

**ANNUAL REPORT AND FINANCIAL STATEMENTS**  
for the year ended 31 December

**2016**



The Institute was founded in 1891 and for the next 80 years played a vital role in the development of the laboratory aspects of preventive medicine as an independent research institute in the UK.

Financial pressures in the 1970s led to the closure of the research and production facilities and the conversion of the Lister Institute into a highly successful trust awarding prestigious Research Fellowships from 1982 which in 2003, again because of financial pressures, were revised to become Prize Fellowships.

The cover portrait of Lord Lister reproduced by courtesy of the Royal Veterinary College

# LEGAL AND ADMINISTRATIVE INFORMATION

for the year ended 31 December 2016

## THE GOVERNING BODY

Professor Sir Alex Markham, DSc, FRCP, FRCPath, FMedSci, *Chairman*

Mr Michael French, BSc(Eng), FCA, *Hon Treasurer*

Professor Judith Armitage, BSc, PhD, FRS

Professor Wendy Bickmore, BA, PhD, FMedSci, FRSE

Professor Sir Adrian P Bird, CBE, FRS, FRSE

Professor Rebecca Fitzgerald, MD, FRCP, FMedSci

Hon Rory M B Guinness

Professor Douglas Higgs, MBBS, MRCPPath, DSc, FRCP, FRCPath, FRS

Mr Andrew Hutton, MA, CFA

Professor Sir Alec J Jeffreys, CH, DPhil, FMedSci, FRS

Professor Patrick Maxwell, FRCP, FMedSci

Mr Matthew Pintus, BA

Professor Cheryl A Tickle, CBE, FRSE, FMedSci, FRS

## SENIOR MANAGEMENT

*Secretary and Director:* Ms Kate Law

### *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

### *Auditors*

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60 Goswell Road  
London EC1M 7AD

### *Registered Office*

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London EC4A 1BD

### *Investment Advisors*

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12 Moorgate  
London EC2R 6DA

Partners Capital LLP  
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# LEGAL AND ADMINISTRATIVE INFORMATION

for the year ended 31 December 2016

## THE SCIENTIFIC ADVISORY COMMITTEE

Professor Patrick Maxwell, FRCP, FMedSci, *Chairman*

Dr Ian Adams, BSc, PhD

Professor Jon Cohen, FRCP, FMedSci

Professor Cyrus Cooper, OBE, MA, DM, FRCP, FFPH, FMedSci

Professor William Deakin, PhD, FRCPsych, FMedSci

Professor Annette C Dolphin, PhD, FRS

Professor Margaret C Frame, PhD, FRSE, FMedSci (*Appointed 2 September 2016*)

Professor David Holden, FMedSci, FRS (*Retired 2 September 2016*)

Professor Corinne Houart, PhD

Professor John Iredale, FRCP, FMedSci, FRSE

Professor Nick Lemoine, MD, PhD, FRCPATH, FMedSci

Professor Christoph M Tang, MB, ChB, PhD, FMedSci (*Appointed 2 September 2016*)

Professor Jonathan Waltho, BSc, PhD

Professor Colin Watts, FRS, FRSE, FMedSci

*Secretary:* Ms Kate Law

## THE FINANCE AND INVESTMENT COMMITTEE

Mr Michael French, BSc(Eng), FCA, *Chairman*

Professor Judith Armitage, BSc, PhD, FRS

Hon Rory M B Guinness

Mr Andrew Hutton, MA, CFA

Professor Sir Alex Markham, DSc, FRCP, FRCPATH, FMedSci

Mr Matthew Pintus, BA

*Secretary:* Ms Kate Law

# CHAIRMAN'S ANNUAL REPORT

for the year ended 31 December 2016

**THE YEAR 2016** was a very special year for the Lister Institute, marking the 125th anniversary of its inauguration in July 1891. We celebrated this occasion with record attendance at an extremely successful two-day meeting in Cambridge and also commissioned an anniversary publication. We were delighted to receive support for these activities in the form of generous donations from the Wellcome Trust and the Lauchentilly Charitable Foundation.

We have, encouragingly, seen a continued improvement in the Institute's finances with a rise in the value of our investment portfolio to just over £41.5m. Against a background of BREXIT and increasingly volatile markets, the Governing Body ratified a recommendation by the Finance and Investment Committee to maintain, on a rolling basis, a secure account of £5m, thereby ensuring that the Lister Institute is able to award at least five prizes every year, for a minimum of five years.

On the research front, we received a record number of applications (99) for the Prize Fellowship. Lister Institute Fellows and former Fellows continued to undertake excellent research, publish high-impact papers and gain academic advancement on many fronts. The Institute's philosophy of supporting research through the identification of top-quality individuals and then helping them to develop their activities is as strong and relevant today, via the Prize Fellowship scheme, as it was in 1982 when the first Senior Fellowships were awarded. My visits to Host Institutions and discussions with Fellows and Members of the Lister Institute give me great confidence that the Lister Institute Prize is still seen as a highly prestigious award, with the flexibility that it offers being its greatest strength.

I am delighted to report that two people closely associated with the Lister Institute were deservedly recognised in the New Year's Honour's list; Professor Sir Alec Jeffreys (former Fellow and now a member of the Governing Body) was made a Companion of Honour and Professor Stephen Inglis, former member of the Governing Body, was awarded a CBE.

## Governing Body and Administrative Matters

The Governing Body met twice during the year, once in April at the Royal Society and again before the start of the extended September Fellows' meeting in Cambridge.

I should like to thank all members of the Governing Body for the time which they

spend on the Institute's business and the thought which they give to its affairs. The Institute runs very effectively with only these two formal Governing Body meetings a year; one in Spring and the Autumn meeting, combined with the AGM and Fellows' meeting, in Cambridge. I am exceedingly grateful to my fellow Trustees for the speed with which they respond to Lister matters in the interim and the consideration they give to the Institute's business. The work of the Governing Body is made easier by the knowledge that two key areas, science and finance/investment, are so ably looked after by the relevant sub-Committees and I thank their members for all their efforts and dedication.

It is important that there is planned turnover of Trustees and this year it was my turn, as longest-serving elected member of the Governing Body, to stand for re-election. I am proud and humbled to be invited to serve such a prestigious body for another five years.

On a less positive note, I have to report an unfortunate and, in the history of the Lister, an unprecedented occurrence. We were informed that one of the current Lister Fellows was under investigation for scientific misconduct and, following a rigorous and independent review by the university concerned, the case was found to be proven. The Fellow left the university immediately and all unspent Lister funding (£182k) has been returned to the Institute and will appear in the 2017 accounts.

The Governing Body spent a considerable time discussing this situation and also the actions taken by the Chairman and Director to mitigate any potential reputational or financial risks to the Lister Institute. Members recommended some minor changes to the risk log and concluded that, given the circumstances, all appropriate actions had been taken.

I am extremely sad to report the death of Professor Sir Patrick Sissons, who served on the Governing Body from 1999 to 2004 during a very difficult time for the Institute. His wise counsel was of tremendous value. Professor Sissons will be remembered both for his groundbreaking research in nephrology and infectious disease, and for his leadership of the University of Cambridge's Clinical School, where he was Regius Professor of Physic. He focused on cytomegalovirus, a virus that is latent in the majority of humans but which can easily kill patients with suppressed immunity. His pioneering work in this field coincided with the emergence of the AIDS epidemic, caused by human immunodeficiency virus. He will be remembered as a brilliant clinical scientist, academic strategist and administrator;

wise, scrupulously fair and unstinting in support of others—especially younger academics and trainees.

Finally, a major contributor to the smooth running of the Institute is the efficiency of Kate Law and a small administrative team of Naomi King and Jacky Wilson and I thank them yet again on behalf of all Trustees.

## Institute Membership

Five Fellows, who completed their fellowship in 2016, have been welcomed into membership of the Institute. They are: Professor Victoria Cowling, University of Dundee; Professor Michael Eddleston, University of Edinburgh; Professor Josef Kittler, University College London; Professor Rob Klose, University of Oxford; and Professor Robin May, University of Birmingham.

## Financial Matters

During a period of global instability, including BREXIT and the US election, the Lister portfolio has out-performed our expectations at the beginning of the year. The overall value of the portfolio has increased by £2.92m in the previous twelve months resulting in reserves of just over £41.6m once £1m had been withdrawn to pay for this year's Fellowships. Both investment managers have performed well in challenging circumstances. The implications of BREXIT are, however, complex and long-lasting and, whilst the Lister benefitted from the diversity of its portfolio and from holding many of its investments overseas, the world economic picture is still very volatile; so prudence remains the 'watchword'.

The healthy level of reserves meant that, in 2016, the Institute was again able to fund five Prize Fellows (£1m) and twenty-five Summer Studentships (£50k). The level of reserves also informed a discussion by the Finance Committee on our ability to maintain £5m in a separate low volatility portfolio (established in 2015), for a rolling period of 5 years. This account enables the Institute to provide protection against market instability and make a clear statement about the intention to fund at least five awards for each of the next five years. The Governing Body endorsed this policy, on a rolling basis to be reviewed annually, as it demonstrates a commitment to human capital and gives a strong signal to the university sector that the Lister finances are in good order.

Another way of protecting the Lister portfolio against future instability is to

increase the proportion of illiquid funds from the current 20% to 30% or higher. A higher level of illiquid funds is standard practice in the charity sector and the Finance and Investment Committee agreed that Partners Capital should provide the Committee with a paper laying out the implications of such a change. These proposals will be considered at its first meeting in 2017.

All usual expenditures are in line with the agreed 2016 budget. Included in the 2016 budget is a one-off allocation of £20k to cater for the 125th Anniversary activities—largely accounted for by the additional meeting on Thursday and the costs of the publication. We were pleased to receive two donations (from the Wellcome Trust and the Lauchentilly Charitable Foundation) amounting to £9k to partially offset these costs. In addition to royalties of £9k from Cancer Research Technology we also received £85k from sales of shares in TauRX, a company established by an ex-Clinical Fellow Professor Claude Wischik, to develop drugs that have the potential to treat dementia.

The Institute's operational costs remained low at £193k, with investment management charges slightly lower than 2015, at £231k. The Lister Institute's total expenditure for 2016 was £1.291m.

As required by recent pension legislation, the three current employees of the Lister Institute have received formal letters from the Treasurer explaining the implications of the new legislation and the options available to them. All formalities have been concluded to the satisfaction of HMRC and there are no financial implications for the Institute.

It is good financial practice periodically to review the performance of investment managers and, as five years have passed since the last formal review, the Treasurer with the Finance and Investment Committee has, since the year-end, carried out a further review. In addition to Partners Capital and Cazenove four other firms were considered as alternatives. After listening to detailed presentations and considering alternative approaches however, the Committee decided that it was satisfied with the performance of its current investment managers and, with the agreement of the Governing Body, Partners Capital and Cazenove have been reappointed.

## **Scientific Activities**

### **Scientific Advisory Committee**

The work of the Scientific Advisory Committee in selecting the Prize Fellows is at

the heart of the Institute's activities. In 2016 we received the highest number of applications to date and the SAC was faced with the daunting task of selecting just five Prize Fellows from 99 proposals. The process proceeds with an initial screening and scoring by SAC members to arrive at a long-list. These candidates are then further evaluated by the SAC with the help of reviews from international researchers, to arrive at a short-list of eleven candidates who were then interviewed. Towards the end of the selection process the standards are very high and, coupled with the very diverse fields of research represented, the task of selecting the 'winners' is extremely difficult—it is a tribute to SAC members and their chairman that each year they identify some truly exceptional young researchers—and this year was no different. I'm also delighted to report an extremely encouraging gender balance amongst this year's winners—three of the five Fellows are women!

As with all Institute committees there is planned turn-over in the membership of the SAC and this year we were sorry to lose the services of Professor David Holden. The Institute owes him, and those who remain on the Committee, a debt of gratitude for their magnificent efforts in selecting the Prize Fellows and maintaining such high standards. When members step down and after each application round we review the SAC membership to ensure that we have the right mix of expertise and seek to recruit new members appropriately. I am delighted to report that Professor Christoph Tang, Professor of Cellular Pathology at the University of Oxford and Professor Margaret Frame, Science Director, CRUK Edinburgh Centre and Director, MRC Institute of Genetics and Molecular Medicine (IGMM) have agreed to join the Committee. I very much hope that they will enjoy their time on the Committee and gain satisfaction from promoting the careers of young researchers.

It was pleasing to see the Summer Studentship scheme strongly endorsed again by the Fellowship and we will continue to support twenty-five recipients. The scheme enables Lister Institute Fellows and former Fellows to offer places to outstanding undergraduate students who then have the opportunity to experience research in a first-rate laboratory. After the studentship is completed the Institute is sent both a scientific report and a personal statement on their experience by the student. In most cases it reinforces the student's wish to go on to do research via PhD training, but in a few it identifies that a career in research is not for them. The former is clearly preferable, although both are satisfactory outcomes.

## 2016 Lister Institute Research Prize Fellowship Winners

The recipients of the 2016 Lister Research Prize Fellowships, who each received the amount of £200k, were:

<b>Prize Winner</b>	<b>Title of Research</b>
 <b>Dr Cynthia Andoniadou</b> King's College London	Regulation of stem cell potential in the mammalian pituitary gland
 <b>Dr Susana Godinho</b> Queen Mary University of London	Regulation of paracrine signalling by centrosome amplification
 <b>Dr Muzlifah Haniffa</b> Newcastle University	<i>In vivo</i> kinetics and functional response of human mononuclear phagocytes during acute tissue inflammation
 <b>Dr Jan Rehwinkel</b> University of Oxford	Z-RNA and Z-DNA: Novel inducers of antiviral immunity
 <b>Prof Daniel Smith</b> University of Glasgow	Investigating the overlap between hypertension and bipolar disorder to identify new and repurposed medications for bipolar disorder

**Note:** The academic rank of each Prize winner is shown as at the date of the award.

## Current and Former Lister Institute Prize Fellows

The following have been awarded Lister Institute Research Prize Fellowships since the inception of the Prize Fellowship scheme. This is an outstanding group of scientists and represents a major contribution to the well-being of UK biomedical research:

<i>Fellow</i>	<i>Title of Research</i>	<i>Awarded</i>
<b>Dr M Madan Babu</b> MRC Laboratory of Molecular Biology, Cambridge	Dynamics of tRNA abundance and the regulation of protein expression levels	2014
<b>Dr Nina Balthasar</b> University of Bristol	Identifying the novel CREB coactivator TORC2's role in the hypothalamic pathways controlling energy homeostasis	2007
<b>Dr Oliver Billker</b> The Wellcome Trust Sanger Institute, Cambridge	In search of the xanthurenic acid receptor of malaria parasites – a potential target for transmission control	2004
<b>Dr Emmanuel Boucrot</b> University College, London	Mechanisms of cargo selection and vesicle formation in a novel pathway of endocytosis	2014
<b>Professor Nia Bryant</b> University of York	Using yeast as a model system to understand the insulin-dependent trafficking of GLUT4 in adipocytes	2004
<b>Dr Simon Bullock</b> MRC Laboratory of Molecular Biology, Cambridge	Mechanisms and neuronal functions of motor-driven transport	2008
<b>Professor Juan Burrone</b> Kings College London	The role of neuronal activity during synapse formation	2009
<b>Dr Vincenzo Costanzo</b> Cancer Research UK Clare Hall Laboratories	The role of ATM and ATR in preventing genomic instability	2006
<b>Professor Victoria Cowling</b> University of Dundee	Regulation and function of the 7-methylguanosine cap	2011
<b>Professor Daniel Davis</b> Imperial College, London	Nanotubes and synapses in immune cell communication	2005
<b>Professor Simon Draper</b> The Jenner Institute Oxford	Development of next-generation broadly-neutralising vaccines against the blood stage infection of human malarias	2013

*Continued overleaf*

<i>Fellow</i>	<i>Title of Research</i>	<i>Awarded</i>
<b>Professor Michael Eddleston</b> University of Edinburgh	Prevention of deaths from late respiratory failure in organo-phosphorus pesticide poisoning	2011
<b>Professor Sherif El-Khamisy</b> University of Sheffield	The repair of oxidative and topoisomerase induced chromosomal strand breaks and human disease	2013
<b>Professor Rebecca Fitzgerald</b> University of Cambridge	Translational research programme for prevention of oesophageal adenocarcinoma	2008
<b>Dr Agnieszka Gambus</b> University of Birmingham	Identification and characterisation of Mcm7 ubiquitin ligase	2015
<b>Dr Holger Gerhardt</b> VIB Vesalius Research Centre KU Germany	Endothelial guidance in vascular patterning	2008
<b>Professor Fiona Gribble</b> University of Cambridge	Secretion of incretin hormones from the mouse intestine	2006
<b>Professor Andrew Jackson</b> University of Edinburgh	Cellular pathways determining human brain size	2009
<b>Dr Ragnhildur Karadottir</b> Welcome Trust-MRC Cambridge Stem Cell Institute	The role of neuronal activity in myelin repair	2015
<b>Professor Josef Kittler</b> University College London	Miro family proteins as regulators of synaptic bio-energetics and a locus for mitochondrial dysfunction in neurological disease	2010
<b>Professor Robert Klose</b> University of Oxford	Biochemical isolation and functional dissection of the CpG island proteome	2011
<b>Dr David Komander</b> MRC Laboratory of Molecular Biology, Cambridge	Bacterial interference with the ubiquitin system	2012
<b>Professor Paul Lehner</b> University of Cambridge	The role of HSP70 in MHC Class 1 mediated antigen presentation in human dendritic cells	2004
<b>Professor David Lyons</b> University of Edinburgh	Elucidating mechanisms of myelinated axon formation, function and repair using zebrafish	2012
<b>Professor Juan Martin-Serrano</b> King's College London	Functional parallels between HIV-1 budding and the last step of cell division	2008
<b>Professor Robin May</b> University of Birmingham	The molecular basis of latency and dissemination during cryptococcosis	2010
<b>Dr Serge Mostowy</b> Imperial College London	Bacterial autophagy and the cytoskeleton in host defence	2015

<i>Fellow</i>	<i>Title of Research</i>	<i>Awarded</i>
<b>Dr Akhilesh Reddy</b> University of Cambridge	Peroxiredoxins and redox oscillations in the circadian (24 hour) clockwork	2012
<b>Professor Tatjana Sauka-Spengler</b> Weatherall Institute of Molecular Medicine, Oxford	Decoding gene regulatory circuits controlling multipotency of neural crest	2013
<b>Dr Melina Schuh</b> Max Planck Institute for Biophysical Chemistry, Germany	Mechanisms of aneuploidy in human oocytes	2014
<b>Professor Kenneth Smith</b> University of Cambridge	Control of infection and autoimmunity by an inhibitory Fc receptor FcγR11b	2007
<b>Professor Grant Stewart</b> University of Birmingham	Investigating the role of the RIDDLE syndrome gene in promoting repair of DNA damage	2009
<b>Dr Anne Straube</b> University of Warwick	Microtubule-actin crosstalk in cell migration	2013
<b>Professor Tomoyuki Tanaka</b> University of Dundee	Mechanisms of kinetochore-microtubule interaction	2005
<b>Dr Sarah Teichmann</b> The Wellcome Trust Sanger Institute and EMBL-EBI, Cambridge	Decoding genetic switches in T helper cell differentiation	2010
<b>Professor Chris Thompson</b> University of Manchester	Identifying and characterising genes that control cell fate choice and social behaviour	2005
<b>Professor Daan van Aalten</b> University of Dundee	Structural mechanisms and specificity of O-GlcNAc signalling in the eukaryotic cell	2006
<b>Dr Fiona Wardle</b> Kings College London	Transcriptional control of mesodermal cell differentiation in vertebrates	2007
<b>Dr Erica Watson</b> University of Cambridge	Mechanisms of folate metabolism during the trans-generational inheritance of disease	2015
<b>Professor Steven West</b> University of Exeter	The nature, mechanism and function of RNA polymerase II modifications in health and disease	2015

## Fellowship Activities

The annual meetings at Christ's College in Cambridge are always exceptionally enjoyable events and 2016, being the 125th Anniversary of Lister, more than lived up to expectations with record attendance and a real sense of 'occasion'.

As part of the 125th celebrations the meeting started on Thursday afternoon with tea followed by a series of informative and interesting talks by ex-Fellows: Professor Geoffrey L Smith, Professor Rebecca Fitzgerald, Professor David Rice and Professor Michael Eddleston. We very much missed Thursday's keynote speaker, Professor Sir Alec Jeffreys who, at the last minute, was unable to attend as a result of a surfing accident—the audience, although disappointed, could not help but be impressed by the reason for his absence!

*Professor Sir Alex Markham visited Oxford to congratulate 2016 Research Prize winner Dr Jan Rehwinkel.*



The Guinness family has supported the Institute since its inception and it made the occasion even more memorable to have three members of that family present for the meeting and private dinner on Thursday. They were: Lord Iveagh, the Hon Rory Guinness (a current Governing Body member) and Mr Edward Guinness (a Governing Body member from 1968 to 2001).

Thursday's events concluded with a poster session, which provided current Fellows with an excellent opportunity to discuss their research and any concerns with the Institute's senior scientists. The feedback from the Fellows, both past and current, was extremely positive and we will consider repeating this session in future years.

Friday's meeting followed the usual pattern with the new Prize Fellows having their baptism of fire by giving the first talks of the day. As ever, they impressed everybody by the quality of their presentations and the underlying research. The diversity of science funded by the Lister can be clearly illustrated by the titles of the talks:

<b>Dr Cynthia Andoniadou</b>	<i>Functions of pituitary stem cells in turnover and disease</i>
<b>Dr Susana Godinho</b>	<i>Paracrine mediated cell invasion by centrosome amplification</i>
<b>Prof Muzlifah Haniffa</b>	<i>Existential revolution within human mononuclear phagocytes: a case of lost identities</i>
<b>Prof Jan Rehwinkel</b>	<i>Nucleic acid sensing by innate immune receptors</i>
<b>Prof Daniel Smith</b>	<i>Investigating the overlap between mood disorders and cardiovascular disease in UK Biobank</i>
<b>Dr Steven West</b>	<i>Making and breaking RNA in human cells</i>

The standard of these talks from the latest members of the 'Lister Institute family' set the benchmark for the rest of the meeting and delegates enjoyed excellent presentations from Dr Oliver Bilker (Functional analysis of a Plasmodium genome) and Professor Christopher Thompson, (Microbial game theory: multicoloured green-beards and investment games). Both gave clear and insightful talks demonstrating the importance of fundamental research in identifying the potential causes and treatment of disease.

The 2016 Special Lister institute Lecture (Throwing some light on our genome)



Professor Muzlifah Haniffa (*front row, third from left*) with her research colleagues on the occasion of the visit to Newcastle University by Professor Sir Alex Markham and the Director, Kate Law (*both top right*)

was given by Professor Wendy Bickmore, Director of the MRC Human Genetics Unit in Edinburgh. Professor Bickmore was a Lister Fellow between 1991 and 1996 when she became fascinated by the structure and organization of chromosomes in the nucleus and went on to show that different human chromosomes have preferred positions in the nucleus, related to their gene content. She described how, despite its immense length, the linear sequence map of the human genome is an incomplete description of our genetic information. This is because information on genome function and gene regulation is also encoded in the way that the DNA sequence is folded up with proteins within chromosomes and within the nucleus. Her team's work, using a multi-disciplinary approach, tries to understand the three-dimensional folding of the genome, how this controls how our genome functions in normal development and how this may be perturbed in disease.

In accordance with tradition, delegates convened for pre-dinner drinks on the Christ's lawn with, to mark the 125th anniversary, Guinness generously provided by the Hon Rory Guinness—even the drizzle couldn't dampen the mood! The usual excellent dinner followed, with the new Prize Fellows presented with their scrolls and welcomed into the 'Lister family'.

## Conclusion

It was a pleasure and a privilege to be 'at the helm' for the 125th anniversary of the Lister Institute. The two-day meeting in Cambridge was a huge success with the additional meeting on Thursday allowing plenty of time for old and new friends and colleagues the chance to catch up on news in an informal setting. The anniversary publication, while in no way competing with the Lesley Collier book on the Lister, offers a colourful and interesting update on the history and achievements of the Institute.

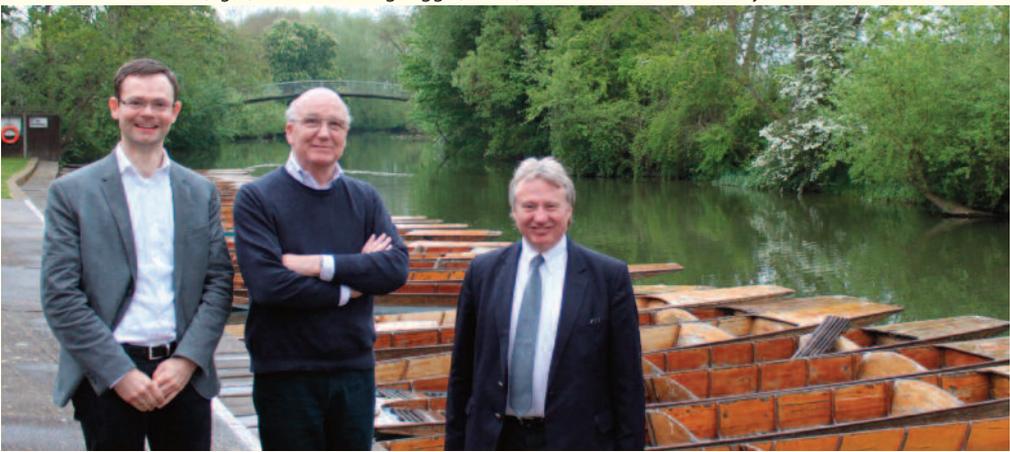
As ever, one of the highlights of the year for me has been listening to the Prize Fellows giving seminars in their own departments, hearing how the award has helped them develop their research groups and talking to other members of their departments about the research environment and funding issues. To all of those Fellows and their host institutions, Kate Law and I would like to express our thanks for their hospitality and ongoing support of the Fellows.

It is clear that the flexibility which the Fellowship gives to young group leaders to bridge positions, bring in particular expertise or obtain essential items of equipment can often be a lifeline for their laboratory whilst they battle for ever more competitive and restrictive grant funding from other agencies. We will, in future, be monitoring the impact of BREXIT on the Fellowships and on the university sector in general.

The strength of the Institute lies in the people associated with it, whether they be Trustees, Members of the Governing Body and its sub-committees, the Membership, our Fellows or the staff. To all I offer my sincere thanks.

ALEX MARKHAM  
Chairman

Prof Sir Alex Markham (*right*) with Prof Doug Higgs (*centre*) and Prof Jan Rehwinkel by the Isis at Oxford



# The 2016 Annual Fellows' Meeting at Christ's College, Cambridge



*Above:* The Hon. Rory Guinness serves a welcome glass to Professor Daniel Smith.



Dr Madan Babu



Professor Darren Monckton



Dr Anne Straube



Dr Ragnhildur Karradottir



*Left:* Lunch provided an opportunity to discuss Friday morning's talks.



*Above:* The Hon. Rory Guinness enjoys a refreshing drink with Professors Daniel Smith and David Lyons.



*Left (l-r):* 2016 Research Prize winners Dr Cynthia Andoniadou and Dr Susana Godinho receive their scrolls from Professor Sir Alex Markham at the Cambridge meeting, flanked by Professors Robin May and Jeremy Derrick.



**Prof Tatjana Sauka-Spengler**

**Professor Muzlifah Haniffa**

**Mr Michael French, Treasurer**

**Dr Stephen Inglis**

# REPORT OF THE GOVERNING BODY

for the year ended 31 December 2016

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 2016. The Financial Statements have been prepared in accordance with the accounting policies set out in Note 1 (page 31) 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 pages 3 and 4 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, unless otherwise stated, are set out on page 3.

## 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 Governing Body of whom six are appointed by the members at the annual general meeting. A maximum of six further Trustees are appointed

by the Governing Body and there are currently four such appointees. One additional member is Lord Iveagh's representative, another is Professor Sir Alec Jeffreys who was appointed to life-membership, and the final member, Professor Cheryl Tickle, 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 maximum of six years and a system of planned rotation is in place. Currently two positions are deliberately being kept vacant. 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, as 'observers', one meeting of the Governing Body. New Trustees will also be made aware of their legal obligations with regard to charity and company law. In addition, new Trustees will be advised of appropriate literature and training courses.

### ***Organisation***

The Institute is governed by its Governing Body which is responsible for setting policies, authorising actions on all significant operational issues and ensuring legality and good practice. The Governing Body meets formally twice a year.

Specific authorities are delegated to two sub-Committees in particular areas. The Scientific Advisory Committee (see page 4 for membership) has responsibility for the selection of the Lister Institute Prize Fellows and the monitoring of their scientific activities, as well as providing scientific and medical advice to the Governing

Body as required. In 2015 the peer review processes of the SAC were audited by the Association of Medical Research Charities and found to be meeting the highest standards. The Finance and Investment Committee (see page 4 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 Governing Body the annual budget, and subsequently monitors performance against it. It also advises the Governing Body, as required, on other financial and risk matters.

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

In the year ending 2016 none of the Charity's Trustees have received any remuneration or any other benefits in relation to their dealings with the Charity.

The Chairman and the Treasurer of the Charity agree the Director's remuneration that, along with other Lister Institute staff, is normally increased in line with RPI. Salaries are also compared to similar organisations and adjusted where appropriate. In 2016, the Director, instead of an increase based on RPI, received a bonus payment in recognition of the additional workload associated with the 125th anniversary activities.

### **Risk Management**

The Trustees assess the risks facing the Institute and review the effectiveness of the controls to monitor and mitigate them. A Risk Management Register 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

The specific risk of bribery associated with any of the Institute's activities has been reviewed, and clear policies and procedures have been developed and communicated to all Trustees, staff and Members.

The specific risk of scientific misconduct by Lister Fellows has been reviewed by the Trustees and, as a result, minor amendments have been made to the risk log.

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—the last review was in October 2012 and the next is planned for 2017, 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 Object of the Institute is to further understanding and progress in preventive medicine by promoting excellence in biomedical research in the UK.

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 2016 these funds stood at £41.49m.

From the 1980s the Institute has pursued its objective 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 2016 the Institute awarded five new Prize Fellowships. In addition, the Institute has continued its Summer Studentship scheme that enables up to twenty-five undergraduates per year to work with Lister Institute Fellows or former Fellows in order to gain experience of biomedical research with the hope that they might consider it as a career.

### ***Achievement and Performance***

The Scientific Advisory Committee has monitored the performance of the current 20 Lister Institute Prize Fellows, through detailed review of the annual reports on their research that include details of all publications and presentations. The Scientific Advisory Committee 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 Summer Students have also been reviewed and found to be very satisfactory.

Five Lister Institute Prize Fellowships were awarded in 2016 to Drs Cynthia Andoniadou, Susana Godinho, Muzlifah Haniffa, Jan Rehwinkel and Daniel Smith, from an initial field of 99 applicants, following extensive scientific review of their applications and final interview by the Scientific Advisory Committee. (More details of the Prize Fellows and their research are provided on page 10). Each Prize Fellowship provides £200k that may be spent over five years on the recipient's research, although the funds are provided to the host institution at the commencement of the award.

Twenty-five Summer Studentships were awarded in 2015. Each is a £2k 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.

The Institute maintained its commitment to fostering scientific interchange and collaboration within the Fellowship by holding its 32nd Annual Research Fellowship meeting at Christ's College, Cambridge. This meeting was also used to celebrate the 125th anniversary of the Lister Institute.

### ***Public Benefit***

In so far as 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 21 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 'Achieve-

ment and Performance' paragraphs above and in the list of Research Prize Fellows, together with their areas of research, on pages 10 to 13 of the Chairman's report. All Lister Institute Fellows are actively encouraged, where appropriate, to develop their research findings for potential public benefit and the Scientific Advisory Committee 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-sponsored research and there are several interactions with large pharmaceutical companies.

A prime example of the impact of research is DNA fingerprinting, which was discovered by 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.

In 2016 the Lister Institute benefitted from a share in the commercialisation of research it funded many years ago, via sales of shares in a spin-out company, TauRX, established by Professor Claude Wischik, a former Fellow (see page 8).

### **Investment policy and performance**

The Institute's investment objective is to develop and maintain its financial resources 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), which states the overall investment objective and sets the investment return objectives, the risk parameters, the performance measures and review procedures for the portfolio. The Institute's IPS was revised in the autumn of 2013 and again in 2015, as a result of the establishment of the liquidity reserve. Specific versions were also agreed for each of the investment managers to reflect their individual investment approaches. The IPSs are reviewed annually. The investment managers are informed at the beginning of the financial year of the Institute's likely cash requirements, both in terms of the amount and the timing of any draw-down, and are asked to keep in an income or cash account sufficient funds to meet them. The Institute has in place an ethical investment policy which does not permit direct investment in tobacco or tobacco-related companies.

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 three-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 three-year periods. This goal has been achieved over the most recent three-year period.

The performance of the investment portfolio is reviewed by the Finance and Investment Committee, which had two meetings in the year with the investment advisors to review performance, liquidity within the portfolio, and the due diligence undertaken on potential new investment vehicles. In addition the Institute receives detailed quarterly valuation and transaction reports. In a year that saw moderate stock market growth the fund has risen from £38.57m to £41.49m. A decision, taken in 2015, 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. A further decision was taken this year to maintain £5m in this Account, on a rolling basis, to be reviewed annually. This decision will ensure that five Prize fellowships can be awarded for at least five years from 2016.

More details of the Institute's activities are set out in the Chairman's Report on pages 5 to 17.

## 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 provision payments, administrative expenditure and expenditure in furtherance of the Charity's objectives. The total return on investments for the year was realised/unrealised gains of £3.633m and investment income of £686k.

The resources expended totalled £1.291m of which £1.060m 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 2016, due to the substantial increase in the value of the investment portfolio and good returns, the Trustees felt able to, once again, award five Prizes and to maintain their value at £200k each. The Summer Studentship scheme at a total cost of £50k can be reviewed each year with regard to both number and value. Twenty-five were funded this year. As previously described, a £5m portfolio has been established to ensure that the number and level of awards is sustainable over a minimum of five years.

Payments are currently made to five pensioners who are previous employees of the Lister Institute.

### *Reserves policy*

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 (£41.49m in 2016) and the continuing appropriateness of the policy are reviewed on an annual basis by the Trustees. As the current level of investments now exceeds that of 2015, they feel satisfied with the policy over the long-term and, given that the Institute is not formally committed to awarding any Prizes beyond the current year, are confident in the ability of the Institute to maintain appropriate levels of activity in the short-term.

### *Plans for the future*

The Institute's future policy is to continue to pursue its current objectives. It will therefore maintain the Prize Fellowship scheme, which it sees as a funding priority. The Summer Studentship scheme will also be maintained together with the opportunity for schools to receive talks from the Institute's Fellowship on science and biomedical subjects as part of an 'outreach' programme.

**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.

By Order of the Governing Body

SIR ALEX F MARKHAM  
Chairman

MR MICHAEL FRENCH  
Treasurer

28 April 2017

# INDEPENDENT AUDITOR'S REPORT

to the members of the Lister Institute of Preventive Medicine

We have audited the financial statements of The Lister Institute of Preventive Medicine for the year ended 31 December 2016 which comprise the Statement of Financial Activities, the Balance Sheet, the Cash Flow Statement and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) including FRS102: 'The Financial Reporting Standard Applicable in the UK and Ireland'.

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.

## ***Respective responsibilities of Trustees and Auditor***

As explained more fully in the Trustees' Responsibilities Statement, the Trustees (who are also the directors of the charitable company for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's (APB's) Ethical Standards for Auditors.

## ***Scope of the audit of the financial statements***

An audit involves obtaining evidence about

the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material mis-statement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the charitable company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Trustees; and the overall presentation of the financial statements. In addition we read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements, and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material mis-statements or inconsistencies we consider the implications for our report.

## ***Opinion on financial statements***

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 2016 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.

## ***Opinion on other matters prescribed by the Companies Act 2006***

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

- the information given in the 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 charitable company and its environment obtained in the course of the audit, we have not identified material mis-statements 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.

Nicholas Brooks (Senior Statutory Auditor)  
for and on behalf of Kingston Smith LLP,  
*Statutory Auditor*

Devonshire House  
60 Goswell Road  
London  
EC1M 7AD

28 April 2017

# STATEMENT OF FINANCIAL ACTIVITIES

for the year ended 31 December 2016

	Notes	2016	2015
		£'000	£'000
<b>Income from</b>			
Investments	2	686	730
Other	3	103	9
<b>Total income</b>		<b>789</b>	<b>739</b>
<b>Expenditure on</b>			
Costs of raising funds:			
Investment management costs	4	(231)	(238)
Charitable Activities:			
Prizes & Summer Studentships	6	(1,060)	(1,224)
<b>Total expenditure</b>		<b>(1,291)</b>	<b>(1,462)</b>
Net gains on investment	9	3,633	920
<b>Net income</b>		<b>3,131</b>	<b>197</b>
Other recognised gains/(losses) :			
Actuarial losses on defined benefit schemes	13	(9)	(11)
Net movement in funds		3,122	186
Reconciliation of funds:			
Total funds brought forward		38,524	38,338
<b>Total funds carried forward</b>		<b>41,646</b>	<b>38,524</b>
<p>All items in the above Statement of Financial Activities relate to continuing operations for both years. The Institute has no other recognised gains and losses other than as stated above and hence no separate income and expenditure statement has been shown.</p>			
<p>The Notes set out on pages 31 to 38 form part of these financial statements.</p>			

# BALANCE SHEET

as at 31 December 2016

Company no. 34479

	Notes	2016 £'000	2015 £'000
<i>Fixed assets</i>			
Investments	9	41,492	38,568
<b>Total fixed assets</b>		<b>41,492</b>	<b>38,568</b>
<i>Current assets</i>			
Debtors	10	193	10
Cash at bank and in hand	11	193	155
<b>Total current assets</b>		<b>386</b>	<b>165</b>
<i>Current liabilities</i>			
Creditors: amounts falling due within one year	12	(64)	(32)
<b>Net current assets</b>		<b>322</b>	<b>133</b>
<b>Total assets less current liabilities</b>		<b>41,814</b>	<b>38,701</b>
Creditors: amounts falling due after more than one year			
Pension provision	13	(168)	(177)
<b>Net assets</b>		<b>41,646</b>	<b>38,524</b>
<i>Represented by</i>			
Restricted funds		-	-
Unrestricted funds	14	41,646	38,524
<b>Total charity funds</b>		<b>41,646</b>	<b>38,524</b>

The Trustees have taken advantage of the exemptions conferred by the Companies Act 2006, on the grounds that the Institute is entitled to the benefit of those exemptions as a small company.

These financial statements were approved by the Governing Body on 28 April 2017.

ALEX F MARKHAM | Members of the  
MICHAEL FRENCH | Governing Body

The Notes set out on pages 31 to 38 form part of these financial statements.

# CASH FLOW STATEMENT

as at 31 December 2016

	2016	2015
	£'000	£'000
<b><i>Cash flow/(outflow) from operating activities</i></b>		
Net cash (used in)/provided by operating activities	(1,348)	(1,653)
<b><i>Cash flows from investing activities</i></b>		
Investment income	686	730
Interest paid	(9)	(11)
Proceeds from disposal of fixed asset investments		
excluding endowment funds	7,165	14,534
Acquisition of fixed asset investments excluding endowment funds	(6,154)	(17,556)
Other movements on investments	(302)	2,670
	38	(1,286)
Net increase/(decrease) in cash and cash equivalents	38	(1,286)
Cash and cash equivalents at beginning of year	155	1,441
<b>Cash and cash equivalents at end of year</b>	<b>193</b>	<b>155</b>
	2016	2015
	£'000	£'000
<b><i>Reconciliation of net income/(expenditure) to net cash flow from operating activities</i></b>		
<b>Net income</b>	<b>3,131</b>	<b>197</b>
<b><i>Adjustments for:</i></b>		
Net (gains)/losses on investments	(3,633)	(920)
Investment income	(686)	(730)
(Increase)/decrease in debtors	(183)	38
Increase/(decrease) in creditors	32	(231)
(Decrease)/increase in pensions	(9)	(7)
<b>Net cash (used in)/provided by operating activities</b>	<b>(1,348)</b>	<b>(1,653)</b>
The Notes set out on pages 31 to 38 form part of these financial statements.		

# NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 December 2016

## 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 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 Scientific Advisory Committee 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.

### ***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.

*Note 1 continues overleaf*

## 1 PRINCIPAL ACCOUNTING POLICIES continued

### **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 13 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. After making enquiries, the Trustees have concluded 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 elected to apply the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS102 to all of its financial instruments. Financial instruments are recognised in the company's balance sheet when the company becomes party to the contractual provisions of the instrument. Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

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 10 and 12 for the debtor and creditor notes.

### **Fund accounting**

Restricted funds are funds available subject to specific restrictions imposed by donors. Unrestricted funds are available for use at the discretion of the Trustees in furtherance of the general objectives of the Foundation.

<b>2 INVESTMENT INCOME</b>		
	2016	2015
	£'000	£'000
Income from fixed asset investments	686	726
Bank interest receivable	-	4
	<b>686</b>	<b>730</b>

<b>3 OTHER INCOME</b>		
	2016	2015
	£'000	£'000
Royalty income	94	9
Donations	9	-
	<b>103</b>	<b>9</b>

Royalty income is earned from Cancer Research Technology as a result of Revenue sharing related to Mammalian Cell research studies £9k (2015: £9k) and MRC from sale of shares in TauRX £85k (2015: nil).

Donations were received in the year from The Wellcome Foundation £8k (2015:nil) and The Launchtillly Charitable Foundation £1k (2015: nil) the use of which was restricted to supporting the costs of the 125th anniversary event in Cambridge, (Note 14).

Immaterial restricted income, as noted above, is not shown separately on the Statement of Financial Activities on page 28.

<b>4 INVESTMENT MANAGEMENT COSTS</b>		
	2016	2015
	£'000	£'000
Partners Capital LLP	121	141
Cazenove Capital Management	110	97
Total investment management fees	<b>231</b>	<b>238</b>

Investment management fees referred to here are those accrued fees relating to the management of the Institute's investment portfolios in 2016.

**5 GOVERNING BODY AND STAFF COSTS****Emoluments of members of the Governing Body**

No member of the Governing Body received any emoluments in respect of services to the Institute during the year (2015: nil). Travel expenses of £1,897 were paid relating to the claims of nine members in connection with their attendance at meetings (2015: £1,358, six members).

Members of the Governing Body who are also members of the Scientific Advisory Committee receive remuneration in relation to their services to the committee. An honorarium of £1,500 (2015: £1,500) was paid to one of the members, the remainder all received £1,000 (2015: £1,000)

**Employee information**

The average number of persons employed by the Institute during the year was three (2015: four), two of whom are part-time (2015: three). All staff were employed in an administrative and support capacity. No employees earn over £60k p.a. (2015: nil).

Key management personnel include the Trustees and the Director. In 2015 the Director-designate was also included. The total employee benefits of the charity's key management personnel were £46,500 (2015: £61,880).

**Staff costs**

	2016	2015
	£'000	£'000
Gross salaries	85	97
Pension contributions	3	3
Employer's national insurance	6	6
	94	106

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

**6 PRIZES & SUMMER STUDENTSHIPS**

	2016	2015
	£'000	£'000
Prize awards	817	1,000
Summer Studentship payments	50	50
Support costs (see Note 7)	79	50
Salaries (see Note 5)	82	93
Governance costs (see Note 8)	32	31
	1,060	1,224

**7 SUPPORT COSTS**

	2016	2015
	£'000	£'000
Office expenses	12	10
Travel expenses	4	4
Professional fees	4	4
Honoraria and events	50	23
Pension costs (see Note 13)	9	9
	79	50

These costs are all considered to be costs to support resources expended on charitable activities. For 2016 Honoraria and events includes gross expenditure for the 125th anniversary in Cambridge which is partly expenditure relating to restricted funds as disclosed in Note 14. Immaterial restricted expenditure as stated above is not shown separately on the Statement of Financial Activities on page 28.

**8 GOVERNANCE COSTS**

	2016	2015
	£'000	£'000
Auditors' remuneration	11	10
Staff costs (see Note 5)	13	13
Honoraria and events	8	8
	32	31

No non-audit services were provided by the auditors during the year (2015: none). Auditor's remuneration includes irrecoverable VAT.

**9 INVESTMENTS**

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

	2016	2015
	£'000	£'000
Market value at beginning of year	38,568	37,296
Purchases during the year at cost	6,151	17,556
Proceeds of sales during the year	(7,162)	(14,534)
Reinvested income for the year	550	557
Movement in un-invested cash	952	(3,127)
Cash withdrawn	(1,200)	(100)
Net change in market value	3,633	920
Market value at year-end	41,492	38,568

*Note 9 continues overleaf*

**9 INVESTMENTS continued**

The portfolio's asset allocation was as follows:

	2016	2015
	£'000	£'000
<i>UK investments</i>		
Equities	8,200	6,584
Fixed interest	5,043	4,977
Other (including private equity, property, commodities, alternatives and inflation-linked bonds)	7,723	7,191
Cash	813	681
<b>Total UK investments</b>	<b>21,779</b>	<b>19,433</b>
<i>Non-UK investments</i>		
Equities	8,322	8,323
Other (including private equity, property, commodities and alternatives)	11,017	10,639
Cash	374	173
<b>Total non-UK investments</b>	<b>19,713</b>	<b>19,135</b>
<b>Total</b>	<b>41,492</b>	<b>38,568</b>

At 31 December 2016 no single shareholding exceeded 5% of the total value of investments (2015: none). Historical cost related to the closing position of 2016 was £31.1m (2015: £30.7m).

**10 DEBTORS**

	2016	2015
	£'000	£'000
Prepayments	1	1
Accrued income	9	9
Other debtors	183	-
<b>Total</b>	<b>193</b>	<b>10</b>

**11 CASH**

	2016	2015
	£'000	£'000
Cash at bank	193	155

**12 CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR**

	2016	2015
	£'000	£'000
Taxation and social security	4	4
Accruals	60	28
<b>Total creditors falling due within one year</b>	<b>64</b>	<b>32</b>

**13 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:

	2016	2015
	£'000	£'000
Liability at beginning of period	177	184
Plus interest cost	9	9
Plus actuarial gains and losses	9	11
Benefits paid	(27)	(27)
<b>Liability at end of period</b>	<b>168</b>	<b>177</b>

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

*Principal actuarial assumptions*

Valuation at 31 December 2016	2016	2015
Rate of increase to pensions in payment	3.0%	3.0%
Rate used to discount scheme liabilities	5.0%	5.0%

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

<b>14 RESTRICTED FUNDS</b>				
	At 01.01.16	Income	Expenditure	At 31.12.16
	£'000	£'000	£'000	£'000
Restricted Funds	-			
The Wellcome Foundation	-	8	8	-
The Lauchentilly Charitable Foundation	-	1	1	-
	-	9	9	-

These restrictive funds were in respect of 2 donations detailed in Note 3 that were specifically given as contributions towards the Lister Institute’s 125th anniversary event in Cambridge in September 2016 (2015: nil).

**15 RELATED PARTY TRANSACTIONS**

There were no related party transactions in the year (2015: none) other than disclosed.

