeArc
25 July 2021

Rising to the challenge of COVID-19

While the development of COVID-19 vaccines has garnered much attention, scientists have also been looking at antibodies as an important treatment option.

Case study

Supporting research that changed Covid care

One of the most severe consequences of Sars-COV-2 infection is the development of blood clots. These have the potential to cause damage or death by restricting the flow of blood within blood vessels, leading to complications like lung failure, stroke or heart attack.

LifeArc's COVID funding call, launched in March 2020, attracted more than 130 submissions, concerning the repurposing of existing medicines or those in late-stage development. One submission, focused on the challenge of blood clots, received £1m in funding and has led to significant new understanding in the treatment of covid infections.

This large multi-centre randomised control trial was designed to evaluate whether heparin – a widely used inexpensive anticoagulant – could be effective against blood clots in COVID-19 patients. If shown to work, that would make treatment available to patients much faster than developing new medicines.

The research team led by the University Health Network of Toronto, in partnership with the University of Manitoba, was part of the ATTACC (Antithrombotic Therapy To Ameliorate Complications of COVID-19) programme. LifeArc's involvement helped the programme attract a further £2.1m from other funding bodies.

The programme used three clinical trial platforms in over 300 hospitals across five continents to address different aspects of the same question: could heparin reduce illness and death by preventing blood clot formation in hospitalised patients?

The findings of the study highlighted some important points about treatment. Results published in December 2020 showed that heparin was not effective in critically ill COVID-19 patients, and actually appeared to be harmful.¹

However in the same trial, full dose heparin in moderately ill Covid patients (ie not yet in intensive care) led to noticeably greater benefit compared to standard treatment.² The treatment prevented the combined endpoint of death or the development of respiratory failure requiring ventilator support.

This finding has changed clinical guidance for covid treatment and has resulted in improved outcomes for patients presenting at hospital with COVID-19 around the world.

Researcher Dr Ewan Goligher, Assistant Professor of Medicine, Interdepartmental Division of Critical Care Medicine, University of Toronto and ATTACC study lead explains what LifeArc's support meant to the team: "LifeArc funding played a fundamentally important role in getting our trial off the ground in a remarkably short period of time and positioned the trial as the definitive platform on which to answer the question. This positioning enabled the partnerships and subsequent funding needed to achieve a definitive answer to one of the most urgent questions in the management of Covid-19."

This rapid impact on patient treatment is exactly why LifeArc committed £10m to fund clinical trials into repurposing. The success in identifying a potential life-saving intervention in less than 12 months is a tribute to the collaboration of hospitals, researchers, patients and funding organisations around the world.

LifeArc funding played a fundamentally important role in getting our trial off the ground in a remarkably short period of time and positioned the trial as the definitive platform on which to answer the question."

1. <https://www.medrxiv.org/content/10.1101/2021.03.10.21252749v1>

2. https://www.uhn.ca/corporate/News/Pages/Full_dose_blood_thinners_decreased_need_for_life_support_and_improved_outcomes_in_hospitalized_COVID19_patients.aspx

A time of transformation

In a uniquely challenging year we made an important contribution to the worldwide fight against COVID-19 and made significant progress in our strategic areas of focus.

A year of challenge and adaptation

The coronavirus pandemic has made the past year tremendously difficult for the whole of society. Within the life sciences sector we have been challenged to change how we think and work together. Thanks to the monetisation of our *Keytruda* royalties in 2019, LifeArc was in a stronger position than many coming into the pandemic and we have been able to mobilise our scientific, advisory and funding capabilities in the fight against the virus. In doing so, we have played our part in helping to understand and treat COVID-19 infections.

At the same time, we have been able to continue building the foundations for long-term impact.

Strategies for growth

Last year I set out how we had identified four strategic areas for LifeArc to expand in, namely diagnostics growth, advanced therapeutics, strategic partnerships, and data and AI. These areas build on our core offerings and reflect the areas of innovation in our sector. I am pleased to say that during 2020, we made significant progress against these areas while continuing to support the creation of new companies, technologies, treatments and diagnostics.

Our diagnostics team expanded its capacity during 2020 and the MBLA (Molecular Bacterial Load Assay) – the diagnostic tool we are developing with St Andrew's University for tuberculosis (TB) – is nearly ready for field testing. TB is a top 10 cause of death in Asia and Africa, and millions of people contract the disease every year. This diagnostic, is a step-change in diagnosis, providing a rapid read out on live bacterial load found in patients' sputum. This should significantly improve how patient treatment decisions are made, as current diagnostics take weeks for a result.

In advanced therapeutics, we identified the need for a network of gene therapy centres to address the challenges that academic researchers in particular have experienced in working to create new, advanced therapies. In partnership with the Medical Research Council (MRC) we launched an £18m call for research centres to apply to become part of a unique network. The hubs aim to support more rapid development of novel gene therapies, with the potential to transform care for millions of patients with rare or life-threatening diseases.

Most significantly we identified that enabling early gene therapy material manufacturing for academics was a major enabler in medical translation of these modalities.

We help turn promising science into benefits for patients. Our role is in translation – taking early ideas from first discovery principles into a commercial or stable product the industry will recognise.”

Dr Melanie Lee, CBE

CEO – LifeArc

Our Seed Fund also financed two gene therapy start-ups in 2020 including Avvinity Therapeutics, a British biotech company developing novel therapeutics for solid tumours.

An achievement coming out of our own labs has been the work on the ULK kinase compound, where we have advanced the work to a point where a biotechnology partner has out-licensed this from us. The project was looking at ULK-targeted compounds to treat a range of cancers, so this development is validation of our aim to advance and de-risk a project to a point where another organisation is willing to take on the onward development.

As advancing technologies unlock new opportunities to meet patient needs, no single organisation can have all the answers and collaboration will be the key to success.

We have continued to build significant strategic relationships; as an example, the strength of our long-term relationship with UK Dementia Research and Innovation (UKDRI) was a key factor in our becoming its technology transfer partner. Meanwhile, we signed an agreement with long-term collaborator Biocartis, an innovative molecular diagnostics company, to investigate its automated molecular diagnosis platform *Idylla* in new areas of infectious and immune-related diseases. We also helped the MRC to develop their spin-out PepGen, whose peptide technology could improve the effectiveness of cutting-edge nucleic acid therapeutics.

£5m

funding provided to increase the understanding of the role of genetic risk factors in patient response to COVID-19

In the two years since PepGen was founded we have negotiated contracts for licensing and setup. We have also helped PepGen secure £45m in Series A funding. Our support has enabled the scientists to progress the technology from the lab bench to the point where it is ready to move towards the clinic.

Positioning for long-term success

We started 2020 with detailed plans for achieving our long-term ambitions. These plans included:

- **Strengthening our foundations** to improve our capacity for change
- **Rebalancing our organisation** to focus on key areas of patient need
- Defining and embedding **new ways of working**
- Developing the **culture, mindset and behaviours** to support our ambitions

Despite the COVID-19-related disruption, we have made real progress with these plans. This included strengthening the leadership team and bringing in new expertise. Dr Ian Campbell joined us as Chief Business Officer and will oversee our key partnerships strategy. Graham Duce began as our Chief Investment Officer in January 2020 and has developed our investment strategy, which will help to ensure we make the best possible use of our financial resources. These appointments enabled us to develop new strategies in key areas such as sustainable investment and strategic partnerships.

Our portfolio review framework, including the Portfolio Review Board we created in 2019, helped us to address the impact of COVID-19 lockdowns on our research activities which had been delayed when our labs closed in the first lockdown. Meanwhile, our investment in Kymab technology has significantly increased our capacity in antibody research.

Successful organisations have a culture that attracts the right people and enables them to deliver their best. We started our culture change exercise during 2020, beginning with an extensive survey of our employees.

We also created a clear set of principles that link our way of working to LifeArc's primary purpose. These principles are the basis for our people development, performance management and reward strategies.

Meeting the challenge of COVID-19

The area in which we have probably made the most progress is embedding new ways of working. We did so in ways that we could not have anticipated at the start of the year.

The rapid spread of the coronavirus took everybody by surprise and had profound effects on our sector. Combating COVID-19 became a shared, global priority, calling for scientific innovation, partnership and support, requiring us to break down the silos between disciplines and work faster than ever before.

Our first duty at the start of the pandemic was to look after our people and in doing so ensure that they could truly contribute to our cause despite changes in working practice. Our people responded to this sense of security by continuing all work that could be done from home while, once the laboratories were safely re-opened, our scientists embraced the chance to practically contribute once more.

We found the move to online meetings brought refreshing benefits of collaboration across our three sites (London, Stevenage and Edinburgh). New teams formed to fully support our external contribution to the drug repurposing initiative and consider a wide variety of ways that we could further the translation of new products to provide a full understanding of vulnerability, risk and treatment of COVID-19. Home working was supported by our HR and technical teams as well as line managers and on reopening the laboratories, our on-site facilities teams were vital to smooth operations.

LifeArc's strengths have really come to the fore in the fight against COVID-19. For example, our scientists tested over 600 antibodies to a very tight timetable, to provide viable candidates for the UK BIA Therapeutics Antibody Taskforce. Our Opportunities Assessment Group (OAG) provided more than 100 drug reports and five landscape reviews to the Government's Therapeutics Taskforce, enabling them to prioritise drugs to test COVID-19. Our Philanthropic Fund ran a call for projects, to fund trials into the repurposing of existing therapies for use in COVID-19 patients.

We are currently funding 14 drug repurposing projects. One of these projects – to address blood clots – has already demonstrated the potential to change how patients with COVID-19 are treated.

Looking ahead

Our goal is to position LifeArc as a leader in developing novel ways to address patient needs. We will achieve this by enabling medical translation to progress promising science and by using our industrial skills and knowledge to generate the pathway, materials, IP and screens that enable products and solutions to address these needs. Our strategy is to identify specific transitional challenges and deliver holistic, patient-centred solutions focusing on the innovative use of data to enable earlier diagnosis and accelerated access to therapies. We will also embrace a 4D approach that integrates drug-based solutions with diagnostics, data and devices. The consideration of diagnostics and devices, use of data and digital interfaces, will all help us to connect to the patient en route to developing therapeutic solutions.

The primary goal of our funding is to benefit human health. Increasingly however, we will also seek to increase our return on translational funding. This is one feature of our expanded venture funding strategy.

Our significant reserve funds are being invested to provide ourselves with sustainable revenue for the long term, while providing sufficient cash flow to enable us to deliver scientific and advisory support to our network of charities, industrial partners and investor communities. Our financial strategy is to enable a sustainable financial future for LifeArc that is fully supportive of our translational purpose, within the UK and also across global innovations.

These commitments require people across the organisation to continue to work in these new ways, motivated by our ability to make a positive difference to patients. I want to thank all of our employees, the Executive Team and our Trustees for their hard work, support and adaptability during an extraordinary year.

Their talents and commitment are central to everything LifeArc has achieved during 2020 and make me confident of our future direction.

If we can continue in 2021 to show the determination, creativity and teamwork that marked 2020, I have every confidence we will achieve what we have set out to do, and more.

Dr Melanie Lee, CBE

CEO – LifeArc
July 2021

The life sciences sector

Translational medicine is a complex and ever-changing ecosystem, where LifeArc plays a unique role.

A pivotal year for life sciences

The life sciences sector has been evolving rapidly in recent years – perhaps never more rapidly than in 2020. This is partly the result of scientific and technological developments such as advanced therapeutics and wearable devices; and partly due to the increasing integration of disciplines such as data science.

But probably the key disrupter in 2020 was the coronavirus pandemic, bringing life sciences into the foreground of people's lives while challenging the sector to find new, more joined-up ways to address urgent patient needs.

These trends and disruptors, both individually and together, will continue to have a material influence on our work in the coming years. This report outlines some of the most important industry drivers in 2020 and how we responded to them.

Drugs: developing new therapeutic approaches

New approaches increasingly offer alternative ways to address diseases that are currently untreatable. Areas such as protein/gene overexpression or errors in DNA and RNA are potential pathways in disease development.

Advanced therapeutics, such as gene-editing based approaches and immune system modulation, hold great promise in addressing these DNA or RNA based diseases. Broadly, these can be classified as:

- *ex vivo*, including cell modification of natural killer cells; and
- *in vivo*, such as gene editing to modify translated proteins.

The promise of cell and gene therapies is already starting to be realised. Some have reached proof of concept or clinical stage, including antisense DNA, antibody drug conjugates, RNA aptamers, RNAi and CAR-T cells. Several gene therapies have already been commercialised but the number of licensed therapeutics remains low and the clinical pipeline is limited. To achieve the significant potential of advanced therapeutics, the life sciences sector will therefore require long-term resource commitment and access to extensive capabilities.

The strong pipeline of projects and pull from the commercial sector contrasts with gaps in the infrastructure to support translation into viable gene therapies. We see this as an opportunity to support academic researchers and help them to develop their innovation into commercially viable patient treatments.

Devices: wearables and the holistic patient experience

Technology and life sciences are increasingly converging, shifting the focus towards monitoring health and preventing disease. As one example, ever more people are using wearable technology to support their own healthcare decisions, with this technology often including medical-grade sensors. These sensors and associated apps can capture information about individuals' health, lifestyles and behaviour. Wearers are willing to provide this information to clinicians, enabling more personalised treatment, but have high expectations of the returns.

The life sciences sector needs to be awake to the potential of wearable or implantable technology, as well as the importance of engaging patients in the research process and having broader discussions about treatment and maintenance care. Providing a holistic patient experience means understanding what it is like for a person to live with a particular condition, which can in turn make life easier for patients and achieve better outcomes. Through technology, clinicians can identify when patients are not adhering to their treatment plans or predict when they are about to suffer an adverse reaction, allowing rapid intervention. Research can also benefit from this trend, with clinical trials accessing real-world data from devices used by patients.

Diagnostics: enabling earlier diagnosis and detection

Early, effective diagnosis is central to the fight against disease. From the patient point of view, it can avoid pain and suffering, while from the therapeutic point of view it can increase the effectiveness of treatment, improving survival rates while reducing cost.

The Deloitte Centre for Healthcare Solutions, in its '2020 global sciences outlook', estimates that 75% of clinical decisions are based on a diagnostic test and that demand for quicker, more accurate diagnosis is rising at a rate of 10% per year.

The development of 'omics' – the collective characterisation and quantification of pools of biological molecules, to understand the structure, function, and dynamics of an organism or organisms – is increasingly enabling earlier diagnostics and detection. However, the need for affordable and reliable near-patient diagnostics remains, to enable better prevention and early diagnosis. The increasing availability of large datasets will greatly aid this work. There are particular opportunities for the development of both diagnostic and therapeutic technologies in the areas of genetics, proteins, metabolism and medical imaging.

LifeArc sees diagnostic development as a key growth area and has expanded its capabilities in this area.

Data: harnessing and understanding big data sets

The medical research sector produces new data at an astonishing rate, beginning in the earliest stages of research through to monitoring and treatment of patients. As technology such as wearables becomes more pervasive, the volume of data and the challenge of utilising it will only increase.

The use of machine learning and artificial intelligence (AI) to interrogate big data sets is rapidly becoming the norm at all stages of translational research and associated business activity. These technologies are making drug discovery and development more innovative, faster and more cost effective. Automation is also taking over some mundane tasks, freeing researchers to add value by spending more time analysing and questioning the insights contained in data.

This work depends on both high-quality data and skilled people. While the algorithms to analyse drug discovery or diagnostic datasets are relatively mature, the main gaps are in the datasets themselves and in the talent available to analyse them.

UK academics are emerging as strong leaders in data and AI. Many consortia involving academia, pharma and AI specialists have been set up and accelerators to foster start-ups are being created privately and by publicly funded organisations.

The bespoke generation of data, along with its prospective collection and knowledgeable curation, will be essential. LifeArc is exploring ways of accessing or facilitating the creation of suitable datasets, primarily through external collaborations and funding.

COVID-19: a global disruptor

COVID-19 has had a huge effect on many aspects of society and brought life sciences on to the front pages. The pandemic's impact required a global response, not least in breaking down the traditional silos between researchers, manufacturers and national regulators to work more effectively together.

Diagnostic and genomic data have been vital in building a shared understanding of infection rates, the virus and mutations. The sharing of this data has directed the way scientists and governments have responded to the pandemic. Organisations have worked together, often internationally, to develop and test vaccines and therapies, even making their resources available to competitors to aid development.

The pandemic also demonstrated that lengthy development timescales can be significantly shortened. With the urgent need for therapeutics, the focus has been on repurposing existing medications that are licensed or near to being licensed for other indications.

The coronavirus pandemic turbo-charged the process from research and development through to manufacture and deployment, challenging the sector to question the art of the possible. One of the biggest medical research challenges of recent time was made possible by collaboration – between researchers, commercial organisations and

The coronavirus pandemic turbo-charged the process from research and development through to manufacture and deployment, challenging the sector to question the art of the possible.”

regulators, across countries, with a common aim. This could become the new pattern for translational science.

At the same time, ongoing research programmes have been severely disrupted, particularly in the charity sector as sources of funding abruptly came to a halt. As financing was already in short supply in many areas, this has only increased the importance of having secure funding to support innovation through to commercially viable solutions.

How LifeArc is responding to these trends

LifeArc monitors these developments and adapts to respond.

We will continue to seek out and maintain **strategic partnerships**, enabling us to develop new therapeutic and diagnostic opportunities, augmenting our own capabilities while speeding up the pace of innovation.

We continue to deploy **transitional funding** to address the urgent needs of scientific research teams to facilitate innovation in key disease areas.

We are developing **data and AI capabilities**, both our own and – through co-funding and collaboration – those of the sector, to capitalise on the increasing importance of data as a driver of life sciences innovation.

Measuring our impact

We have set out four categories for measuring our impact. These reflect not just our strategic priorities but the breadth of our work in translation science, advice and funding.

Impact areas

① Research translation

Translating research into new products, devices and services

② Stimulating new research

Stimulating new research through funding and partnerships

③ Knowledge generation

Generating new science and health knowledge

④ Developing future scientists

Developing the human capacity to carry out and enable research

2020 strategic priorities

Diagnostics growth

① ② ③

Advanced therapeutics

① ② ③ ④

Strategic partnerships

① ② ③

Data and AI

① ② ④

COVID-19 response

① ② ③ ④

Key achievements

- TB-MBLA (Molecular Bacterial Load Assay) ready for field test
- *Idylla* platform access agreed with Biocarti

- Avvinity Therapeutics co-funded with Future Fund
- Two gene therapy start-ups funded through Seed Fund
- Agreement signed with the Medical Research Council (MRC) to fund Gene Therapy Innovation Hubs from 2021

- Agreement reached with UK Dementia Research and Innovation (UKDRI) to become technology transfer partner
- Four projects co-funded with Crick Institute as part of Crick Fund
- Key role in BIA Antibody Taskforce

- KQL Accelerator co-funded with 10 start-ups identified for support
- Sector data needs workshop with Association of Medical Research Charities (AMRC)

- 14 projects supported via repurposing call
- Funding of CRUSH project
- Six internal projects identified for funding
- 600 antibody candidates fast-tracked through testing for UK BIA Antibody Taskforce
- 118 drug reports and five landscape reviews produced for UK Government Therapeutics Taskforce

Measurable impact

Research translation

| | | | |
|---|--|-----|---|
| 1 | New compound out-licensed (ULK) for development | 114 | Patents granted to client companies with the support of LifeArc |
| 2 | MRC spin-outs, PepGen and InFlectis, were supported in accessing further funding | 600 | COVID-19 antibody candidates fast-tracked through testing for UK BIA Antibody Taskforce |

Stimulating new research

| | | | |
|----|---------------------------------------|----|---|
| 10 | Companies funded through KQ labs | 14 | Drug repurposing projects funded via COVID Fund |
| 13 | Projects funded by Philanthropic Fund | 7 | New companies funded via Seed Fund |

Knowledge generation

| | | | |
|----|---|----|---|
| 32 | Presentations, 12 papers and nine posters delivered | 13 | Published papers, enabled to date by access to LifeArc compound tools |
|----|---|----|---|

Developing future scientists

| | | | |
|----|--|----|---|
| 12 | Students commenced their placement year for science careers in 2020 | 14 | Researchers commenced one of LifeArc's fellowship programmes |
| 1 | Industrial fellowship awarded to a LifeArc scientist by the Royal Commission for the Exhibition of 1851 as one of the UK's ten most talented young researchers | 2 | Postdoctoral fellowship positions created at Cleveland Clinic |

Research translation

For research to benefit patients, it must ultimately be translated from the original scientific concept into new products, devices or services.

This can take many years and significant investment in resources. For LifeArc, our role in advancing this research translation can involve:

- developing new diagnostic or therapeutic products, to the point where they can be licensed to third parties for commercialisation;
- creating or protecting intellectual property for life sciences innovations; and
- providing funding and advice for spin-off companies.

Our impact in 2020

LifeArc's business model focuses on developing innovative science to the point where it is ready for further development. As a charitable research organisation, LifeArc's scientific focus is not on profitability but on areas of high medical need and the identification of solutions to diagnose, treat and support patients. Our projects are often picked up at an early stage and sometimes involve new technology; both factors carry a high level of risk. As a result, many of these projects (particularly in therapeutical research) have a relatively low probability of success, but with high breakthrough potential.

One of those successes is our ULK (Unc-51 like kinase) compound, outlicensed in 2020 to a biotech partner for future development as a therapy in a range of different cancer indications. ULK, which originated through collaboration with the Universities of Dundee and Glasgow, is a component of the cellular recycling process known as autophagy, which cancer cells use as a means to generate energy and outgrow surrounding normal tissue.

Our scientists are also developing the Tuberculosis Molecular Bacterial Load Assay (TB-MBLA). This test was developed at St. Andrews University as a way to diagnose TB, monitor treatment effectiveness and guide decision-making. We are developing the model to the point where it can be manufactured and sold as a reliable diagnostic tool.

TB is responsible for 1.4 million deaths per year. The TB-MBLA diagnostic takes around four hours to obtain results, compared with up to eight weeks for current tests, allowing clinicians to make treatment decisions in real time. In 2021 we will launch a research study of the TB-MBLA at four sites in Africa to determine if it can replace conventional TV tests for the diagnosis and monitoring of pulmonary TB.

Supporting the fight against COVID-19 was a feature of much of our activity in 2020. As part of the Bioindustry Association Antibody Therapeutics Taskforce, we were involved in a consortium to identify and develop antibodies that could be used as a treatment. Our role was to evaluate more than 600 antibody candidates, to assess their potential as COVID-19 treatments. This work came at a critical time in the pandemic and demonstrates the value of collaboration between the many Taskforce partners.

Impact numbers

1

New project out-licensed (ULK)

2

MRC spin-out companies, PepGen and InFlectis, were supported in accessing further funding

114

Patents granted to clients with LifeArc support

600

COVID-19 antibody candidates fast-tracked through testing for UK BIA Antibody Taskforce

Our Opportunity Assessment Group (OAG) also played a key role in helping the UK Government's Therapeutic Task Force to prioritise candidates for testing.

Through our long-standing partnership with the Medical Research Council's Laboratory of Molecular Biology (MRC LMB) we have helped create or protect 110 new intellectual property (IP) cases during 2020. This IP was generated through work on rare diseases funded by the MRC and other organisations.

In addition to helping secure intellectual property (IP) rights LifeArc's technology transfer team helps the MRC access funding. We also help with the contracts, licensing and setup required to spin out new businesses.

In 2020 we helped the MRC, to achieve Series A funding for two of its spin-outs, PepGen and InFlectis. The PepGen funding will help advance a novel technology that could improve the effectiveness of cutting-edge nucleic acid therapeutics. Our support over the two years since the company was spun off has enabled PepGen scientists to progress the technology from the lab bench to the point where it is ready to move towards the clinic.

Case study

Collaboration leads to promising new approach for Alzheimer's disease

A team from LifeArc and Göttingen University have developed a new approach to intervene in early-stage treatment of Alzheimer's disease and demonstrated its therapeutic potential in mouse models.

Alzheimer's disease is the most common type of dementia, affecting half a million people in the UK and causing a long, slow and irreversible deterioration in memory, thinking skills and language skills. There are no effective treatments to prevent or reverse the disease process.

One of the hallmarks of Alzheimer's disease is abnormal structures that form in the brain. These 'amyloid plaques' are largely made up of insoluble clumps of A β peptides. Many therapeutic strategies have focused on targeting A β to reduce or prevent plaque formation and improve disease outcomes – so far without success. But A β peptides come in several different molecular forms – and there is growing evidence that the shorter, soluble forms outside of plaques are key to disease progression.

The LifeArc/Göttingen team initially developed a mouse antibody that specifically binds to non-plaque A β peptides. Using novel structural insights into the A β peptide, the team generated a more potent 'humanised' version of the antibody. This antibody is effective at targeting soluble A β peptide without affecting non-damaged tissues, indicating that the antibody could be effective in relatively low doses, with a reduced risk of side effects.

The researchers evaluated the effects of the antibody in two mouse models of Alzheimer's disease, with striking results: plaque formation and early symptoms of the disease were significantly reduced in one model, while in the other, antibody administration reduced nerve cell loss and rescued memory deficits when compared to untreated mice.

These are early but promising results in the journey towards a commercial therapy for a disease which places a tremendous social and economic burden on families and societies, costing the UK £26bn.

Project portfolio

LifeArc had a rich and varied portfolio of translational science projects active in 2020. This pipeline represents the scientific assets being developed by our therapeutics discovery and diagnostics development teams.

LifeArc's translational science group acts as a bridge between academic research and industry development, where early stage diagnostic or therapeutic assets (small molecules of biologics) are developed to international standards of commercialisation. We also conduct technology development projects to enhance our discovery capabilities.

Portfolio diversity

The quality, breadth and balance of the portfolio is assured by the Portfolio Review Board (PRB), prioritising projects in alignment with LifeArc's strategy while tracking portfolio performance through a series of metrics and KPIs.

The range of projects covered in this portfolio reflects LifeArc's breadth of therapeutic expertise, with projects in oncology, neuroscience and infection. The organisation works in other areas – such as funding rare disease research through the Philanthropic Fund – but these activities fall outside of this portfolio.

The projected time to completion for these projects – which is usually at the point where they are transferred to a partner for onward development – will vary significantly given LifeArc's range of drug discovery capabilities. For example, the organisation offers a humanised antibody engineering service followed by performance testing in a range of biophysical assays to determine the development potential of lead clinical candidates. In contrast, LifeArc's medicinal chemists develop structure-activity relationships to improve potency, solubility and physico-chemical properties of small molecules to turn them into drug-like molecules.

| Project and Indication | 2020 | | | | 2021 | | | |
|--|------------|-----|-----|-----|------|-----|-----|-----|
| | Q.1 | Q.2 | Q.3 | Q.4 | Q.1 | Q.2 | Q.3 | Q.4 |
| Therapeutics – ONCOLOGY | | | | | | | | |
| Ovarian Cancer | Completed | | | | | | | |
| Multiple cancers, to overcome drug resistance | | | | | | | | |
| Cancer stem cells | | | | | | | | |
| Cancer | | | | | | | | |
| Head and neck cancer | | | | | | | | |
| Cancer | | | | | | | | |
| Cancer | | | | | | | | |
| Cancer | | | | | | | | |
| Cancer | | | | | | | | |
| Colorectal cancer | | | | | | | | |
| Neuroblastoma | Terminated | | | | | | | |
| Metastatic cancer and/or primary tumour | Terminated | | | | | | | |
| Triple negative breast cancer | Terminated | | | | | | | |
| Therapeutics – NEUROSCIENCE | | | | | | | | |
| Alzheimer's disease | | | | | | | | |
| Alzheimer's disease | | | | | | | | |
| Neuropathic pain (NP) | | | | | | | | |
| Chronic pain | | | | | | | | |
| Prophylactic treatment of migraine | | | | | | | | |
| Neuropathic pain | Completed | | | | | | | |
| Therapeutics – INFECTION | | | | | | | | |
| Pan Coronavirus | | | | | | | | |
| Antimicrobial | | | | | | | | |
| Antimicrobial | | | | | | | | |
| Antimicrobial | | | | | | | | |
| Gram -ve bacterial infections | | | | | | | | |
| Therapeutics – OTHER & TECH. DEVELOPMENT | | | | | | | | |
| Technical development | | | | | | | | |
| Technical development | | | | | | | | |
| Technical development | | | | | | | | |
| BBB penetration | Terminated | | | | | | | |
| Sepsis | Terminated | | | | | | | |
| Diagnostics – ONCOLOGY | | | | | | | | |
| Tech. dev. oncology | | | | | | | | |
| Metastatic breast cancer | | | | | | | | |
| Diagnostics – INFECTION | | | | | | | | |
| Tuberculosis | | | | | | | | |
| Diagnostics – GASTROENTEROLOGY & HEPATOLOGY | | | | | | | | |
| Paediatric Crohn's | | | | | | | | |

As is appropriate for a charitable research organisation, LifeArc's primary focus is not on profitability but on areas of high medical need and the identification of solutions to diagnose, treat and support patients. These projects are often picked up at an early stage and sometimes involve new technology, both factors that carry a high level of risk. As a result, the majority of projects, particularly within therapeutic research, have a relatively low probability of success, but with high breakthrough potential if they are successful.

Looking ahead, LifeArc will continue to use its portfolio review framework to ensure its scientific portfolio remains on track and aligned with its evolving strategy and goals.

| Category | Sub-category | Value | Unit |
|-------------|-------------------|-------|--------|
| Category 1 | Sub-category 1.1 | 10 | Unit 1 |
| | Sub-category 1.2 | 20 | Unit 1 |
| | Sub-category 1.3 | 30 | Unit 1 |
| | Sub-category 1.4 | 40 | Unit 1 |
| | Sub-category 1.5 | 50 | Unit 1 |
| | Sub-category 1.6 | 60 | Unit 1 |
| Category 2 | Sub-category 2.1 | 70 | Unit 1 |
| | Sub-category 2.2 | 80 | Unit 1 |
| Category 3 | Sub-category 3.1 | 90 | Unit 1 |
| | Sub-category 3.2 | 100 | Unit 1 |
| | Sub-category 3.3 | 110 | Unit 1 |
| | Sub-category 3.4 | 120 | Unit 1 |
| | Sub-category 3.5 | 130 | Unit 1 |
| Category 4 | Sub-category 4.1 | 140 | Unit 1 |
| | Sub-category 4.2 | 150 | Unit 1 |
| Category 5 | Sub-category 5.1 | 160 | Unit 1 |
| | Sub-category 5.2 | 170 | Unit 1 |
| Category 6 | Sub-category 6.1 | 180 | Unit 1 |
| | Sub-category 6.2 | 190 | Unit 1 |
| Category 7 | Sub-category 7.1 | 200 | Unit 1 |
| | Sub-category 7.2 | 210 | Unit 1 |
| Category 8 | Sub-category 8.1 | 220 | Unit 1 |
| | Sub-category 8.2 | 230 | Unit 1 |
| Category 9 | Sub-category 9.1 | 240 | Unit 1 |
| | Sub-category 9.2 | 250 | Unit 1 |
| Category 10 | Sub-category 10.1 | 260 | Unit 1 |
| | Sub-category 10.2 | 270 | Unit 1 |
| Category 11 | Sub-category 11.1 | 280 | Unit 1 |
| | Sub-category 11.2 | 290 | Unit 1 |
| Category 12 | Sub-category 12.1 | 300 | Unit 1 |
| | Sub-category 12.2 | 310 | Unit 1 |
| Category 13 | Sub-category 13.1 | 320 | Unit 1 |
| | Sub-category 13.2 | 330 | Unit 1 |
| Category 14 | Sub-category 14.1 | 340 | Unit 1 |
| | Sub-category 14.2 | 350 | Unit 1 |
| Category 15 | Sub-category 15.1 | 360 | Unit 1 |
| | Sub-category 15.2 | 370 | Unit 1 |
| Category 16 | Sub-category 16.1 | 380 | Unit 1 |
| | Sub-category 16.2 | 390 | Unit 1 |
| Category 17 | Sub-category 17.1 | 400 | Unit 1 |
| | Sub-category 17.2 | 410 | Unit 1 |
| Category 18 | Sub-category 18.1 | 420 | Unit 1 |
| | Sub-category 18.2 | 430 | Unit 1 |
| Category 19 | Sub-category 19.1 | 440 | Unit 1 |
| | Sub-category 19.2 | 450 | Unit 1 |
| Category 20 | Sub-category 20.1 | 460 | Unit 1 |
| | Sub-category 20.2 | 470 | Unit 1 |
| Category 21 | Sub-category 21.1 | 480 | Unit 1 |
| | Sub-category 21.2 | 490 | Unit 1 |
| Category 22 | Sub-category 22.1 | 500 | Unit 1 |
| | Sub-category 22.2 | 510 | Unit 1 |
| Category 23 | Sub-category 23.1 | 520 | Unit 1 |
| | Sub-category 23.2 | 530 | Unit 1 |
| Category 24 | Sub-category 24.1 | 540 | Unit 1 |
| | Sub-category 24.2 | 550 | Unit 1 |
| Category 25 | Sub-category 25.1 | 560 | Unit 1 |
| | Sub-category 25.2 | 570 | Unit 1 |
| Category 26 | Sub-category 26.1 | 580 | Unit 1 |
| | Sub-category 26.2 | 590 | Unit 1 |
| Category 27 | Sub-category 27.1 | 600 | Unit 1 |
| | Sub-category 27.2 | 610 | Unit 1 |
| Category 28 | Sub-category 28.1 | 620 | Unit 1 |
| | Sub-category 28.2 | 630 | Unit 1 |
| Category 29 | Sub-category 29.1 | 640 | Unit 1 |
| | Sub-category 29.2 | 650 | Unit 1 |
| Category 30 | Sub-category 30.1 | 660 | Unit 1 |
| | Sub-category 30.2 | 670 | Unit 1 |
| Category 31 | Sub-category 31.1 | 680 | Unit 1 |
| | Sub-category 31.2 | 690 | Unit 1 |
| Category 32 | Sub-category 32.1 | 700 | Unit 1 |
| | Sub-category 32.2 | 710 | Unit 1 |
| Category 33 | Sub-category 33.1 | 720 | Unit 1 |
| | Sub-category 33.2 | 730 | Unit 1 |
| Category 34 | Sub-category 34.1 | 740 | Unit 1 |
| | Sub-category 34.2 | 750 | Unit 1 |
| Category 35 | Sub-category 35.1 | 760 | Unit 1 |
| | Sub-category 35.2 | 770 | Unit 1 |
| Category 36 | Sub-category 36.1 | 780 | Unit 1 |
| | Sub-category 36.2 | 790 | Unit 1 |
| Category 37 | Sub-category 37.1 | 800 | Unit 1 |
| | Sub-category 37.2 | 810 | Unit 1 |
| Category 38 | Sub-category 38.1 | 820 | Unit 1 |
| | Sub-category 38.2 | 830 | Unit 1 |
| Category 39 | Sub-category 39.1 | 840 | Unit 1 |
| | Sub-category 39.2 | 850 | Unit 1 |
| Category 40 | Sub-category 40.1 | 860 | Unit 1 |
| | Sub-category 40.2 | 870 | Unit 1 |
| Category 41 | Sub-category 41.1 | 880 | Unit 1 |
| | Sub-category 41.2 | 890 | Unit 1 |
| Category 42 | Sub-category 42.1 | 900 | Unit 1 |
| | Sub-category 42.2 | 910 | Unit 1 |
| Category 43 | Sub-category 43.1 | 920 | Unit 1 |
| | Sub-category 43.2 | 930 | Unit 1 |

Stimulating new research

We stimulate research into the development of new treatments through funding, collaborations and partnerships.

We provide funding and advisory support to research projects and to early-stage businesses, providing essential support for innovation into key areas of underserved patient need and helping to develop new diagnostic and therapeutic approaches. Our scope of facilitation includes:

- leveraging our own and our collaborators' knowledge and resources, to fill research gaps and develop new patient interventions; and
- investing for impact, by being prepared to take risks on funding innovations with significant potential for improving patient wellbeing.

Impact numbers

10

Companies funded through KQ Labs

14

Drug repurposing projects funded, via COVID Fund

13

Projects funded by Philanthropic Fund

Our impact in 2020

During 2020, our work to stimulate new research included supporting numerous projects relating to COVID-19. We provided £10m in funding for 14 repurposing projects (see case study opposite for a key example) and a further £2m of funding to the University of Edinburgh's STOPCOVID project, which focused on the inflammatory pathways leading directly to lung injury.

Within LifeArc's own portfolio, we identified six COVID-19-related projects for further development. LifeArc also committed to funding CVR-CRUSH, a new national facility for COVID-19 drug screening and resistance based at the MRC-University of Glasgow Centre for Virus Research. The centre will play a valuable role in helping the UK prepare for future outbreaks.

Another important theme of the year was our support for advanced therapeutics, new medical products that use gene therapy, cell therapy, and tissue engineering and which have huge potential for diseases that have proven difficult to treat. Much of the work being done in the UK is by academic researchers and there has been a shortage of financial and practical support for this work.

LifeArc partnered with the Medical Research Council (MRC) to support the creation of a national network of Gene Therapy Innovation Hubs – innovation-focused facilities for production of gene-therapy clinical trial materials. Backed by a collective investment of £18m, the Hubs are designed to enable more rapid development of novel gene therapies, with potential to transform care for millions of patients with rare or life-threatening genetic diseases. Each of the Hubs will offer researchers access to GMP (Good Manufacturing Practice) facilities for clinical trial materials, alongside essential translational support and regulatory advice. Post-year end we announced the recipients of our investment into three new, dedicated Gene Therapy Innovation Hubs – at King's College London, NHS Blood and Transplant in Bristol and the University of Sheffield.

LifeArc's Seed Fund offers funding and investment opportunities to facilitate early stage therapeutics start-ups where we believe they can make a real difference to patients' lives. The fund aims to bridge the gap and incubate small start-ups to a point where they could attract venture funding.

In partnership with the UK Government's Future Fund, the Seed Fund co-funded start-up Avvinity Therapeutics to progress validation research into first-in-class novel therapeutics as potential drug candidates for the treatment of solid tumours including gastric cancer. The Seed Fund also continued to support two further advanced therapy start-ups during 2020: Ikarovec, a business which is developing novel gene therapies to treat major ophthalmic indications, and Pheno Therapeutics, which researches novel treatments that may reverse the effects of MS by repairing damage to the nervous system. In 2020 the Seed Fund provided finance to four new companies, with a further three due to receive funding post-year end.

Another key objective for LifeArc in 2020 was to support the acceleration of data and digital health innovation. We partnered with the Francis Crick Institute on their KQ Labs initiative, an accelerator programme focused on data-driven healthcare solutions. We provided funding for 10 new companies for an initial period of 12 months, while they are part of the accelerator programme. The 10 selected companies are using data to tackle diverse problems in domains including Parkinson's disease, cancer biomarkers and precision medicine, among others, but the programme has potential for wider healthcare and patient impact. KQ Labs' wider objective is to catalyse the growth of a data driven health ecosystem for start-ups in the UK, building on excellence in both biomedical and data sciences.

Our Philanthropic Fund offers grants to support translational research into rare diseases – incubating and de-risking projects to accelerate the prospects of potential treatments. This approach is particularly important as industry is reluctant to invest in rare diseases without the likelihood of a financial return on investment.

Case study

How to kill a virus: LifeArc's role in shaping the UK's COVID-19 response

In 2020 the UK Government, supported by UK Research and Innovation and the National Institute for Health and Research, launched the COVID-19 Therapeutics Taskforce to co-ordinate national trials into potential treatments. The Taskforce launched RECOVERY, the world's largest randomised controlled clinical trial for COVID-19 treatments, which identified the benefits of dexamethasone as a cheap and readily-available anti-inflammatory drug.

The Taskforce produced results through innovative trial designs studying multiple medicines in parallel trials. A major challenge was selecting the most appropriate drug to investigate given the sheer number of candidates. This is why the taskforce turned to LifeArc's Opportunity Assessment Group (OAG).

OAG's quick and efficient due diligence had already proven their value in LifeArc's drug repurposing call. The team's holistic approach spanned analysis of scientific rationale, drug profile, competitive landscape and the logistics of sourcing and distribution, ensuring an in-depth and comprehensive drug review.

Within weeks, the OAG team provided analysis on over 100 drug candidates and biologic pathways. This was vital in helping the Taskforce to accelerate promising treatments through to the clinic in record time.

Alison Cave, ISCF Challenge Director at Innovate UK, highlighted the importance of OAG's support: "The LifeArc team have been extremely accommodating around short timescales...without their support we could not have delivered the due diligence work to the timescales that the COVID pandemic demanded".

This work has already produced tangible results: three interventions reviewed by the team have since been included in the ACCORD and RECOVERY trials. LifeArc's contribution to this vital initiative highlights both the impact of our holistic review processes and the power of collaboration in pursuit of a common goal.

Knowledge generation

Our own lab-based scientific research, platforms and diagnostics work accelerates the progress of innovative scientific discoveries and technologies in areas of significant need.

Our scientific research stimulates and supports innovation, both internally and for others, by:

- increasing the pool of life sciences knowledge, by publishing papers and presenting at public events
- making research tools and methods available to researchers
- sharing research databases and models for use by others

Impact numbers

32

Presentations, 12 papers and nine posters delivered

13

Papers published to date, with the aid of LifeArc tools

Our impact in 2020

As research funding has come under pressure, free access to research toolkits has been a vital source of support. The LifeArc Compound Library is an invaluable aid to research and is made available to researchers at no cost. The Library is a physical collection of around 160,000 compounds, subdivided into several sets targeted at different mechanisms or strategies. It includes potential research tool compounds and compound sets optimised to support lead identification. The dataset can be searched electronically and compounds selected; it is also available as larger plate-based compound sets. The Library is used by an average 30 projects a year.

In a similar manner, LifeArc makes antibodies available to researchers. During 2020 for instance, we provided antibodies to the MRC Laboratory of Molecular Biology (LMB) to help progress a programme of *in vivo* studies.

Although COVID-19 temporarily interrupted our scientists' work during 2020, LifeArc employees continued to be productive, delivering a range of papers, presentations and posters that advanced scientific knowledge. Our people had 12 papers published in total, in subjects ranging from allosteric activation of MALT1 by its Ubiquitin-binding Ig3 domain, to patient derived explants as a pre-clinical platform for anti-cancer drug and biomarker discovery.

Although many conferences were either postponed or converted into online events, our scientists made more than 30 presentations. For example, LifeArc scientists presented on "Fragment-based target screening – an empirical approach to prioritising targets: a case study on antibacterials" and "Cell based screening to identify a lead humanised antibody-conjugate" at the International SLAS (Society for Laboratory Automation and Screening) conference 2020, and on "Turning science into benefits for patients through collaboration" at the CEIDR (Centre of Excellence in Infectious Diseases Research) Industrial Symposium.

Nine posters were also presented, including an introduction to our protein mass spectrometry toolbox visual and a poster for the European Laboratory Research & Innovation Group, on using CRISPR technology to validate eIF4A1 as a potential target for cancer therapeutics.

Case study

Exploring new approaches to drug discovery

LifeArc's scientists have been working on a fresh approach to drug discovery, using a parallel high-throughput application to significantly improve fragment-based screening. This will potentially enable researchers into antibacterial therapeutics to prioritise and select new targets more effectively.

Antibacterial drug discovery is a field with many unique challenges, some of which can be addressed through more reliable target selection. Our team's novel workflow combines informatics, using the wealth of data coming from consortia investigating structural genomics, with experimental approaches, to enable researchers to carry out evidence-based prioritisation of targets from large sets.

LifeArc scientists developed a proof of concept, applying this technique to a set of antibacterial targets comprising 146 essential genes. Of these targets, 51 were selected and 38 delivered results that allowed the team to rank them by ligandability. The data obtained against these de-risked targets resulted in rapid progression into structurally enabled drug discovery projects, demonstrating the practical value of the fragment-based target screening workflow.

The team's article on this research, entitled "Fragment-based target screening as an empirical approach to prioritising targets: a case study on antibacterials", featured in the November 2020 issue of *Drug Discovery Today*. The theme of this issue was "High throughput screening; current biochemical and cell-based approaches". The article offers both a way ahead for improving future antibacterial drug discovery and a practical case for the increasing importance of informatics as a diagnostic tool. As a particularly promising development in this field, our case study featured as the lead article.

Developing future scientists

The future of life sciences research depends on having a sufficient flow of diverse talent into the industry.

There is a pressing need for people who are excited to bring new ideas to life and passionate about improving the lives of patients and the people who care for them. We therefore nurture our own talent through accredited training and project experience, and help to develop others through our fellowships, mentoring and industrial placement schemes.

LifeArc enables both current and future scientists to acquire and develop specialist skills, primarily through:

- our industrial placement programme for undergraduates;
- our AUTM and Technology Transfer Fellowship programmes;
- support for postdoctoral research projects;
- support for research and development facilities, such as our 2020 commitment to support a network of Gene Therapy Innovation Hubs.
- our participation in the Science Technology Engineering and Maths (STEM) Ambassador programme, funded by the National Science Foundation, to educate school-age scientists.

Our impact in 2020

We enable scientists to experience cross-disciplinary scientific development, a way of working which is not easily taught in an academic setting. This helps them to experience the reality of life sciences translation and to decide on their future direction.

During 2020, 45 people spent time working and learning with LifeArc teams. This included two cohorts of industrial placement students, with the 12 who joined us in 2019 completing their placements in 2020, and another 12 students arriving in September 2020. A further 15 researchers completed the AUTM and Technology Transfer fellowships and a CASE (Council for Advancement and Support for Education) study programme.

We are also helping to develop future scientific excellence through our partnership with MRC, to support a network of Gene Therapy Innovation Hubs. These hubs will support the sharing of both knowledge and resources, to enable academic researchers across the UK to develop innovation in advanced therapeutics (see page 10 for more information).

Impact numbers

12

Students commenced their placement for science careers in 2020

14

Researchers embarked on LifeArc's AUTM and Technology Transfer fellowship programmes

3

PhD students completed CASE scheme in 2020

2

Postdoc fellowships to be sponsored at Cleveland Clinic

Industrial placements – developing awareness of translational science

During 2020 12 industrial placement (IP) students took a break from their university studies to spend a year working in one of LifeArc's industrial laboratories. The students worked closely with experienced team members across a number of areas of the drug discovery process.

Of the 71 students who have completed the programme since its inception, 64% have gone into further academic study, including postdoctoral research. The other 36% have moved into employment, with a large majority embarking on a science-related career, either directly in research or in related fields such as clinical support, science writing and teaching.

Working with schools to engage future scientists

LifeArc encourages colleagues to support pre-university student groups and help engender an interest in long-term scientific careers. This has included acting as STEM ambassadors as well as more ad hoc support. In the past two years, colleagues have visited schools with exhibit stands and demonstrations; participated in local government events; and produced a leaflet for schools, outlining career opportunities in science.

During the COVID-19 pandemic, it has not been possible to maintain site or school visits. However LifeArc scientists have continued to interact with students and schools remotely, to give advice and share understanding of career opportunities.

Our fellowship programmes – helping life scientists develop their careers

LifeArc offers a number of development opportunities to academic life scientists interested in technology transfer skills, through our AUTM Fellowship and the Technology Transfer Fellowship schemes.

The **AUTM programme**, which we run in partnership with the AUTM Foundation, equips academic life scientists, at the graduate or post-doctoral level, with the skills and knowledge to transition into careers in technology transfer. The programme recruits both in the UK and worldwide. Fellows commit to spend time on the programme alongside their existing positions. Our curriculum combines formal training with networking, mentoring and practical experience in the field.

Six of the seven AUTM Fellows on the 2018-19 programme have used their experience to progress to new roles such as business development, translation management and innovation consultancy, while the seventh is now working on a prestigious research project. The 2019-20 cohort was disrupted by COVID-19 and will continue their programme in 2021.

Our **Technology Transfer Fellowship** programme is run in partnership with Imperial College London as well as Queen Mary Innovation and UCL Business (UCLB), the technology transfer offices for Queen Mary University of London and University College London respectively. Four fellows are taken on per year; each spends three months working at each technology transfer office while being paid by LifeArc. They receive training and hands-on practical experience in four of London's leading technology transfer environments.

Our initial cohort have all moved on to key roles in technology transfer (one of them at LifeArc) or in the academic sphere. One of the current cohort has left early, having secured a role with a venture capital organisation.

Supporting academic and employee researchers

LifeArc is an industrial partner supporting a number of research council funded PhD studentships. Typically these students will spend three to four months on placement with LifeArc, over the course of their PhD studies. Of the 13 students who completed the scheme up to the end of 2020, 10 have been awarded their PhDs and have moved on to further research or full-time jobs.

LifeArc also provides support to postdoctoral researchers in academic institutions, helping to develop innovation across life science technologies and approaches, including bioinformatics (Milner Institute), proteomics (Medicines Development Centre) and structural biology (Leicester University and UCB – A2D2 project).

In addition, we actively support programmes to enable colleagues to obtain PhD qualifications. Two LifeArc employees have successfully obtained fellowships through the Royal Commission of 1851 award, a competitive award for early-career researchers in industry.

Towards the end of 2020, LifeArc expanded its support for postdoctoral research, signing an agreement with Cleveland Clinic to fund two post-doctorate fellowships.

Case study

Developing the next generation of technology transfer specialists

Technology transfer is a highly trained and multi-disciplinary scientific endeavour, providing the crucial link between academic research and commercial development.

Our Technology Transfer Fellowship was launched in 2018, in conjunction with Imperial College London, Queen Mary Innovation and UCL Business, three of London's leading technology transfer environments. The Fellowship combines training and practical experience to develop understanding of the drug discovery process, intellectual property management and the biotechnology and pharmaceutical industries. Experts from organisations such as the Wellcome Sanger Institute, AlbionVC, Bristows and Mewburn Ellis, have supported the programme by presenting to the fellows during induction week.

All four fellows from the scheme's first year have found employment in technology transfer. One, Dr Elliott Jennings, joined LifeArc as a Business Manager. Elliott described the Fellowship as, "a fantastic introduction to the industry [which] exposed me to a range of new technologies, ways of working and TTOs. The network I began to build has been one of the lasting outcomes of the programme."

Tom Hockaday, author of 'University Technology Transfer: What It Is and How To Do It' and former Managing Director of Oxford University Innovation, has presented to the fellows. He sums up the value of the Fellowship: "There are very few similar opportunities available to get such a detailed insight into the workings of technology transfer offices, the challenges, the opportunities to support researchers and to see the brilliance of scientific research results having an impact in society. The roles into which alumni have moved clearly demonstrate how the Fellowship develops skillsets that the participants will benefit from as their careers progress."

People are critical to our success

LifeArc's long-term ambition relies on the commitment and capabilities of our people. Our people strategy is designed to help us attract the right people with the right skills and capabilities and support them to achieve our goals.

People overview

LifeArc plays a key part in facilitating the development of promising science into patient benefit. To do so, we focus on attracting, developing and retaining excellent scientists and other key talent who enable them and ensure their work gets to patients. The challenges of the COVID-19 pandemic brought into even sharper focus the importance of supporting, engaging and creating a sense of belonging for our people.

During 2020, the charity made progress against a number of people-related objectives, a number of which are outlined below.

Engaging our people

During the year we recognised the need to connect our remote teams and build a shared experience as part of the wider LifeArc community. We have developed the Life@LifeArc concept, connecting our people, creating an inclusive internal narrative and celebrating our successes. We have also launched initiatives including 'coffee roulette', bringing colleagues together for a virtual chat, which has encouraged conversations between people who do not usually work together, this has generated positive feedback.

To keep our people connected and informed while working remotely, we migrated our regular town halls online and increased the frequency, enabling colleagues to discuss the organisation's progress and how they contribute.

Our intranet has also been a key source of information, carrying news and resources to support colleagues, including the creation of a wellbeing site offering tips for keeping well during lockdown and a series of blogs from employees to bring to life their experiences of working remotely. Our online COVID Information Centre provided up to date guidance on the changes, what it meant for our sites and provided manager guides to equip them to actively support our people. In addition, our CEO kept colleagues up to date with regular newsletters and contributed a blog on her own experience of working from home.

During 2020 LifeArc approved significant investment in new technology to improve our employee experience across the employment lifecycle, including an interactive benefits platform. This provides us the opportunity in 2021 to encourage employees to interact more regularly with their benefits, helping them both understand and realise the value they offer. A focus in 2021 will be on reviewing our benefits to ensure they meet employees' needs.

Building on this, financial education is an area of importance for LifeArc. New technology and new partnerships for benefits and pensions advice have built the foundations for us to bring this to life for our people in 2021.

We continued to monitor and support colleague wellbeing throughout the year and when we reopened our laboratories, we held discussions with every colleague involved, to understand their concerns and ensure they could return safely to our sites."

Equality, diversity and inclusion

Although unemployment is rising in the UK, healthcare remains a growth sector, with significant opportunities for skilled people to change employer. Being competitive is no longer enough. We aspire to attract, recruit and grow diverse talent by creating a truly inclusive culture, one that values the differences of views, backgrounds, preferences, beliefs and experiences and which creates an organisation where people can be themselves, believe that their contributions are valued and feel that LifeArc is where they belong.

Our Board has committed to strengthening diversity and at their request, in 2020 we reviewed our diversity data. This shows a balanced ratio of male: female throughout LifeArc including at a senior level. We need to explore how we can evolve other areas of diversity while sustaining our positive representation on gender diversity; this will include reporting on gender pay comparison from our 2021 report onwards. We also used our culture survey to capture employees' views on diversity and inclusion and what this means to them, while our refreshed organisational principles are expressed in a language of inclusion, respect and the valuing of uniqueness in others.

We will extend this focus in 2021 to our procurement processes and partners to assure ourselves of our external partners' diversity and inclusion approach. We will also roll out inclusive leadership training, establish forums for employees to discuss opportunities and challenges and join appropriate external networks within both life sciences and charity communities.

Promoting employee wellbeing

The Human Resources team worked proactively during 2020 with LifeArc team leaders, improving their ability to hold supportive conversations and further recognise signs that people need support. We also engaged a wellbeing partner to support our people and to help them feel comfortable bringing wellbeing into everyday conversations.

At the start of the pandemic, we formed a working group aimed at ensuring employees had the practical resources and support they needed to work effectively from home. We continued to monitor and support employee wellbeing throughout the year and when we reopened our laboratories, we held discussions with every employee involved, to understand their concerns and ensure they could return safely to our sites. The site support teams at each of our sites put training in place to support this and we have received positive feedback about the care we have taken to manage individual needs.

Developing a reward strategy to attract and retain talent

Our reward strategy is designed to attract and retain talent across the organisation by supporting a positive employee experience. During 2021, we will continue to facilitate greater transparency and engagement. This will include giving greater clarity about roles, career progression and our grades. We will continue to review our pay decisions with a focus on both gender and ethnic diversity. Our new portal creates the opportunity to develop a peer-to-peer recognition approach, which will further help our culture and behaviours remain meaningful for everyone.

In 2021 we will build on this work by evolving our recruitment and development processes as well as developing effective performance conversations, focusing on 'moments that matter'. Supported by peer-to-peer recognition we will transform these processes from formal 'events' into part of our day-to-day lives.

Developing our people and our culture to facilitate change

Following the successful launch of the Empowering Leaders programme in 2019, we transferred the programme online in 2020 to ensure that, despite the pandemic, momentum would continue. Over 30 managers experienced all three modules and follow up coaching. This has helped them understand and deliver on the

During 2021 we will finalise our Diversity and Inclusion policy, continue our programme to engage all employees about diversity and inclusion and focus on key areas to bring this into our interactions with employees, patients and partners."

important role they play across all points of the employee lifecycle and shape the experience of their people. We were delighted that the programme was accredited by the Institute of Leadership and Management.

During 2020 we worked with employees to understand LifeArc's current culture and defined our aspirations about the culture we want to create. We adopted an inclusive approach with 92% of our employees participating in our survey. This feedback has informed and shaped our principles and ensured the associated behaviours which bring these to life resonate with all employees. Engaging the Executive leaders along with the Board of Trustees we gained input about our aspirational culture, creating a roadmap to build a more inclusive culture.

During 2021 we will finalise our diversity and inclusion policy, continue our programme to engage all employees about diversity and inclusion and focus on key areas to bring this into our interactions with employees, patients and partners. We have also used a range of other channels to share with our people the journey that LifeArc has embarked on, and we have begun to equip our people to navigate change. The Living Change toolkit, which will be completed in early 2021, will ensure our people have the capabilities and understanding to enable change in themselves and others, making our long-term ambitions a reality.

Understanding our stakeholders

Working together to achieve long-term success.

LifeArc exists to help translate early stage, promising science into medical interventions to improve human health and benefit society. Our work brings us into contact with a wide range of researchers, academic institutions and public and private organisations. These relationships enrich our understanding of our stakeholders' needs, concerns and challenges, while expanding our knowledge of new and important sector drivers (see 'Sector overview' on pages 10-11). This in turn enables us to deploy translational science, advice and funding more effectively for long-term success.

Many of our Trustees have current or previous roles with stakeholder organisations, ensuring the LifeArc Board has a good understanding of stakeholder perspectives. We are expanding on this source of advice and knowledge by establishing a Strategic Advisory Council in 2021 (referred to on page 41, 'Streamlining our decision-making'), to provide stakeholder insight and feedback to our Trustees.

Engaging with our stakeholders

Collaboration and licensing partners

Collaboration is a fundamental part of our approach to scientific translation, combining our resources and capabilities with organisations including pharmaceutical and diagnostics companies; research funders; charities and patient representatives; academic institutions; technology transfer offices; and government bodies.

By working closely with collaborators, we develop our understanding of their needs and how we can support them, as well as broadening our understanding and impact in new areas such as advanced therapeutics and big data. Our close interaction also helps us identify the best partners to progress translated innovations or other projects towards delivering patient benefit.

We also draw on our collaborative relationships to understand future sector challenges and the part we can play in resolving them. An example is our commitment to support the development of a network of gene therapy hubs. Thanks to our ongoing relationship with the Medical Research Council (MRC), and the Biotechnology and Biological Sciences Research Council (BBSRC), we had developed a clear understanding of the challenges facing UK academics looking to carry out gene therapy research. This informed our commitment to funding the hubs and also the specific support they are designed to deliver, including clinical-grade viral vectors and the translational science expertise.

Translational research clients

Strong relationships with clients help us to understand how we can work effectively together for mutual benefit. This stakeholder group includes charities and patient organisations; research and medical scientists; medical research foundations; universities; and principal investigators leading clinical trials.

We provide translational advice and support to a range of charities and in many cases these are now long-standing relationships; our charities team runs regular surveys to understand the needs of these customers and how effectively these are being met.

Research scientists and academic institutions are responsible for generating much of the innovative science that can benefit from translational support. We have regular catch-up meetings with our academic partners to ensure that we understand their current projects and concerns and that they understand how we can help them.

Networking with universities keeps us up to date with trends in scientific innovation and enables us to identify potential opportunities to provide support or funding, as well as alerting researchers to LifeArc as a potential source of collaboration.

These conversations also help expand our understanding of the different players in our sector, the challenges facing them and the services they need from us.

Professional bodies

We contribute to a wide range of professional bodies, whose remit includes representing and promoting the life sciences sector. These include the Academy of Medical Sciences, the UK BioIndustry Association and British In Vitro Diagnostics Association. In the technology transfer field, we also work with AUTM, ASTP Proton and Praxis Unico. Our participation in the AUTM Fellowship programme (pictured below) is another channel for sharing expertise and understanding about our sector, while building relationships with leading educational institutions and future translational scientists.

LifeArc employees sit on organising bodies such as the European Laboratory Research and Innovation Group, as well as expert committees such as the British Society for Gene and Cell Therapy and the UK BioIndustry Association Board. In addition, we participate in investment scientific conferences.

Our work relies on collaboration with a wide range of researchers, academic institutions and organisations, to address needs that we cannot tackle alone... Ongoing engagement with stakeholders primarily takes place during the charity's day-to-day activities."

Kapil Sthapit and Bhawana Manandhar, with their son Arnabh, who has the rare neuromuscular condition, x-linked myotubular myopathy

Governmental bodies

Government bodies with whom LifeArc has a working relationship include government-backed funders, regulators and policymakers. Examples of these include UK Research and Innovation (primarily MRC and the Biotechnology and Biological Sciences Research Council (BBSRC) but also with other councils), the National Institute for Health Research, The Chief Scientist Office of the Scottish Government and regulators such as The UK Medicines and Healthcare products Regulatory Agency, which approves vaccines, diagnostics and therapeutics devices. We co-fund projects, provide technology transfer services and provide input to different committees.

While we have always maintained good relationships with these bodies, COVID-19 has accelerated our engagement with different government advisory and delivery groups, from the Department of Health to NIHR. We are involved in task forces, due diligence reporting and committees.

Investors

Investors are a critical source of the funding that is needed to turn scientific innovation into products that can benefit patients. LifeArc is part of the investment ecosystem, regularly seeking partners to co-invest while also preparing projects, or helping clients to prepare, for onward investment. It is therefore vital that we understand what investors are looking for and what makes an acceptable level of investment risk.

We therefore maintain regular contact with life science and health technology investors in the UK, Europe and US, and share information with them on current investments and ideas. We talk to global and long-term strategic investors about partnerships and co-investment opportunities, from pre-seed to seed to venture capital investment. In addition, we build relationships with financial investors with an interest in the sector.

Patients and carers

As our ultimate beneficiary, patients feature strongly in our everyday thinking and strategic planning. Our work with medical charities, particularly in the rare disease space, brings us into close contact with patients who are themselves trustees or advisors to the charity. Our consultation with medical professionals, charities representing patient groups and patient representatives helps us to better understand patient need and impact, informing our strategic focus and future impact.

Employees

Employee engagement is fundamental to our long-term success. We connect with our people through a variety of channels, including regular town halls; site, departmental and team meetings; team briefings; cascades of information from senior leadership; our intranet; and employee forums and surveys.

The COVID-19 pandemic and the move to remote working posed significant challenges to employee engagement. We ensured that employees had full access to information and support via their team leaders, supported by the HR and IT teams. We also encouraged leaders and colleagues to share their experience of lockdown via intranet blogs. We set up an internal funding call to engage employees directly with the fight against COVID-19, offering them the opportunity to propose new projects for funding and inclusion in our scientific portfolio.

As a result of our efforts to keep employees informed and engaged, LifeArc was able to continue its key activities, including laboratory-based work, throughout the pandemic. The role that LifeArc has played in supporting the fight against COVID-19 would have been impossible without the engagement of our employees.

Sustainability and carbon reporting

LifeArc is committed to reducing its energy use and greenhouse gas emissions. This report sets out our energy use and carbon emissions for 2020, as an approximate benchmark against which we will measure the success of future strategies.

Carbon reporting is one initiative under a broader range of activities currently underway, which collectively aim to decrease LifeArc's environmental impact and improve the sustainability of our operations as society works towards a lower carbon future. Other activities include changes to operational processes to reduce natural resource consumption, recycle more materials and recover energy from un-recyclable material. We are in the early stages of our journey to reducing our overall carbon footprint, and we hope to start making advancements towards a zero-carbon footprint over the next few years.

The year ending 31 December 2020 was one of considerable disruption. As a result of extensive changes to working practice such as working from home, data recorded for LifeArc sites do not fully represent the energy usage and carbon footprint of all our activities. Consequently, it has not been possible for us to undertake a programme of energy efficiency improvement.

We have now begun to develop an environmental strategy, which will drive our journey to reducing our carbon footprint. While 2020 cannot be regarded as a 'normal' year, the data reported below will give us a practical set of benchmarks against which to plan and measure future energy efficiency and carbon reduction actions.

0%

Gas consumption

595

Purchased electricity (tonnes CO₂e)

3.04

Business travel in employee-owned vehicles (average car, unknown fuel) (tonnes CO₂e)

Methodology

We have followed the GHG Reporting Protocol – Corporate Standard for company reporting to identify and report relevant energy and greenhouse gas (GHG) emissions over which we have operational control. This includes owned assets where LifeArc is directly responsible for electricity and/or gas supplies across its three sites (Stevenage, London and Edinburgh).

We have considered the materiality of environmental impacts arising from our operations and identified GHG emissions generated via energy use to be the most significant. We based our assessment on financial spend and the opportunity for LifeArc to control impacts.

Other areas, such as water, waste, biodiversity and emissions to air, water and land, are deemed less material. However, we will report on some or all of these impacts in the future, if they are relevant to our operations.

LifeArc has considered the seven main GHGs covered by the Kyoto protocol, converting to tonnes of CO₂ equivalents (CO₂e). We have followed the 2019 HM Government Environmental Reporting Guidelines. We have also used the 2020 UK Government's Conversion Factors for Company Reporting.

The sources used for energy are actual billing data, with no estimates being used. Business travel mileage includes staff driving their own vehicles for LifeArc business. For business mileage, actual mileage claims were used.

UK Greenhouse gas (GHG) emissions and energy use data for the period 1 January 2020 to 31 December 2020

| | |
|--|--------------|
| Total energy consumption used to calculate emissions (kWh) | 2,554,256.07 |
| Energy consumption break-down (kWh): | |
| — Gas | 0 |
| — Electricity | 2,541,999.00 |
| — Transport fuel | 12,257.07 |
| Scope 1 emissions (tonnes CO ₂ e) | |
| Gas consumption | 0 |
| Scope 2 emissions (tonnes CO ₂ e) | |
| Purchased electricity | 592.64 |
| Scope 3 emissions (tonnes CO ₂ e) | |
| Business travel in employee-owned vehicles (average car, unknown fuel) | 3.04 |
| Total gross emissions (tonnes CO ₂ e) | 595.68 |
| Intensity ratio: Tonnes CO ₂ e per FTE ¹ | 2.77 |
| Intensity ratio of purchased electricity: Tonnes CO ₂ e per 1,000 sq ft floor area ² | 13.21 |

1. Based on average number of employees for 2020 (215).
2. Based on 45,084 sq ft total floor area (London, Stevenage, Edinburgh).

Emission scopes

The following sources of emissions have been considered:

Scope 1

Fuel consumption

- Direct emissions from controlled gas boilers converted from kWh usage (not relevant to LifeArc as no gas consumed in the property for heating or hot water purposes)
- Business travel through company owned vehicles (not relevant to LifeArc as the organisation does not possess company vehicles).

Scope 2

From electricity consumption

- Indirect emissions from electricity purchased by LifeArc and consumed within real estate assets owned by the company (converted from kWh usage at Stevenage, London and Edinburgh)
- GHG emissions from electricity (Scope 2) are reported according to the 'location-based' approach outlined in the SECR guidelines.

Scope 3

From transport

- Indirect emissions from business travel in rental or employee-owned vehicles where LifeArc is responsible for purchasing the fuel (mileage).

This report has been prepared in compliance with The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018, also referred to as Streamlined Energy and Carbon Reporting (SECR). EVORA Global Limited has been appointed by LifeArc to prepare this report and perform quality checks on the sustainability data presented. EVORA is an independent, pan-European sustainability consultancy and software provider, specialising in the commercial real estate sector.

Financial review

LifeArc achieved a net increase in funds during 2020, while investments significantly improved on the previous period.

Overview

In 2020 LifeArc total expenditure was £49.7m. This was offset by £3.1m income from charitable activities and £60.8m total returns on investment, including £6m investment income and £54.8m gains on investments over the year.

The successful completion of the monetisation of our royalties from *Keytruda* in May 2019 for \$1.297bn meant our income from *Keytruda* fell to \$nil in 2020. LifeArc has retained the contractual right to receive a share of future royalties in the event that *Keytruda* royalties exceed an agreed level, which is not anticipated until 2023. *Keytruda* is an immunotherapy product which initially received US Food and Drug Administration (FDA) approval in 2014 for the treatment of advanced melanoma but has since received expanded approval to include a number of additional cancer indications and territories.

There will now be a shift in the composition of incoming resources away from *Keytruda* royalty income to investment income and gains and other income generated by charitable activities to fund the expenditure required to successfully implement our strategy and achieve our objectives.

Total incoming resources of £9.1m is made up of £3.1m income from charitable activities and £6m investment income. Income from charitable activities includes £1.5m (9 months to Dec 2019 – £1.5m) of contract and royalty income, and £1.2m (9 months to Dec 2019 – £0.9m) received for intellectual property management and technology transfer services.

Substantially all (£0.9m) of LifeArc's contract and royalty income for the year to December 2020 comprises royalties from the sale of *natilizumab* (*Tysabri*). The equivalent figure for the 9 months to December 2019 was £1.4m.

During the year our position as sole Limited Partner in a Venture Fund was dissolved. The fund had made two investments during its lifecycle. The first in SpringWorks Therapeutics was fully divested prior to dissolution and all disposal proceeds (£43.7m) were distributed to LifeArc. The remaining investment in Eliem Therapeutics Inc was transferred to LifeArc and is now recorded as a fixed asset investment on our balance sheet. LifeArc realised gains of £6.2m in 2020 from the disposal of shares in SpringWorks Therapeutics and the dissolution of the Venture Fund.

£49.7m

Total expenditure for 2020

£60.8m

Total returns on investment

LifeArc's investment in Kymab (Convertible preference shares) was written back up to \$30m from \$10m. The acquisition of Kymab by Sanofi was completed in April 2021 with \$30m plus \$4.9m interest returned to LifeArc.

Expenditure

Total resources expended during the year amounted to £49.7m (9 months to Dec 2019 – £27.6m). These include activities that directly relate to our public benefit objective (research and technology transfer), the cost of generating funds, corporate and governance costs and general support costs that are not directly attributable to charitable activities. The underlying expenditure relating to delivering LifeArc's public benefit objectives has increased on last year by £12.9m (after extrapolating 2019 expenditure to 12 months).

COVID-19: LifeArc has designated funds totalling £27m in place to help tackle the Coronavirus pandemic. LifeArc incurred expenditure totalling £9m in 2020 to help tackle the Coronavirus pandemic including £5.6m of external funding to identify and support clinical trials that offered the best chance of finding treatments for COVID-19, and a further £2m to the University of Edinburgh's STOPCOVID project.

In 2020 LifeArc invested £8.2m in seven early-stage companies within the UK through our seed fund. LifeArc aims to bridge the funding gap for start-ups to a point where they could attract later stage funding.

Over the year LifeArc has continued to focus on strong cost control and robust financial governance.

Investment review

Total investment returns including unrealised gains have significantly improved on the prior period. Our long-term investment portfolio focused on equities, fixed interest securities, and alternatives achieved realised and unrealised gains of £13.1m for the period, on an opening investment balance of £142m. A net return of 9.9% was achieved over the period which is above our target return of 4.2% (RPI + 3%) and in line with underlying market conditions.

The *Keytruda* monetisation proceeds make up a large proportion of total assets and were held in low-risk, low-return money market funds; this amounts to £644.7m generating a net return of 0.3%. These monies are earmarked for investment in accordance with our strategic asset allocation in 2021.

During the year we invested from our money market funds five tranches of £50m from July to October totalling £250m in the BlackRock Developed World ESG Screened Index Fund (Passive Global Equity Fund) to gain exposure to Global equities. There was an unrealised gain of £19.7m at December 2020, being a net annualised return of 12.8%.

LifeArc's short-term investment portfolio totalling £69.9m focused on fixed interest securities with a targeted return of three-month UK LIBOR in order to fund the day-to-day operations of LifeArc. A net return of 0.2% was achieved.

Reserves policy

LifeArc holds reserves to ensure that, as far as is reasonably possible, its long-term strategic plans can be funded, given certain assumptions about future investment returns and income. All of LifeArc's reserves are held in pursuance of its charitable objectives.

As a charity which is now primarily funded by investment returns, LifeArc necessarily holds significant reserves to generate enough cash to fund our operations and further our strategy. In addition, we hope to generate future returns from our work in translational science and translational funding, but this work is extremely risky, subject to high attrition rates and runs over a lifecycle of at least 10 years before commercial returns are realised. We have therefore not included income from this in our reserve assumptions.

The LifeArc Board have determined that LifeArc should seek to continue to exist for the long term to support translational science in the UK and beyond. Our policy is to hold reserves at a level which enables execution of our strategy in line with our 10 year financial plan. The reserves policy is reviewed annually by the Board of Trustees, considering the Charity Commission guidance CC19.

The Board considers that the most appropriate measure for the charity's reserve policy is the liquid and readily realisable investments which excludes our planned allocations to illiquid private investments which will be held for a long-term time horizon. The level of these reserves as at 31 December 2020 was £929m (Dec 2019 – £888m).

These reserve levels will enable us to fund significant spending commitments in accordance with our long term plans.

Auditors

PKF Littlejohn LLP has signified its willingness to continue in office as auditors.

Disclosure of information to auditors

So far as each Trustee is aware at the time of the approval of this Board report:

- there is no relevant audit information of which LifeArc's auditors are unaware
- the Trustees of the Board have taken all reasonable steps to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information

Significant recent funding allocations

In addition to expenditure on our own translational science projects and on advising and supporting our partners, we made significant additions to our funding work in 2020.

| | | |
|--|-----------------------------|-----------------------------|
| Covid Fund | Spent in 2020 | Allocated Fund |
| | £9m | £27m |
| Seed Fund | Investments in 2020 | Early stage companies |
| | £8.2m | 7 |
| Phil Fund | Contracts awarded at Dec 20 | Contracts awarded at Dec 19 |
| | £6.5m | £2.7m |
| Crick Fund | Contracts awarded at Dec 20 | Contracts awarded at Dec 19 |
| | £1.2m | £1.0m |
| Advanced Therapeutics Innovation Hubs | Commitment made at Dec 20 | |
| | £8m | |
| Illumina Accelerator Cambridge | Commitment made at Dec 20 | |
| | £10m | |

Key financial metrics

| | 12 months to Dec 2020 | 9 months to Dec 2019 |
|-----------------------------------|--------------------------|-------------------------|
| Total resources expended | £49.7m | £27.6m |
| Income from charitable activities | £3.1m | £986.2m |
| Other income | £20k | £12.4m |
| Income from investments | £6.0m | £5.8m |
| Net gains on investments | £54.8m | £32.8m |
| Net movement in funds | £14.3m | £997.5m |
| Funds balance carried forward | £1,218.9m | £1,204.7m |

How we identify and manage risk

Risk management at LifeArc forms a core pillar of the governance programme. It is designed to support informed decision-making in relation to the risks and opportunities that could impact our ability to implement our strategy.

Risk management is one of the key foundations for our long-term success, particularly at present as LifeArc has embarked on a period of change.

Responsibility for overall management of risk lies with the Board of Trustees. The Board determines the risk appetite of LifeArc in key areas, in line with our strategic aims, and ensures an appropriate framework is in place to seek to manage, as far as practicable, risks within this defined appetite.

The Executive Management Team, under the leadership of the Chief Executive Officer, is responsible for ensuring that appropriate resources are allocated to implement the risk management strategy, culture, and processes on behalf of the Board. It is the responsibility of the individual Executive Directors to ensure that all employees and their line managers help the business to identify and manage risk. The Risk Manager acts in a supporting role by providing an effective framework for the identification, assessment and mitigation of risk aligned to our strategy. The risk management process is also co-ordinated with the internal

audit function (currently provided by BDO) to ensure the assurance framework is independently assessed and continues to be improved over time.

LifeArc's risk management policy seeks to minimise, so far as practicable and at an appropriate cost, the possibility that our corporate strategy and objectives are not delivered. The policy also seeks to protect our people, assets, suppliers and partners.

There is an active risk management process to ensure that management has suitable mitigations either in place or planned to mitigate LifeArc's principal risks. We take an agile approach so that we can quickly adapt to changes in the external environment as well as changes in the organisation's activities and needs.

The goal is to manage risk to a level that is acceptable to the Board rather than seek to eliminate all risks. It is important to note that some aspects of the strategy carry inherent risk. There are areas where the Board accepts higher risk, for example, investment in unproven novel

areas of science, progressing projects in difficult areas of unmet need or early venture funding which themselves are often high risk by their nature. Certain risks are not cost effective or practical to eliminate entirely. An example is cyber-crime, where we have accepted a higher residual risk while putting strong mitigation in place, including training and awareness campaigns. Whatever the level of risk associated with the activity itself, we maintain a low-risk appetite in terms of oversight and governance.

On a quarterly basis, and at least twice a year, the Audit and Risk Management Committee (ARMC) and the Board, review the corporate risks in the form of a risk heat map. In addition, periodically there is a deep dive of specific key risks with the risk owner at ARMC meetings. Furthermore, a watch list is maintained to support the oversight of emerging risks.

In 2020 we have made continued progress in the mitigation of our key risks and, in particular, the governance over our investment portfolio that supports LifeArc's financial sustainability. In addition, we commenced the review of governance for the emerging LifeArc venture

Risk management process

| Roles and responsibilities | |
|----------------------------|---|
| Reporting and assurance | Board of Trustees <ul style="list-style-type: none">— Establishing the risk appetite of the charity as part of the strategic planning process, keeping this under review and validating it at least annually |
| | Audit and Risk Management Committee <ul style="list-style-type: none">— Overseeing the effectiveness of risk management— Regular review of key risks— Overseeing the reporting of risk to the Board and to external stakeholders |
| | Executive <ul style="list-style-type: none">— Overall collective responsibility for supporting risk management— Sets the tone and influences the culture of risk management across LifeArc— Owning the process for identifying, analysing, responding to threats and opportunities within LifeArc's internal and external environments— Maintaining an effective system of internal control that supports the achievement of LifeArc's objectives— Monitoring the effectiveness of risk identification, risk assessment and risk management strategies |
| | Employees <ul style="list-style-type: none">— Embrace and incorporate a risk management culture into working practices |

Case study

The UK-wide lockdown threatened our ability to deliver our unique range of core offerings. In response we undertook an overall risk assessment and identified ways to enable us to continue with our scientific projects and contribute positively to the fight against the virus.

We assessed and re-prioritised our scientific project portfolio and established an Executive-led Steering Group to reopen our laboratories safely and effectively. Our risk-based strategy included a comprehensive set of social distancing protocols but it also involved adapting the pattern of laboratory work.

We undertook extensive staff consultation in order to ensure that our scientists understood the safe working environment. As a result our scientists were able to continue delivering patient benefit by progressing our science portfolio.

investment activity and recognised new risks now that our 2021 Corporate goals have been set.

Our aim is that risk management continues to become a more integral part of the ethos and day-to-day operations and culture of the organisation: that it is dynamic and is seen as something that positively contributes to achieving our objectives.

In 2021, management will continue to focus on refining the risk management framework and further embedding the culture of effective risk management across LifeArc.

The key risk areas which the Board of Trustees consider to be most relevant are summarised below. The risks are measured in terms of the likelihood of occurrence and the potential impact should the risk event occur. The likelihood describes the probability of the risk occurring, varying from Low (highly unlikely) to Very High (almost certain). The impact is a measure of the effect on LifeArc if the risk materialises, ranging from Low (insignificant) to Very High (severe). In addition, the current

agreed risk appetite is indicated for each of the risks. Risk appetite is an indication of the acceptable level of risk within which we operate and will vary depending on the type and nature of the risk.

Some risks have been assessed as beyond our tolerance for acceptable risk taking in light of our current strategy and so require further action. People risks, management of change and our newly defined strategic risks fall into this category. In the context of LifeArc's evolution risk mitigation takes time to be implemented; however, we have developed plans with risk owners and agreed appropriate timelines for the implementation of further mitigation to close the gaps.

Principal risk analysis

| Risk* | Likelihood | Impact | Current Net Risk Position | Risk appetite |
|---|-------------|-------------|---------------------------|---------------|
| Strategic risks | | | | |
| 1 Key strategic partnerships | Medium/High | Medium/High | Medium/High | Medium |
| 2 Platform technology | Medium/High | Medium/High | Medium/High | Medium |
| 3 LifeArc Ventures | High | Medium/High | High | Medium/High |
| Financial risks | | | | |
| 4 Investment reserve returns | Medium | Medium | Medium | Medium |
| Operational risks | | | | |
| 5 Portfolio alignment | Medium | High | High | Medium/High |
| 6 Cyber-attack/IT security | Medium | Medium | Medium | Low/Medium |
| 7 People capability and capacity | Medium | Medium | Medium | Low |
| 8 Management of material change | Medium | Medium | Medium | Low |
| 9 COVID-19 – impact of further restrictions | Very low | Medium/High | Low | Low |
| 10 Health and safety (major incident) | Very low | Medium/High | Low | Low |

* Please see the table on pages 34 to 37 for the detailed descriptions of the risks and the actions in place to ensure alignment between the risk position and the risk appetite.

Our principal risks and how we mitigate them

We identify and mitigate risks arising from our activities and those of our partners, as well as the evolving environment in which we operate.

The corporate risk register

| Risk area | Description | Mitigation or in-progress actions | Change in risk profile vs prior year |
|--------------------------------------|--|---|--------------------------------------|
| 1. Key strategic partnerships | The development of successful strategic relationships will be critical to the delivery of our strategy. As we increase our engagement with and reliance on third party innovators and licensees, there is a risk that we don't optimally select, deliver and manage these partnerships leading to reduced impact, impaired outcomes and damage to reputation. | In place: <ul style="list-style-type: none"> Executive accountability through new Chief Business Officer to lead the delivery of externalisation Risk based authority levels In progress: <ul style="list-style-type: none"> New alliance management process being developed and embedded Organisation and systems to be realigned with new process Third party risk and assurance assessment underway Monitoring of contracts to ensure partnering obligations have been met | New risk |
| 2. Platform technology | The development and strengthening of our platform technologies and offerings is a key tenet of LifeArc's strategy. There is a risk that we do not make further progress in understanding and exploring platform technology and therefore do not identify and secure new platforms to contribute to patient impact and sustainability, although this is a major focus of our science Executives through 2021. | In place: <ul style="list-style-type: none"> Executive accountability through Executive Director, Drug Discovery In progress: <ul style="list-style-type: none"> Define therapeutic and diagnostic based platforms required to support missions and other work Understand synergies between current diagnostics platforms and missions with specific activities defined Define future platforms that will allow therapeutics and diagnostics to synergise within missions with specific reference to companion diagnostics including disease risk, patient stratification and efficacy Define data platforms needed to drive improved target ID/selection, patient risk/diagnosis/stratification Explore the device landscape relevant to our missions and understand which platforms will help drive for success and move us towards our 4D ambition | New risk |
| 3. LifeArc Ventures | As we expand the breadth of our investment activities in early translational research, there is a risk to our ability to generate returns which contribute to the charity's sustainability over time. | In place: <ul style="list-style-type: none"> Seed Fund Investment Committee In progress: <ul style="list-style-type: none"> Seed Fund portfolio review Governance and Terms of Reference for the new Early Ventures Investment Committee to replace the Seed Fund Investment Committee. Proposal is that half of the members will be independent Deliberation on venture scale up opportunities Risk assessment | New risk |

| Risk area | Description | Mitigation or in-progress actions | Change in risk profile vs prior year |
|--------------------------------------|---|--|---|
| 4. Investment reserve returns | We do not achieve the required investment performance over time (10-year horizon) in order to fund the delivery of the LifeArc strategy. | In place: <ul style="list-style-type: none"> • Top-tier global custodian appointed • Respected external investment consultant in place • In-house investment specialist • Board approved investment policy • Investment Committee supplemented by appointment of co-opted members to set strategy and monitor performance of the investment portfolio • Agreed investment risk appetite from the Board • Board approved investment parameters • Approved operating model governing interaction with the global custodian and investment consultant • Definition of strategic asset allocation In progress: <ul style="list-style-type: none"> • Completion of investment in accordance with strategic asset allocation | Reduced |
| 5. Portfolio alignment | Given our appetite for selecting early-stage scientific projects with inherent high risk in line with our strategy and while we seek to minimise the risk of project failure, there remains a risk that we do not ultimately achieve the desired patient benefit. | In place: <ul style="list-style-type: none"> • Policies and key processes in place covering governance of the scientific portfolio and to ensure that all employees understand the requirements of their role • In-house 'Due Diligence' team analyses identified opportunities from a scientific/technical, IP and commercial perspective and operates a two-stage assessment system including both internal and external assessors. In addition, the Philanthropic Fund Committee governs the allocation of grants to support translational rare disease research projects • Portfolio Review Board and supporting hierarchy of governance structure to assure: <ul style="list-style-type: none"> • ongoing scientific/technical assessment of projects, recommendations for changes in scope and stage gate transitions • progress against plan and reassignment of resources to support delivery • objective measurement of project health, progress and against plan and formalised decision-making • Science Committee, a subcommittee of the Board, provides oversight of the governance of the Translational Science projects • Project Management Office (PMO) supports delivery and oversees progress for all projects at the portfolio level In progress: <ul style="list-style-type: none"> • Document project frameworks, mapping project sub-processes from identification to closure, tailored to project types • Design and implementation of a PMO software solution • Build project management toolkit to support best practice | Slightly reduced. Further reduction anticipated once changes are embedded |

The corporate risk register

| Risk area | Description | Mitigation or in-progress actions | Change in risk profile vs prior year |
|--|---|--|---|
| 6. Cyber-attack and IT security | Loss of data, for example due to unauthorised access of the IT systems or a cyber-attack, would damage our reputation and restrict our activities. | In place: <ul style="list-style-type: none"> • Business continuity plans, tested annually • Data recovery systems in place and reviewed for resilience • Network controls in place with perimeter firewalls • Anti-virus and anti-ransomware software in place • Compulsory cyber security awareness training for all employees and ongoing awareness activities • Two factor authentication for key systems • Engagement of specialists to regularly assess the IT security control environment • Cyber awareness training and personal risk profiles rolled out in early 2021 In progress: <ul style="list-style-type: none"> • Deployment of vulnerability management detection and response software [VMDR] • 24-hour security operations centre | No change |
| 7. People capability and capacity | As we look to increase our impact and invest in new areas, the risk increases that we are unable to recruit, develop, and retain capable and skilled employees and Trustees necessary to deliver the strategy. | In place: <ul style="list-style-type: none"> • Principles framework based on LifeArc purpose – to put patients at the centre of all we do • HR capabilities evolving to support 2021 priorities • HR policies • Remuneration Committee oversight – ensuring that LifeArc has the people and culture it needs to deliver its strategy • Nominations Committee oversight – responsible for developing and maintaining active succession planning for the Board and Executive • Organisation principles expressed in language of inclusion In progress: <ul style="list-style-type: none"> • Build capability and culture to deliver strong leadership up and down the organisation • Refresh reward and recognition strategy to differentiate high performance • Evolving diversity and inclusion | No change |
| 8. Management of material change | We fail to manage significant change or do not make the changes required for the organisation in order to realise the strategic opportunity provided by the Keytruda monetisation. A lack of a targeted approach could mean that we do not successfully implement the desired change or result in significant opportunities being missed due to energy being dissipated across too many projects. | In place: <ul style="list-style-type: none"> • Specific role – Head of Culture and Change • Programme to create change capability, prioritising PMO, HR, Corporate Goal teams • Launch of the principles framework (implementation in progress) In progress: <ul style="list-style-type: none"> • PMO / HR to be developed as 'experts' to embed change across LifeArc • Develop change capability and framework and associated tools • Roll out of change capability to line managers and Executive • Define and embed our culture to enable 2021+ strategy • Ongoing development of the LifeArc strategy | Increased due to proximity to execution of change |

| Risk area | Description | Mitigation or in-progress actions | Change in risk profile vs prior year |
|---|---|--|--------------------------------------|
| 9. COVID-19 – impact of further restrictions | In view of the ongoing pervasive impact of the current COVID situation and impact of increased prevalence or restrictions, there is a risk of further disruption to the portfolio and therefore to the delivery of patient benefit and impact of employee morale if there are further restrictions. | In place: <ul style="list-style-type: none"> Steering Group meets every two weeks Site policies and procedures Site based governance and oversight teams Ongoing communication with employees Support for homeworking through provision of equipment and technology Provision of wellbeing resources | New risk |
| 10. Health and safety (major) incident | Failure to maintain the health and safety of employees could harm our people, or have a significant reputational impact, or lead to disruption of our activities and also have serious legal consequences. | In place: <ul style="list-style-type: none"> Facilities managed in accordance with regulatory standards (COSHH), and NEBOSH qualified laboratory manager LifeArc Health and Safety Committee meets quarterly and considers appropriate responses to any incidents or near misses. Health and safety risk assessments (per activity) Health and safety update provided to monthly Executive Director meetings and quarterly to the Board Internal audits to ensure compliance | No change |

Governance report

Governance report

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Chair's governance review

Dr John Stageman OBE

Chair – LifeArc

COVID-19 made 2020 a challenging year for every organisation and LifeArc was no exception. Good governance is fundamental to LifeArc's success and events like the pandemic show the critical importance of having strong frameworks in place.

These include the ability to identify and manage risk effectively so you can rapidly identify the most important priorities and plans for action.

I am proud to say that thanks to our strong foundations and responsive governance framework, LifeArc was able not only to preserve the key interests of its partners and protect the safety and health of its employees but also play a proactive role in the fight against COVID-19.

While managing the impact of COVID-19 was a significant feature of the year, the Board has continued with our programme of moving the charity forwards, including further developing its governance structures. This included the move from a membership model to a foundation model of governance, and the related decision to create a strategic Advisory Council (SAC) with its first meeting planned for 2021. We have also focused on ensuring we have an effective investment strategy, following the *Keytruda* monetisation in 2019, helping to secure a sustainable financial future for the charity and its work.

The role of governance

Good governance is the foundation for successful organisations. Among other things, it involves rigorous scrutiny and oversight of the charity's objectives and its strategy for achieving them, as well as ensuring we have the right structures, people, processes and controls to implement that strategy effectively. Strong governance helps LifeArc achieve its purpose of turning promising science into treatments and interventions that improve patients' lives.

The Board therefore aims to adopt best practice and demonstrate exemplary leadership and governance, in close co-operation with the Executive Management Team. Our approach is guided by the principles of the Charity Governance Code for Larger Charities (the 'Code') and the Charity Commission's Guidance, as well as professional advice where appropriate. We assess our compliance with the Code on an ongoing basis, most recently in light of the Code review carried out in 2020.

The Investment, Nominations, Remuneration, Scientific and Audit and Risk Management Committees play key roles in carrying out the Board's functions and the active management of risk.

Over recent years, we have enhanced our governance framework in a number of areas, including risk management, Board effectiveness, diversity and development, and approving key policies. This process continued in 2020 with the move to a more efficient foundation model, which further improves the efficiency of decision-making.

Overseeing the response to COVID-19

Throughout the pandemic, the Board has prioritised the health and wellbeing of our people and LifeArc's support for the scientific response to the virus. The Audit and Risk Management Committee oversaw the development of a robust risk assessment, which ensured that operational decisions were made first and foremost with a view to mitigating risk to colleagues. Meanwhile our Scientific Committee, aided by a robust portfolio management framework, closely monitored the impact of the COVID-19 lockdown on science projects and the measures taken to bring priority activities back on track. While the portfolio has still not recovered all the time lost due to lockdowns, we have been able to make good progress and use the opportunity to reshape some of the portfolio.

In the final quarter of 2020 the Board heard proposals for introducing a missions-led approach to unite broad sections of expertise in LifeArc behind stated goals or specific missions. LifeArc's successful response to the challenges of COVID-19 had demonstrated the value of bringing together colleagues from across the charity, united by a common aim. The Board was supportive of these proposals, which we believe will improve the impact of our investments in our science, advice and funding activities by sharpening our focus, simplifying the articulation of our goals and focusing our desired impact. We have asked the Executive to progress with their proposals and are expecting to see our first, selected translation missions crystallise during 2021.

Streamlining our decision-making

As part of our review of Board efficiencies, the Board examined the charity's formal decision-making process. LifeArc's original structure was based on a membership model, with membership made up of current Trustees, former Trustees and other professionals. While this model gave us access to a wider range of experience it tended to make some decision-making slower and less flexible, with undue weight on the annual general meeting as a vehicle for making key governance decisions.

During 2020 the Board proposed to move to a foundation model in which the membership is limited to serving Trustees. This will enable the Board to be more responsive and flexible in its decision-making.

We also recognised that the experience represented by our former membership was a valuable source of advice, expertise and challenge for LifeArc. We therefore decided to create the Strategic Advisory Council to provide important stakeholder insight and feedback to the Board. Our intention is to recruit to the Council in 2021, bringing in individuals with wide experience across areas of strategic importance to life sciences and LifeArc.

Assessing the Board's effectiveness

To lead LifeArc effectively over the coming years, it is essential that the Trustees have the right mix of skills and experience. This year the Board initiated a skills audit of Trustees, to build the picture of the breadth of skills possessed and to identify any gaps that should be addressed through future recruitment. The Board has engaged external consultants to help us conduct performance assessments of individual Board members, following on from the earlier work completed on the functioning of the Board as a whole.

The diversity of our Board and LifeArc is essential. In 2020, the new appointments made to the Board positively affected our gender balance, moving it to a ratio of 38% female to 62% male by year end, compared with a percentage at the start of the year of 25% to 75%.

Lynne Robb joined us as a Trustee in June 2020. Lynne brings significant financial experience as an accountant with in-depth knowledge of both the charities and life sciences sectors. She is also a Trustee of both Prostate Cancer UK and Tate & Lyle's pension scheme, and a non-executive director of the Medicines Discovery Catapult Ltd. Jo Pisani was appointed to the Board in December 2020. Jo has 30 years' experience in industry and consulting, and also serves on the boards of the UK Dementia Research Institute, RSA Group, MedCity and Findacure. She is also a member of the foresight advisory board for the University of Birmingham.

Meanwhile, Steve Visscher stepped down from the Board in December. I would like to thank Steve for his contribution to our journey and wish him all the best for the future.

Conclusion

LifeArc has been able to respond proactively to the COVID-19 pandemic, based in part on our financial strength and robust approach to risk management, and in part on the extraordinary resilience of the LifeArc leadership and employees.

The effective portfolio management framework that the Executive Management Team put in place ensured that the charity was able to address the impact of the temporary shutdown and then reduced working capacity of the facilities. I believe that the unified, goal-focused manner of the way in which we responded to the COVID-19 emergency puts us in a good position to develop a more missions-led approach to future goals.

I would like to thank the members of the Board, the Executive Team and all LifeArc employees for their dedication and hard work throughout an extraordinarily difficult year. We finish the year, in my view, stronger and more focused, ready to move on to bigger and better things in the coming years.



Dr John Stageman OBE

Chair – LifeArc
25 July 2021

Board of Trustees

By setting strategic direction, and overseeing risk management and governance, the Board supports the Chief Executive Officer and the Executive Management Team in achieving the charity's purpose.

At period end the following Trustees were in place:

Dr John Stageman OBE

Appointed: 29/09/14

Role: Chair Board of Trustees, Nominations and Remuneration Committees.

Skills: John has a wealth of experience in the pharmaceutical industry and biotechnology research and has held several international R&D senior management roles at AstraZeneca.

In 2011 he was awarded an OBE for his services to the UK biotechnology industry.

Dr Paul Mussenden

Appointed: 19/06/14

Role: Chair ARMC, Deputy Chair Board of Trustees, member of Remuneration and Nominations Committees.

Skills: Paul has over 20 years' experience advising companies in the healthcare industry at all stages of development from start-up to pre-IPO to mature listed businesses.

Dr Melanie Lee CBE

Appointed: 14/11/19

Role: Chief Executive Officer.

Skills: Melanie is Chief Executive Officer of LifeArc. She has 30 years' leadership experience in healthcare R&D, the biopharmaceutical industry and the medical research charity sector. She was formerly Chief Scientific Officer at BTG. She has previously held Trustee appointments at Cancer Research Technology and Cancer Research UK and serves on the Board of Directors of Sanofi.

Aisling Burnand MBE

Appointed: 20/11/17

Role: member of Nominations Committee.

Skills: Aisling is Chief Executive of AMRC and previously held a similar role at the BioIndustry Association, where she championed UK biosciences. She received an MBE in 2007 for services to science.

Dan Morgan

Appointed: 20/11/17

Role: member of Audit and Risk Management Committee.

Skills: Dan has over 20 years' experience of private capital markets, including venture investment in life sciences. He is a Member of the Institute of Chartered Accountants in England and Wales.

Peter Keen

Appointed: 05/02/13

Role: Chair Investment Committee (until 15/08/19), member of Nominations, ARMC and Investment Committees.

Skills: Peter is a chartered accountant by training with over 35 years' experience in the commercial exploitation of healthcare related technologies in both private and public companies.

David Zahn

Appointed: 15/08/19

Role: Chair Investment Committee.

Skills: David has more than 20 years' experience in investment strategy and is currently Head of European Fixed Income at Franklin Templeton, a global investment management firm. He is a governor and chair of the investment committee at The Health Foundation and a Non Executive Director at the Health Data Research UK and CFA Society of the UK.

Dr Les Hughes

Appointed: 01/03/16

Role: Chair Scientific Committee.

Skills: Les has over 30 years' experience in a range of roles in the pharmaceutical industry and is now a consultant in portfolio management, strategy development and the successful delivery of drugs to the market.

Dr Mike Romanos**Appointed:** 01/03/16**Role:** member of Scientific Committee.

Skills: Mike is an experienced biopharmaceutical industry leader with scientific breadth and extensive knowledge of translation. He is CEO of Microbiotica, previously CEO of Crescendo Biologics, global VP at GSK, Translator in Residence in Imperial College and Venture Partner in UK Innovation and Science Seed Fund.

Jo Pisani**Appointed:** 17/12/20**Role:** Trustee.

Skills: Following 30 years in industry and consulting, Jo currently serves on the boards of the UK Dementia Research Institute, The RSA Group, MedCity and Findacure. She is also a member of the foresight advisory board for University of Birmingham.

Dr Sally Burtles**Appointed:** 14/11/13**Role:** member of Scientific and Remuneration Committees.

Skills: Sally has 25 years' experience in the charity, higher education and NHS sectors. She is a skilled facilitator of translational and experimental medicine research, preclinical development and early clinical trials. Sally is Director and Secretary of the Lister Institute of Preventative Medicine, a Research Fellow at the University of Sunderland and a trustee at Trozon X17.

Changes to the Board of Trustees:**Lynne Robb**

joined 8 June 2020

Jo Pisani

joined 17 December 2020

Stephen Visscher

served until 24 September 2020

For more detailed Trustee biographies, please visit lifearc.org/governance

Andrew Mercieca**Appointed:** 14/11/19**Role:** Chief Financial Officer.

Skills: Andrew is Chief Financial Officer of LifeArc. He has over 25 years' experience as a finance professional and has held senior finance roles across the pharmaceutical and technology sectors. He was EMEA CFO for a global mobile technology provider and has held senior positions at Astellas and Merck KGa

Lynne Robb**Appointed:** 08/06/20**Role:** member of Audit and Risk Management Committee.

Skills: Lynne has significant experience as a CFO with significant knowledge of both the charities and life sciences sectors. She is a Trustee of Prostate Cancer UK and Tate & Lyle's pension scheme. She is also a non-executive director of the Medicines Discovery Catapult Ltd.

Governance, structure and management

Promoting the charity's success

The Trustees have a duty to promote the success of the charity by advancing its charitable objectives to promote medical research for the benefit of the public. In doing so, they are required by section 172(1) of the Companies Act 2006 to take into account a number of factors. These include:

- a) the likely consequences of decisions in the long term;
- b) the interests of employees;
- c) the need to foster the charity's relationships with stakeholders;
- d) the impact of the charity's operations on the community and the environment;
- e) the desirability of the charity maintaining a reputation for high standards of business conduct; and
- f) the need to act fairly between members.

The people report on page 24 explains how LifeArc protects and promotes the interests of its employees. The 'understanding our stakeholders' report on page 26 explains in more detail how LifeArc engages with its stakeholders to promote the long-term success of the organisation. The sustainability and carbon reporting review on page 28 outlines the actions the organisation is taking to understand and improve its impact on the environment.

As a company limited by guarantee, LifeArc does not have any shareholders. With the move to a foundation model, serving Trustees are LifeArc's only members.

Grant-making policy

All grants made by LifeArc under its Philanthropic Fund and in respect of its COVID response are in accordance with LifeArc's grant making policies. These set out eligibility criteria, monitoring and reporting procedures and refer to the general parameters of grant making, ensuring that all spend is in line with LifeArc's objects and for the public benefit.

Charitable objectives

LifeArc is a company limited by guarantee and a registered charity, established in 2000. The charity's governing document, its Articles of Association, sets out its charitable objectives:

- To promote the public benefit by improving human health and medical research, in particular by assisting the progress of the scientific discoveries and new technologies arising from research into therapeutic treatments, drugs, diagnostics, other technologies or information resources.
- To work with industry, charities, universities, the health service and other relevant bodies, as well as conducting our own research and development as needed to accelerate the progress of these discoveries and technologies to the stage at which they are
 - (i) capable of being made generally available to the medical profession and the public for practical application for the improvement of health and/or
 - (ii) transferred or licensed to a third party to progress development of such discoveries or technologies towards such goals.

Structure, governance and management

The Board is responsible for setting strategy and ensuring the necessary assets are in place to meet the charity's strategic aims; monitoring performance; and overseeing risk management. It is also responsible for Trustee and Executive Management succession planning, overseeing any changes to the charity's constitution and upholding its culture and values. Day-to-day running of the charity is delegated to the Executive Management Team.

The Trustees confirm that they have referred to the Charity Commission's general guidance on public benefit when reviewing the Charity's aims and objects and in setting the strategy and planning future initiatives.

Trustees

LifeArc's Board is comprised of 13 Trustees, including two Executive Directors. The Trustees fulfil the legally defined roles of members and directors of the charitable company. Trustees, who each have governance experience, come from broad and varied backgrounds, including biomedical sciences, investment fund management, charities, finance and law. New Trustees are recommended by the Nominations Committee and appointed by the Board.

As recommended under the Charity Governance Code, Trustees are appointed for a renewable term of three years and may stand for re-election for a maximum of three consecutive terms. New Trustees are briefed on LifeArc's objectives and on their duties and statutory obligations. They also receive relevant Charity commission guidance. Trustees meet regularly with the Executive Management Team to discuss all areas of the business.

Trustees are not remunerated for their role at LifeArc, but are paid expenses. Other expenses incurred in the course of their duties are paid directly by the charity. Executive Trustees are remunerated in respect of their executive service.

Trustees as members

As a company limited by guarantee, LifeArc is legally required to have members who act as nominal guarantors in the event that the company should ever be wound up. LifeArc has adopted a foundation model of governance where membership is restricted to serving Trustees. The charity is currently recruiting a Strategic Advisory Council from key stakeholders, which will provide strategic advice and feedback to the Board.

Committees of the Board

The Board of Trustees delegates oversight and assurance for key functions to the five dedicated Board committees: Audit and Risk Management Committee, Investment Committee, Nominations Committee, Remuneration Committee and Scientific Committee. Most Trustees serve on one or more committees. The committees can co-opt non-trustees to provide additional expertise.

Conflicts of interest

LifeArc's policy on conflicts of interest applies to Trustees and employees alike. A register of Trustees' and Executive Directors' interests is reviewed at each Board meeting and all employees complete a 'conflicts disclosure form' annually. Completed forms are reviewed by the Company Secretary to identify and manage any potential conflict. The Board has elected not to publish its registers of gifts, hospitality and interests owing to potential data privacy implications.

Management Committee

Executive Management Team

The Executive Management Team is responsible for the day-to-day running of the charity under authority delegated by the Board of Trustees. The team, under the leadership of the CEO, proposes to the Board where the charity should invest its time, money and expertise. It proposes strategic changes to the organisation's activities prior to submission to the Board or committees. It is also responsible for developing the financial and operational plans for Board approval and monitoring financial performance.

Melanie Lee
Chief Executive Officer

Edward Bliss
General Counsel & Company Secretary

Justin Bryans
Executive Director, Drug Discovery

Fiona French
Executive Director, Human Resources

Andrew Farquharson
Executive Director, Technology Transfer

Andrew Mercieca
Chief Financial Officer

Graham Duce
Chief Investment Officer

Ian Campbell
Chief Business Officer

Board and committee attendance

| | Board of Trustees | | | | | |
|--|-------------------|-------|-------|----------|---------|----------|
| | Scheduled | ARMC | IC | Sci Comm | Nom Com | Rem Comm |
| John Stageman | 7 (7) | | | 5 (5) | 3 (3) | 2 (2) |
| Paul Mussenden | 7 (7) | 4 (4) | 5 (5) | | 3 (3) | 2 (2) |
| Peter Keen | 7 (7) | 4 (4) | 4 (5) | | 3 (3) | |
| Les Hughes | 7 (7) | | | 5 (5) | | |
| Mike Romanos | 7 (7) | | | 5 (5) | | |
| Steve Visscher (served until 24 September 2020) | 5 (5) | | | | | |
| Aisling Burnand | 7 (7) | | | | 3 (3) | |
| Daniel Morgan | 7 (7) | 4 (4) | 4 (4) | | | |
| Sally Burtles | 6 (7) | | | 3 (5) | | 2 (2) |
| David Zahn | 7 (7) | | 5 (5) | | | |
| Andrew Mercieca | 7 (7) | | | | | |
| Melanie Lee | 7 (7) | | | | | |
| Lynne Robb (joined 8 June 2020) | 4 (4) | 3 (3) | | | | |
| Co-opted members | | | | | | |
| Simon Gibson | | | 4 (5) | | | |
| Jonathan Marriott | | | 3 (5) | | | |
| Cindy Rose | | | 2 (3) | | | |

First number indicates number of meetings attended.

Second number – in () – indicates total number of meetings where attendance was possible.

Audit and Risk Management Committee Report

Paul Mussenden

Audit and Risk Management Committee Chair

Committee membership

| Member | Meetings attended |
|---------------------------------------|-------------------|
| Paul Mussenden (Chair) | ● ● ● ● |
| Peter Keen | ● ● ● ● |
| Dan Morgan | ● ● ● ● |
| Lynne Robb (appointed 8 June 2020) | — ● ● ● |

What we did in the year

- Introduced a deep dive into specific key risk areas with Executive Management (for example IT/cyber-risk)
- Steered the introduction of enhanced cash reporting and reporting of current and forecast commitments over the longer term
- Advised on the valuation of investments and valuation policy
- Reviewed the change in structure of the charity to a foundation model
- Received updates on the management of risk associated with the impact of COVID-19
- Reviewed Committee performance and composition and appointed Lynne Robb to the Committee.

The key areas of focus for 2021

- Guiding the update of the Reserves Policy
- Overseeing the implementation of the Finance Improvement Programme (relating to the ongoing development of the Finance Team and Finance processes and strategy)
- Updating risk appetite statements for consideration by the Board and overseeing agreed activity to mitigate key operational and strategic risks
- Implementation of an enhanced overall internal control framework
- Supporting the creation of an overall assurance plan

As Chair of the Audit and Risk Management Committee, I am pleased to present our report for the year ended 31 December 2020.

The ARMC, which meets quarterly, provides assurance to the Board of Trustees on financial planning, reporting, risk management, governance, assurance and related matters. The Committee approves the appointment of internal and external auditors, oversees the budget process, scrutinises the annual accounts and approves the internal audit programme.

The ARMC focuses on developing robust assurance frameworks to support the delivery of LifeArc's strategy and ensure good governance is embedded in all we do. The Committee also reviews evolving best practice and develops LifeArc's approach as the charity's activities become broader and more complex. During the year we received updates on compliance with the Charity Governance Code for larger charities.

We regularly review auditors' reports and advice on governance best practice and monitor the completion of resultant actions. The Committee regularly receives assurance reports from the internal auditors on the design and effectiveness of controls and processes for each audited area. During the year we supported the review and update of the internal audit plan and ensured it reflects the risk profile of LifeArc.

The CEO, CFO, General Counsel & Company Secretary, and other individuals with responsibility for risk and assurance oversight, routinely attend the meetings along with representatives from the internal and external audit teams.

During 2020 we made further progress in balancing strategic risk with the need for practical operational implementation and embedding of risk management. This was demonstrated by the role played by risk management in the COVID-19 response and the integration of risk in key decisions such as the transfer of the Kymab technology.

In 2021 we will focus on further developing our risk culture to support the achievement of our corporate goals. In particular, we will support the Executive Management in ensuring that risk appetite is considered in decision-making and resource allocation.

More broadly, we will continue to work with LifeArc to ensure it develops an appropriate and robust internal control and assurance framework and achieves the desired level of risk management maturity. The goal is to ensure the Board can demonstrate that risks are being managed effectively in accordance with corporate goals and the agreed risk appetite.

During the year we welcomed Lynne Robb to the Committee. I would like to take this opportunity to thank all the ARMC members, and John, for their support and input throughout the year.

Paul Mussenden

Audit and Risk Management Committee Chair

Key: ● Attended ○ Not attended — Not applicable

Scientific Committee Report

Les Hughes
Scientific Committee Chair

Committee membership

| Member | Meetings attended |
|--------------------|-------------------|
| Les Hughes (Chair) | ● ● ● ● ● |
| Sally Burtles | ● ● ● ○ ○ |
| Mike Romanos | ● ● ● ● ● |
| John Stageman | ● ● ● ● ● |

What we did in the year

- Monitored portfolio progress via regular updates from the Portfolio Review Board (PRB)
- Reviewed impact of COVID-19-related lockdowns on projects and oversaw actions taken to mitigate this
- Reviewed LifeArc's COVID-19 roadmap, projects and collaborations, and reviewed and approved project proposals
- Reviewed future of disease focus areas and approved introduction of a mission-based approach
- Evaluated proposals for potential focus areas, including pain
- Set out the Committee's future role in the oversight and evaluation of future missions
- Recommended investments in Biocartis Idylla platform and the GENOMICCS initiative
- Debated the proposal for KPIs on the portfolio progress

The key areas of focus for 2021

- Evaluate the LifeArc scientific portfolio
- Monitor and engage with LifeArc missions as they are developed

I am pleased to report that the Scientific Committee had a productive year, supporting LifeArc's pursuit of its strategy and its scientific response to COVID-19.

The Committee oversees the charity's research activities and provides assurance to the Board on the development, implementation and effective delivery of these activities. In particular, we consider the quality, breadth and balance of the therapeutics and diagnostics portfolios.

A portfolio management board (PRB) was introduced in 2019, to give the Executive Management a unified overview of LifeArc's scientific portfolio. The PRB reports regularly into the Scientific Committee, making recommendations on project prioritisation and resourcing for the Committee's approval. The PRB process has enabled LifeArc to make clear decisions on projects aligned to our strategy. It has also allowed the Committee to take a 'deep dive' into specific projects including the progress of the TB-MBLA diagnostic product and the successful transfer of the Kymab technology into our Stevenage laboratories as a result of our investment in Kymab.

The response to COVID-19 was a critical feature of 2020. The Committee regularly reviewed the impact of lockdowns on project deliverables and milestones and monitored LifeArc's COVID-19 roadmap including the Philanthropic Fund's funding of a number of drug repurposing projects and the involvement of LifeArc scientists in testing antibodies for development by the UK BIA Antibody Taskforce. The Committee advised that the united response displayed in the fight against COVID-19 would support the planned future coalescence around a mission or missions.

The Committee also reviewed and endorsed the outcomes of LifeArc's internal call for COVID-19-related projects. We reviewed each project in turn against a range of criteria including post-COVID-19 applicability and relevance to LifeArc's translational platforms. We endorsed the decisions of the expert panel and recommended seven internal projects for Board approval; in addition we endorsed an external project for the creation of a screening facility at the University of Glasgow to progress drug discovery.

Successful relationships are central to our strategy. During 2020, the Committee recommended an investment in the Idylla platform under a non-exclusive license offered to us by long-time collaborator Biocartis. The Idylla investment has the potential to be deployed across our disease areas. We also recommended support for the GenOMICC COVID-19 Study, led by the GenOMICC consortium in partnership with Genomics England. This project will offer significant insights into COVID-19 as well as strengthening our relationship with important partners in the data and AI field.

In December we approved a move to a missions-based approach to delivering our science translation strategy, focusing on underserved patient needs. This builds on LifeArc's strengths and will unite different disciplines behind specific goals. The Scientific Committee considered its role in relation to missions and concluded that there will still be an important governance and advisory role to be fulfilled. The Committee has asked the Executive to come back in early 2021 with criteria for selecting specific missions.

Looking forward to 2021 we will continue to evaluate the LifeArc scientific portfolio and provide advice and direction to the Executive. We will also continue to monitor and support the phased development of missions within the organisation.

Les Hughes
Scientific Committee Chair

Key: ● Attended ○ Not attended — Not applicable

Investment Committee Report

David Zahn

Investment Committee
Chair

Committee membership

| Member | Meetings attended |
|------------------------------|-------------------|
| David Zahn (Chair) | ● ● ● ● ● |
| Peter Keen | ○ ● ● ● ● |
| Paul Mussenden | ● ● ● ● ● |
| Dan Morgan | ● ● ● ● — |
| Simon Gibson (Co-opted) | ● ● ○ ● ● |
| Jonathan Marriott (Co-opted) | ● ○ ● ○ ● |
| Cindy Rose (Co-opted) | — — ● ● ○ |

What we did in the year

- Established investment infrastructure to enable LifeArc to manage its capital investment portfolio effectively for long-term success – key highlights were:
 - Appointment of Northern Trust as the global custodian
 - Appointment of Cambridge Associates as investment consultant
- Revised Terms of Reference to determine ways of working between the Board, Investment Committee and the Chief Investment Officer
- Recommended the Environment, Social and Governance (ESG) policy statement to the Board
- Invested £250m into an ESG-focused passive global equity fund

The key areas of focus for 2021

- Seek Board approval of the Strategic Asset Allocation (SAA) for the investment portfolio to the Board
- Seek Board approval of the Investment Policy Statement (IPS) for the investment portfolio
- Implement the transition from existing asset managers to the IC-approved target portfolio in accordance with our SAA
- Research and allocate to new opportunities as they arise within private investments
- Search and select active public equity managers within the portfolio
- Continue to evolve ESG policy

I am pleased to present our report for the year ended 31 December 2020. The report highlights the key activities during the year and future plans for LifeArc's investment portfolio.

Responsibilities of the Committee

The Investment Committee is established as a Committee of the Board of Trustees in accordance with LifeArc's Articles of Association. The Committee has responsibility for the appropriate and effective management of LifeArc's investment portfolio.

The Investment Committee recommends LifeArc's overall investment policy to the Board for approval. This includes risk and return objectives as well as investment and Environmental, Social and Governance (ESG) constraints.

In addition, we review the management of LifeArc's investment portfolio and provide advice and guidance to the Board accordingly. This includes developing an appropriate investment policy to support the organisation in fulfilling its purpose and goals. The Committee meets quarterly (and on an interim basis where appropriate).

The Committee has responsibility to review the performance of our external investment managers against their performance benchmarks and the overall long-term investment target agreed with the Board.

The Committee is authorised to determine Strategic (long-term) Asset Allocation (SAA) across asset classes and markets and set rebalancing methodology; it also has responsibility for approving and monitoring a portfolio of fund managers with whom LifeArc can invest for an agreed asset.

In the case of private investments, the Committee delegates the sourcing of manager names to LifeArc's Chief Investment Officer (who works in collaboration with the appointed investment consultant). For commitments to private investment funds under 1.5% of the assets under management of the investment portfolio, the Chief Investment Officer (CIO) can approve investment allocations. For investments above 1.5% to a private markets fund, the CIO will make a recommendation to the Investment Committee.

Principal activities of the Committee

The Committee was called upon to approve a strategic investment management infrastructure proposed by Chief Investment Officer Graham Duce, to enable the effective management of the LifeArc investment portfolio.

Following the monetisation of a portion of LifeArc's royalty interest in *Keytruda* in 2019, the investment portfolio in 2020 comprised £1.1bn. Prior to the establishment of our investment infrastructure the Committee approved and oversaw the implementation of a series of investments, totalling £250m, in a passive global equity fund, the BlackRock Developed World ESG Screened Index.

Following rigorous due diligence processes, the Committee engaged the services of an investment consultant (Cambridge Associates) to advise on strategic asset allocation, manager selection, portfolio construction and governance. We also appointed a global custodian (Northern Trust) to administer the portfolio. The Strategic Asset Allocation was proposed by the Investment Committee for approval by the Board (it was approved post year end).

The Committee also recommended an ethical investment policy to the Board, which identifies areas where the organisation is unwilling to invest. Our expectation is that this policy will evolve over time.

Key: ● Attended ○ Not attended — Not applicable

Priorities for the coming year

In 2021 the Committee will be making recommendations to the Board regarding an Investment Policy Statement (IPS) for the investment portfolio. We will also oversee the transition from the existing asset managers to the Committee's approved target portfolio in accordance with our SAA, with a view to completion by the end of June 2021.

The Committee expects the CIO to consider allocations within the agreed parameters and to research and allocate to new opportunities as they arise, within the world of private markets. A key objective for the year is to find suitable active managers for the majority of the allocation to public equities. A sub-group of Investment Committee members has been formed to aid this process.

David Zahn

Investment Committee Chair

Strategic Asset Allocation (SAA)

| | Risk equivalent | Policy weights | Policy ranges |
|--------------------------------------|-----------------|----------------|---------------|
| Growth | 80% | 72% | 60% - 84% |
| Global Equity | 60% | 52% | 60% - 84% |
| PE/ VC | 20% | 20% | 0% - 25% |
| Diversifiers | 0% | 16% | 8% - 24% |
| Private Diversifiers | 0% | 5% | 0% - 7% |
| Total Liquid Diversifiers | 0% | 11% | 8% - 24% |
| Property | 0% | 3% | 0% - 10% |
| Hedge Funds | 0% | 4% | 0% - 10% |
| Credit | 0% | 4% | 0% - 10% |
| Other | 0% | 0% | 0% - 5% |
| Liquidity Buffer | 20% | 12% | 2% - 18% |
| Fixed Income | 20% | 10% | 0% - 18% |
| Global Government Bonds | | 3% | 0% - 10% |
| Global Inflation Linked Bonds | 0% | 3% | 0% - 10% |
| Other | 0% | 4% | 0% - 10% |
| Cash | 0% | 2% | 2% - 18% |

Nominations Committee Report

John Stageman
Nominations Committee
Chair

Committee membership

| Member | Meetings attended |
|-----------------------|-------------------|
| John Stageman (Chair) | ● ● ● |
| Peter Keen | ● ● ● |
| Aisling Burnand | ● ● ● |
| Paul Mussenden | ● ● ● |

What we did in the year

- Conducted a Board skills assessment
- Reviewed the performance of the Trustees individually and collectively
- Developed Trustee succession plans and reviewed the appointment process for Trustees
- Oversaw the recruitment of two new Trustees to the Board and approved senior executive appointments
- Oversaw move to Foundation model and recommended proposal to create a Strategic Advisory Council (SAC)

The key areas of focus for 2021

- Monitor LifeArc’s culture and its progress with enhancing diversity and inclusion
- Continue to evaluate the Board’s performance
- Further refine succession planning

I am pleased to report on the Nominations Committee’s work during 2020. The Committee develops and maintains succession plans for the Board and Executive, as well as overseeing Board performance and evaluation. It meets a minimum of twice a year.

In 2020, the Committee successfully addressed the focus areas we set out in last year’s report. We engaged a consultancy to report on the skills the Board requires and those possessed by our Trustees, to identify priorities and options for Board recruitment and succession. We also worked with a leadership development consultancy to help us assess the performance of individual Trustees, following on from the earlier review of the Board’s functioning as a whole. Both of these conform to Charity Commission best practice guidelines.

Effective succession planning ensures we are well prepared when key vacancies arise. During 2020, we worked on developing a succession plan for the Trustees, covering both immediate and longer-term succession. We also reviewed the appointment process for recruiting new Trustees, ensuring the process is robust, transparent and respects the need for diversity.

Once a new Trustee’s appointment is confirmed and references have been checked, we share a range of documents with them, including our Annual Report, strategy and relevant policies, via a dedicated online application. The Terms of Reference for our Board and committees are also shared, as well as meeting dates for the coming year. Induction meetings are arranged with other Board members and key senior leaders. The Chair also spends time with new Trustees to ensure they feel informed and able to contribute from the first meeting.

In last year’s report, we identified the requirement to recruit a new member of the Audit and Risk Management Committee. Following an external search overseen by the Nominations Committee, the Board appointed Lynne Robb as a Trustee. She has particular expertise in financial matters and a strong understanding of our sector. The Committee also oversaw the appointment of Jo Pisani, who joined the Board in December 2020. Jo was recommended through our trustee network and her appointment was independently assessed in line with our recruitment policy. Her expertise encompasses the critical areas of life science strategy, patient voice and data and Artificial Intelligence (AI).

Our other key activities in the year included approving the appointments of Fiona French as Executive Director of Human Resources and Dr Ian Campbell as Chief Business Officer, a new role overseeing our key partnerships strategy. The Committee also oversaw the process for moving to a foundation model and the associated establishment of a new strategic Advisory Council (SAC). Finally, we discussed the succession plan for our Executive Directors’ roles, an area which we will develop further in 2021.

At the end of the year, the Committee’s remit expanded to include culture, diversity and inclusion. These will be focus areas for us in 2021, along with further work on evaluating the Board’s performance and refining succession planning. The Committee is also overseeing the creation of the SAC to provide strategic insights and challenge to the Board.

John Stageman
Nominations Committee Chair

Key: ● Attended ○ Not attended — Not applicable

Remuneration Committee Report

John Stageman
Remuneration
Committee Chair

Committee membership

| Member | Meetings attended |
|-----------------------|-------------------|
| John Stageman (Chair) | ● ● |
| Sally Burtles | ● ● |
| Paul Mussenden | ● ● |

What we did in the year

- Consulted employees and revised a key term in employment contracts, to bring into line with best practice
- Continued to develop and review reward strategies, to remain competitive and aligned to our organisational principles and ambitions
- Approved upgrade of HR technology to improve transparency of our reward and benefits

The key areas of focus for 2021

- Broaden the Committee's Terms of Reference to review the reward system, and its development in relation to our desired culture, diversity and inclusion.
- Refresh our reward strategy to ensure it aligns with organisational strategy.

I am pleased to report on the Remuneration Committee's activities during 2020. The Committee's work recognises that remuneration is key to attracting, retaining and motivating employees, and ensuring they feel valued and recognised, while aligning to our people strategy, culture and corporate ambition. The Committee met twice a year in 2020; this will increase to three times in 2021.

The Committee made progress in a number of areas in 2020. In the wake of a review of financial risks, the Committee recognised the need to bring a key term in LifeArc's employment contracts in line with best sector practice. The Executive Committee was empowered to make the change. The process included a comprehensive programme of employee consultation, enabled by the newly formed Employee Forum, with support from senior management. All employee contracts were updated in March 2020.

The Remuneration Committee played a key role in guiding decisions about our pay and bonuses during a challenging year. Our focus was on creating certainty and continuity for our people, in respect of their work and employment, and this informed our broader reward approach in 2020. The Committee supported the decision to not award pay increases to those in senior leadership roles, however significant leadership and performance during the year were recognised through a reduced bonus framework for this group. As LifeArc continues to focus on attracting and retaining talent, the Committee supported the decision to apply adjusted pay increases and bonuses to those in other roles. Individual decisions were based on collective and individual performance and careful review of reference market rates.

The Committee also recognised the value of transparent remuneration processes, supported by financial education, to enable employees to understand, value and make the most of their reward and benefits. The Committee supported LifeArc's review of pension governance and the formation of a new pensions committee together with the plan to run pension workshops for all employees early in 2021. It also approved significant investment in a new HR system ('LifeArc & Me') and benefits portal ('MyRewards@LifeArc') improving employees' engagement with their benefits and total reward offering. These new platforms will improve our employee experience, a key area of focus in 2021.

More broadly, the Committee has focused on ensuring LifeArc's reward policy remains competitive and aligned to our organisational principles and ambitions. We continue to input to benchmark surveys to ensure we are confident that we provide market competitive pay that reflects an individual's role and their contribution. Further, our bonus supports our collaborative culture, rewarding performance against the attainment of collective goals. We offer benefits that provide employees with choice. The Committee regularly reviews information on industry reward strategies and trends, and relevant data on roles in similar charities where available. These are used together with our own recruitment and turnover data to review LifeArc remuneration strategies and make changes where we believe these to be necessary.

In 2021 the Committee will be expanding its remit to include wider and more detailed monitoring of remuneration and culture from a diversity and inclusion perspective. We will work with reward specialist Verditer to develop LifeArc's reward strategy and ensure that it builds in this perspective fully. Our continued focus on creating increased transparency around reward to improve understanding of pay, benefits and progression within LifeArc will help ensure we deliver an employee experience we can be proud of.

John Stageman
Remuneration Committee Chair

Key: ● Attended ○ Not attended — Not applicable

Responsibilities of the Trustees statement

Trustees' Annual Report 31 December 2020

Statement of Trustees' responsibilities

The Trustees (who are the directors for the purpose of company law) are responsible for preparing the Trustees' report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Practice). Company law requires Trustees to prepare financial statements, for each financial year, which give a true and fair view of the state of affairs of the charitable company and of its incoming resources and application of those resources, including its income and expenditure for the period. In preparing these financial statements the Trustees are required to:

- Select suitable accounting policies and then apply them consistently.
- Observe the methods and principles in the Charities' Statement of Recommended Practice (SORP).
- Make judgements and estimates that are reasonable and prudent.
- State whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements.
- Prepare the financial statements on a going concern basis unless it is inappropriate to presume that LifeArc will continue in operation.

The members of the Board are responsible for keeping proper accounting records that are sufficient to show and to explain the charitable company's transactions and to disclose, with reasonable accuracy, at any time, the financial position of the charitable company and to ensure that the financial statements comply with the Companies Act 2006. The Trustees are also responsible for safeguarding the assets of LifeArc and for taking reasonable steps for the prevention and detection of fraud or other irregularities.

The Board met seven times during the reporting period (25 February 2020, 16 March 2020, 18 May 2020, 25 June 2020, 24 September 2020, 21 October 2020, 17 December 2020) and also at the AGM on 14 July 2020.

This Annual Report was approved by the LifeArc Board on 15 July 2021 and signed on its behalf by



Dr John Stageman OBE
Chairman

Financial statements

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Independent auditor's report to the trustees and members of LifeArc

Opinion

We have audited the financial statements of LifeArc (the 'charitable company') for the year ended 31 December 2020 which comprise the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102, The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the charitable company's affairs as at 31 December 2020, and of its incoming resources and application of resources, including its income and expenditure, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006, the Charities and Trustee Investment (Scotland) Act 2005 and regulation 8 of the Charities Accounts (Scotland) Regulations 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 charitable 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, 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.

Conclusions relating to going concern

In auditing the financial statements, we have concluded the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charitable company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises the information included in the trustees' annual report, other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the trustees' annual report. 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. 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 course of 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 themselves. 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.

Opinions 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 trustees' annual report, which includes the strategic report and the directors' report prepared for the purposes of company law, 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 included within the trustees' annual report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of our knowledge and understanding of the charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report and the directors' report included within the trustees' annual report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 and the Charities Accounts (Scotland) Regulations 2006 require us to report to you if, in our opinion:

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

Responsibilities of trustees

As explained more fully in the trustees' responsibilities statement, the trustees (who are also the directors of the charitable company for the purposes of company law) 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 trustees 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 trustees are responsible for assessing the charitable 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 trustees either intend to liquidate the charitable company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under the Companies Act 2006 and report in accordance with the Acts and relevant regulations made or having effect thereunder.

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.

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below:

- We obtained an understanding of the charitable company and the sector in which it operates to identify laws and regulations that could reasonably be expected to have a direct effect on the financial statements. We obtained our understanding in this regard through discussions with management, sector research and application of cumulative audit knowledge and experience of the sector.
- We determined the principal laws and regulations relevant to the charitable company in this regard to be those arising from the Companies Act 2006, Charities Act 2011, Charities and Trustee Investment (Scotland) Act 2005 and Financial Reporting Standard 102.
- We designed our audit procedures to ensure the audit team considered whether there were any indications of non-compliance by the charitable company with those laws and regulations. These procedures included, but were not limited to enquiries of management, review of minutes of meetings of the trustees and review of legal and regulatory correspondence.
- We also identified the risks of material misstatement of the financial statements due to fraud. We considered, in addition to the non-rebuttable presumption of a risk of fraud arising from management override of controls, that there was potential for management bias in the valuation of unlisted investments. We challenged the assumptions underpinning the fair value assessments by management, comparing these to financial information pertaining to the relevant investment at the year end and post-year end. We also identified potential for management bias in the depreciation rate applied to tangible fixed assets, and we addressed this by considering the useful economic life applied for the types of asset held, and re-performing the calculation to ensure it had been performed accurately in line with the stated accounting policy.

— As in all of our audits, we addressed the risk of fraud arising from management override of controls by performing audit procedures which included, but were not limited to: the testing of journals; reviewing accounting estimates for evidence of bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

Because of the inherent limitations of an audit, there is a risk that we will not detect all irregularities, including those leading to a material misstatement in the financial statements or non-compliance with regulation. This risk increases the more that compliance with a law or regulation is removed from the events and transactions reflected in the financial statements, as we will be less likely to become aware of instances of non-compliance. The risk is also greater regarding irregularities occurring due to fraud rather than error, as fraud involves intentional concealment, forgery, collusion, omission or misrepresentation.

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

Use of our report

This report is made solely to the charitable company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006, and to the charitable company's trustees, as a body, in accordance with Regulation 10 of the Charities Accounts (Scotland) Regulations 2006. Our audit work has been undertaken so that we might state to the charitable company's members and trustees 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 charitable company, the charitable company's members as a body and the charitable company's trustees as a body, for our audit work, for this report, or for the opinions we have formed.



Alastair Duke

(Senior Statutory Auditor)

For and on behalf of PKF Littlejohn LLP
Statutory Auditor

15 Westferry Circus
Canary Wharf
London E14 4HD

Date: 26 July 2021

PKF Littlejohn LLP is eligible for appointment as auditor of the charity by virtue of its eligibility for appointment as auditor of a company under section 1212 of the Companies Act 2006.

Statement of financial activities

For the year ended 31 December 2020

| | Notes | Unrestricted funds £000s | Restricted £000s | Total funds year to December 2020 £000s | Total funds 9 months to Dec 2019 £000s |
|------------------------------------|-----------|-----------------------------|---------------------|--|---|
| Income and endowments from: | | | | | |
| Charitable activities | 1 | 2,709 | 415 | 3,124 | 974,034 |
| Trading activities | | – | – | – | 7 |
| Investments | 2 | 6,004 | – | 6,004 | 5,793 |
| Other income | 3 | 20 | – | 20 | 12,370 |
| Total income and endowments | | 8,733 | 415 | 9,148 | 992,204 |
| Expenditure on: | | | | | |
| Raising funds | 4 | 1,938 | – | 1,938 | 976 |
| Charitable activities | 5 | 47,306 | 415 | 47,721 | 26,846 |
| Provisions | 19 | – | – | – | (250) |
| Total expenditure | | 49,244 | 415 | 49,659 | 27,572 |
| Net gains on investments | 14/15 | 54,802 | – | 54,802 | 32,825 |
| Net income | | 14,291 | – | 14,291 | 997,457 |
| Net movement in funds | 21 | 14,291 | – | 14,291 | 997,457 |
| Reconciliation of funds: | | | | | |
| Total funds brought forward | 21 | 1,204,650 | – | 1,204,650 | 207,193 |
| Cash flow hedge reserve | 21 | – | – | – | – |
| Total funds carried forward | 21 | 1,218,941 | – | 1,218,941 | 1,204,650 |

All income and expenditure derives from continuing activities.

The Statement of Financial Activities includes all gains and losses recognised during the year.

Full comparative figures are presented in note 31.

The accounting policies and notes on pages 59 to 77 form part of the financial statements

Balance sheet

As at 31 December 2020

Company number: 2698321

| | Note | LifeArc 2020 £000s | LifeArc 2019 £000s |
|---|------|--------------------------|--------------------------|
| FIXED ASSETS | | | |
| Tangible fixed assets | 12 | 12,234 | 12,405 |
| Intangible assets | 13 | 16,514 | 15,946 |
| Investments | 14 | 444,462 | 197,279 |
| | | 473,210 | 225,630 |
| CURRENT ASSETS | | | |
| Investments | 15 | 740,410 | 968,294 |
| Debtors | 16 | 2,553 | 21,857 |
| Cash at bank and in hand | | 12,559 | 2,509 |
| | | 755,522 | 992,660 |
| Creditors: amounts falling due within one year | 17 | (9,056) | (12,905) |
| Net current assets | | 746,466 | 979,755 |
| Total assets less current liabilities | | 1,219,676 | 1,205,385 |
| Provision for liabilities | 19 | (735) | (735) |
| Net assets | | 1,218,941 | 1,204,650 |
| CHARITY FUNDS | | | |
| Unrestricted funds | 21 | 1,165,127 | 1,166,381 |
| Designated funds | 21 | 53,814 | 38,269 |
| Total charity funds | | 1,218,941 | 1,204,650 |

The accounting policies and notes on pages 59 to 77 form part of the financial statements

The financial statements were approved and authorised for issue by the Board on 15 July 2021.

Signed on behalf of the Board of Trustees.



Dr John Stageman OBE
Chairman

Statement of cash flows

For the year ended 31 December 2020

| | Note | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|---|------|-----------------------------------|----------------------------------|
| Cash flow from operating activities | 24 | (25,616) | 975,800 |
| Net cash flow provided by/(used in) operating activities | | (25,616) | 975,800 |
| Cash flow from investing activities | | | |
| Payments to acquire tangible fixed assets | | (2,704) | (3,368) |
| Payments to acquire intangible assets | | (598) | (15,946) |
| Receipts from sale of fixed assets | | – | – |
| Payments to acquire investments | | (294,299) | (36,669) |
| Receipts from sale of investments | | 80,157 | 18,810 |
| Dividends, interest and rents received from investments | | 3,010 | 5,793 |
| Reclassification from fixed asset to current asset investment | | 24,914 | – |
| Decrease/(increase) in current asset investments | | 227,884 | (962,597) |
| (Increase)/decrease in cash held for investment | | (2,698) | 1,566 |
| Net cash flow provided by/(used in) investing activities | | 35,666 | (992,411) |
| Change in cash and cash equivalents in the year | | 10,050 | (16,611) |
| Cash and cash equivalents at 1 January | | 2,509 | 19,120 |
| Cash and cash equivalents at 31 December | | 12,559 | 2,509 |
| Cash and cash equivalents consist of: | | | |
| Cash at bank and in hand | | 2,525 | 2,509 |
| Short-term deposits | | 10,034 | – |
| Cash and cash equivalents at 31 December | | 12,559 | 2,509 |

The accounting policies and notes on pages 59 to 77 form part of the financial statements

Accounting policies

For the year ended 31 December 2020

General information and basis of preparation

LifeArc is a charitable company limited by guarantee in the United Kingdom. In the event of the charity being wound up, the liability in respect of the guarantee is limited to £1 per member of the charity. The address of the registered office is given on the back cover of these financial statements. The nature of the charity's operations and principal activities are progressing early stage science from academic research towards clinical benefit, working with industry and academia to accelerate the delivery of diagnostic tests to patients and providing intellectual property (IP) management and commercialisation services to medical research charities and organisations.

The charity constitutes a public benefit entity as defined by FRS 102. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice (SORP) applicable to charities preparing their accounts in accordance with the financial reporting standard applicable in the United Kingdom and Republic of Ireland (FRS 102), the Charities Act 2011, the Companies Act 2006 and UK generally accepted practice as it applies from 1 January 2019.

The financial statements are prepared on a going concern basis under the historical cost convention. The financial statements are prepared in sterling, which is the functional currency of the charity, and rounded to the nearest £000.

The subsidiary undertaking LifeArc Innovations Limited has been excluded from consolidation on the basis of it not being material, in line with FRS 102 paragraph 9.9A

The significant accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all periods presented unless otherwise stated.

Going concern

The Trustees consider that the use of the going concern basis is appropriate because there are no material uncertainties relating to events or conditions that may cast significant doubt about the ability of the charity to continue as a going concern, and there is reasonable expectation that the charity has adequate reserves to continue in operational existence for the foreseeable future. The impact of COVID-19 has been considered when reviewing budgets and long-term plans, and is also not considered to impact the ability of the charity to continue as a going concern.

Incoming resources

Income is recognised when the Charity is entitled to the income, the value can be reasonably measured and it is probable that the income will be received. Incoming resources from charitable activities comprise the following:

- Research contract and development income recognised according to the terms of the contract upon completion of agreed milestones, royalty income recognised on an accruals basis.
- Technology transfer services fees receivable from the Medical Research Council (MRC) which are invoiced in line with the service level agreement.

- Grant income recognised when LifeArc has the right to receive the money. Grants received which are restricted by the donor for performance in future accounting periods are deferred.
- Rental income from researchers occupying LifeArc facilities. Income recognised represents amounts invoiced in the year.

Incoming resources from trading activities consist of:

- The provision of accounting, human resource, legal and meeting room services.

Incoming resources from investments comprise the following:

- Investment income together with recoverable tax, recognised on a receivable basis.

Resources expended

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category. Where costs cannot be directly attributed to particular headings, they have been allocated to activities on a basis consistent with the use of resources.

- Costs of raising funds are the costs of managing investments for both income generation and capital maintenance and include investment manager fees relating to the costs of the external management of investments of LifeArc.
- Charitable activities comprise expenditure on the direct charitable activities of LifeArc.
- Provisions comprise estimated movement in obligations as at the balance sheet date as a result of a past event.

Fund accounting

The unrestricted fund is a general unrestricted fund which is available for use at the discretion of the Trustees in furtherance of the general objectives of LifeArc and which has not been designated for other purposes.

Designated funds are amounts set aside by the Trustees for specific purposes.

The restricted funds represent grants received in the year which are subject to specific restrictions imposed by the donor.

Support cost allocation

Support costs are those that assist the work of the charity but do not directly represent charitable activities and constitute corporate resource and governance costs. They are incurred directly in support of expenditure on the activities of the charity. Corporate resource and governance costs have been allocated to activities on an employee headcount basis.

Accounting for tangible fixed assets

Fixed assets or groups of fixed assets with a cost in excess of £5,000 are capitalised at cost and depreciated according to the disclosed policy.

Accounting policies

continued

Depreciation of tangible fixed assets

Depreciation is provided on a straight-line basis so as to write off the cost or valuation of tangible fixed assets less estimated residual value over their estimated useful economic lives, which are as follows:

- long leasehold land and buildings – over the period of the lease or useful economic life, whichever is the shorter;
- plant and machinery – 10 years;
- laboratory equipment – 5-10 years;
- furniture, fixtures and fittings and office equipment – 5 years;
- computers – 3-5 years;
- leasehold improvements – over the period of the lease or useful economic life, whichever is the shorter; and
- IT infrastructure – 10 years

Accounting for intangible fixed assets

Intangible assets are capitalised at cost and amortised according to the disclosed policy.

Amortisation of intangible fixed assets

Amortisation is provided on a reducing-balance basis or straight-line basis with the most appropriate basis for each asset chosen so as to write off the cost of intangible fixed assets less estimated residual value over their estimated useful economic lives, which are as follows:

- licences – over the period of the licence or useful economic life, whichever is the shorter

Fixed asset investments

Investments are recorded at cost and are stated at fair value at the balance sheet date. The unrealised gains and losses arising as a result are included in the Statement of Financial Activities (SOFA) together with any realised gains and losses on any investments disposed of in the year.

Financial assets, including investments in equity instruments which are not subsidiaries, are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried, where possible, at fair value and the changes in value are recognised in the SOFA. Assets are considered for indications of impairment, with any impairment then recognised in the SOFA.

Current asset investments

Investments are stated at market value at the balance sheet date. The unrealised gains and losses arising as a result are included in the SOFA together with any realised gains and losses on any disposals in the year.

Impairment reviews

A review of the impairment of fixed asset investments is carried out if events or changes in circumstances indicate that the carrying amount will not be recoverable.

Operating leases

Rentals paid under operating leases are charged to the SOFA on a straight-line basis over the terms of the lease. Where there is a rent-free period the total cost of the lease is recognised over the term on a straight-line basis.

Foreign currencies

Monetary assets and liabilities in foreign currencies are translated into sterling at the rate of exchange ruling at the balance sheet date.

Transactions which have been concluded prior to the balance sheet date are translated into sterling at the monthly rate of exchange ruling at the date of the transaction. Exchange gains and losses arising in the normal course of operations are included in the SOFA.

Financial instruments and hedging activities

LifeArc uses forward foreign currency contracts to manage its exposure to fluctuations in foreign exchange rates. These instruments are initially recognised at fair value on the trade date and are subsequently remeasured at their fair value at the end of the reporting date.

All hedging instruments will be recognised on the balance sheet at fair value, and all changes in value of the hedging instrument will be recognised in the cash flow hedge reserve.

Gains and losses are released to the SOFA once the hedge is realised.

Employee benefits

When employees have rendered service to the charity, short-term employee benefits to which the employees are entitled are recognised at the undiscounted amount expected to be paid in exchange for that service.

Pension costs

The charitable company operates a defined contributions pension scheme which is open to all employees. The funds of the scheme are administered by a third party and are separate from the charitable company. The pension charge represents contributions payable by the charitable company for the year. The charitable company's liability is limited to the amount of the contributions.

Termination benefits

Redundancy and termination costs are recognised when there is a legal or constructive obligation which can be measured reliably, and it is probable that a payment will be made.

Material items

Material items are items which derive from events or transactions that fall within the ordinary activities of the charitable company and which individually need to be disclosed by virtue of their size or incidence if the financial statements are to give a true and fair view. The separate reporting of material items helps to provide a better indication of the charitable company's underlying business performance.

Taxation

LifeArc is a registered charity and is generally exempt from corporation tax but not from value added tax (VAT). Irrecoverable VAT is included with the cost of those items to which it relates.

Provisions

A provision is made for a liability in the financial statements where LifeArc has a present obligation as a result of a past event, it is probable that a transfer of economic benefits will be required to settle the liability and a reliable estimate can be made of the obligation.

Notes to the financial statements

For the year ended 31 December 2020

1 Income from charitable activities

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--|-----------------------------------|----------------------------------|
| Keytruda monetisation | – | 971,252 |
| Research contracts and royalty income | 1,509 | 1,445 |
| IP management and technology transfer services | 1,200 | 900 |
| Grants | 415 | 437 |
| | 3,124 | 974,034 |

2 Income from investments

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--------------------------------------|-----------------------------------|----------------------------------|
| Dividends – equities | 2,454 | 2,179 |
| Interest – fixed interest securities | 3,360 | 3,267 |
| Interest – deposits | 190 | 347 |
| | 6,004 | 5,793 |

3 Other income

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|---------------|-----------------------------------|----------------------------------|
| Miscellaneous | 20 | 12,370 |
| | 20 | 12,370 |

Other income during the 9 months to December 2019 included a one-off lump-sum payment received in settlement of a dispute under a research collaboration agreement of £12.2m.

4 Raising funds

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|-------------------------|-----------------------------------|----------------------------------|
| Investment office costs | 516 | – |
| Investment manager fees | 1,422 | 976 |
| | 1,938 | 976 |

Notes to the financial statements

continued

5 Analysis of expenditure on charitable activities

| | Activities undertaken directly £000s | Support costs £000s | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--|---|---------------------------|-----------------------------------|----------------------------------|
| Early stage drug discovery | 19,326 | 3,457 | 22,783 | 14,930 |
| Diagnostics development | 3,169 | 790 | 3,959 | 2,545 |
| IP, licensing and business development | 6,792 | 2,099 | 8,891 | 7,584 |
| Venture Fund | 154 | 32 | 186 | 337 |
| Seed Fund | 756 | 161 | 917 | 570 |
| Philanthropic and COVID Fund | 10,953 | 32 | 10,985 | 880 |
| | 41,150 | 6,571 | 47,721 | 26,846 |

6 Allocation of support costs

| | Governance £000s | Corporate resources £000s | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--|---------------------|---------------------------------|-----------------------------------|----------------------------------|
| Early-stage drug discovery | 128 | 3,329 | 3,457 | 4,282 |
| Diagnostics discovery | 29 | 761 | 790 | 884 |
| IP, licensing and business development | 470 | 1,629 | 2,099 | 2,659 |
| Venture Fund | 1 | 31 | 32 | – |
| Seed Fund | 6 | 155 | 161 | 186 |
| Philanthropic Fund | 1 | 31 | 32 | 47 |
| | 635 | 5,936 | 6,571 | 8,058 |

Governance costs are detailed further in note 7.

7 Governance costs

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--------------------------------------|-----------------------------------|----------------------------------|
| Staff costs | 290 | 257 |
| Direct costs | | |
| Other legal and professional charges | 45 | 74 |
| Audit fees | 35 | 36 |
| Other fees | 84 | 47 |
| Bank charges | 6 | 7 |
| Insurance | 131 | 109 |
| Other governance costs | 44 | 71 |
| | 635 | 601 |

8 Net income for the year

Net income is stated after charging/(crediting):

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--|-----------------------------------|----------------------------------|
| Depreciation of tangible fixed assets | 2,813 | 1,906 |
| Operating leases – property | 1,175 | 848 |
| Auditor's remuneration | 35 | 36 |
| Fees payable to internal auditor | 82 | 47 |
| Net losses/(gains) on foreign exchange | 614 | (4,245) |

9 Auditor's remuneration

| | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|--|-----------------------------------|----------------------------------|
| Fees payable to the charity's auditor for the audit of the charity's annual accounts | 35 | 33 |
| Fees payable to the charity's auditor for other services: | | |
| Other services | 14 | 3 |
| | 49 | 36 |

Notes to the financial statements

continued

10 Trustees' and key management personnel remuneration and expenses

Having obtained approval from the Charity Commission, on 14 November 2019 Melanie Lee (Chief Executive Officer) and Andrew Mercieca (Chief Financial Officer) were appointed as Trustees of the charity. From 14 November 2019 remuneration and benefits were paid to these two individuals for their roles as employees of the charity, not for their positions as Trustees. The aggregate amounts paid during the year (made up of basic pay, bonus, pension allowance, employer's pension contribution, employer's NI, and benefits in kind), was £484k to Melanie Lee (November to December 2019, £72k) and £249k to Andrew Mercieca (November to December 2019, £37k).

All other Trustees neither received nor waived any remuneration during the year (9 months to December 2019 – £Nil).

In respect of acting as a Director for SpringWorks Therapeutics on behalf of LifeArc, during the year Peter Keen invoiced LifeArc £Nil for consultancy services (9 months to December 2019 – £10k).

The total amount of employee benefits received by key management personnel during the year (made up of basic pay, bonus, pension allowance, employer's pension contribution and employer's NI) was £2,093k (9 months to December 2019 – £1,553k). The Trustees consider its key management personnel to comprise the Chief Executive Officer and Executive Management Team.

The following Trustees' expenses were reimbursed or paid directly on their behalf during the year for their services as Trustees:

| | 12 months to Dec 2020 No. Trustees | 9 months to Dec 2019 No. Trustees | 12 months to Dec 2020 £000s | 9 months to Dec 2019 £000s |
|------------------------|--|---|-----------------------------------|----------------------------------|
| Travel and subsistence | 3 | 7 | 1 | 15 |
| | 3 | 7 | 1 | 15 |

Included above is £Nil (9 months to December 2019 – £Nil) which has been paid directly to third parties.

11 Staff costs and employee benefits

The average number of employees, analysed by function, was:

| | Dec 2020 | Dec 2019 |
|-----------------------|----------|----------|
| Management | 8 | 7 |
| Research | 108 | 103 |
| Technology transfer | 41 | 41 |
| Administration | 51 | 46 |
| Agency/contract staff | 7 | 4 |
| | 215 | 201 |

The total staff costs and employee benefits were as follows:

| | Dec 2020 £000s | Dec 2019 £000s |
|------------------------------------|-------------------|-------------------|
| Wages and salaries | 13,406 | 9,693 |
| Social security | 1,466 | 1,088 |
| Defined contribution pension costs | 1,110 | 738 |
| Agency/contract staff | 563 | 160 |
| | 16,545 | 11,679 |

Additional analysis has been provided to show the full year actual costs for the 12 months to 31 December 2019 to enable more meaningful comparison to the figures for the 12 months to 31 December 2020.

The number of employees who received total employee benefits (made up of basic pay, bonus, and pension allowance) of more than £60,000 is as follows:

| | 12 months to Dec 2020 | 9 months to Dec 2019 | 12 months to Dec 2019 |
|---------------------|--------------------------|-------------------------|--------------------------|
| £60,001 – £70,000 | 13 | 14 | 17 |
| £70,001 – £80,000 | 13 | 9 | 5 |
| £80,001 – £90,000 | 13 | 3 | 16 |
| £90,001 – £100,000 | 7 | 8 | 5 |
| £100,001 – £110,000 | 1 | 2 | 4 |
| £110,001 – £120,000 | 10 | 1 | 4 |
| £120,001 – £130,000 | 1 | 1 | 4 |
| £130,001 – £140,000 | 2 | – | 1 |
| £140,001 – £150,000 | 1 | – | 1 |
| £150,001 – £160,000 | – | – | 1 |
| £160,001 – £170,000 | 1 | 3 | – |
| £170,001 – £180,000 | 1 | 1 | – |
| £180,001 – £190,000 | 1 | 1 | – |
| £190,001 – £200,000 | 1 | – | 2 |
| £200,001 – £210,000 | 3 | – | – |
| £210,001 – £220,000 | – | – | 2 |
| £230,001 – £240,000 | – | – | 1 |
| £350,001 – £360,000 | – | 1 | – |
| £420,001 – £430,000 | 1 | – | – |
| £450,001 – £460,000 | – | – | 1 |
| | 69 | 44 | 64 |

The pension contributions to the defined contribution scheme payable on behalf of 69 (9 months to December 2019 – 44) members of staff amounted to £548,314 (9 months to December 2019 – £287,594).

The redundancy and termination payments in the year totalled £54,600 (2019 – £nil), all of which had been paid during the year with no amounts outstanding at the year end.

Notes to the financial statements

continued

12 Tangible fixed assets

| | Assets under construction £000s | Leasehold improvements £000s | Laboratory equipment and plant £000s | Fixtures, fittings and computers £000s | Total £000s |
|---------------------------------|---------------------------------------|------------------------------------|---|---|----------------|
| COST | | | | | |
| At 1 January 2020 | 36 | 9,654 | 9,796 | 3,047 | 22,533 |
| Additions | 1,014 | 154 | 1,329 | 208 | 2,705 |
| Disposals | – | – | (277) | (567) | (844) |
| Reclassification | (896) | – | 592 | 304 | – |
| At 31 December 2020 | 154 | 9,808 | 11,440 | 2,992 | 24,394 |
| ACCUMULATED DEPRECIATION | | | | | |
| At 1 January 2020 | – | 2,583 | 5,788 | 1,757 | 10,128 |
| Charge for year | – | 945 | 1,293 | 545 | 2,783 |
| Disposals | – | – | (277) | (474) | (751) |
| Reclassification | | | | | |
| At 31 December 2020 | – | 3,528 | 6,804 | 1,828 | 12,160 |
| NET BOOK VALUE | | | | | |
| At 31 December 2020 | 154 | 6,280 | 4,636 | 1,164 | 12,234 |
| At 31 December 2019 | 36 | 7,071 | 4,008 | 1,290 | 12,405 |

LifeArc had capital commitments of £390k at 31 December 2020 (December 2019 – £130k).

13 Intangible assets

| | Licences £000s | Assets under construction £000s | Total £000s |
|---------------------------------|-------------------|---------------------------------------|----------------|
| COST | | | |
| At 1 January 2020 | – | 15,946 | 15,946 |
| Additions | 447 | 151 | 598 |
| Disposals | – | – | – |
| Reclassification | – | – | – |
| At 31 December 2020 | 447 | 16,097 | 16,544 |
| ACCUMULATED DEPRECIATION | | | |
| At 1 January 2020 | – | – | – |
| Charge for year | 30 | – | 30 |
| Disposals | – | – | – |
| Reclassification | – | – | – |
| At 31 December 2020 | 30 | – | 30 |
| NET BOOK VALUE | | | |
| At 31 December 2020 | 417 | 16,097 | 16,514 |
| At 31 December 2019 | – | 15,946 | 15,946 |

Intangible asset under construction relates to LifeArc's licence of Kymab's Intellisect transgenic mouse antibody platform, which will be brought into use in 2021.

14 Fixed asset investments

| | Dec 2020 £000s | Dec 2019 £000s |
|---|-------------------|-------------------|
| Investment at cost | 54 | 54 |
| Unlisted investments held at fair value | 18,591 | 55,171 |
| Listed investments | 425,817 | 142,054 |
| | 444,462 | 197,279 |

Included within investments at cost is £10k in relation to 100% of the shares in LifeArc Innovations Limited.

Notes to the financial statements

continued

14 Fixed asset investments (continued)

Unlisted investments held at fair value

| | Venture Fund £000s | Seed Fund £000s | Eliem Therapeutics £000s | Kymab £000s | Total £000s |
|--|-----------------------|--------------------|--------------------------------|----------------|----------------|
| Fair value at 1 January 2020 | 44,087 | 3,500 | – | 7,584 | 55,171 |
| Investments in the year | – | 8,192 | – | – | 8,192 |
| Disposals in the year | (42,350) | – | – | – | (42,350) |
| Transfers in the year | (7,617) | – | 7,617 | – | – |
| Realised gains during the year | 6,151 | – | – | – | 6,151 |
| Unrealised (loss)/gain during the year | – | (776) | – | 14,652 | 13,876 |
| Reclassification to current asset investment | – | – | – | (24,914) | (24,914) |
| Interest accrued on convertible debt | – | 58 | – | 2,936 | 2,994 |
| Foreign exchange losses | (271) | – | – | (258) | (529) |
| Fair value at 31 December 2020 | – | 10,974 | 7,617 | – | 18,591 |

During the year LifeArc's position as sole LP in a Venture Fund was dissolved. An investment in SpringWorks Therapeutics was fully divested within the Venture Fund with disposal proceeds being distributed to LifeArc. The only remaining investment in the Venture Fund (Eliem Therapeutics Inc) was transferred to LifeArc and is recorded as a fixed asset investment on our balance sheet.

LifeArc GP Limited was established as a subsidiary on 7 October 2020, and dissolved on 13 April 2021.

At the year end the charity was committed to investing £10m of cornerstone investment in the funding cycle of Illumina Accelerator Cambridge.

Listed investments

| | Dec 2020 £000s | Dec 2019 £000s |
|--------------------------------|-------------------|-------------------|
| Market value at 1 January | 138,899 | 128,999 |
| Acquisitions | 286,106 | 21,493 |
| Sale proceeds | (37,806) | (18,810) |
| Unrealised gain | 32,258 | 6,482 |
| Realised gain | 576 | 736 |
| Revaluation | (67) | (1) |
| Market value at 31 December | 419,966 | 138,899 |
| Historical cost at 31 December | 375,101 | 122,667 |

Portfolio analysis

| | | Dec 2020 £000s | Dec 2019 £000s |
|---------------------------|---------------|-------------------|-------------------|
| Equities | within the UK | 27,622 | 18,032 |
| | overseas | 348,310 | 76,365 |
| Fixed interest securities | within the UK | 21,606 | 18,180 |
| | overseas | 2,859 | 2,239 |
| Alternative investment | | 19,569 | 24,083 |
| | | 419,966 | 138,899 |
| Cash | | 5,851 | 3,155 |
| | | 425,817 | 142,054 |

15 Current asset investments

| | Dec 2020 £000s | Dec 2019 £000s |
|---|-------------------|-------------------|
| At 1 January | 968,252 | 5,615 |
| Net (withdrawals)/investment | (256,500) | 955,160 |
| Acquisitions | 1,999,651 | 786,512 |
| Sale proceeds | (1,999,536) | (786,122) |
| Realised gains | 1,846 | 736 |
| Unrealised gains | 95 | 1,059 |
| Interest received | 1,036 | 2,278 |
| Reclassified from fixed asset investments | 24,914 | – |
| Foreign exchange (loss)/gain | – | 3,283 |
| Management fees | (378) | (269) |
| As at 31 December | 739,380 | 968,252 |
| Historical cost at 31 December | 721,494 | 965,879 |

Notes to the financial statements

continued

15 Current asset investments (continued)

Portfolio analysis

| | Dec 2020 £000s | Dec 2019 £000s |
|---|-------------------|-------------------|
| Fixed interest securities within the UK | 704,450 | 868,262 |
| Fixed interest securities overseas | 10,016 | 99,990 |
| Alternative investment | 24,914 | – |
| | 739,380 | 968,252 |
| Cash | 1,030 | 42 |
| | 740,410 | 968,294 |

The fair value of listed investments is determined by reference to the quoted price for identical assets in an active market at the balance sheet date.

No short-term deposits were held at 31 December 2020 or at 31 December 2019.

LifeArc's investment in Kymab (\$30m USD of convertible preference shares plus interest receivable) has been reclassified as a current asset investment. Kymab was acquired by Sanofi in April 2021, which resulted in the repayment of LifeArc's investment.

16 Debtors

| | Dec 2020 £000s | Dec 2019 £000s |
|--------------------------------|-------------------|-------------------|
| Trade debtors | 159 | 148 |
| Interest receivable | – | 60 |
| Prepayments and accrued income | 1,772 | 2,464 |
| Tax debtor – VAT | 556 | 935 |
| Other debtors | 66 | 18,250 |
| | 2,553 | 21,857 |

Other debtors at December 2019 included a one-off lump-sum payment received in settlement of a dispute under a research collaboration agreement of £18m.

17 Creditors: amounts falling due within one year

| | Dec 2020 £000s | Dec 2019 £000s |
|------------------------------|-------------------|-------------------|
| Trade creditors | 1,359 | 1,327 |
| Accruals and deferred income | 6,327 | 4,750 |
| Other creditors | 799 | 6,355 |
| PAYE & NI creditor | 571 | 473 |
| | 9,056 | 12,905 |

Other creditors at December 2019 included the share of a one-off lump-sum payment received in settlement of a dispute under a research collaboration agreement to be passed to a third party of £5.8m.

18 Leases

| | Dec 2020 £000s | Dec 2019 £000s |
|--|-------------------|-------------------|
| Operating leases – lessee | | |
| Total future minimum lease payments under non-cancellable operating leases are as follows: | | |
| Not later than one year | 1,371 | 1,398 |
| Later than one and not later than five years | 3,805 | 4,286 |
| Later than five years | 78 | 422 |
| | 5,254 | 6,106 |

19 Provisions for liabilities and charges – group and ultimate parent

| | Provision for dilapidations £000s | Total £000s |
|---------------------------------------|---|----------------|
| At 31 December 2019 | 735 | 735 |
| Additions during the year | – | – |
| Amounts charged against the provision | – | – |
| Unused amounts reversed | – | – |
| At 31 December 2020 | 735 | 735 |

The provision relates to dilapidations for the Edinburgh site, the Lynton House site, and the Stevenage site.

Credits to the SOFA resulting from the release of provisions during the year amounted to £Nil provision (December 2019 – £250k) of which £Nil (2019 – £Nil) was attributable to restricted funds.

20 Grant commitments

At 31 December 2020 LifeArc had made multi-year funding commitments from the Philanthropic Fund totalling £4.8m. £2.5m is expected to be paid within one year, with £2.3m expected to be paid after one year.

At 31 December 2020 LifeArc had made multi-year funding commitments from the COVID Fund totalling £11.8m. £10.6m is expected to be paid within one year, with £1.2m expected to be paid after one year.

At 31 December 2020 LifeArc had made other multi-year funding commitments relating to Knowledge Quarter Labs and Advanced Therapy Innovation Hubs totalling £8.8m. £2.9m is expected to be paid within one year, with £5.9m expected to be paid after one year.

Notes to the financial statements

continued

21 Fund reconciliation

| | Balance at 1 Jan 2020 £000s | Income £000s | Expenditure £000s | Cash flow hedge reserve £000s | Transfers £000s | Gains/ (losses) £000s | Balance at 31 Dec 2020 £000s |
|--------------------|-----------------------------------|-----------------|----------------------|--|--------------------|-----------------------------|------------------------------------|
| Unrestricted | 1,166,381 | 8,675 | (38,507) | – | (27,000) | 55,578 | 1,165,127 |
| Seed Fund | 24,000 | 58 | – | – | – | (776) | 23,282 |
| Philanthropic Fund | 9,394 | – | (1,594) | – | – | – | 7,800 |
| Crick Fund | 4,875 | – | (173) | – | – | – | 4,702 |
| COVID Fund | – | – | (8,970) | – | 27,000 | – | 18,030 |
| Total unrestricted | 1,204,650 | 8,733 | (49,244) | – | – | 54,802 | 1,218,941 |
| Restricted | – | 415 | (415) | – | – | – | – |
| | 1,204,650 | 9,148 | (49,659) | – | – | 54,802 | 1,218,941 |

| | Balance at 1 Apr 2019 £000s | Income £000s | Expenditure £000s | Cash flow hedge reserve £000s | Transfers £000s | Gains/(losses) £000s | Balance at 31 Dec 2019 £000s |
|--------------------|-----------------------------------|----------------|----------------------|-------------------------------------|--------------------|-------------------------|------------------------------------|
| Unrestricted | 177,100 | 991,767 | (26,404) | 93 | (10,000) | 33,825 | 1,166,381 |
| Seed Fund | 25,000 | – | – | – | – | (1,000) | 24,000 |
| Philanthropic Fund | 5,000 | – | (606) | – | 5,000 | – | 9,394 |
| Crick Fund | – | – | (125) | – | 5,000 | – | 4,875 |
| Total unrestricted | 207,100 | 991,767 | (27,135) | 93 | – | 32,825 | 1,204,650 |
| Restricted | – | 437 | (437) | – | – | – | – |
| | 207,100 | 992,204 | (27,572) | 93 | – | 32,825 | 1,204,650 |

Seed Fund

| | £000s |
|---|----------------|
| Gross designated fund | 25,000 |
| Investment impairments to 31 December 2019 | (1,000) |
| Investment impairments during the year | (776) |
| Total investment impairments to 31 December 2020 | (1,776) |
| Investment income to 31 December 2019 | – |
| Investment income during the year | 58 |
| Total investment income to 31 December 2020 | 58 |
| Total funds available for investment | 23,282 |
| Total investments made to 31 December 2020 | 12,692 |
| Funds available for further investment | 10,590 |
| | 23,282 |

LifeArc has designated £25m to the Seed Fund for making investments in early stage spin-out companies within the UK. The fund aims to bridge the gap and incubate small start-ups to a point where they could attract venture funding.

Other designated funds

| | COVID Fund £000s | Philanthropic Fund £000s | Crick Fund £000s |
|--|---------------------|--------------------------------|---------------------|
| Gross designated fund | 27,000 | 10,000 | 5,000 |
| Awards provided to 31 December 2019 | – | 606 | 125 |
| Awards provided during the year | 8,970 | 1,594 | 173 |
| Total awards provided to 31 December 2020 | 8,970 | 2,200 | 298 |
| Funds available for further awards | 18,030 | 7,800 | 4,702 |

Forward foreign exchange contracts were entered into in 2017/18. During the year there was no gain or loss (9 months to December 2019 – £93k gain) relating to the movements of sterling against US dollar as a result of the remaining forward foreign exchange contracts which is taken to the cash flow hedge reserves.

Fund descriptions

a) Unrestricted funds

The unrestricted fund is a general unrestricted fund which is available for use at the discretion of the Trustees in furtherance of the general objectives of LifeArc and which has not been designated for other purposes.

b) Restricted funds

The restricted funds are grants received in the year which are subject to specific restrictions imposed by the donor.

Grant income includes £415k (9 months to December 2019 – £437k) from Alzheimer's Research UK (ARUK), GSK Services, the European Commission Horizon 2020 programme, and the Royal Commission for the Exhibition of 1851.

c) Designated funds

The designated funds were specifically allocated for the COVID Fund (£27m), Seed Fund (£25m), Philanthropic Fund (£10m), and Crick Fund (£5m).

Notes to the financial statements

continued

22 Analysis of net assets between funds

| | Unrestricted funds £000s | Designated funds £000s | Total Dec 2020 £000s |
|----------------------------------|--------------------------------|------------------------------|----------------------------|
| Fixed assets | 449,918 | 23,282 | 473,200 |
| Cash and current investments | 722,448 | 30,532 | 752,980 |
| Other current assets/liabilities | (6,504) | – | (6,504) |
| Provisions | (735) | – | (735) |
| | 1,165,127 | 53,814 | 1,218,941 |

The designated fund includes £27m for the COVID Fund, £25m for the Seed Fund, £10m for the Philanthropic Fund, and £5m for the Crick Fund.

| | Unrestricted funds £000s | Designated funds £000s | Total Dec 2019 £000s |
|----------------------------------|--------------------------------|------------------------------|----------------------------|
| Fixed assets | 187,351 | 24,000 | 211,351 |
| Cash and current investments | 970,821 | 14,269 | 985,090 |
| Other current assets/liabilities | 8,944 | – | 8,944 |
| Provisions | (735) | – | (735) |
| | 1,166,381 | 38,269 | 1,204,650 |

23 Financial instruments – foreign currency risk

Transactional foreign currency exposure arises from royalty income streams received from overseas. LifeArc previously hedged this exposure principally using forward foreign exchange contracts covering up to 50% out to 24 months. LifeArc is exposed to foreign exchange risk in relation to sterling against movements against the US dollar.

As at the balance sheet date the gross notional value in sterling terms of forward foreign exchange sell contracts amounted to £Nil (December 2019 – £Nil).

There were no gains and losses in equity on forward exchange contracts at 31 December 2020 or 31 December 2019 to be released to the SOFA from the balance sheet date.

During the year no gain or loss was taken to the SOFA as a result of forward exchange contracts (9 months to December 2019 – £102,672 loss was taken to the SOFA). There were no existing hedges at 31 December 2020.

24 Reconciliation of net (expenditure)/income to net cash flow from operating activities

| | Dec 2020 £000s | Dec 2019 £000s |
|--|-------------------|-------------------|
| Net income for year/period | 14,291 | 997,457 |
| Dividends, interest and rents from investments | (6,004) | (5,811) |
| Investment disposal levies and third party fees | – | 1 |
| Revaluation loss/(gain) on investments | 597 | 1 |
| Depreciation and impairment of tangible fixed assets | 2,783 | 1,906 |
| Amortisation and impairment of intangible fixed assets | 30 | – |
| (Gains) on investments | (52,861) | (32,301) |
| Loss on disposal of tangible fixed assets | 93 | 9 |
| Decrease/(Increase) in debtors | 19,304 | 6,753 |
| (Decrease)/Increase in creditors | (3,849) | 7,692 |
| Increase/(Decrease) in hedge reserve | – | 93 |
| Net cash flow from operating activities | (25,616) | 975,800 |

25 Pensions and other post-retirement benefits

Defined contribution pension plans

The charity operates a defined contribution pension plan for its employees.

The amount of contributions recognised as an expense during the year was £1,109k (9 months to December 2019 – £738k).

26 Related party transactions

The members of the Board received no remuneration from LifeArc for their services as Trustees during the year.

Reimbursements for travel expenses with an aggregate value of £1,088 (9 months to December 2019 – £14,508) were made to three members (9 months to December 2019 – seven members). These transactions were carried out on normal commercial terms.

Trustee indemnity insurance was purchased in the year at a cost of £24,640 including insurance premium tax (2019 – £17,596).

Other than the above, and payments to key management personnel as detailed in note 10, there have been no further related party transactions in the year ended 31 December 2020. Comparative information for the year ended 31 December 2019 is provided below:

| | Income £000s | Expenditure £000s | Debtor £000s | Creditor £000s | Commitments £000s |
|---|-----------------|----------------------|-----------------|-------------------|----------------------|
| Medical Research Council (MRC) associated | | | | | |
| At end date 31 December 2019 | 1,160 | – | – | 5,776 | – |
| Bridge Valley Ventures | | | | | |
| At end date 31 December 2019 | 7 | 333 | 94 | – | – |
| SpringWorks | | | | | |
| At end date 31 December 2019 | 3 | – | – | – | – |

Notes to the financial statements

continued

27 Limited liability

LifeArc is a company limited by guarantee (Company number 02698321) and thus has no share capital.

In the event of LifeArc being wound up, every member of LifeArc undertakes to contribute no more than £1 to the assets of LifeArc while they are a member, or within one year after they cease to be a member, for the debts and liabilities of LifeArc contracted before they cease to be a member. The number of members at 31 December 2020 was 13 (31 December 2019 – 22).

28 Charitable status

LifeArc is a charity registered with the Charity Commissioners for England and Wales, number 1015243 and a charity registered in Scotland (number SC037861) with the Office of the Scottish Charity Regulator.

29 Trading subsidiary

LifeArc holds 100% of the shares in LifeArc Innovations Limited. Consolidated accounts have not been prepared as its inclusion is not material for the purpose of giving a true and fair view.

30 Ultimate controlling party

The charitable company is controlled by its members.

31 Comparative statement of financial activities

| | Notes | Unrestricted funds £000s | Restricted £000s | Total funds 9 months to Dec 2019 £000s |
|------------------------------------|-----------|-----------------------------|---------------------|---|
| Income and endowments from: | | | | |
| Charitable activities | 1 | 973,597 | 437 | 974,034 |
| Trading activities | 2 | 7 | – | 7 |
| Investments | 3 | 5,793 | – | 5,793 |
| Other income | 4 | 12,370 | – | 12,370 |
| Total income and endowments | | 991,767 | 437 | 992,204 |
| Expenditure on: | | | | |
| Raising funds | 5 | 976 | – | 976 |
| Charitable activities | 6 | 26,409 | 437 | 26,846 |
| Provisions | 20 | (250) | – | (250) |
| Total expenditure | | 27,135 | 437 | 27,572 |
| Net gains on investments | 15/16 | 32,825 | – | 32,825 |
| Net income | | 997,457 | – | 997,457 |
| Net movement in funds | 22 | 997,457 | – | 997,457 |
| Reconciliation of funds: | | | | |
| Total funds brought forward | 22 | 207,193 | – | 207,193 |
| Cash flow hedge reserve | 22 | – | – | – |
| Total funds carried forward | 22 | 1,204,650 | – | 1,204,650 |

Notes

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, typical of notebook or legal stationery. The paper is otherwise completely empty, with no text, markings, or illustrations.

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Company number

LifeArc is a company limited by guarantee no.
2698321 incorporated in England and Wales.

Charity numbers

LifeArc is a charity registered with the Charity
Commission for England and Wales no. 1015243
and a charity registered in Scotland with the Office
of the Scottish Charity Regulator no. SC037861.