

ANNUAL REPORT AND FINANCIAL STATEMENTS

for the year ended 31 December

2023

A photograph of a male scientist in a white lab coat and blue gloves, working in a laboratory. He is using a pipette to transfer liquid into a small container. The background shows various laboratory equipment and shelves.

*Nurturing the future leaders
in biomedical research*

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The Lister Institute of Preventive Medicine

The Institute was founded in 1891 and for the next 85 years played a vital role in the development of the laboratory aspects of preventive medicine as an independent research institute in the UK. Since the 1980s the Lister Institute has been a highly successful charity awarding prestigious research fellowships, which in 2003, were revised to become Prize Fellowships. The Fellowships continue to deliver the Lister Institute's strategic aim of nurturing the future leaders in biomedical research.

Over its history and up to the present day the Lister Institute research staff and fellows have made discoveries that have made significant impacts on human health. Some examples are:

- *Dr Dame Harriet Chick discovered that a deficiency of vitamin D was the cause of rickets, making it easily preventable.*
- *Several researchers were involved in research into blood groups thus making blood transfusion safe.*
- *Professor Leslie Collier found a way to produce a form of smallpox vaccine storable at warm temperatures so it could be used all over the world and ultimately led to the eradication of smallpox.*
- *Professor Sir Alec Jeffreys discovered DNA fingerprinting for use in solving crimes and paternity cases.*
- *Professor Fran Platt developed the drug Miglustat which is a treatment for the lysosomal storage disorder Niemann-Pick disease type C (NP-C), a rare but devastating multi-system disorder.*
- *Professor Michael Eddleston's work has had a profound impact on WHO policies regarding world pesticide-related poisoning avoidance and treatment. Resultant changes in clinical practice and pesticide regulation have saved thousands of lives.*
- *Professor Rebecca Fitzgerald's innovative technique, Cytosponge, helps clinicians assess patients for Barrett's oesophagus, a condition that can be a precursor to oesophageal cancer. Early detection is vital, allowing the condition to be treated before it progresses to the cancer stage.*

Our current fellows continue to make discoveries that will impact our health and medicine in the future.

CHAIRMAN'S INTRODUCTION

for the year ended 31 December 2023

I am pleased to present the Lister Institute of Preventive Medicine Annual Report for 2023 on behalf of the Governing Body.

I am delighted that 2023, my first year as chair of the Institute, was a good year. It awarded six Lister Prizes of £250,000, gave 39 studentships and held a fantastic Annual Meeting in Oxford.

Our Fellows and former Fellows continue to conduct excellent research, publish in high impact journals and to win awards and recognition for their work. This year, particular congratulations must be given to Professors Madan Babu and Judi Allen (Scientific Committee member) who were made Fellows of the Royal Society; and Professors Muzlifah Haniffa and Tom Baden who were elected members of EMBO. Congratulations must also be given to one of our former Fellows and Trustees: Professor Rebecca Fitzgerald who was awarded an OBE for services to cancer. Her research is focused on developing new ways to detect oesophageal cancer early and she has



Congratulations must be given to Professor Sir John Iredale, our Chairman who was awarded a knighthood for services to medical research in the New Year's Honours list.

led pioneering advances in research and technological innovation to detect cancer earlier to improve outcomes for cancer patients.

We held a very successful annual meeting at Corpus Christi College in Oxford. We had prize winners from 2020, 2022 and 2023 speaking as well as very inspirational talks from former Fellows, Professor Simon Bullock, Professor Robin May, Scientific Committee Member, Professor Judi Allen, and Governing Body member, Professor Pam Shaw.

I, with the help of Professor Sir Alex Markham and Dr Sally Burtles undertook visits to recent Fellows in their home institutions. I must give my thanks to Alex for his support in enabling all the visits to happen. This year we visited 9 fellows in 9 different institutions: Dr Rebecca Lawson (Cambridge), Dr David Bending (Birmingham), Dr Amanda Chaplin (Leicester), Dr Shoba Amarnath (Newcastle), Dr Anthony Khawaja (UCL), Dr Marco Di Antonio (Imperial), Dr James Davies (Oxford), Dr Tung Le (Norwich) and Dr Elizabeth Ballou (Exeter). It is always excellent to hear the Fellows present their research and for us to be able to tell their colleagues about the Lister Institute. On behalf of Professor Sir Alex Markham and Dr Sally Burtles I would like to express our thanks for their excellent hospitality and ongoing support.

I would like to thank Professor Julian Blow and all the members of the Scientific Committee ('SC') for their extremely hard work in reviewing the applications and identifying the Lister Prize Fellows. As a past member and Chair of the SC I know how much work it is for both the Committee to review the applications and the staff to secure external reviewers for those that are long-listed. The final interviews were conducted in person at the Royal Society with the candidate's giving presentations and being subject to intense questioning before the Prize winners were selected.

I would also like to thank the members of the Governing Body and the Finance and Investment Committee (FIC) for all their hard work and support throughout the year and meeting the challenges of managing our investments through testing times.

Financial markets remained volatile in 2023 with continued concerns about inflation, the cost of living and the wars in Ukraine and Gaza. Through this, our investment managers continued to do a good job of managing our investments. The valuation of our investments on 31 December 2023 (after withdrawal of the funds for the Prize Fellowships and our operational costs) was £43.1M, very slightly down from £43.3M in 2022.

The research environment is particularly challenging especially for young researchers. The Lister Institute Prizes of £250,000 provide an excellent opportunity to make a significant and positive impact on the research and careers of those who win them and ensures we deliver on our stated aim of 'nurturing the future leaders in biomedical research'.

I must end by thanking the team – Sally Burtles, Nicola King, Dina Almulu and Sue Andrews – for making the Lister Institute operate so smoothly on a day-to-day basis. Dina Almulu has done an excellent job as Operations Manager while Nicola King has been on maternity leave.

The Lister Institute is a strong organisation and that is because of the people associated with it - our Fellows, the members of the Governing Body and its sub-committees, the Membership of the Institute and our staff. To all I offer my sincerest and warmest appreciation.

Professor Sir John Iredale, Chairman

2023 LISTER RESEARCH PRIZE FELLOWSHIP WINNERS

The six individuals to whom we awarded the Lister Prize Fellowships are as follows:

This year, as ever, our Fellows represent a wide range of research areas. Their work contributes to a greater understanding of disease and pathogens the body's healing mechanisms and supporting the development of new therapeutic approaches.



Dr John Knight,
University of Manchester
Harnessing the divergent roles of elongation dependency for cancer therapy

Translation elongation turns the genetic code into functional protein, but also uses a vast amount of energy. John has helped build a model where two types of elongation dependency arise in disease. Class 1 dependencies increase the rate of elongation to elevate protein synthesis. Class 2 dependencies suppress elongation to preserve energy. Using cancers with different dependencies, his group studies the underlying biology of elongation-dependent disease. They are also identifying new druggable elongation regulators to precisely target elongation dysregulation in disease.



Dr Joana Neves,
King's College London
Regulation of Innate lymphoid cell differentiation & function in intestinal health and disease

Joana's research group aims to understand how the various cellular compartments of the gut, including immune, epithelial, stromal, microbial, and neural cells, communicate with each other. Their objective is to direct those conversations to promote gut homeostasis. To achieve this, they employ interdisciplinary approaches and develop complex organoid models. These strategies allow them to address critical questions surrounding the intricate dynamics of gut cellular interactions, in particular the ones involving innate lymphoid cells, which are key players on intestinal immune responses.



Dr Srikanth Ramaswamy,
University of Newcastle
A tale of two neuromodulators: how histamine and serotonin shape social interactions in mice and human brains

The brain continuously adapts and responds to ever-changing behavioural demands. It achieves this by controlling the function of nerve cells (neurons) and their networks through the release of neuromodulators. Neuromodulators – dopamine, acetylcholine, serotonin, noradrenaline or histamine – are chemical messengers that govern the emergence of brain oscillations by controlling the activity of neural networks and regulating shifts between behavioural states such as sleep and wakefulness or distraction and attention. Srikanth's research seeks to understand the mechanisms through which neuromodulators shape cognition in mammalian brains and utilize this knowledge to build computational models of how the brain implements cognitive functions.



Dr Kirby Swatek,
University of Dundee
Irreversible inactivation of ubiquitin and ubiquitin-like proteins

Ubiquitin and ubiquitin-like proteins are among the most predominant post-translational modifications in eukaryotic cells. These modifications are crucial for maintaining a healthy cellular environment as mutations in these signalling systems are frequently associated with disease. Fascinatingly, it has emerged that during specific conditions these modifiers become 'inactive' and can no longer perform their normal cellular functions. Kirby's research group is interested in exploring this emerging area of misregulation which may prove critical for identifying new disease biomarkers and novel therapeutic targets.



Dr Helen Weavers,
University of Bristol
Targeting immune system resilience to curb collateral damage and extend healthy ageing

The cells and tissues within our bodies encounter many challenges over their lifetime, such as physical damage or toxin exposure. Yet many tissues display remarkable resilience to these internal and external threats, continuing to function and even thrive in the face of adversity. Helen's group studies the molecular basis of this biological resilience. By discovering why some tissues have robust capacity to resist or repair damage and 'bounce back', they aim to harness these powerful biological shields therapeutically to enhance tissue recovery after insult. Helen's team recently discovered that biological resilience is key to maintaining a healthy immune system, where it prevents activated pro-inflammatory immune cells from causing systemic collateral damage. By investigating these processes using cutting-edge imaging and omics approaches, Helen's lab is identifying new ways to enhance immune resilience across the life-course and promote healthy ageing.



Dr Fiona Jane Whelan,
University of Nottingham
Accessory gene driven competition within the cystic fibrosis lung microbiota

Individuals with cystic fibrosis harbour chronic pathogenic lung infections which cause most of the morbidity and mortality in this population. Fiona's lab aims to identify microbial genes within the lung microbiome which inhibit these pathogens and can potentially be used as novel therapeutic targets. Fiona's lab uses high-throughput microbiology to identify microbes that can inhibit pathogens. They find that many of these interactions are strain-dependent, meaning that it is the genes present in some but not all strains of an organism which contribute to this inhibition.

BEYOND THE PROTEIN-FIRST PARADIGM IN ALS



Two current Lister Fellows have united to carry out ground-breaking research on ALS and its associated molecular phenomena. Could it be that strange forms of RNA are responsible for some of the condition's devastating symptoms?

In a paper published in Nature Communications, Rickie Patani (2021 Fellow), Marco Di Antonio (2022 Fellow) and their co-authors explore the possibility that genetic material, rather than just proteins, could play a causal role in Amyotrophic lateral sclerosis (ALS - also known as motor neurone disease). We caught up with them to talk about their remarkable findings and the Lister connection that helped bring them together.

Genes on repeat

Typically, the focus in ALS research is on proteins, which play a clear role in the disease's origin and its development. But Rickie and Marco's team have discovered a new pathway between ALS and a phenomenon called gene expansion, which happens in our DNA.

"Somehow, this nucleic acid is doing something that can trigger the disease." - says Marco

In gene expansion, a short string of nucleotides, our genetic building blocks, seem to get stuck on repeat like a stutter in speech or a scratched record. This fragment 'replays' many times before the normal sequence of the gene resumes.

"ALS is one of the few neurodegenerative diseases we know of that has some kind of correlation with a repeating sequence of nucleotides within a gene," says Marco. "We didn't know what to expect, but we knew there was a strong correlation - somehow, this nucleic acid is doing something that can trigger the disease."

A protein-focused paradigm

The team believe that RNA derived from expanded genes is laying the foundation for protein anomalies called aggregations. These aggregations are solid masses of protein that collect around the neurons. And while the aggregation phenomenon is well recognised, the Nature paper, whose lead author is Dr Federica Raguseo, breaks new ground.

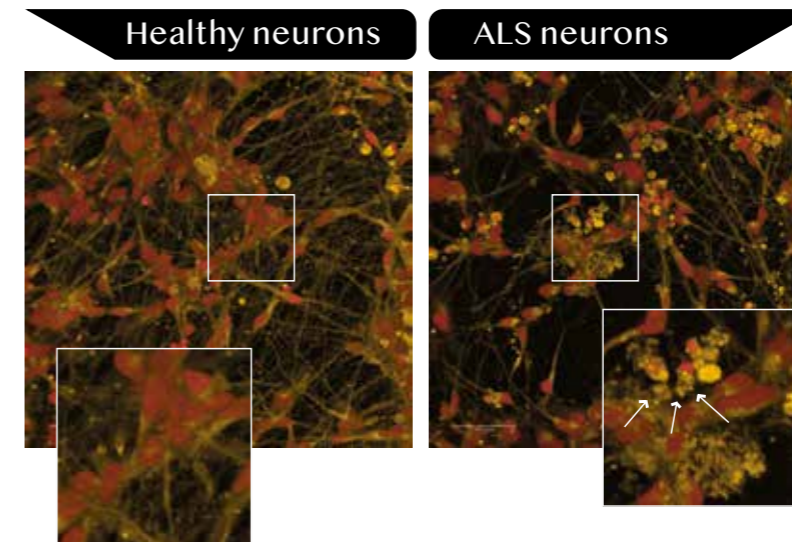
"The process of aggregation is a hallmark of all of neurodegeneration, in Parkinson's, Alzheimer's, and ALS. We've always seen it as fundamentally protein-based, both the event that starts it off and the progression of aggregation afterwards," says Marco.

"This research tells us that RNA itself, even in the absence of protein, can start an aggregation. That's incredibly exciting because it means the precursor of a lot of aggregates we see throughout neurodegeneration may not be protein at all, but RNA. So, it might be targetable through existing modalities like antisense oligonucleotides. It's a huge prospect."

How huge?

"This gene is a major cause of ALS, accounting for 40% of the genetic cases. Genetic cases are about 10% of the total number of patients overall. And for the remaining 90%, mutation in this gene probably accounts for

AMYOTROPHIC LATERAL SCLEROSIS (ALS) IS ALSO KNOWN AS MOTOR NEURONE DISEASE



7-10% of sporadic cases in that group of people as well," Rickie explains.

Looking at gene expansion in a new light

The biomedical field has been exploring genetic repeats for a while, but until now, it hasn't connected these directly to ALS, focusing instead on how gene expansion affects protein production.

"In our field, there has been a lot of research into mechanisms where the repeat is kidnapping proteins and stopping them from functioning or getting translated into proteins that could be toxic," says Rickie.

"But what I found especially fascinating is that the repeat itself can aggregate. That's a profoundly novel finding. "We've always taken a protein-centric view on aggregation, and this adds something completely fresh to the mix." - Rickie

When RNA and proteins collude

Both scientists are quick to stress that their research doesn't negate the role of protein in ALS and other neurodegenerative conditions. Instead, it represents another angle to attack the disease therapeutically.

"There are two contributing factors that can synergise together," notes Marco. "We can take a protein called TDP43, which has been heavily studied in relation to aggregation, and combine it with our RNA expansion in

vitro. The two things combined make the aggregation worse. It's probably telling us that it's a combination of factors, but RNA could be a key component, and it can be targeted with existing strategies. That's where the excitement comes from."

Serendipitous collaboration

Rickie and Marco's collaboration has been serendipitous in a couple of ways. As Lister Fellows, they became aware of each other as part of the close-knit Lister community. They're also connected geographically, with connections to the Francis Crick Institute in London - Rickie is based there, and Marco's lab at Imperial College has recently set up a satellite group there.

"I contacted Rickie ahead of the Lister Annual Meeting after going through the list of Fellows," recalls Marco. "I dropped him an email because I needed someone with expertise in ALS, ideally in London, who could validate our more in vitro findings in a therapeutically relevant model."

"And then he said, 'Actually, this is exactly what we wanted as well, to validate some of our stuff,' and so we met exactly midway."

The two scientists' specialities seemed to click together like pieces in a jigsaw puzzle - Marco's in vitro research with genes, which gave the project a tremendous theoretical foundation, and Rickie's clinical work

with ALS patients, which helped not only to validate the science in vivo but to hammer home the value of the work to clinical and therapeutic stakeholders.

"Marco won't say this because he's very modest," says Rickie, "but the brilliance of Marco's lab is entirely what has led to this. I feel privileged to work with him because he identified this brilliant idea." Nonetheless, it was Rickie's team who were able to validate the Di Antonio Lab findings with patients' genetic material.

"We designed the experiments collaboratively," says Rickie. "We took samples from patients who carry this repeat expansion and samples from a control group. Then we looked at them using a tool, again, from Marco's lab, that allowed us to visualise the RNAs. From this, we could infer that they were these RNA-based aggregates."

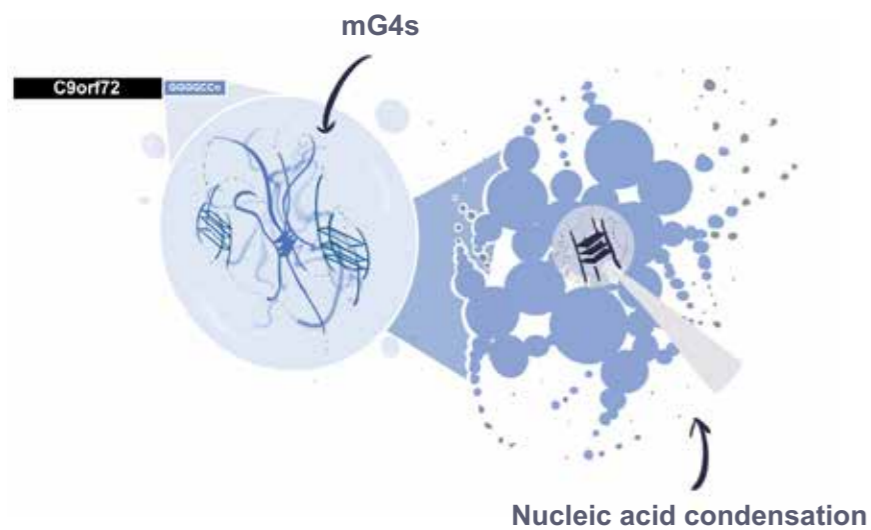
Being able to examine real people's cellular material, which expresses disease in their motor neurons, was much more valuable than only using knock-down or artificially overexpressed genes to test the phenomenon in a lab.

The Lister connection

Being Lister Fellows has catalysed the relationship between the two researchers.

"It's not something we've discussed at any point, but whenever I see that someone is a Lister Fellow, my willingness to respond to them is very high," says Marco. "And clearly the project was hugely exciting as well. The combination of these things made us very, very keen."

"The interdisciplinarity has been key for us," he continues. "We're immensely grateful to the Lister Institute because there's no other connection between us that would have made this happen. It's fantastic that we've come together in this way and we're planning so much more - it's been a springboard for even more questions."



FEMALE LEADERS IN FOCUS

Our Governing Body (GB) is made up of Trustees who are also company directors of the Lister Institute. They come from diverse backgrounds some within the field of preventive medicine, from clinician-scientists to geneticists. We asked five female members of our GB to share their thoughts on being a woman in science now and in the past, and how they would advise a female science leader of the future.

Professor Wendy Bickmore, CBE, BA, PhD, FMedSci, FRSE, Western General Hospital, Edinburgh

Wendy received a CBE in 2021 for services to medical science and to women in science.

Within the Lister Institute, gender representation has got better over time, as it has in science generally. I've never felt it was a place where it was odd to be a woman in science; it felt like a completely natural home. There are definitely more women in science leadership now, and more awareness of balance and representation in committees. Although that can become an issue if the same people are asked to do everything, as it takes time away from your own science. It's useful to be good at saying no.

I notice that when I am involved in high-level meetings, what I say is not always heard. It's something I've become acutely aware of in the last five years. It doesn't happen when I'm talking science to scientific colleagues, but rather in arenas of persuasion and politics.

I'd advise a new female scientist that if you enjoy doing science, do it. If you're good at it, you will succeed. I also recommend getting out into the community and networking. The ability to do that with young families has improved hugely, with grants for childcare and the option to come to conferences with your kids.

Professor Rebecca Fitzgerald, OBE, MACantab, MD, FMedSci, Hutchison-MRC Research Centre, Cambridge

Rebecca received an OBE in 2023 for services to cancer.

It's notable that the applications we get aren't equitable from an equality, diversity and inclusion perspective. There is overrepresentation of a small number of institutions and a lack of people from ethnic minorities applying. That's something I hope will change in the future.

My clinical speciality is gastroenterology, which has been very male dominated, so I got used to being in the minority. Among the students I teach today, there's almost the opposite pattern.

Everyone is different in their leadership style, but perhaps being a female leader does give you a different perspective. It's important for women in science to encourage one another. The further you get in your career, the more important it becomes to mentor and support others and to create a good atmosphere.

My advice for a woman beginning her scientific career is to prioritise her time. In a clinical scientific career like mine, where you have personal life, scientific work and clinical work to balance, you have to learn how to delegate and what to say no to.

Professor Muzlifah Haniffa, FMedSci, Newcastle University and Wellcome Sanger Institute

Muzz was elected to the Academy of Medical Sciences in 2020 and joins the Governing Body from September 2024.

My hope for the future is that we no longer need to ask questions about women specifically, because we will have achieved gender parity. One of my passions and commitments is to try to make the system inclusive of anyone who wants to do scientific research. As well as being a woman in science, I am someone from an ethnic minority background and from a different country. The system is not necessarily designed for someone like me, and I want to make sure others find it easier to navigate than I did.

Things have improved, but there is still a long way to go. We no longer have people making sexist remarks, but there's still a lot of unconscious bias from both men and women. A new female scientist doesn't get heard in the way a male would be. It's very subtle and can be hard to detect and address.

It's not just up to women to support other women. Support from institutions, funders, senior leaders, and allies, including men, are much more likely to help women navigate a career in STEM. Everybody should be supporting each other.

For inspiration, I recommend books *The Exceptions* by Kate Zernike and *Breaking Through* by Katalin Karikó.

Professor Rosalind Smyth, CBE, FMedSci, UCL Great Ormond Street Institute of Child Health

Ros was awarded her CBE in 2015 for services to the regulation of medicines for children.

The Lister Institute provides support to researchers at a critical point in their careers. The timing is particularly important for women as these opportunities arise when people have young families and demanding personal responsibilities, as well as the pressure to demonstrate research excellence.

Things are much better now than two to three decades ago, but there are still attitudes and practices which cause difficulties for women in following a research and academic track. The UK will be successful in science by supporting the brightest and best, so it is essential that we remain vigilant of the need to support talented women to pursue these careers.

Women should be aware of the career "crunch points" and look out for and support those more junior than themselves. Everyone needs to contribute to a positive research culture.

Professor Judith Armitage, PhD, FRS, University of Oxford

Judy was awarded her FRS for her work on microbiology.

Things have really changed during my career. I was once asked at a job interview how I combined research with housework. There was no maternity leave and next to no childcare. I returned to work 3 weeks after becoming a mother, bringing my baby, who slept in the pram or on the gently humming fax machine.

It is now much more straightforward to have children early in your career. But because of the linear way career success is measured, having a break for childcare can still have an adverse effect.

Early in my career, I was taken under the wing of a senior female scientist, Pat Clarke. Her advice was not to pursue the obvious questions, which would already be taken by men with big groups, but to find an interesting, tangential question and make it your own. I think this is still sound advice.

My real hope is that people stop commenting on the gender or background of anyone in science. It should be irrelevant. We need as great a variety of thinking and approaches as possible, and I hope we will see more women and more researchers from minority backgrounds coming from non-traditional areas and institutions.

LISTER ANNUAL FELLOWS MEETING 2023

Our annual meeting brings together a multi-generational community of scientists, from Lister Summer Students on the brink of their careers, to current Fellows setting up their research groups, to former Fellows, Members and Committee members who are happy to share their knowledge and experience. Attendees always come from a huge range of disciplines and backgrounds, and this year's event was no exception.

It was an unseasonably hot September day when friends, students, committee members and members of the Lister Fellows gathered at Corpus Christi College, Oxford. We began with drinks and canapes outside the College's Al Jaber Auditorium, the vestibule of which had its large glass doors open to the sunshine. Spirits were high as Fellows and other members of the Lister community greeted one another and made new connections.



After a tea and coffee break, the group returned to the auditorium to hear from 2022 Prize Winner **Dr Anthony Khawaja of University College London and Moorfields Eye Hospital**, who joined us remotely due to testing positive for COVID-19. Combining genetic information with other biomarkers, Anthony has created predictive tools healthcare professionals can use to recommend tailored treatments to glaucoma patients.

Rounding off the afternoon's talks was 2022 Prize Winner **Dr Amanda Chaplin of the University of Leicester** with a talk about her study of human DNA repair complexes using cryo-electron microscopy (cryo-EM). The technology has helped Amanda and her team explore DNA repair in greater detail than ever before. Her talk was accompanied by striking images of the proteins and genetic material provided by cryo-EM technology.

As usual, talks were accompanied by lively Q&A sessions with attendees, who were inspired by fresh perspectives on the science they practice day to day.

Thursday concluded with drinks, a buffet and a poster presentation from the Lister Summer Students in the busy Rainolds Room. The posters captured the projects students were carrying out in the labs of Lister Fellows. The evening was warm enough for attendees to sit outside, enjoying the Turner Quad and college gardens.

With everyone settled inside the auditorium, we heard an introduction from our Chair, Professor Sir John Iredale, who introduced the first speaker, former Lister Fellow **Professor Robin May of the University of Birmingham**. Robin's talk traced a path from his childhood fascination with birdwatching to a love of watching microorganisms swim under a microscope during his academic career.

We then heard from 2020 Prize Winner **Dr Rebecca Lawson, of the University of Cambridge**. Becky's work unites psychiatric diagnosis with computer modelling, which could formalise the classification of psychiatric symptoms, building up a quantitative 'fingerprint' of cognitive traits.





Dr Joana Neves of King's College London then introduced us to her work on the regulation of innate lymphoid cell differentiation and function in intestinal health and disease. Joana and her team investigate unhelpful innate lymphoid cells (ILCs) using organoids – tiny model 'mini-guts' made of living tissue in vitro.

Next, we welcomed **Dr John Knight of the University of Manchester**. John studies the way human proteins are translated from RNA 'blueprints'. Translation involves multiple steps – initiation, elongation and termination. John's doctoral work explored the role of the elongation step in colorectal cancer, establishing that modulating it could have a valuable therapeutic role.

The final 2023 Fellows talk was from **Dr Helen Weavers of the University of Bristol**. Helen introduced her research on immune system resilience and maintaining healthy tissues in later life. Our bodies can survive and even thrive despite a lifetime of physical and chemical insults, and Helen's interest lies in the biological mechanisms of repair, neutralisation or damage limitation that make this happen.

Friday's talks kicked off with a lecture on macrophages, matrix and metazoan parasites from **Professor Judi Allen of the University of Manchester**, a member of the Scientific Committee. Judi introduced us to the 'type 2' immune response in humans which is fundamentally different to the 'classical' immune response.

Next came the first of the 2023 Lister Fellows' talks, from **Dr Fiona Whelan of the University of Nottingham**. Fiona introduces a computational layer to traditional biomedical research. She and her colleagues wrote a programme, Coinfinder, which finds significant gene interactions in bacterial genomes. The knowledge could help create cystic fibrosis treatments targeting pathogenic strains of bacteria.

Dr Kirby Swatek of the University of Dundee took the podium to discuss his work on ubiquitin and ubiquitin-like proteins. These are found in almost all eukaryotic tissues, where they play an important and complex signalling role. Kirby described how he will use the Lister Prize funding to address unanswered questions about ubiquitin and ubiquitin-like proteins and their role in health and disease.

The next talk was from **Dr Srikanth Ramaswamy of the University of Newcastle**. Srikanth studies the role that neuromodulators – substances that influence how neurons function – play in shaping social interactions in the brains of humans and mice. He uses computer modelling and neurorobotics to supplement knowledge gained from experimental work.



A short talk followed from former Lister Fellow **Dr Simon Bullock of the University of Cambridge**, co-founder of the Microscopes 4 Schools project. The project aims to spark scientific interest in children of primary school age, especially those with underprivileged or underrepresented backgrounds. Simon invited us to try out the microscopes with a selection of leaves, feathers, flowers and other specimens.



The sessions concluded with the Special Lister Lecture, delivered by Governing Body Member, **Professor Dame Pam Shaw of the University of Sheffield**, Director of the Sheffield Institute for Translational Neuroscience (SITraN), who has received many awards for her pioneering work in the treatment of motor neurone disease (MND). Pam's talk was a moving story about the journey towards better outcomes for people living with MND, and the progress made to date in extending their life expectancy and improving their quality of life.

We rounded off the event with a delicious supper in the college dining hall and many toasts to good health – and to good health research.



CURRENT LISTER PRIZE FELLOWS

For the full list of all Lister Fellows (past and present) please see the Lister website <https://www.lister-institute.org.uk/former-fellows/>

<i>Fellow</i>	<i>Title of Research</i>	<i>Awarded</i>
Dr Shoba Amarnath Newcastle University	Translating co-receptor biology to immunotherapeutics in cancer	2022
Professor Tom Baden University of Sussex	Anisotropic retinal circuits for processing of colour and space in nature	2018
Dr Elizabeth Ballou University of Exeter	Investigating how cross-kingdom microbial partnerships impact fungal pathogenesis of the causative agents of Mucormycosis	2022
Dr David Bending University of Birmingham	T cell receptor signalling dynamics during T follicular helper cell responses	2022
Dr Tanmay Bharat University of Cambridge	In situ structural studies of the functional organisation and inhibition of the BAM complex in Gram-negative bacteria	2021
Professor Timothy Blower Durham University	BREX and phage-bacteria interactions	2019
Dr Amanda Chaplin University of Leicester	Cryo-EM studies of human DNA repair complexes: DNA-PK and interacting partners	2022
Professor Ross Chapman University of Oxford	DNA double-strand break repair mechanisms in immunity and oncogenesis	2019
Dr Rebecca Corrigan University of Sheffield	Analysis of the role of (p)ppGpp in staphylococcal infection using zebrafish as a model organism	2018
Professor James Davies University of Oxford	Using base pair mapping of genome architecture to interrogate the mechanisms by which enhancers control transcription	2022
Dr Marco Di Antonio Imperial College London	Unravelling epigenetic pathways leading to chemo-resistance in ovarian cancer with a light-controlled CRISPR-based platform	2022
Professor Mark Dodding University of Bristol	A new chemical biology approach to target molecular motors for the manipulation of cytoskeleton and organelle dynamics	2018
Professor Sherif El-Khamisy University of Sheffield	The repair of oxidative and topoisomerase induced chromosomal strand breaks and human disease	2013
Professor Susana Godinho Queen Mary University of London	Regulation of paracrine signalling by centrosome amplification	2016
Professor Ravindra Gupta University of Cambridge	Cell cycle regulation in Macrophages	2021
Dr Anthony Khawaja Institute of Ophthalmology University College London	Translating genomic discovery into clinical prediction tools for glaucoma	2022
Dr John Knight University of Manchester	Harnessing the divergent roles of elongation dependency for cancer therapy	2023
Dr Joanne Konkol University of Manchester	Atypical monocytes at the oral mucosa; revisiting myeloid cell development and function at a unique barrier site	2019

<i>Fellow</i>	<i>Title of Research</i>	<i>Awarded</i>
Professor Yogesh Kulathu University of Dundee	Regulation and function of protein FUBlylation	2017
Professor Rebecca Lawson University of Cambridge	Computational neurodevelopment: a new framework for understanding autism spectrum disorder	2020
Dr Tung Le John Innes Centre	The line of duty: How to segregate a giant linear plasmid in antibiotic-producing Streptomyces	2022
Dr James Lee The Francis Crick Institute	From SNPs to biology in inflammatory diseases	2021
Dr Michelle Linterman Babraham Institute	Tertiary lymphoid structures in health and disease	2019
Professor Yanlan Mao University College London	Mechanochemical regulation of tissue growth and morphogenesis	2018
Professor Joseph Marsh University of Edinburgh	The dominant-negative effect in protein complexes: implications for human genetic disease	2018
Dr Will McEwan University of Cambridge	Protein-level knockdown as a new frontier for biological and biomedical sciences	2019
Professor James Nathan University of Cambridge	The interplay between metabolism and oxygen sensing	2017
Dr Joana Neves King's College London	Regulation of Innate Lymphoid Cell differentiation & function in intestinal health and disease	2023
Professor Rickie Patani UCL & The Francis Crick Institute	Identifying therapeutically targetable RNA binding proteins in ALS	2021
Dr Srikanth Ramaswamy Newcastle University	A tale of two neuromodulators: how histamine and serotonin shape social interactions in mice and human brains	2023
Dr Tomás Ryan Trinity College Dublin	Gone or Misplaced? – Retrieving Infant Memories in Adults	2020
Professor Amanda Sferruzzi-Perri University of Cambridge	Biomarkers of materno-fetal health: role of placental endocrine mediators in normal and obese pregnancies	2018
Dr Hayley Sharpe Babraham Institute	Receptor tyrosine phosphatase signalling mechanisms in health and disease	2020
Dr Christopher Stewart Newcastle University	Using stem cell derived “mini guts” to investigate microbiome-host interaction in early life	2021
Dr Kirby Swatek University of Dundee	Irreversible inactivation of ubiquitin and ubiquitin-like proteins	2023
Dr Stephan Uphoff University of Oxford	Resolving oxidative stress response mechanisms in bacteria during infection and antibiotic treatment	2020
Dr Stineke Van Houte University of Exeter	Developing new tools to tackle antibiotic resistance	2021
Dr Helen Weavers University of Bristol	Targeting immune system resilience to curb collateral damage and extend healthy ageing	2023
Dr Fiona Whelan University of Manchester	Accessory gene driven competition within the cystic fibrosis lung microbiota	2023

ENVIRONMENT, SOCIAL, GOVERNANCE (ESG); EDI (EQUALITY, DIVERSITY & INCLUSION) AND FINANCIAL OVERVIEW

GOVERNANCE OVERVIEW

The Governing Body (GB)

Governance of the Lister Institute is overseen by the GB which meets twice a year. Members of the GB are Trustees of the charity and have responsibility to the Charity Commission to ensure the charity is well run and remains true to its purpose. As ever, we must pay tribute to the quality and dedication of the GB members and the speed and clarity with which they respond to Lister matters.

At the AGM in 2023 Mr Matthew Pintus stood down as the Elected member who had had the longest period since being last elected. He was re-elected to allow time for a handover with Mrs Jennifer Smithson who was appointed to the GB in 2023.

Finance and Investment Committee (FIC)

The FIC met twice in 2023 and undertook its normal business reviewing the performance of the investment managers and the finances of the Lister Institute.

The Lister Institute's ESG investment policy continues to be a focus for the FIC. The policy attempts to balance the potential investment reward available from the widest possible universe of holdings, while limiting and/or monitoring investment in areas that might be in conflict with the Institute's purposes.

The FIC remains comfortable with the performance of the aggregate investment portfolio, and the manner in which it is being invested by the underlying managers.

Scientific Committee (SC)

In 2023 the SC reviewed and revised the Lister Institute's Scientific Strategy. The new strategy does not constitute a major change in strategy but more of a clarification of our approach and bringing the document up to date. As part of the new strategy, the Committee changed its name from the Scientific Advisory Committee to the Scientific Committee.

There were two changes in the membership of the SC. Professors Liz Patton (Edinburgh) and Mike Owen (Cardiff) stood down, and Professors Belinda Lennox (Oxford) and Clare Isacke (Institute of Cancer Research) joined the Committee.

The SC met twice this year. It met once via Zoom to undertake the business of the Committee looking at the review process and the statistics to ensure we are achieving fairness throughout. The main and most important meeting was the interviews of the short-listed candidates for the Lister Prize Fellowships.

Institute Membership

All Fellows of the Lister Institute become Members when they complete their Fellowship. In addition, all Committee members, previous members of staff and others with a particular interest in the Lister Institute are Members. At present we have 236 Members and they are all eligible to vote at the AGM.

The Fellows who completed their Fellowship in 2023 and were elected as Members of the Institute were: Dr Sebastian Guettler (Institute of Cancer Research), Dr Matthew Hepworth (University of Manchester) and Professor Daniel Smith (University of Edinburgh).

Two new Scientific Committee Members were also elected as Members of the Institute: Professor Clare Isacke (Institute of Cancer Research) and Professor Belinda Lennox (University of Oxford).

A new member of the Governing Body, Mrs Jenny Smithson, was appointed as a Member of the Institute.

ENVIRONMENT OVERVIEW

The Lister Institute is a small organisation with a small environmental impact. It has no buildings and all three staff work from home. Essential meetings, such as the Annual Fellows Meeting are held in person, with travel by public transport encouraged. Other meetings are held online or in person as needed.

SOCIAL OVERVIEW

Through the biomedical research that it funds, the Lister Institute has a beneficial impact on society through direct patient and public benefit e.g. new treatments and diagnostics as well as through the expansion of knowledge and understanding. It also aims to support the careers of talented young researchers and to give opportunities to students interested in pursuing careers in research. For the Lister Institute to be successful it is essential that it attracts and retains skilled and talented people. It does this by creating an inclusive working environment where people can be themselves, treating everyone fairly with dignity and respect. We are committed to fairness in our remuneration packages and supporting flexibility at work. Pensions continue to be paid to a small number of former employees.

EQUALITY, DIVERSITY AND INCLUSION (EDI) OVERVIEW

We value and embrace EDI and aim to achieve equality, diversity and inclusiveness across the Lister Institute – in our Prize Fellows, our committee members and our staff. While to EDI is our aim, we recognise that we still have work to do achieve it.

We aspire to having an equal gender balance across the Lister Institute. Currently the gender balance in the organisation is as follows: Governing Body 36% female: 64% male; Scientific Committee 46% female: 54% male; current Fellows 35% female: 65% male; staff 100% female. The gender balance at all stages of our application process is monitored and steps are made to address any aspects of the process that may affect the gender balance, though ultimately the highest quality candidates are selected.

The Institute aspires to achieve ethnic diversity consistent with the demographics of the UK general population (broadly 82% white, 18% ethnic minority) and from the 2022 round of prizes started to collect data to assess our performance. Our 2023 Prize winners and SC are close to the national pattern. For the 2023 prize round 16% of applicants and 17% of prize winners were from minority ethnic backgrounds. The SC has 15% of members who are from minority ethnic backgrounds. We recognise that significant improvements can be made to our Governing Body's diversity and intend to address this as members retire and we make new appointments.



FINANCIAL OVERVIEW



Murray Legg, Treasurer

While financial returns for 2023 were ultimately positive, the path to this outcome was not straight forward. A range of geopolitical and macroeconomic events threatened markets' resilience; any advances in the financial indices were typically over-turned in the subsequent period. It was only in the final two months of the year that a clear trend emerged, and almost all of the positive returns earned in 2023 arose in November and December.

The Lister Institute has its low volatility liquidity reserve fund, which was established to enable the Lister to ride out a major market correction. It has continued to provide a buffer against this uncertainty and falls in the markets and, for the first time last year (2022), we took advantage of this reserve and used it to fund the Prizes.

Our two investment managers, Cazenove and Partners Capital have managed our portfolio with our investments having a final valuation (after withdrawal of £1.9M from the main portfolios for the prize Fellowships and Lister operations) of £43.1M, only down slightly from £43.3M at the end of 2022. Both Partners Capital and Cazenove transferred a further £375K each to the Cazenove B Portfolio to partially replenish it. The FIC will continue to monitor closely our portfolio and there will continue to be careful consideration of the numbers and levels of Fellowships and studentships and if and when the liquidity reserve fund (B portfolio) should be further replenished.

Six prizes were awarded instead of the originally budgeted number of seven, but in other areas all expenditure has been in line with the agreed 2023 budget. The investment managers' fees were £168K, down from £185K in 2022. With six Fellowships being awarded at £250K each, 101K spent on studentships and operational costs being £259K the total expenditure for the Lister institute in 2023 was £2.028M.

	£K
Prize Fellowships and Studentships	1,601
Investment managers fees	168
Staff and operational costs	259
TOTAL	2,028

The Lister Institute remains indebted to our all the members of the FIC, and I would like to thank them all for their scrutiny of the Institute's finances and the rigorous questioning of our current investment advisors, Partners Capital LLP and Cazenove Capital Management. We are particularly grateful to Murray Legg for his contribution as Treasurer and chair of the FIC.

Sir John Iredale, Chairman

REPORT OF THE GOVERNING BODY for the year ended 31 December 2023

The Governing Body presents its Annual Report under the Charities Act 2011 together with the audited Financial Statements of the Charity for the year ended 31 December 2023. The Financial Statements have been prepared in accordance with the accounting policies set out in Note 1 (page 27) to the Financial Statements and comply with the Companies Act 2006, the FRS102 Charities SORP and the documents governing the constitution of the Charity.

LEGAL AND ADMINISTRATIVE DETAILS

Legal and administrative information is set out on page 33 of this report.

Members of the Governing Body, Directors and Trustees

The members of the Governing Body are, for the purposes of company law, Directors of the Institute and, for the purposes of charity law, Trustees of the Institute and throughout this report are collectively referred to as the Trustees.

Details of the Trustees serving throughout the year are set out on page 33.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Constitution

The Institute is registered with the Charity Commission for England and Wales (registration number 206271). It is incorporated and registered in England and Wales under the Companies Act 2006 as a company limited by guarantee and not having a share capital (company number 34479). It is governed by its Articles of Association and has charitable status.

Appointment and Re-appointment of Trustees

The Trustees are the fifteen members of the GB of whom six are elected by the members at the Annual General Meeting. A maximum of six further Trustees are appointed by the Governing Body and there are currently six such appointees. One additional member is Lord Iveagh's representative, the Hon Rory Guinness, another is Professor Sir Alec Jeffreys who was appointed to life-membership, and the final member, Professor Douglas Higgs, is the representative of the Royal Society. Trustees, other than the two nominated representatives, Professor Sir Alec Jeffreys and exceptionally those appointed by the Governing Body, generally serve for a period of six years and a system of planned rotation is in place. When considering appointment or nomination for election as Trustees, the Governing Body has regard to the specialist skills needed.

Induction and Training of Trustees

New Trustees undergo induction sessions with the Chairman, Treasurer and Director during which they will gain an understanding of the Institute's structure, activities, financial position, and future strategies. Prior to appointment they will attend one meeting of the GB as an 'observer'. New Trustees will also be made aware of their legal obligations regarding charity and company law. In addition, new Trustees will be advised of appropriate literature and training courses. An Induction check list supports the process.

Organisation

The Institute is governed by its GB, which is responsible for setting policies, authorising actions on all significant operational issues and ensuring legality and good practice. The GB meets formally twice a year. The Treasurer and Chairman review the remuneration of all staff once a year. This includes the remuneration of those individuals considered to be key management personnel.

Specific authorities are delegated to two sub-Committees in particular areas. The SC (see page 33 for membership) has responsibility for identifying the Lister Institute Prize Fellows and the monitoring of their scientific activities, as well as providing scientific and medical advice to the GB as required. The FIC (see page 33 for membership) has responsibility for interaction with the Institute's investment advisors, ensuring implementation of the Institute's investment policy and monitoring performance. It prepares and submits to the GB the annual budget, and subsequently monitors performance against it. It also advises the GB, as required, on other financial and risk matters.

The routine management of the Institute's activities is undertaken by its Director aided by the Operations Manager and the Accountant. All staff work from home.

In 2023, none of the Charity's Trustees received any remuneration in relation to their work for the charity. The Chairman and the Treasurer of the Charity agree the Director's remuneration which, along with other Lister Institute staff, is normally increased in line with CPI. Salaries are also compared to similar organisations and adjusted periodically where appropriate.

Risk Management

Identifying and managing the possible and probable risks that the charity may face is a key part of effective governance. The Trustees assess the risks facing the Institute and review the effectiveness of the controls to monitor and mitigate them. In 2023, the Institute introduced a Risk Management Policy to formalise the basic principles and strategies that the charity applies to help manage its risks. Central to this is the Risk Register which is maintained and formally reviewed annually by the Governing Body.

The key controls used by the Institute include:

- Formal agendas for all Governing Body meetings
- Strategic planning, budgeting and management accounting
- Formal written policies
- Clear authorisation and approval levels
- Regular review of Fellows' scientific reports
- Regular detailed review of investment policies and performance

The risk of cybersecurity is considered by the Trustees on an ongoing basis. A cybersecurity policy has been developed. IT support for staff involves regular security updates and regular cybersecurity training. Security around the application and management process is maintained through an online grants management system called Benefactor. An IT review and risk assessment was undertaken in 2023 as an addition to the organisational risk log.

REPORT OF THE GOVERNING BODY (CONTINUED)

In recent years, the risk logs, terms and conditions, policies and procedures have been adapted and updated. The terms and conditions were reviewed in 2022. The risk register is reviewed annually, and policies are reviewed regularly as defined within each policy. A number of new policies were introduced in 2023 to ensure that the Institute complies with the expectations of the Charity Commission in relation to the policies that all charities should have. The Institute maintains a 'Register of Interests' for all Governing Body and committee members as well as principal staff and operates a clear "declaration of interests" policy and procedures for all meetings.

The principal risk facing the Institute lies in its ability to maintain and protect the value in real terms of its investments and to generate from them, on a long-term basis, a consistently high overall return. This risk is mitigated by the Institute's appointment of experienced investment managers with a proven track record; by internal controls that allow close and regular monitoring of their performance against benchmarks; by the Institute's requirement of its investment managers to re-tender periodically and competitively for appointment; and by regular meetings that formally review investment performance and policy and include one-to-one presentations by the investment managers.

Investment Policy Statements are in place for the Lister Institute and its investment partners. These are reviewed on an annual basis.

Objectives and Activities

The statutory objective of the Institute is to further the understanding and progress in preventive medicine by promoting excellence in biomedical research in the UK and Ireland.

When founded in 1891, the Institute sought to achieve this objective by establishing a research institute specialising in the area of "infections" and their prevention by immunisation and other means. It complemented these research activities by the production and supply of materials such as vaccines and anti-toxins.

The Institute continued in this mode until the late 1970s when increasing financial and regulatory pressures caused the cessation of these activities. Proceeds from the resultant sale of land and buildings created the investment funds from which present-day activities are financed; at 31 December 2023 these funds stood at £43.1M. From the 1980s, the Institute has pursued its objective of nurturing future leaders by the provision of grant funding to facilitate the research and careers of high-quality individuals, working in areas of biomedicine relevant to preventive medicine. It has done this because it believes that the acquisition and advancement of knowledge is crucial to the understanding of health and disease and that research to achieve this is driven forward by high quality individuals and their supporting staff.

Principal Activities

In pursuance of this objective, during 2023 the Institute awarded six new Prize Fellowships. In addition, the Institute has

continued its Summer Studentship scheme. Generally, this has enabled an increasing number of undergraduates per year to work with Lister Institute Fellows or former Fellows to gain experience of biomedical research with the hope that they might consider it as a career. In 2023, 39 studentships were awarded.

Achievement and Performance

The SC has monitored the performance of the current 39 Lister Institute Prize Fellows through review of their annual scientific research reports that includes the progress they are making, as well as all publications and presentations. The SC has reported to Trustees that it is of the view that all Fellows are undertaking high quality research and producing new knowledge that will contribute significantly to our understanding of disease, its causes, treatment and prevention. The reports of the research undertaken by the Lister Summer Students have also been reviewed and found to be satisfactory.

Six Lister Institute Prize Fellowships were awarded in 2023 to Dr Fiona Jane Whelan (University of Nottingham); Dr Kirby Swatek (University of Dundee); Dr Helen Weavers (University of Bristol); Dr Joana F Neves (King's College London); Dr John Knight (University of Manchester); Dr Srikanth Ramaswamy (University of Newcastle) from an initial field of 96 applicants. They were awarded following extensive scientific review of their applications and final interview by the SC. (More details of the Prize Fellows and their research are provided on pages 2 and 3). Each Prize Fellowship provides £250K to be spent over 5 years with the funds provided to the host institution at the commencement of the award.

39 Summer Studentships were awarded in 2023. Each is a £2,500 student bursary and is paid to the host institution at the commencement of the award for the support of the student for up to a ten-week period.

Public Benefit

The statutory objectives, aims and activities of The Lister Institute of Preventive Medicine are to further understanding in preventive medicine by promoting biomedical research, as set out on page 18 of this Report. The Trustees have considered the Charity Commission's guidance on public benefit, including the guidance 'public benefit: running a charity (PB2)'. The public benefit of the Institute's grant-making is clearly identifiable in the 'Achievement and Performance' paragraphs above and in the list of Research Prize Fellows together with their areas of research on pages 12 and 13. All Lister Institute Fellows are actively encouraged, where appropriate, to develop their research findings for potential public benefit and the SC has regard to this when reviewing their research reports. The Lister Institute therefore benefits the public or a sector of it without imposing any restrictions. Applications from individuals are accepted only when demonstrably consistent with the charitable objectives of the Institute.

Impact

The impact of the activities of a medical research charity can be measured at many levels ranging from the growth of knowledge to direct patient/public benefit. Often the transition from the former to the latter may take many years and the involvement of several organisations. The Institute requires that the results of the research it supports are published and disseminated; that, where appropriate, significant intellectual property is protected via patents; and that its commercial development is encouraged. Several biotechnology companies have been formed around the findings of Institute-funded research and there are several interactions with large pharmaceutical companies. A prime example of the impact of Lister Institute research is DNA fingerprinting, which was discovered by Professor Sir Alec Jeffreys when a Lister Institute Fellow, and has become an integral part of society, helping to prove innocence or guilt in criminal cases, resolving immigration arguments and clarifying paternity. Other examples include Professor Frances Platt's research which she started as a Lister Fellow and in collaboration with Dr Terry Butters, has led to the development of the approved drug miglustat (Zavesca) for glycosphingolipid storage disease therapy. Professor Michael Eddleston's research, initially funded by the Lister Institute on the effects of pesticide poisoning and the use of these chemicals for suicide in countries such as Sri Lanka and Bangladesh. His work has led to international regulation of these pesticides. Professor Rebecca Fitzgerald developed the cytosponge – the sponge on a string – which has proved to be effective in detecting and diagnosing a condition that can lead to oesophageal cancer. It has recently been trialled by the NHS and has reduced the need for invasive endoscopy in thousands of low-risk patients.

More directly, since 2019 we have awarded 29 Lister Prizes (2019 -5, 2020 - 4, 2021 - 6, 2022 - 8, 2023 - 6) helping the careers of 29 excellent young scientists and clinicians at pivotal stages of their research careers. In the last five years we have also awarded 164 summer studentships which will hopefully have encouraged many students to take up careers in research.

Investment Policy and Performance

The Institute's investment objective is to develop and maintain its financial resources in real terms through the selection of investments, consistent with an acceptable level of risk.

The Institute's investment portfolio is split between Cazenove Capital Management and Partners Capital LLP who both operate under mandates agreed in advance with the Finance and Investment Committee. These mandates set out an overall target asset allocation with allowable ranges for each category of asset.

Both investment managers invest on a total returns basis through a variety of pooled funds and in accordance with the Institute's overarching "Investment Policy Statement" ("IPS"). This states the overall investment objective and sets the investment return objectives, the risk parameters, the performance measures and review procedures for the portfolio.

We are mindful of the Charity Commission Guidance on Investing Charity Money (CC14) and adhere to the principals espoused therein. The Institute's IPS was reviewed and revised as part of the quinquennial review of investment managers with specific versions agreed for each of the investment managers to reflect their individual investment approaches. The IPS's are reviewed annually. Every year the Institute reiterates its likely cash requirements, both in terms of the amount and the timing of any withdrawal.

The Institute's IPS includes reference to an ethical investment policy which does not permit direct investment in tobacco or tobacco-related companies. It has been agreed that our focus will remain on balancing ethical investments and returns as there is no compelling argument for a significant change in strategy at this time, although the Lister's stance on ESG will be kept under close review.

The Institute's overall financial return objective is to preserve and, if possible, enhance the purchasing power of its portfolio assets, net of costs and approved withdrawals, over rolling five-year periods. This goal is synonymous with the pursuit of a time-weighted net return on portfolio assets that equals and, if possible, exceeds cost inflation as measured by the UK Consumer Price Index plus the Institute's long-term spending rate of 3-4% measured over corresponding five-year periods. Having exceeded this target over recent years until 2022, with the high level of inflation being experienced and difficult markets our investment performance is now running behind the target.

The performance of the investment portfolio is reviewed by the Finance and Investment Committee, which held two meetings in the year with the investment advisors to review performance, liquidity within the portfolio etc. In addition, the Institute receives detailed quarterly valuation and transaction reports. 2023 was a better year for the market but still resulted in the Lister Portfolio declining by £201K to £43.1M from £43.3M at the end of 2022.

A decision, taken in 2015 (and ratified in subsequent years), to withdraw and place £5M in a Liquidity Account was based both on the recent strong growth of the portfolio but also concerns about future market volatility and performance. As a result of the Investment Managers Review at the beginning of 2022 a proportion of this £5M was invested in a 'absolute return minded' fund - Ruffer Charitable Assets Trust that will hopefully help protect against the worst effects of inflation. This decision was aimed to ensure that six Prize Fellowships of £250K each can be awarded for at least three years from 2023.

The liquidity B portfolio was used in 2022 to fund the Prize Fellowships; however, by February 2023 some markets had rebounded to all-time highs and the much publicised, impending recession had not happened. As a result, FIC made the decision to partially replenish the liquidity portfolio (by £750K or 50%) and its current value stands at £3.7M.

More details of the Institute's activities are set out in the Chairman's Report on pages 1 to 16.

REPORT OF THE GOVERNING BODY (CONTINUED)

FINANCIAL REVIEW

Allocation of Resources

The Institute, which does not seek to raise funds from the public, depends primarily on investment returns to meet its pension payments, administrative expenditure and expenditure in furtherance of the Charity's objectives. The total return on investments for the year was a gain of £1.221M and investment income of £658K.

The resources expended totalled £2,028M of which £1,601M were resources expended for the Institute's charitable activities.

The Prize Fellowships are fixed sum awards and, therefore, expenditure can be regulated by altering the number and/or value of prizes awarded each year. In 2023, prizes were awarded to six very strong candidates.

Payments are currently made to three pensioners who are previous employees of the Lister Institute. The Institute's unfunded pension liability is some £142K. Given the value and nature of our investments, we do not believe pension funding to be a concern.

Reserves Policy

At 31 December 2023 the Institute has total reserves of £43.1M all of which are unrestricted. A majority of the Institute's investments are listed. The Trustees regard the liquid B portfolio as a free reserve which, if necessary, would cover two years expected future expenditure.

The policy of the Trustees is to maintain adequate financial resources to provide income to meet current and future commitments as they fall due and ensure that adequate funds remain available to enable them to make awards in perpetuity. The adequacy of the level of reserves and the continuing appropriateness of the policy are reviewed on an annual basis by the Trustees. They continue to endorse the policy and its ability to support the long-term viability of the Institute. Although the Institute is not formally committed to awarding any Prizes beyond the current year, the Trustees are confident in the ability of the Institute to maintain appropriate levels of activity.

Plans for the Future

The Institute's future policy is to continue to pursue its current objectives. It will therefore maintain and look to increase the Prize Fellowship scheme, which it sees as a funding priority. In wishing to continue to support young researchers through the on-going challenges in the research environment, the Governing Body has agreed that if there are sufficient high-quality candidates, the Scientific Committee may award around 6 Lister Prizes in 2024. The Lister Summer Studentship scheme will also be increased when possible.

Trustee Responsibilities Statement

The Trustees (who are also directors of The Lister Institute of Preventive Medicine for the purposes of company law) are responsible for preparing the Trustees' Annual Report and

the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Company law requires the 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 the incoming resources and application of resources, including the income and expenditure, of the charitable company for that 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 SORP;
- make judgments 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; and
- prepare the financial statements on the going concern basis, unless it is inappropriate to presume that the charitable company will continue in business.

The Trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charitable company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charitable company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the Trustees are aware:

- there is no relevant audit information of which the charitable company's auditor is unaware; and
- the Trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the auditor is aware of that information.

The Trustees are responsible for the maintenance and integrity of the corporate and financial information included on the charitable company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

This Trustees' report has been prepared in accordance with the special provisions of Part 15 of the Companies Act 2006 relating to small companies.

By Order of the Governing Body

JOHN IREDALE
Chairman, 2 August 2024

MURRAY LEGG
Treasurer, 2 August 2024

INDEPENDENT AUDITOR'S REPORT

to the Members of the Lister Institute of Preventive Medicine
for the year ended 31 December 2023

Opinion

We have audited the financial statements of The Lister Institute of Preventive Medicine ('the charitable company') for the year ended 31 December 2023 which comprise the Statement of Financial Activities (including the Summary Income and Expenditure Account), 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 2023 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.

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 that 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 annual report, other than the financial statements and our auditor's report thereon. The Trustees are responsible for the other information contained within the 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 for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Trustees' annual report has been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

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

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

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the 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; or
- the Trustees were not entitled to prepare the financial statements in accordance with the small companies' regime and take advantage of the small companies' exemption in preparing the Trustees' annual report and from preparing a strategic report.

INDEPENDENT AUDITOR'S REPORT (CONTINUED)

Responsibilities of Trustees

As explained more fully in the Trustees' responsibilities statement set out on page 10, 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

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 aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs (UK) we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the charitable company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Trustees.
- Conclude on the appropriateness of the Trustees' use of the going concern basis of accounting and, based on the audit

evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the charitable company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the charitable company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

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.

The objectives of our audit in respect of fraud, are; to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses to those assessed risks; and to respond appropriately to instances of fraud or suspected fraud identified during the audit. However, the primary responsibility for the prevention and detection of fraud rests with both management and those charged with governance of the charitable company.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory requirements applicable to the charitable company and considered that the most significant are [the Companies Act 2006, the Charities Act 2011, the Charity SORP, and UK financial reporting standards as issued by the Financial Reporting Council.
- We obtained an understanding of how the charitable company complies with these requirements by discussions with management and those charged with governance.

- We assessed the risk of material misstatement of the financial statements, including the risk of material misstatement due to fraud and how it might occur, by holding discussions with management and those charged with governance.
- We inquired of management and those charged with governance as to any known instances of non-compliance or suspected non-compliance with laws and regulations.
- Based on this understanding, we designed specific appropriate audit procedures to identify instances of non-compliance with laws and regulations. This included making enquiries of management and those charged with governance and obtaining additional corroborative evidence as required.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

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. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to any party other than the charitable company and charitable company's members as a body, for our audit work, for this report, or for the opinions we have formed.

JONATHAN AIKENS (Senior Statutory Auditor)

for and on behalf of Moore Kingston Smith LLP, Statutory Auditor

9 Appold Street
London EC2A 2AP

9 August 2024

STATEMENT OF FINANCIAL ACTIVITIES (INCORPORATING INCOME AND EXPENDITURE ACCOUNT)

for the year ended 31 December 2023

	Notes	2023 £'000	2022 £'000
Income from:			
Investments	2	679	595
Total income		679	595
Expenditure on:			
Cost of raising funds			
Investment management costs	3	(168)	(185)
Charitable Activities			
Prizes and Summer Studentships	5	(1,840)	(2,305)
Total expenditure		(2,007)	(2,490)
Net gains/(losses) on investments	8	1,221	(2,483)
Net (expenditure) for the year		(107)	(4,378)
Other recognised (losses):			
Actuarial charge on defined benefit schemes	12	(20)	(25)
Net movement in funds		(127)	(4,403)
Reconciliation of funds:			
Total funds brought forward		43,275	47,678
Net Movement for the Year		(127)	(4,403)
Total funds carried forward		43,148	43,275

All of the Charity's funds are unrestricted.

The Statement of Financial Activities includes all gains and losses recognised during the year. All income and expenditure derives from continuing activities/operations.

The notes set out on pages 27 to 32 form part of these financial statements.

BALANCE SHEET

as at 31 December 2023 Company no: 34479

	Notes	2023 £'000	2022 £'000
Fixed assets:			
Investments	8	43,101	43,294
Total fixed assets		43,101	43,294
Current assets:			
Debtors	9	6	6
Cash at bank and in hand	10	248	167
Total current assets		254	173
Current liabilities:			
Creditors: amounts falling due within one year	11	(66)	(50)
Net current assets		189	123
Total assets less current liabilities		43,290	43,417
Creditors: amounts falling due after more than one year			
Pension provision	12	(142)	(142)
Net assets		43,148	43,275
Represented by			
Unrestricted funds		43,148	43,275
Total charity funds		43,148	43,275

All of the Charity's funds are unrestricted.

These accounts have been prepared in accordance with the special provision of Part 15 of the Companies Act 2006 relating to small companies and in accordance with the Financial Reporting Standard 102.

These financial statements were approved by the Governing Body on 17 April 2024

JOHN IREDALE

Chairman

2 August 2024

MURRAY LEGG

Treasurer

2 August 2024

The notes set out on pages 27 to 32 form part of these financial statements.

STATEMENT OF CASHFLOW

for the year ended 31 December 2023

	2023	2022
	£'000	£'000
Cash flow from operating activities		
Net cash (used in) operating activities	(2,012)	(2,531)
Cash flow from investing activities		
Investment income	679	595
Proceeds from disposal of fixed asset investments	10,986	16,314
Acquisition of fixed asset investments	(11,395)	(13,818)
Other movements on investments	1,823	(676)
Net cash from investing activities	2,093	2,415
Net increase/(decrease) in cash	81	(116)
Cash and cash equivalents at beginning of year	167	283
Cash and cash equivalents at end of year	248	167
Reconciliation of net income to net cash flow from operating activities		
	2023	2022
	£'000	£'000
Net (expenditure) / income	(127)	(4,403)
Adjustments for		
Net gains on investments	(1,221)	2,483
Investment Income	(679)	(595)
(Increase) in debtors	-	(1)
Increase / (Decrease) in creditors	15	(23)
(Increase) / Decrease in pensions	-	8
Net cash used in operating activities	(2,012)	(2,531)

The Institute has no borrowings and cash is held on current account or short term deposits.
For analysis of cash see Note 10.

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 December 2023

1 PRINCIPAL ACCOUNTING POLICIES

Basis of preparation

The Financial Statements have been prepared in accordance with the Statement of Recommended Practice, Accounting and Reporting by Charities (FRS102 SORP). The Financial Statements are prepared in accordance with the historical cost convention modified by the revaluation of investments. The charity is a Public Benefit Entity as defined by FRS102.

The Financial Statements are prepared in sterling which is the functional currency of the Charity. Monetary amounts in these Financial Statements are rounded to the nearest thousand pounds.

The principal accounting policies adopted in the preparation of the Financial Statements are as follows:

Income

All incoming resources are accounted for on a receivable basis.

Prizes and summer studentships

The cost of Research Prize Fellowships is charged in the year awarded.

Expenditure

The costs of raising funds include those fees payable to the Institute's investment fund managers for the management of the Institute's investment portfolio. These are accounted for on an accruals basis.

Charitable activities comprise all expenditure directly relating to the objects of the charity and are accounted for on an accruals basis. The allocation of expenditure between governance and management, administration and support costs is reviewed on an annual basis to ensure the allocation is appropriate. Indirect costs are generally treated as falling into the latter category with the exception of a proportion of salary and related costs, which have been classified as governance costs.

In addition to auditor's remuneration, governance costs comprise the proportion of staff costs associated with the time spent on the preparation of the statutory accounts and other governance issues, together with honoraria remuneration provided to members of the Institute's SC for their duties in selecting the Prize Fellows.

Supplementary pensions and staff pensions

An estimate of the full provision is made in the Financial Statements for the costs of future supplementary payments. The provision and charge to income are reviewed annually by the Trustees in the knowledge that the number of persons receiving the supplementary pensions will not increase. The pension costs are assessed in accordance with actuarial advice and these costs are accounted for in accordance with FRS102 SORP.

Existing employees participate in a defined contribution scheme, the costs of which are expensed as incurred. These disclosures are made in accordance with FRS102 SORP.

Tangible Fixed Assets

Any capital items purchased under £1K in value are expensed in the accounts in full as incurred. The Charity has no tangible fixed assets.

Investments

Investments are shown at market value in the balance sheet. Changes in the market value are included in the Statement of Financial Activities as realised and unrealised investment gains or losses in the year in which they arise. Investments denominated in foreign currencies are valued at year-end rates of exchange.

Cash flow statement

The Charity has included a cash flow statement in accordance with FRS102 SORP.

Taxation

The organisation is a registered charity and has obtained exemptions from taxation under Part 11, Chapter 3 of the Corporation Tax Act 2010. This exemption will remain as long as income is compatible with that section and expenditure is applied to charitable purposes only.

Critical accounting estimates and areas of judgement

In preparing financial statements it is necessary to make certain judgements, estimates and assumptions that affect the amounts recognised in the financial statements. The Trustees consider the estimates involved in the valuation of investments to have most significant effect on amounts recognised in the financial statements. These are taken directly from Investment Managers' reports.

In addition, the company has an obligation to pay pension benefits to certain employees. The cost of these benefits and the present value of the obligation depend on a number of factors including: life expectancy, salary increases, asset valuations and the discount rate on corporate bonds. Management estimates these factors in determining the net pension obligation in the balance sheet. The assumptions reflect historical experience and current trends. See Note 12 for the disclosures relating to the defined benefit pension scheme.

Going Concern

The Trustees have assessed whether the use of the going concern basis is appropriate and have considered possible events or conditions that might cast significant doubt on the ability of the charity to continue as a going concern. The Trustees have made this assessment for a period of at least one year from the date of approval of the financial statements. In making this assessment the Trustees are satisfied that the substantial reserves and liquid assets held by the Lister Institute

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

1 PRINCIPAL ACCOUNTING POLICIES *continued*

justify their belief that there are no material uncertainties that cast significant doubt on the charity's ability to continue as a going concern. The charity therefore continues to adopt the going concern basis in preparing its financial statements.

Financial instruments

The company has financial assets and liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value.

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid, net of any trade discounts due.

Cash at bank and cash in hand includes cash and short term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

Creditors and provisions are recognised where the company has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

With the exceptions of prepayments and deferred income all other debtor and creditor balances are considered to be basic financial instruments under FRS 102. See notes 9 and 11 for the debtor and creditor notes.

Fund accounting

All of the Charity's funds are unrestricted. Unrestricted funds are available for use at the discretion of the Trustees in furtherance of the general objectives of the Institute.

2 INVESTMENT INCOME

	2023	2022
	£'000	£'000
Income from fixed asset investments	658	588
Bank interest receivable	21	7
	679	595

3 INVESTMENT MANAGEMENT COSTS

	2023	2022
	£'000	£'000
Partners Capital LLP	79	92
Cazenove Capital Management	89	93
Total investment management fees	168	185

4 GOVERNING BODY AND STAFF COSTS

Employee information

The average number of persons employed by the Institute during the year was 4, (2022: 3) two of whom are part-time (2022: 2) and one of whom was on maternity leave. All staff were employed in an administrative and support capacity. No employees earn over £60,000 p.a. (2022: none).

Staff costs	2023	2022
	£'000	£'000
Gross salaries	114	101
Pension contributions	5	4
Employer's national insurance	7	7
	126	112

The salary costs are allocated under governance where related to statutory accounts preparation, the balance being reported within charitable activities.

Key management personnel include the Trustees and the Director.

The total employee benefits of the charity's key management personnel were £49,862 (2022: £44,069).

Emoluments of Trustees (members of the Governing Body (GB))

None of the members of the GB received an emolument in respect of services to the Institute during the year (see Scientific Committee below) (2022: £2,000). Travel expenses of £2,728 were paid relating to the claims of seven members in connection with their attendance at meetings (2022: £858 four members).

Members of the Scientific Committee (SC) (the chair of which is also a member of the Governing Body) are offered remuneration in relation to their services to the committee. An honorarium of £2,000 (2022: £2,000) was offered to the chair of the SC, the other SC members (none of whom are members of the GB) were offered £1,000 (2022: £1,000). The majority of members, including the chair, asked for the honorarium to be paid to their employing institution.

5 PRIZES & SUMMER STUDENTSHIPS

	2023	2022
	£'000	£'000
Prize awards	1,500	2,000
Summer studentship payments	99	84
Support costs (see note 6)	90	87
Salaries (see note 4)	110	98
Governance costs (see note 7)	41	36
	1,840	2,305

6 SUPPORT COSTS

	2023	2022
	£'000	£'000
Office expenses	25	25
Travel expenses	9	9
Professional fees	10	8
Honoraria and events	40	38
Pension costs (see note 12)	6	7
	90	87

These costs are all considered to be costs to support resources expended on charitable activities.

7 GOVERNANCE COSTS

	2023	2022
	£'000	£'000
Auditor's remuneration - current year	16	15
Staff costs (see Note 5)	16	14
Honoraria and events	9	7
	40	36

No non-audit services were provided by the auditors during the year (2022: none).

Auditors remuneration includes fees for the year totalling £13,775 excluding VAT. (2022: £12,650).

**NOTES TO THE FINANCIAL STATEMENTS
(CONTINUED)**

8 INVESTMENTS

Listed investments are valued at middle market quotations ruling at the year-end

	2023	2022
	£'000	£'000
Market value at beginning of year	43,294	47,597
Purchases during the year at cost	11,395	13,231
Proceeds of sales during the year	(10,986)	(16,314)
Reinvested income for the year	658	588
Movement in un-invested cash	(581)	2,875
Cash withdrawn	(1,900)	(2,200)
Net change in market value	1,221	(2,483)
Market value at year-end	43,101	43,294

The portfolio's asset allocation was as follows

UK investments

Equities	1,387	1,845
Fixed interest	2,785	2,781
Other (including private equity, property, commodities, alternatives and inflation linked bonds)	4,543	4,543
Cash	4,172	4,954
Total UK investments	12,887	14,123

Non-UK investments

Equities	25,213	23,473
Other (including private equity, property, commodities and alternatives)	5,001	5,698
Cash	-	-
Total Non-UK investments	30,214	29,170
Total	43,101	43,294

As of 31 December 2023 individual shareholdings exceeding 5% of the total value of investments were: Vanguard S & P 500 UCITS - £2,783,872; Partners Capital Harrier Fund - £2,679,766 (2022: None)'

The Institute's investments held by one custodian are charged as security for the Institute's ongoing financial obligations to that custodian for banking services related to those investments.

9 DEBTORS

	2023	2022
	£'000	£'000
Prepayments	6	6
Total	6	6

10 CASH

	2023	2022
	£'000	£'000
Cash at bank	248	167

11 CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2023	2022
	£'000	£'000
Taxation and social security	5	4
Accruals	61	46
Total creditors falling due within one year	66	50

12 PROVISION FOR LIABILITIES AND CHARGES

This represents a provision for future supplementary pension payments in respect of ex-employees, based on their salary and length of service. The pensions are unfunded, with payments made out of the Institute's funds as they fall due.

Movements in the pension provision during the year were as below

	2023	2022
	£'000	£'000
Liability at beginning of period	142	134
Plus interest cost	6	7
Plus actuarial losses	20	25
Benefits paid	(26)	(24)
Liability at end of period	142	142

The tables below state the FRS102 actuarial assumptions used to estimate the pension provision.

Principal actuarial assumptions Valuation at 31 December 2023

	2023	2022
Rate of increase to pensions in payment*	5%	5%
Rate used to discount scheme liabilities	4.5%	5%

The post-retirement mortality assumption uses the PCA00 base tables (year of birth) with improvements equal to medium cohort with a 1% minimum.

NOTES TO THE FINANCIAL STATEMENTS (CONTINUED)

13 RELATED PARTY TRANSACTIONS

Emoluments of Trustees (members of the Governing Body (GB)). None of the members of the GB received an emolument in respect of services to the Institute during the year (2022: £2,000). Travel expenses of £2,728 were paid relating to the claims of seven members in connection with their attendance at meetings (2022: £858 four members).

Members of the Scientific Committee (SC) (the chair of which is also a member of the Governing Body) are offered remuneration in relation to their services to the committee. An honorarium of £2,000 (2022: £2,000) was offered to the chair of the SC, the other SC members (none of whom are members of the GB) were offered £1,000 (2022: £1,000). The majority of members, including the chair, asked for the honorarium to be paid to their employing institution.

Lister Prize Fellowships may be awarded to candidates from academic institutions which employ or have associations with Trustees. Trustees are not involved in and do not benefit from such awards which are made after a rigorous selection process by the SC. SC members also reclude themselves where there are similar relationships with candidates for prizes.

In 2023 two Lister Prize Fellowships were awarded to applicants from the same institutions as two of our Trustees (2022: one).

14 MEMBERS' LIABILITY

The liability of the Members of the institute is limited to 50p. At the date of the financial statements, there were 236 members, each with a guarantee potential of 50p.

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Page 14: Professor Dame Pamela Shaw, Ms Dina Almuli, Professor Sir Alec Jeffreys, Mr Matthew Pintus, Professor Sir John Iredale, Dr Sally Burtles, Mrs Nicola King, Mrs Susan Andrews, Professor Julian Blow

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LEGAL AND ADMINISTRATIVE INFORMATION for the year ended 31 December 2023

Business Address

PO Box 2502
Watford
WD18 1AE

Solicitors

Macfarlanes
20 Cursitor Street
London EC4A 1LT

Bankers

Messrs Coutts & Co
St Martins Office
440 Strand
London WC2R 0QS

Auditor

Moore Kingston Smith LLP
9 Appold Street
London EC2A 2AP

Registered Office

Macfarlanes
10 Norwich Street
London EC4A 1BD

Investment Advisors

Cazenove Capital Management
1 London Wall Place
London EC2Y 5AU

Partners Capital LLP

5 Young Street
London W8 5EH

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Telephone: 0203 532 5345

The Lister Institute of Preventive Medicine is a company limited by guarantee (England 34479) and is a registered charity (206271)

THE GOVERNING BODY

Professor Sir John Iredale, FRCP, FMedSci, FRSE, *Chairman*
Mr Murray Legg, BSc, FCA, *Hon Treasurer*
Professor Judith Armitage, BSc, PhD, FRS
Professor Wendy Bickmore, CBE, BA, PhD, FMedSci, FRS, FRSE
Professor Sir Adrian P Bird, CBE, FRS, FRSE
Professor Julian Blow, PhD, FRSE, *Chair Scientific Advisory Committee*

Professor Rebecca Fitzgerald, OBE, MACantab, MD, FMedSci
Hon Rory M B Guinness, BA, MSc, FCIM
Professor Douglas Higgs, MBBS, MRCP, DSc, FRCP, FRCPath, FRS
Professor Sir Alec J Jeffreys, CH, DPhil, FMedSci, FRS
Mr Stephen McMahon, MA (Oxon), FCA, FCSI
Mr Matthew Pintus, BA
Professor Dame Pamela Shaw, DBE, FRCP, FMedSci
Mrs Jennifer Smithson, BA (*Appointed September 2023*)
Professor Rosalind Smyth, CBE, FMedSci

THE SCIENTIFIC COMMITTEE

Professor Julian Blow, PhD, FRSE, FMedSci, FMedSci, *Chair*
Professor Judi Allen, MPH, PhD, FRSE, FRSB, FMedSci
Professor Thomas J Evans, MA, PhD, MBChir, FRCP
Professor Muzlifah Haniffa, FMedSci
Professor Aroon Hingorani, MA, PhD, FRCP
Professor Clare Isacke, DPhil, FMedSci (*Appointed September 2023*)
Professor Yvonne Jones, FRS, FMedSci, FLSW
Professor Angus Lamond, FRS, FRSE, FMedSci
Professor Belinda Lennox, DM FRCPsych (*Appointed September 2023*)
Professor Iain B McInnes, CBE PhD FRCP FRSE FMedSci
Professor Sir Mike Owen, BSc, MB ChB, PhD, FRCPsych, FMedSci, FLSW (*Retired September 2023*)
Professor Elizabeth Patton, BSc, PhD, FRSE (*Retired September 2023*)
Professor Inga Prokopenko, MSc PhD
Professor Anne Rosser, PhD, FRCP
Professor Daniel St Johnston, FRS, FMedSci

THE FINANCE AND INVESTMENT COMMITTEE

Mr Murray Legg, BSc, FCA, Hon Treasurer, *Chair*
Professor Judith Armitage, BSc, PhD, FRS
Hon Rory M B Guinness, BA, FCIM
Professor Sir John Iredale, FRCP, FMedSci, FRSE
Mr Stephen McMahon, MA (Oxon), FCA, FCSI
Mr Matthew Pintus, BA
Mrs Jenny Smithson, BA (*Appointed September 2023*)

SENIOR MANAGEMENT

Director and Secretary: Dr Sally Burtles, BSc, PhD

