

# Annual Report

Volume XXIX 30th Anniversary Year

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# Welcome to the Isaac Newton Trust's twenty-ninth Annual Report.

This year, we celebrated the 30th anniversary of the founding of the Trust, and the first meeting of Trustees on 22 November 1988, with a drinks reception in the Master's Lodge attended by past and present Trustees and staff. This milestone has provided an excellent opportunity to pause and reflect on the Trust's activities over 30 years in channelling the generosity of Trinity College into the University's research, learning and education. The data (p. 7) show how the Trust has quietly and steadily provided support for research projects across the University, as well as making major interventions to enable splashier strategic projects that offer considerable long-term benefit to the University. The narrative also shows how the emphasis has shifted over the years between student bursaries towards primarily supporting postdoctoral research.

This is also a year in which Trustees have been watching the progress of our income and expenditure and its effects on our investments particularly closely. As a result of a Strategic Review in 2015, Trustees recognised that the level of accumulated unspent income was considerably higher than could be justified by the Trust's founding purpose: to make the very best use of Trinity's generous donations to the greatest good in the University. It was agreed to mobilise a portion of our reserves in support of larger research projects, the aim being to reduce our investments to a level at which our forward commitments could be honoured with a small contingency to allow the Trustees to respond to an unmissable opportunity to secure a major new project for the University.

This decision led to the establishment of our 'Strategic Grants' programme, which has been a great success and has been much appreciated by the University as a means of enabling large institutional, often interdisciplinary, projects of strategic value, and, in some cases, securing major external donations.

The main feature of our Accounts for 2018-19 is that our investments have now been reduced to a level at which they just cover our forward commitments (see Figure 7). This will inevitably mean that we will be changing our approach to grant-giving from 2019-20 onwards. The Trustees have agreed to undertake a major Strategic Review during the summer of 2019, the results of which will guide their budgeting and decision-making.

On a personal note, Trustees are thrilled to note that two recent Nobel Prizes are closely associated with the Trust. Sir Gregory Winter, who was awarded the 2018 Nobel Prize in Chemistry, has recently stepped down as a Trustee in advance of the end of his tenure as Master of Trinity; we will all miss his forensic analysis of applications and inimitable style of lively discussion. Trustees are also delighted to note that Professor Didier Queloz has been awarded the 2019 Nobel Prize for Physics for the first confirmation of an exoplanet; the Isaac Newton Trust provided financial support of Professor Queloz's recruitment to Cambridge in 2013. Very many congratulations to both!

If you have any questions or comments about this Report, please do not hesitate to contact me.

**Dr Laurie Friday** 

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Director



# **Patron**

H.R.H. The Prince of Wales

# **Trustees**

Professor Lord Robert Mair (Chairman)
Professor Sir David Baulcombe (Trinity Trustee)
Professor Jeremy Baumberg
Professor Sarah Colvin
Professor Gerard Evan
Professor Frank Kelly
Professor Rae Langton (from 2 July 2018)
Professor John Marenbon (Trinity Trustee from 4 May 2019)
Professor Richard Smith
Professor Dame Marilyn Strathern
Professor Dame Jean Thomas
Sir Gregory Winter (to 29 November 2018)

# **Officers & Staff**

Dr Laurie Friday (Director)
Mr Donald Hearn (Treasurer)
Dr Nichola Tooke (Senior Administrator)
Ms Janet Sparrow (Research Administrator)

# **Aims & Objectives of the Trust**

'To promote education, learning and research in the University of Cambridge.'

The Isaac Newton Trust is regulated by the Office for Students, claiming exemption under the Charities Act 2011 through its connection to the University of Cambridge.

The Postdoc Centre 105 Eddington Place Cambridge CB3 1AS

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# **DIRECTOR'S REPORT**

# The Trust's Funding Activities 2018-2019

Our headline figures for 2018-19 (p. 29) reveal that the Trust continues to spend more than it receives and that we are inevitably drawing down our reserves. This is in accordance with the Trustees' agreed policy to mobilise a portion of our reserves in support of larger research projects. A Strategic Review is being conducted at the end of this financial year to draw up a strategy for expenditure in future years (see p. 9).

In deciding who and what to fund, and to what extent, the Trustees continue to hold to the following general principles:

- · to promote excellence in research and scholarship;
- · to respond flexibly to emerging needs;
- to prefer to help new projects get off the ground, committing to projects for no more than 5 years, and reviewing existing projects at intervals;
- to prioritise early career researchers, helping to nurture and grow the University's intellectual capital;
- to assist the University to secure or attract matching funding from outside sources wherever possible.

# Summary of new grants awarded 2018-19

In brief, Trustees have approved:

- £2.1m for Research Grants
- £1.9m for Early Career Fellowships
- £0.14m for College Teaching Officers' research
- **£1.5m** set aside for postgraduate studentships over the next 7 years and renewal of our commitments to research support jointly with the Schools to 2021.

The following new awards have been made:

- 41 Research Grants
- 5 Strategic Grants
- **55** Research Grants through our partnerships with the Schools
- **22** Leverhulme Early Career Fellowships, for admission in 2019-20
- 3 Newton/College Junior Research Fellowships, for admission in 2019-20
- **5** College Teaching Officer Research Leave grants for 2019-20
- **59** MPhil bursaries jointly with the Colleges

Full details of all these grants will be found in pages 10 to 28.

I would like to begin a detailed analysis by setting these figures in the context of a retrospective survey of the Trust's activities over 30 years, and then to move on to some thoughts on how the Trust might proceed from here.



# Thirty years of the Isaac Newton Trust

#### **The Founding Trustees**

The inaugural meeting of the Trust was held on 22 November 1988, in the Master's study in Trinity College. His Royal Highness, The Prince of Wales, was in the chair. The Master (Sir Andrew Huxley), the Vice-Master (Professor Gareth Jones), the Senior Bursar (Dr (later Sir) John Bradfield), Sir Robin Ibbs, Professor (later Lord) Alec Broers, Dr Stephen Fleet and Dr Anil Seal were present as the founding Trustees. Dr Seal was appointed the founding Director and Dr Bradfield was appointed Treasurer.

#### Major grants and projects

Major projects have been a feature from the very beginning of the Trust. These include the endowment of major centres and new buildings that have made a considerable impact on the academic life of the University. Prior to 2000, major grants were mostly funded through exceptional Special Donations from Trinity for defined purposes:

#### 1988-91

Isaac Newton Institute for Mathematical Sciences £1m
University Library extension £0.5m
Interdisciplinary Research Centres
University new appointments (c 50 pa)
Undergraduate Bursaries set up with Colleges
A programme of Grants to Faculties for new appointments began

## 1992-3

Graduate Bursary scheme

1995-97 building projects: Mathematics, Divinity, Criminology, the Raised Faculty Buildings, Biochemistry, Genetics, Plant Sciences, Chemistry, Engineering, Computer Lab, DAMTP.

Isaac Newton Institute: further contribution to the endowment of £1m

#### 2000-01

Centre for Research in the Arts, Social Sciences & Humanities (CRASSH) £1m

#### 2006-7

CRASSH £0.75m;

Leverhulme Early Career Fellowships c £1m p.a.

#### 2009-10

CRASSH £0.75m;

Joint Schools Grants with the Humanities & Social Sciences £0.1m p.a.

#### 2016-17

Strategic Grants £2.6m

## 2017-18

Strategic Grants £1.9m



# **Research Grants**

The Trust's archive records the details of thousands of applications, in all subject areas, to the Trust for relatively small (by Research Council standards) sums of money that would make all the difference between a research project getting under way and failing to get off the ground, or might sustain a researcher whose skills had been honed in Cambridge and had proved invaluable to the University, while waiting for the outcome of a major grant application.

Over thirty years, more than 1,300 Research Grants have been awarded at a cumulative cost of £70million:

Figure 1a: cumulative number of research grants awarded by INT 1988-2018\*

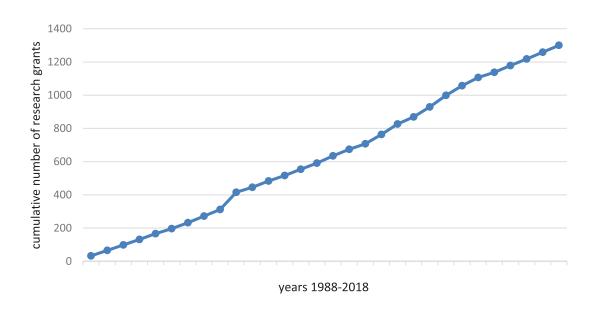
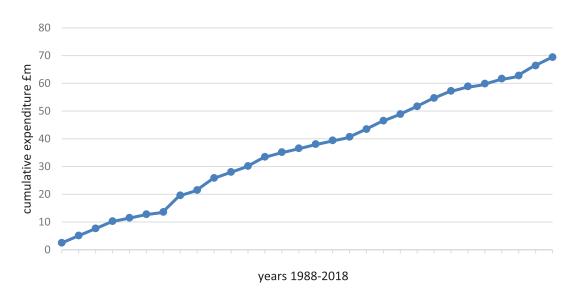


Figure 1b: cumulative commitment to research grants by INT 1988-2018\*



<sup>\*</sup>These figures do not include Fellowships, College posts, or student support.

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## **Student Bursaries**

For many people, the Isaac Newton Trust has been synonymous with the Student Bursary Scheme. From the outset, the Trustees developed their own initiatives to support the University's programme of education, learning & research. One of the two initiatives adopted in 1990 was the setting up of a Student Bursary scheme for undergraduates in response to the government's freezing of student grants and, later, the introduction of 'top-up' loans.

Newton Bursaries were created to attract and enable the best candidates to come to Cambridge and widen the field from which they are drawn. The original intention was to create 300 three-year bursaries at up to £300 per annum for undergraduates (plus 100 graduate awards) at a total cost of £600,000 at steady state. These would be jointly funded with the Colleges and external sponsors would be sought. A pilot scheme of 150 awards ran in 1990-91.

The full scheme began in October 1992, with the Trust providing £225,000 per year. A number of corporate and private donors, including a number of individual Trinity alumni, were brought into the scheme over the next few years.

By 1997, however, it was evident that wider and more ambitious provision would be needed, and discussions in the University mooted the possibility of the Newton Bursaries providing a 'shell' for such a programme. It was recognised that further large recurrent donations from Trinity would be needed to put in place an effective scheme and in 1999, a Newton Bursaries Endowment Fund was created to receive Special Donations for this purpose from Trinity.

The Higher Education Act 2004 prepared the way for 'top-up' fees to be introduced from 2006. The cost of bursaries increased substantially at that point, up to £7m pa at steady state, and this was met largely by contributions from the University, the INT and the Colleges. The University and the Colleges made student bursaries a major theme of the University's 800th Anniversary campaign, and the funds raised were directed via the Trust as the central administrator.

By 2013, these bursaries had become recognised by the University as a legitimate charge on fee income, so the contribution from the Trust's own funding stream from Trinity could be replaced. The Trust's contribution fell to 10% in 2014-15 and then ceased in 2016. It was agreed that the Trust's dedicated Bursaries Endowment Fund should be run down and the residue made available for a new Masters Bursaries scheme, the costs of which would be shared with Colleges.

The Trustees expressed satisfaction that 'the funding of undergraduate bursaries, originally such a major part of the Trust's work, has been put on a more secure basis and taken over by the University and Colleges...' and the administration of the scheme was finally handed over to the central offices of the University in 2015 (see: https://www.cambridgestudents.cam.ac.uk/cambridgebursary).

The Student Bursary scheme now makes more than 3,000 awards of up to £3,500, totalling more than £7.9million per annum, and has become a central pillar of the University's student recruitment, accessibility and support strategy.



# Planning for the Future: strategic review 2019

Since their Strategic Review of 2015, the Trustees have pursued a policy of ensuring that Trinity's donations are used to their full potential. Over the past three years, this has entailed drawing down our considerable reserves. While the return on these investments has been an important component of our annual income (up to 25%), accumulation of unspent donations is not appropriate to the Trust's charitable objectives. Trustees agreed that they should systematically mobilise a proportion of these reserves to enable larger, 'strategic' projects across a wide range of subjects.

As a result, Trustees agreed for the fourth year running expenditure well above the level of our income (see p 29): more than £5 million was committed in 2018-19, whereas our income has remained static over the past three years at about £2m, of which £1.5m is donated annually by Trinity. In order to keep pace with these extra commitments, the Trust has withdrawn from its investments held in the Cambridge University Endowment Fund (CUEF) at a rate of up to £4m per annum.

The end of this financial year marks the point at which our investments will fall to a level at which, if all income were to cease, our current forward commitments could be honoured in full, but there would be little scope for responding to compelling new developments (see Figure 7).

Trinity College is committed to funding the Trust for the next three years, donating £1.5m per annum, so the Trustees are in a position to forecast our income and expenditure and to model the effect of these on our remaining resources under different assumptions of new funding activity.

In order to make realistic plans under these models, Trustees will:

- model our income and expenditure under different assumptions of grant-making activity;
- · forecast the effect of these on our remaining resources;
- · agree on an overall budget for the next three years;
- review each of the current funding programmes;
- consider whether or not other sources of funding should be sought;
- decide which programmes to prioritise; and
- plan for how the budget should be managed across the financial year.

Following the review in July-September 2019, some of the results will be reported in this Annual Report, while others will be more appropriately reported in the following financial year. It is evident that the review will have a significant impact on the Trustee's spending strategy for 2019-20, not least through the setting of budgets for specific areas of expenditure and reorganising the cycle of applications and awards.



# **AWARDS MADE IN 2018-19**

# RESEARCH GRANTS

Trustees committed £2.1m to new Research Grants in 2018-19 (see Fig. 2) (£3.0m in 2017-18; £3.6m in 2016-17; £1.0m in 2015-16; £1.2m in 2014-15).

# Isaac Newton Research Grants (RGS)

Three categories of grants were awarded in three termly rounds per annum:

- Emergency Grants: up to £30k over 12 months: for bridging salary costs, short periods of underwriting, or start-up grants;
- Project Grants: up to £60k over three years: for initial partner funding for new research projects, grants for unconventional, innovative forms of research and scholarship;
- Equipment Grants: awards or loans of up to about £50k each for exceptional requests for a key research item, to be funded in partnership with other University institutions, or for costs associated with use of shared facilities

INT Research Grants are awarded to Departments and other University institutions, across the full range of subjects, normally for the support of a specific project under the leadership of a named Principal Investigator (PI). Particular attention is given to the qualities of the research project, on which we seek advice from external and internal referees, but consideration is also given to the likely benefits of a grant to the Department, the PI, and/or early career researchers involved. Decisions are made by the Trustees in round-table discussions at meetings held three times a year.

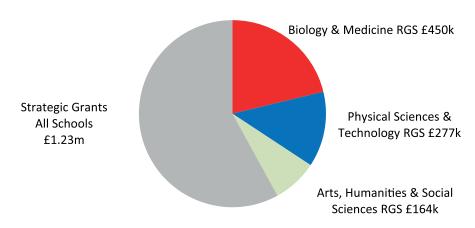
While most grants are contributions to support the salary of a Research Associate, often near the start of his or her post-doctoral career, over the past three years there has been increasing demand for funds for new equipment and for consumables.

## **Strategic Research Programmes & Projects**

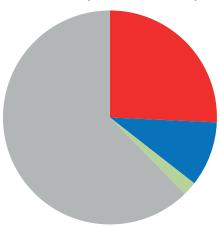
These major grants were again managed by a single annual call for preliminary applications in Michaelmas Term. Selected bids were invited to submit a full application in Lent Term. Applications are channelled through Chairs of the Schools or, in the case of interdisciplinary bids, a Pro-Vice Chancellor and may bid for up to £1m over five years for a large, institutional programme of strategic value to the University for the promotion of education or research.

Figure 2: New research grants awarded 2018-19, with 2017-18 and 2016-17 for comparison

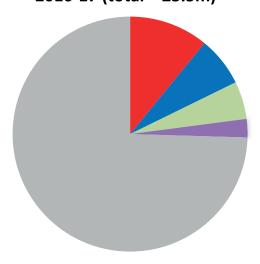
# 2018-19 (total £2.1m)



# 2017-18 (total = £3.1m)



# 2016-17 (total = £3.5m)



<sup>\*</sup>These figures do not include Fellowships, College posts, or student support.



Over the year, 68 applications (73 in 2017-18; 61 in 2016-17; 55 in 2015-16; 69 in 2014-15; 55 in 2013-14), were received across all Schools and institutions of which ten were for the purchase of major items of equipment and eleven were for Strategic Projects.

Forty-three new awards were made, five fewer than last year.

The success rate across all Schools and categories of grant was 64% (67% in 2017-18; 66% in 2016-17; 72% in 2015-16; 58% in 2014-15; 66% in 2013-14).

Trustees do not currently limit the number of applications for Research Grants that they are willing to consider from any given School or from any particular department or faculty. There is, however, a persistent pattern of marked differences between the numbers of applications received from the University's constituent institutions (see Fig. 3). This reflects to a large extent the prevalent modes of research in different Schools: in Biological Sciences, as in most STEM subjects, the norm is a research group including a number of postdoctoral workers.

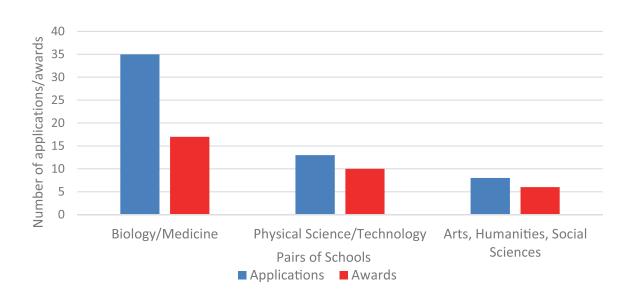


Figure 3: Research Grants 2018-19\*: numbers of applications and awards, by Schools

The frequency distributions of grant duration (Fig. 4a) and value (Fig. 4b) reflect the establishment of distinct types of Research Grant award that began in 2015-16: there is strong demand for small (<£20k), short (up to one year) 'Emergency Grants'. These have proved exceptionally useful in carrying key postdoctoral workers through the end of a grant to the start of the next, and also to ensure that the impetus achieved during a pilot project can be carried through an application to an external funding body for a major project grant. That they are very much appreciated by the recipients is evident from the feedback we receive in Final Reports (see p. 17).

<sup>\*</sup>includes Equipment Grants, but not Strategic Grants

Figure 4a: Research Grants 2018-19\*: duration of awards, compared to past three years

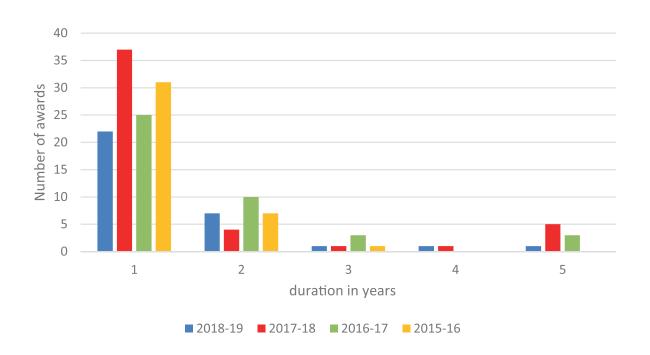
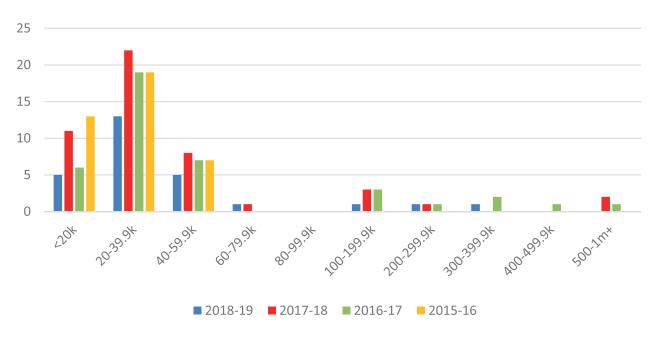


Figure 4b: Research Grants 2018-19\*: value of awards, compared to last three years



<sup>\*</sup>includes Strategic Grants but not Equipment



# Isaac Newton Trust Research Grants awarded in 2018-19

# Schools of Arts, Humanities and Social Sciences

#### Asian and Middle Eastern Studies (Professor Barak Kushner)

Charting the Geography of Power Eighteen-month grant in part-support of a Research Associate.

#### **Classics** (Professor Martin Millett)

Aldborough (Isurium Brigantum): the origins of Roman urbanism in northern Britain Underwriting over six months for the salary costs of a Research Associate.

#### **Education** (Dr Jennifer Gibson)

Automated risk screening for childhood speech disorders

One-year grant for the salary costs of a Research Associate, and towards investigator and web application development costs.

#### Fitzwilliam Museum (Dr Victoria Avery)

Sculpture Matters: the Fitzwilliam Museum Renaissance and Baroque sculpture cataloguing project Eleven-month grant in part-support of a Research Associate.

# Social Anthropology (Dr David Sneath)

Analysing visual anthropological data on the Kalmyks in Russia Six-month grant towards the salary costs of a Research Associate.

#### **Theoretical and Applied Linguistics** (Dr Barbara McGillivray)

Latin corpora and computational tools: state of the art and future directions Seven-week grant in part-support of a Research Associate.

# **Schools of Physical Sciences and Technology**

# **Applied Mathematics and Theoretical Physics** (Dr Nathalie Vriend)

Nonlocal rheology tests in intermediate flows Eight-month grant towards salary costs.

#### Earth Sciences (Dr John Maclennan)

Crystal chronometers of rising magma

Six-month grant in part-support of a Research Associate.

#### **Engineering** (Dr Michael de Volder)

Carbon nanotube emitters for space propulsion

Ten-month grant for the salary costs of a Research Associate, cleanroom access and processing costs.

# **Geography** (Professor Robert Bennett)

Business proprietor succession and firm size change 1851-1881

Five-month grant towards Research Associate salary costs.



#### **Geography and History** (Dr Alice Reid)

Cambridge Group for the History of Population and Social Structure (CAMPOP) Underwriting over one year towards the salary costs of three members of staff.

#### Materials Science and Metallurgy (Professor Judith Driscoll)

New concept in multi-state high density memory A grant over twenty months towards equipment access costs.

#### Materials Science and Metallurgy (Dr Robert Hoye)

Instilling defect tolerance in solar absorbers (INSTIL) Three-year grant towards facilities access.

#### Materials Science and Metallurgy (Dr Sohini Kar-Narayan)

Printed sensors for implantable rings in heart valves Six-month grant in support of a Research Associate.

#### **Physics** (Dr Malte Grosche)

Metallic magnetocalorics for cryogenic refrigeration A grant towards the purchase of an arc furnace and glove box.

#### Physics (Dr Alpha Lee)

Rational discovery of novel thermoelectrics by active machine learning Two-year grant in part-support of a Research Associate.

## **Physics** (Dr Suchitra Sebastian)

Tuning a Fermi surface between insulating and metallic regimes Two-year grant towards the salary costs of a Research Associate, consumable and travel costs.

# **Schools of Biology and Clinical Medicine**

#### **Biochemistry** (Dr Antony Jackson and Professor Christopher Huang)

The combined Nav1.7/β3 subunit oligomeric complex as a target for novel venom toxins in pain research Seven-month grant in part-support of a Research Associate.

#### **Clinical Neurosciences** (Dr Stefano Pluchino)

In vivo characterisation and manipulation of succinate-dependent injury in chronic neuroinflammation One-year grant towards research expenses.

#### **Clinical Neurosciences** (Professor Christopher Rodgers)

Metabolic 7T magnetic resonance imaging in Cambridge

A grant towards the purchase of a Siemens 'multinuclear package' for MAGNETOM Terra.

#### **Genetics** (Dr Christopher Illingworth)

Evolution of influenza virus in immunosuppressed human hosts

Partial underwriting over six months towards the salary costs of a Senior Research Associate.

## **Gurdon Institute** (Dr Jennifer Gallop)

Targeting defective endocytosis in Lowe syndrome

Partial underwriting over six months in part-support a Research Associate.



#### Medicine (Dr Xuan Li)

A study of the role of Mark4 in regulating cardiomyoctye contraction A grant towards the purchase of an IonOptix full calcium and contractility system.

#### **Pathology** (Dr Betty Ying-Wen Chung)

Protein synthesis during host-pathogen interaction

Two-year grant towards the salary costs of a computational biology Research Associate.

# **Pathology** (Dr Nerea Irigoyen)

Understanding the regulation of Zika virus genome translation

One-year grant towards small equipment and consumables.

## **Physiology, Development and Neuroscience** (Dr Thorsten Boroviak)

Tracing primate implantation by spatial single-cell transcriptional and epigenetic profiling

Two-year grant in part-support of a Research Associate.

## **Physiology, Development and Neuroscience** (Professor Nick Brown)

Imaging integrin signalling

Six-month grant towards the salary costs of a Research Associate.

#### **Physiology, Development and Neuroscience** (Dr Amanda Sferruzzi-Perri)

Identifying placental hormones that determine maternal nutrient allocation to fetal growth

Ten-month grant in part-support of a Research Associate.

## Physiology, Development and Neuroscience (Dr Margherita Turco)

Generation of an in vitro model of the maternal-fetal interface of human pregnancy

Partial underwriting over one year towards the salary costs of a Research Associate.

## **Plant Sciences** (Dr Sebastien Andreuzza)

Optimizing nuclei affinity capture for plant meiosis

Six-month grant in support of a Research Associate.

#### Psychology (Dr Lucy Cheke)

Bringing Cambridge Neuroscience back to the cutting edge with Transcranial magnetic stimulation (TMS)

A grant towards the purchase of a DuoMag XT-100 rTMS system and a Brainsight TMS Navigation set-up.

#### **Psychology** (Professor Mark Johnson)

Embodied attention and learning: reconceptualising early developmental processes using head-mounted eyetracking

Two-year grant towards the purchase of a head-mounted eye-tracking set-up and related research expenses.

### **Veterinary Medicine** (Dr Mark Holmes)

Refining traditional bacterial culture methodologies for low-resource communities using low-cost optical hardware

Two-year grant towards the salary costs of a Research Associate.

## **Zoology** (Dr Jimena Berni)

The role of Hox genes in integration across neuronal networks Nine-month grant in part-support of a Research Associate.



**Zoology** (Dr Paul Conduit)

Investigating the role of  $\gamma$ -TuRCs and non-centrosomal MTOCs in developing adult neurons Underwriting over nine months towards the salary costs of a Research Associate.

**Zoology** (Dr Jason Head)

3D scanning for large biological specimens A grant towards the purchase of an Artec 3D Space Spider scanner.

**Zoology** (Professor Rebecca Kilner)

Can evolutionary history be used to predict future evolutionary change? Three-month grant in part-support of a Research Associate.

# What our Research Grant recipients have said:

'the award was spectacularly useful and has launched the clinical academic careers of three excellent individuals.'

'.the INT grant allowed [X] to hone further his credentials as a leading expert on this body of important... source material, which will in turn I hope lead to the further development of [his] academic career'

'Thanks to INT support, [X] was able to stay on in the lab, and because of his expertise gained over the past years, he has been able to push ahead with experiments that already form the core of our next publication'

'I thank the Isaac Newton Trust for the grant, which provided the right amount of resources over a manageable period of time to broaden and deepen ongoing research.'

'The Newton Trust Research Grant . . . helped hugely with making a head start on the project and with the transition of my lab from U.S.A. to the U.K. Importantly it enabled me to recruit this outstanding senior scientist to my lab, and eventually offer him a permanent position.'

'The grant awarded by the Trust provided fundamental support at a crucial point to allow us to successfully initiate and establish this initiative. Without this, we would have been unable to build the capacity to develop and deliver the wide range of activities that are now in place....The above activities and income generation streams have all been made possible by the support of the Isaac Newton Trust and we are extremely grateful to the staff and Trustees for enabling us to undertake this work.'



# Strategic grants

The aim of these grants has been to enable large, institutional, perhaps interdisciplinary, programmes and projects of strategic value for the promotion of education or research in the University. The programme has enabled the Trust to mobilise its accumulated unspent income swiftly and creatively with the added benefit of helping to secure external funding where matching institutional funds are required.

Five new major grants were made this year, compared to 7 in 2017-18 and 9 in 2016-17 and a second grant of £200,000 was made to continue our support for the Interdisciplinary Research Centres, at a total cost of £1.23m. Half of the new commitment has been made for the support of strategic developments in the Arts, Humanities and Social Sciences:

## **School of Arts and Humanities** (Professor Chris Young)

Co-funding of British Academy Global Professorships

A grant over five or six years towards the salary costs of up to two BA Global Professors.

#### School of Arts and Humanities (Professor John Rink)

Cambridge Digital Humanities

Three-year grant in support of two post-doctoral research fellows.

## Pathology (Dr Jim Ajioka)

Translating Cambridge Synthetic Biology to impact LMIC bioeconomies Four-year grant in part-support of a post-doctoral research fellow.

# **Engineering** (Professor Janet Lees)

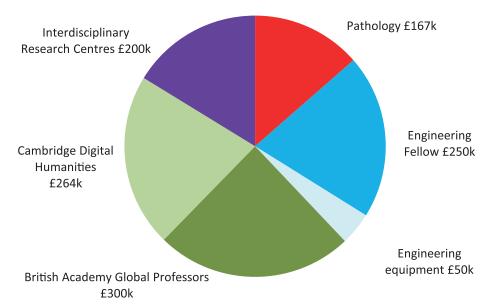
Structural systems beyond 2050: strategic large-scale experimental hub A grant towards the purchase of a 1 meganewton hydraulic test machine.

#### **Engineering** (Professor David Cardwell)

Senior Research Fellowships in Engineering

The salary costs of a research fellow for five years to be held at Newnham College.







# JOINT RESEARCH GRANT PROGRAMMES WITH THE SCHOOLS

Grants made by the Trust in partnership with the Schools, together with major programme grants secured from external sources such as the Wellcome Trust, can add substantial value to the research funding available to researchers in the Schools. The Trust currently contributes £500,000 per annum through this route. These programmes continue to form a major part of the Trust's research funding activities.

# **INT/Cambridge Humanities Research Grants**

The administration of CHRG grants is undertaken by the Schools of the Arts & Humanities and Humanities & Social Sciences jointly. Two joint calls for applications are issued annually, for awards in three tiers:

Tier 1: Small Research Grants up to £1,500 (£30k is ring-fenced for this Tier)

Tier 2: CHRGS awards of £1,500 - £20,000 for projects, particularly for early career researchers, especially pilots for applications to external research funding;

Tier 3: matching funding of up to £10,000 to support mutual exchange with

institutions affiliated to Paris Sciences et Lettres and other partners.

# Results of the 2018-19 application rounds

	2018-19 awards	2018-2019 total	2017-18 awards	2017-18 total	2016-17 awards	2016-17 total	2015-16 awards	2015-16 total
Tier 1	7	£10,326	14	£18,936	19	£26,557	16	£22,121
Tier 2	22	£294,720	36	£419,422	25	£334,677	49	£579,781
Tier 3	5	£26,807	3	£21,999	5	£16,928	0	0
Total	34	£331,853	53	£460,357	49	£378,952	65	£601,902

The Trust contributes £100,000 per year to these awards, with a view to between £30,000 and £40,000 of this grant being allocated for small research grants annually.

Reports on the competition are received from the Schools each year, together with a detailed financial breakdown and individual reports from award holders.

The Trust has made a further commitment to continuing with these awards up to 2021.



# INT/Wellcome Trust ISSF/University of Cambridge Research Support for the Schools of **Biological Sciences and Clinical Medicine**

These research grants are administered by the School of Biological Sciences and the Clinical School. They are aimed at recently-appointed lecturers in the two Schools, or persons appointed to the equivalent posts (as approved by their Head of the School), within 3 years of the project start date. The objective is to provide small research grants to develop projects leading to full applications for external funding. Research grants of up to £80,000 for up to 2 years are available to fund postdoctoral support, equipment and ancillary consumables.

The programme is funded from three sources, each of which provides £250,000 of the total: the Isaac Newton Trust, the Wellcome Trust's Institutional Strategic Support Fund (ISSF), and the host departments of the successful applications. The involvement of the Isaac Newton Trust enables new appointees in biological subjects whose research lies outside the Wellcome Trust's remit to secure a contribution to start-up funding.

Selection is carried out by a panel of senior academics from the two Schools; the Wellcome Trust requires final reports on the supported projects and provides external scrutiny of the effectiveness of the programme by auditing the use of the ISSF fund for this purpose.

The Trustees are pleased to note that the Wellcome Trust has renewed the ISSF grant to 2021 and have agreed to continue to support this programme up to 2021.

## Results of the 2018-19 application round:

- 10 grants were approved by the Schools' Panel for funding (10 in 2017-18; 10 in 2016-17; 7 in 2015-16);
- Total value of new awards in 2017-18 was £838,244 (£746,645 in 2017-18; £729,315 in 2016-17; £449,520 in 2015-16).

# INT/University of Cambridge Early Career Support for the Schools of Physical Sciences and Technology

This joint research grant programme provides modest research grants to allow new lecturers in the Schools of the Physical Sciences and Technology to develop projects leading to full applications for external funding.

The competition is open to University Lecturers in all departments of the School of Physical Sciences and Technology appointed within three years of the project start date. Research grants of up to £50,000 are available, for postdoctoral Research Associate support, equipment and ancillary consumables.

The Isaac Newton Trust provides 50% of the total budget; its contribution of £150,000 per annum, together with matching funds from the Schools involved, brings the annual fund to £300,000.

The Trust's review of the programme came too late to enable the Schools to plan for a full round in 2018-19, so the totals are somewhat reduced from previous years. Trustees have now agreed to extend their support to 2021, in line with the other Joint Schools programmes.

## Results of the 2018-19 application round:

- 4 grants were approved by the Schools (8 in 2017-18; 6 in 2016-17; 7 in 2015-16);
- The value of new awards was £77,675 (compared to £174,613 in 2017-18; £254,557 in 2016-17; £235,697 in 2015-16).



# **EARLY CAREER FELLOWSHIPS**

The Trustees are committed to helping to launch the independent careers of early career researchers across all subjects by providing matching funding on behalf of the University for two intensely competitive national fellowship programmes: the Leverhulme Trust's Early Career Fellowships and the Humboldt Foundation's Feodor Lynen Early Career Fellowships. These awards accounted for almost one-third of the Trust's research expenditure in 2018-19 (Fig. 9).

The Trust now supports about 70 Early Career Fellows, in an astonishing range of subject areas, in Cambridge at any one time. The Trust brings these Fellows together in a creative net-working event: the 'Isaac Newton Trust Fellows Day' has now been held for a second year at the Postdoc Centre, Eddington. Fellows present five-minute summaries of their research and share discussion over lunch. Topics are extremely wide-ranging. This year, we heard about: grammatical change in German, using sermons as data; the charitable distribution of drugs in Old Regime France; where to find the best place to start a fire; Kierkegaard's reception of Rhino-Flemish Mysticism; interplay between sulphide- and vapour saturation in mafic magmas; protecting our privacy and security from silicon; and deciphering secret conversations between symbiotic fungi and plant roots, among others.

We also now help 'our' Fellows, many of whom come from outside Cambridge and most of whom do not already have College associations, to find a College. Incoming Fellows have no obligation to participate in this scheme, and are free to explore the possibilities themselves, but the Trust helps those who would like assistance. This programme has proved very popular with the Fellows and has been well-supported by the Colleges, with 13 Colleges participating this year and 17 last year.

As the UK stands on the brink of a possible break with the European Union, the Trustees have agreed that the importance of enabling collaboration with European institutions has never been higher. We are therefore particularly pleased to be able to continue to support the Humboldt Feodor Lynen Fellowships and will discuss the future of this programme with the General Secretary of the Humboldt Foundation when he visits Cambridge early in the coming academical year.

# **Leverhulme Early Career Fellowships**

The Leverhulme Early Career Fellowship programme is one of the Trust's longest-standing and most successful commitments to the academic training of the next generation of researchers. The Isaac Newton Trust has been providing the required institutional contribution, on behalf of the University, since 2007. The INT provides 50% funding for the salaries of each researcher selected by the Leverhulme Trust in its national competition wishing to take up a place in Cambridge, up to £25,000 per annum. Awards are made across the full range of subjects, other than clinical studies.

A competition to identify the very best scholars wishing to conduct postdoctoral research in Cambridge is coordinated by the Trust, but the selection is carried out by three subject-specific academic panels nominated by the Schools. Successful candidates are provided with a guarantee of matched funding from the Isaac Newton Trust should they be successful at the national level

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#### Results of the 2019 competition

The Leverhulme Trust offered 150 awards nation-wide this year, of which 22 were made to those wishing to carry out research in Cambridge (17 out of 100 in 2018-19; 20 out of 125 in 2017; 15 in 2016; 17 in 2015). The new Leverhulme Early Career Fellows, match-funded by the INT, who will take up their places at Cambridge in 2019-20

Schools	Fellows	Department/Faculty
Arts, Humanities & Social Sciences	Dr Oliver Morgan	English
	Dr Mathelinda Nabugodi	English
	Dr Christina Woolner	Social Anthropology
	Dr Daria Mattingly	Modern & Medieval Languages
	Dr Sofia Gotti	History of Art
	Dr Deniz Turker	History of Art
	Dr Alexander Gagatsis	Music
	Dr Hajni Elias	Asian & Middle Eastern Studies
	Dr Tommaso Mari	Classics
	Dr Farah Ahmed	Education
Biological Sciences & Clinical Medicine	Dr Robert Mok	Brain Sciences
	Dr Xuan Liang	Physiology, Development & Neuroscience
Physical Sciences & Technology	Dr Emrys Evans	Physics
	Dr Miguel Anaya	Physics
	Dr Luke Bridgestocke	Earth Sciences
	Dr Tim Greenfield	Earth Sciences
	Dr Bipasha Chakraborty	Applied Maths & Theoretical Physics
	Dr Jingwei Liang	Applied Maths & Theoretical Physics
	Dr Adrien Lefauve	Applied Maths & Theoretical Physics
	Dr Elena Maters	Chemistry
	Mrs Kadi Saar	Chemistry
	Dr Martin Kleppmann	Computer Laboratory

The University of Cambridge's share across all subjects of the national LECF awards for 2019-20 was 16%. The 12 awards made to applicants in science and technology wanting to research in Cambridge represent almost 33% of the national total; the next most successful university secured only three awards. Cambridge's share of the national awards in Arts and Humanities was 11% and in Social Sciences 8% (lists can be found at https://www.leverhulme.ac.uk/listings?field\_grant\_scheme\_target\_id=3).

Apart from the evident quality of applicants to Cambridge, there is a distinct possibility that our extraordinary success is due, at least in part, to the fact that the Isaac Newton Trust guarantees to provide the matched funding required from the host institution for all candidates successful in the national competition. Without these quarantees, candidates cannot even enter the national competition. The Trustees believe that it is essential that institutional matching funding continues to be readily available for the support of all our prospective candidates.



# Institutional matching funding for Leverhulme ECFs: prospects for the future

If we take a longer view of the Trust's engagement with the Leverhulme Early Career Fellowships, it becomes immediately apparent that the Trust is unlikely to be able to continue to bear this responsibility alone. The number of LECFs awarded to be held at Cambridge has greatly increased in the past five years. Although growth in numbers and cost to the Trust is most dramatic in Physical Sciences and Technology, increases are evident across all subjects:

Total over 13 cohorts = 144

page 10

p

Figure 6a: numbers of Leverhulme ECFs match-funded by INT over the past 13 years

The maximum commitment made by the Trust in 2018-19 for LECFs starting in 2019-20 is **£1.65m** (compared to £1.13m in 2017-18); the call on our resources has risen more than eight-fold since we first began to offer matching funds on behalf of the University:



Figure 6b: INT commitment to Leverhulme ECFs over the past 13 years

Cohort commencing



Seen against the background of our overall grant-giving activities and our income, the level of commitment shown in Figure 6b to the Leverhulme Fellows is unsustainable: the 2019-20 cohort could potentially account for about 75% of our income.

This is clearly an area in which the Trustees will need to consider how to make sure that matching funding for these truly excellent Early Career Research Fellows can continue, so that Cambridge remains highly competitive at the national level and no-one is prevented from taking up their place in Cambridge if they have been selected by the Leverhulme Trust's academic panels.

# What our Leverhulme Early Career Fellows have said:

'The support I have received from the Isaac Newton Trust has benefited me greatly. It has enabled me to concentrate fully on my research and exceed the goals I had set. Being funded by the Isaac Newton Trust has also provided me with a sense of independence, which is critical for when I transition to the next stage in my career, as a primary investigator.'

'... time to write, to concentrate on my research, and to develop my professional networks through attendance and participation in international conferences. I've also had time to seek out opportunities to collaborate with colleagues from other disciplines and to explore possibilities for large-scale grants to support those collaborations. I've been able to dedicate time toward engaging the public with my research too.'

'It has been a fascinating and an unexpected journey and the freedom provided by funding from Newton Trust has been invaluable. It has allowed me to think ahead to new projects and to bid for bigger funding calls. In essence, it has done more than buy me out and fund my research; it has allowed me to start thinking strategically about big and new ideas.'

'The lack of sufficient funding opportunities for research and development, particularly for early career researchers, has contributed to an environment where an increasing number of brilliant and deserving researchers are unable to pursue a career in academia. I consider myself very fortunate therefore to receive the support of the trusts at such a crucial time in my career.'



# **Humboldt Foundation Feodor Lynen Early Career Fellowships**

The Trustees support postdoctoral researchers who have secured a Humboldt Foundation Feodor Lynen Early Career Fellowship to be held in Cambridge under the guidance of an existing Humboldt Fellow. As with the Leverhulme ECFs, these highly-competitive appointments are made by the other institution and the host University is expected to make a substantial contribution to the cost of the fellowship. The INT makes a contribution of £1,000 per month for up to 24 months on behalf of the University for all successful Humboldt Early Career Fellows.

No new awards were made in 2018-19; our Humboldt Feodor Lynen Early Career Fellows in 2018-19 were:

Humboldt ECF	Department	Start	End
Dr Christophe Große	Materials Science & Metallurgy	Nov 2016	Aug 2018
Dr Matias Acosta	Materials Science & Metallurgy	May 2017	Apr 2019
Dr Simon Pickl	German & Dutch	Oct 2017	Sept 2019

Dr Volker Deringer, our previous Feodor Lynen Fellow, is now a Leverhulme Early Career Fellow in Engineering, supported by the Trust.

# **ESRC Future Leaders Programme**

This programme has now been replaced by ESRC New Investigator Grants. The Trust is not involved in providing matching funding for the new scheme, but continues to support Fellows appointed under the Future Leaders arrangements. Five ESRC Future Leaders were still in post in 2018-19:

Department	ESRC Future Leaders	Start	End
Law	Dr Veronika Fikfak	Jan 2016	Dec 2018
Education	Dr Marisol Basilio	Jan 2016	Dec 2020*
Psychology	Dr Idalmis Santiesteban	Apr 2016	July 2019**
Political & International Studies	Dr Sophie Roborgh	Oct 2016	Sep 2018
Sociology	Dr Kate Williams	Jan 2017	Dec 2018

<sup>\*</sup>No-cost extension for maternity leave  $\,\,$  \*\* No-cost extension for unforeseeable delays to project.

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# **INT/College Junior Research Fellowships**

Isaac Newton Trust/College Junior Research Fellowships were established in partnership with the less wellendowed colleges (the list, which is reviewed annually, can be found at http://www.newtontrust.cam.ac.uk/ educsupport/jrf/eligiblecoll) to enable them to appoint Junior Research Fellows in the Humanities.

The Trust offers successful Colleges £15,000 per year for three years, which approximates to about 50% of the funding needed for a JRF stipend. Colleges with 'non-standard' alumni bases may apply for an additional £5,000 per annum. Each College may have only one active INT JRF at any one time. There is one round annually, in June/July. Selection of the Fellow is then a matter for the College, which is expected to apply the usual stringent academic criteria.

Newton Trust/College JRFs in post during 2017-18 were:

College	JRF	Faculty/Department	Start	End
Churchill	Dr Conor O'Brien	History	Oct 15	Sep 18
Clare Hall	Dr Daniel Jolowicz	Classics	Oct 15	Sep 18
St Edmund's	Dr Charis Charalampous	English	Oct 15	Sep 18
Downing	Dr Edward Cavanagh	History	Oct 16	Sep 19
Darwin	Dr Adrian Weller	Engineering	Oct 17	Sep 20
Fitzwilliam	Dr David Winters	English	Oct 17	Sep 20
Robinson	Dr Benjamin Guy	Anglo-Saxon, Norse & Celtic	Oct 17	Sep 20
St Catharine's	Dr David Callender	Anglo-Saxon, Norse & Celtic	Oct 18	Sep 21
Selwyn	Dr Helena Phillips-Robins	MML/Italian	Oct 18	Sep 21
St Edmund's	Dr Noah Carl	POLIS	Oct 18	Jun 19

One new JRF is to be appointed by Girton to start in the next academical year.

The Trustees also agreed to fund one five-year Engineering Research Fellow as part of Engineering's project to recruit a significant number of new research fellows (see 'Strategic Grants' p. 18); Dr Sakthy Selvakumaran will take up her Research Fellowship at Newnham in October 2019.



# **COLLEGE TEACHING PARTNERSHIPS**

# **Newton Trust Teaching Fellowships**

No new awards are now being made, but one extension was granted this year. The following Newton Trust Teaching Fellows remained in post during 2018-19:

College	Fellow	Department	Start	End
Girton	Dr Helen Yannakoudakis	Computer Laboratory	Oct 2014	Sep 2018
Queens'	Dr José Maria Escartin Esteban	Physics	Oct 2015	Sep 2019
Fitzwilliam	Dr Deepak Venkateshvaran	Physics	Oct 2016	Sep 2020
Fitzwilliam	Dr Fiona Danks	Scott Polar Research	Oct 2016	Sep 2021
Fitzwilliam	Mr Marco Geraci	Economics	Oct 2017	Sep 2021
Fitzwilliam	Dr Carla Mulas	Stem Cell Institute	Oct 2017	Sep 2021
Lucy Cavendish	Dr Amber Ruigrok*	Psychiatry	Oct 2017	Sep 2021

<sup>\*</sup>extension approved on confirmation of an extended contract in the University

# **College Teaching Officers**

This programme was closed in 2011 and no new appointments have been made since. Two posts remained current in 2018-19:

College	СТО	Department	Start	End
Homerton	Dr Simon Wadsley	Mathematics	Oct 2008	Sep 2018
Queens'	Dr Andrew Thompson	History	Oct 2011	Sep 2019

# **College Teaching Officer Research Leave (CTORL)**

The Trust launched this programme in 2013-14 to encourage high-quality research among College Teaching Officers (CTOs). Colleges apply for grants to make full-time short-term junior teaching appointments of 9 to 12 months' duration, to release an established CTO to take an extended period of leave for a significant research project. There is one application round per year, in January or February.

The Trustees have agreed to make up to five awards of up to £30,000 each year. The programme has so far been open to CTOs from all Colleges, but, from 2019, the awards will be open only to those Colleges which are exempt from making a Contribution to the Colleges Fund, currently the ten least well-endowed Colleges.

A sixth cohort of appointments was made at a cost of £145k (£85k in 2017-18; £105k in 2016-17, £75k in 2015-16), to be held in 2018-19 as follows:

College	СТО	Faculty/Department	Duration (months)
Pembroke	Dr Caroline Burt	History	12
Pembroke	Dr Hildegard Diemberger	Human, Social & Political Science	12
Murray Edwards	Dr Paola Filipucci	Human, Social & Political Science	9
Girton	Dr Helen van Noorden	Classics	12
Fitzwilliam	Dr Rachel Camina	Mathematics	12



# STUDENT AWARDS

# **PhD Studentships and Masters Bursaries**

The Trust has maintained a long-term commitment to providing competitive research scholarships to the best of the UK and EU students, many of whom have been unable to secure funding from public sources such as the Research Councils. The Trust does not itself award these scholarships, but directs funding through existing University competitions. The Trust does not provide salary or research costs for students other than through these established major funding programmes.

# PhD Studentship programmes

The Trust is supporting six 3-year PhD studentships per year for the duration of the AHRC DTP award 2014-19. The cost to the Trust in 2018-19 was £213,863 (£208,079 in 2017-18; £188,020 in 2016-17; £127,181 in 2015-16; £51,515 in 2014-15).

There will be an overspend across the six years of the DTP as a result of a sharp increase in the University fee in 2015, from £3,996 to £8,589 per annum. The estimated total cost of this programme will therefore be £89k higher than the original commitment of £989k. The difference will be funded from the remainder of the restricted funds (see below).

In 2018-19, the Trustees further committed a maximum of £1.2m over 7 years to support up to six studentships per annum (at half cost, shared with the AHRC) as part of the next AHRC Doctoral Training Programme, to commence in 2019. The INT contribution will enable students whose College is not a participant in the shared funding arrangements to take up their place. In this new DTP, the University of Cambridge will be part of a consortium with Oxford University, the Open University and three non-HEI partners (BBC World Service, British Telecom and the National Trust).

# **Newton Trust/College MPhil bursaries**

The Trust offers bursaries for UK students taking one-year MPhil courses as preparation for a doctoral degree. These awards are held in certain Colleges that had agreed to match the Trust's contribution of £6,000 per student; Colleges of lesser wealth offering two such studentships are eligible for a further bursary entirely funded by the Trust (ie £12,000).

The competition is run by the Student Registry and the selections are made by academic panels representing different subject areas.

For awards to be held in:	2018-19	2017-18	2016-17	2015-16	2014-15
Colleges participating	27	28	26	25	19
Number of Bursaries awarded	59	73	66	57	38
Cost to the Trust	£396,000	£504,000	£444,000	£402,000	£204,000

At the end of the financial year, the administration for these MPhil Bursaries will pass to the Cambridge Trust. The Trustees have agreed to transfer £300k from the funds remaining in the Restricted Bursary Fund to the Cambridge Trust to continue with the awards. Any remainder will be ploughed into the AHRC Doctoral Training Programme.



# FINANCIAL SUMMARIES

# Audited accounts: headline figures and forward planning

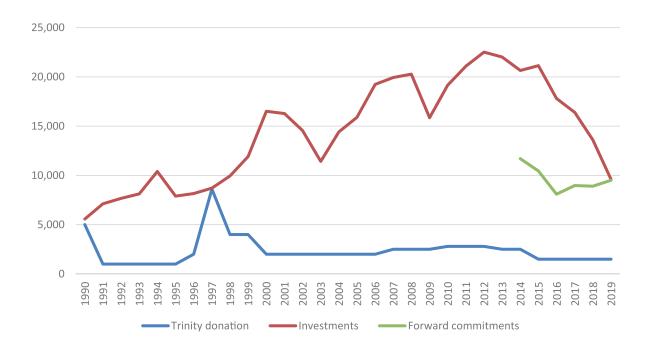
	2018-19	2017-18	2016-17	2015-16	2014-15
Opening reserves	£6,868,019	£8,696,489	£10,317,258	£11,606,463	£11,214,894
Income	£1,960,297	£2,046,986	£2,036,687	£2,159,553	£6,853,103
Expenditure	£5,296,340	£4,659,115	£5,734,898	£3,275,840	£7,743,667
Gain (Loss) on investments	£11,814	£783,659	£2,077,442	(£172,918)	£5,449
Closing reserves	£3,543,790	£6,868,019	£8,696,489	£10,317,258	£11,606,463

The audited accounts for the year ended 30 June 2019 are presented in detail on our website at https://www.newtontrust.cam.ac.uk/about/accounts.

There was again a planned excess of expenditure over income (see p. 9); this amounted to £3.3m in 2018-19. In the two previous years, the excess was mitigated by good returns on investments. However, the gain on investments was only marginal this year, so the closing reserves at the end of June 2019 are down by £3.3m compared to the year end 2017-18.

Fig. 7 shows the relationship between the Trust's total reserves and income from Trinity College since the foundation of the Trust. The reserves required to cover forward commitment (in green) are also shown from the inception of forward commitment accounting. Investments have now reached the level at which, should all income cease, the Trust can just cover our forward commitments and will be dependent on income to allow for new funding activity. The Trustees are pleased that Trinity has committed to maintaining their donation at £1.5m per annum for the next three years, which will enable the Trustees to budget accordingly and prioritise their grant-giving activities.

Figure 7: INT investments, forward commitments & Trinity donations 1989-2019

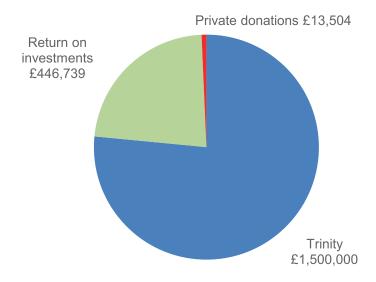




# **Income and expenditure 2017-18**

Total income in 2018-19 was £1.96m (£2.05m in 2017-18; £2.04m in 2016-17; £2.16 in 2015-16).

**Figure 8: Income 2018-19** 



The donation to the Trust from Trinity in 2017-18 was £1,500,000, the same as in the previous three years; the College Council has confirmed that it will continue to fund the Trust at this level for the next three years.

As our investments shrink, so the income we receive from them is likely to fall; indeed, this has been the pattern for the past four years: our investments provided £446,739 this year (£533k in 2017-18; £524k in 2016-17; £640k in 2015-16).

Private donations to the Trust, channelled mostly through Trinity College, amounted to approximately £13,504 including Gift Aid.

# Expenditure: New commitments made in 2018-19

New commitments to research grants and fellowships in all categories amounted to £3.9m (£4.9m in 2017-18; £6.1m in 2016-17; £2.5m in 2015-16). In addition, £129k was spent on administration, and £396k was awarded for MPhils from the Restricted Bursary fund.

## Forward commitments and write-backs

At the end of the year, the Trust had total forward commitments of £9.8m (£8.9m in 2017-18). The Trust wrote back £338k from the unused portions of unrestricted grants; the largest write-backs tend to come from commitments no longer required after a Research Fellow is successful in securing another grant or post before the end of an INT Fellowship.



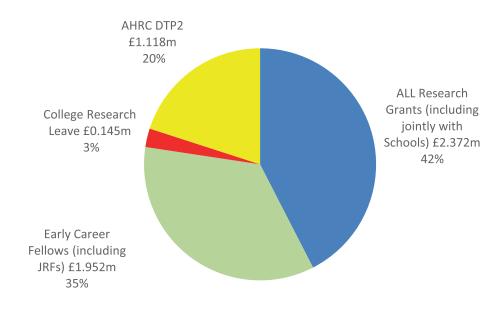
#### Assets and uncommitted funds

There was a small gain on the valuation of the investment assets of £11k (compared to a gain of £0.8m in 2017-18; a gain of £2.0m in 2016-17; and an unrealised loss of £0.2m in 2015-16). The net result is a further decrease in uncommitted funds carried forward, to £3.5m (£6.9m in 2017-18; £8.7m in 2016-17; £10.3m in 2015-16).

As reported last year, all our investments are now held in the Cambridge University Endowment Fund. At the end of the year, CUEF managed £9.6m on behalf of the Trust (£13.6m in 2017-18; £14.8m in 2016-17; £10.2m in 2015-16).

## New commitments 2018-19 – research funding

Figure 9: new Research Commitments by major category 2018-19



#### New research awards by subject area.

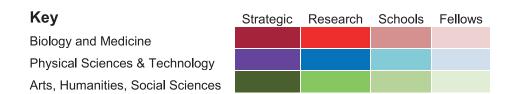
It is a common perception that the Isaac Newton Trust funds scientific research, but in reality the Trust funds across all subject areas, with a distinct preference for supporting the Arts, Humanities and Social Sciences. While this is an attempt by the Trustees to 'level the playing field' for those subjects for which funding is hardest to gather from other sources, it is not out of keeping with Sir Isaac's own very far-reaching research interests.

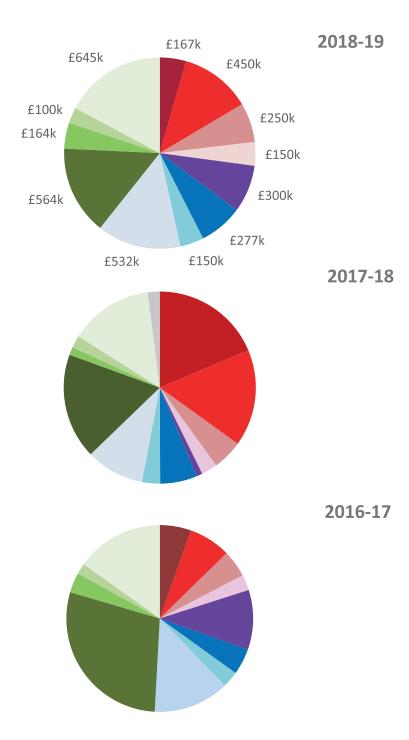
There are, however, significant changes in emphasis in funding across the Schools from year to year (see Fig. 10); these are largely explained by the projects selected for Strategic Grants.

If grants to research student grants are added into these figures, the share of research funds for the Arts, Humanities and Social Sciences rises to about 50% for 2018-19.



Figure 10: Research commitments 2018-19: by subject area, by category





Notes: New commitments made each year in all categories with the exception of the Joint Schools awards, for which the year's actual expenditure has been used. Fellows = Leverhulme, Humboldt and JRFs.



## Payments - restricted funds

The Trust's financial contribution to the Cambridge Bursaries scheme ended with the 2015-16 financial year. At that point, the remainder in the Bursaries Fund was committed to the support of MPhil Bursaries.

Isaac Newton Trust / College MPhil bursaries accounted for £390k in 2018-19 (£504k in 2017-18; £444k in 2016-17, £402k in 2015-16).

# **Payments - administrative costs**

Expenditure	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14
staff salaries, pensions, NI	£102,673	£92,379	£80,960	£148,550	£122,591	£153,694
rent, services and miscellaneous	£11,596	£31,199	£14,538	£30,041	£19,302	£17,728
governance (audit, accounts)	£14,438	£14,590	£12,120	£11,880	£6,000	£2,304
Total support costs	£128,707	£138,168	£107,618	£190,471	£147,921	£173,726

#### **Auditors**

Peters, Elworthy & Moore were Auditors to the Trust for the Financial Year 2017-18 and have been reappointed for 2018-19.

## From the archives:

I was originally able to purchase our 3,500ha study area in the Kalahari with the help of a £40,000 grant from the Newton Trust. I realised at the time that this was a rather extraordinary request and I was immensely grateful to the Newton Trustees for supporting it.....Their input was crucial for the purchase, enabling me to raise a further £150K to buy the area.

Owning the land has paid off handsomely. My work there on meerkats and mole-rats has been funded by a series of grants from NERC and subsequently by two ERC Advanced grants. Six other universities now use the site and, throughout the year, we now normally have 40-50 students, assistants, postdocs and Pl's working there. Over 200 graduates from across the world have worked with us as field assistants for a year each.

In addition, our work has been the focus of more than fifty TV programmes, including the award winning series 'Meerkat Manor' that reached a worldwide audience of over fifty million.'

Kalahari Research Centre project (Professor Tim Clutton-Brock, Zoology, 2008)



# Comings and goings...

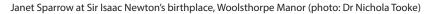
In July 2018, the Trustees welcomed Professor Rae Langton, Knightbridge Professor of Philosophy and Fellow of Newnham College, as a Trustee to represent subjects in the Arts and Humanities.

The Council of Trinity appointed Professor John Marenbon FBA, Honorary Professor of Medieval Philosophy, as the second Trinity Fellow, from May 2019.

Sir Gregory Winter announced that he would be stepping down as a Trustee in advance of the end of his tenure as Master of Trinity and that the November 2018 meeting would be his last. We took the opportunity to combine the celebration of the Trust's 30th anniversary with an appreciation of Sir Greg's contributions to the Trust by holding a reception for past and present Trustees and Officers after the meeting. Sir Greg was presented with a promise of an apple tree to be grafted from the famous tree at Sir Isaac Newton's birthplace at Woolsthorpe Manor.

Trustees were sad to learn that Professor Sarah Colvin would be standing down in July 2019 and that our long-standing Trustee, Dame Marilyn Strathern, would come to the end of her nine-year tenure in October 2019. We are hugely grateful to them both for their exceptionally wise and perceptive contributions. This will leave a very considerable gap in the Trust's coverage of subjects in the Arts, Humanities and Social Sciences and we will seek to recruit new Trustees in these subject areas.

Ms Janet Sparrow announced her decision to retire in October 2019. Janet has provided excellent support as the Trust's part-time Administrator with particular responsibility for Research Grants. No detail is too small for Janet's eagle eye, and her interest in the activities of the Trust and the research projects we have funded has been of exceptional value to our work. We took Janet to Woolsthorpe Manor, by way of an early retirement gift, in June, and Trustees presented her with a small sliver of the apple tree, polished and set in silver.









Isaac Newton Trust Fellows' Day 2019 (photographs by Jennifer Hayward). Clockwise from top left: Sergii Strelchuk (Applied Maths and Theoretical Physics); Jeongmin Choi (Plant Sciences); Reuben Rideaux (Psychology); Fellows and Trustees examine the elephant in the room; Hjoerdis Becker-Lindenthal (Divinity); Emma Liu (Earth Sciences).



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