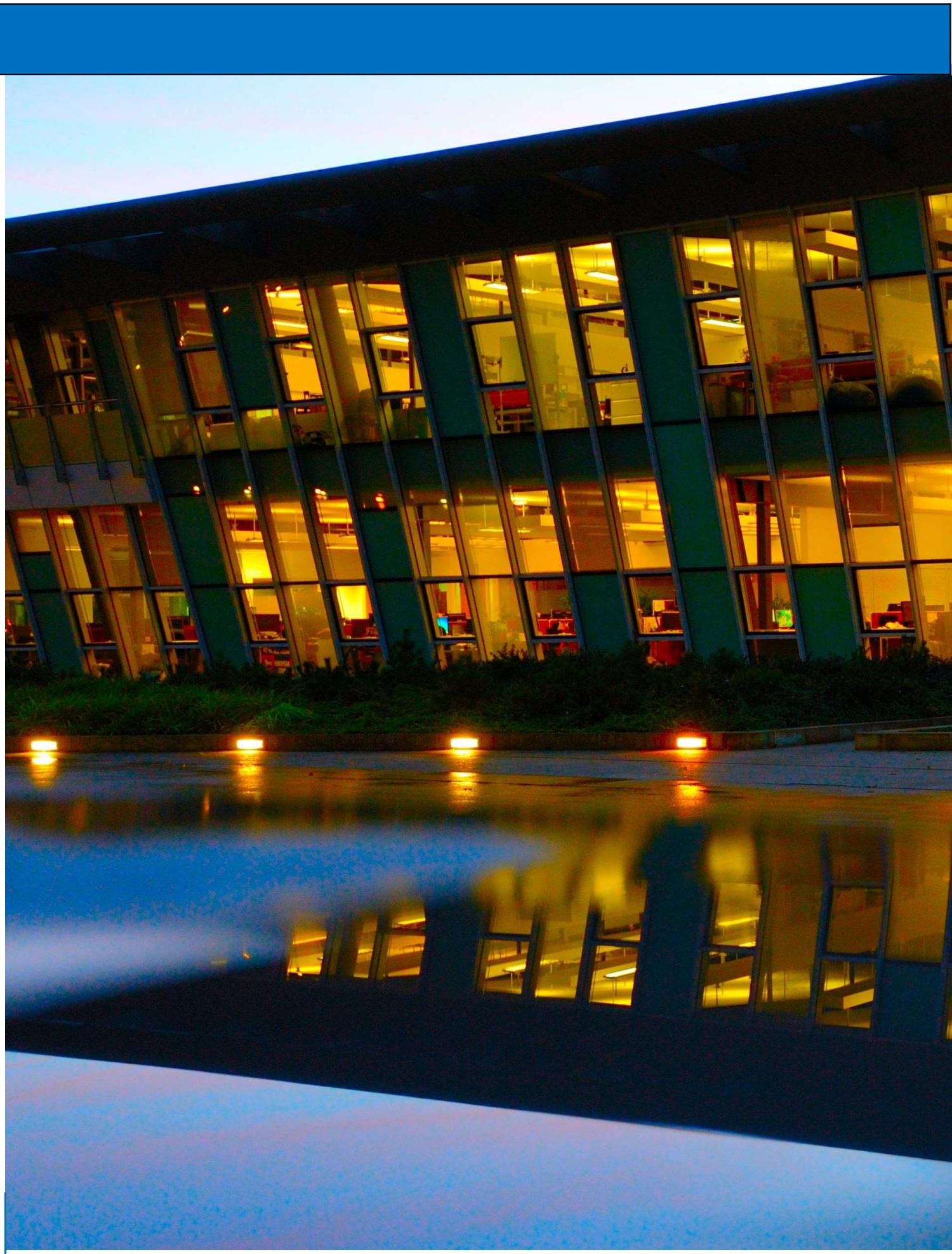




Genome Research Limited
Annual Report and
Financial Statements
For Year Ended
30 September 2018



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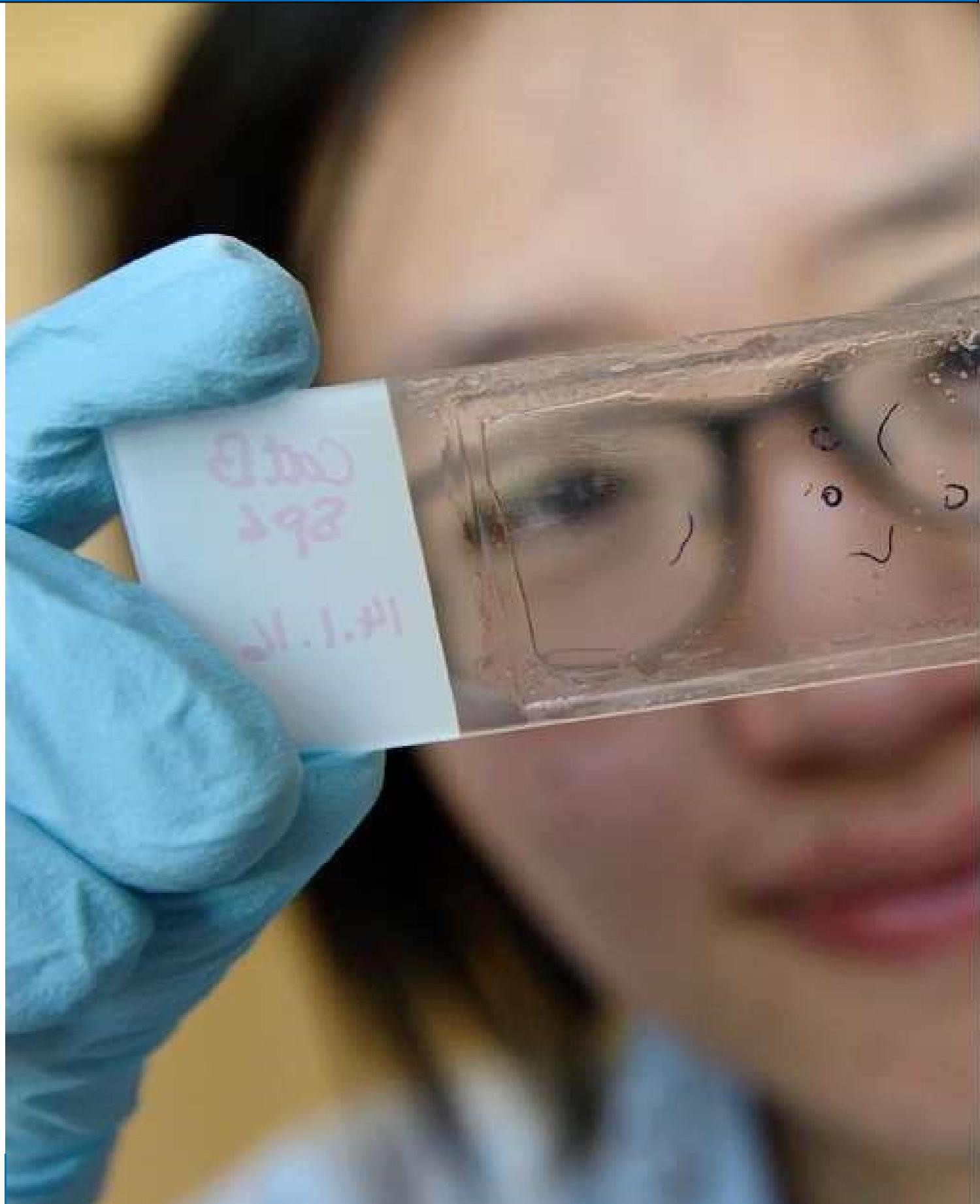
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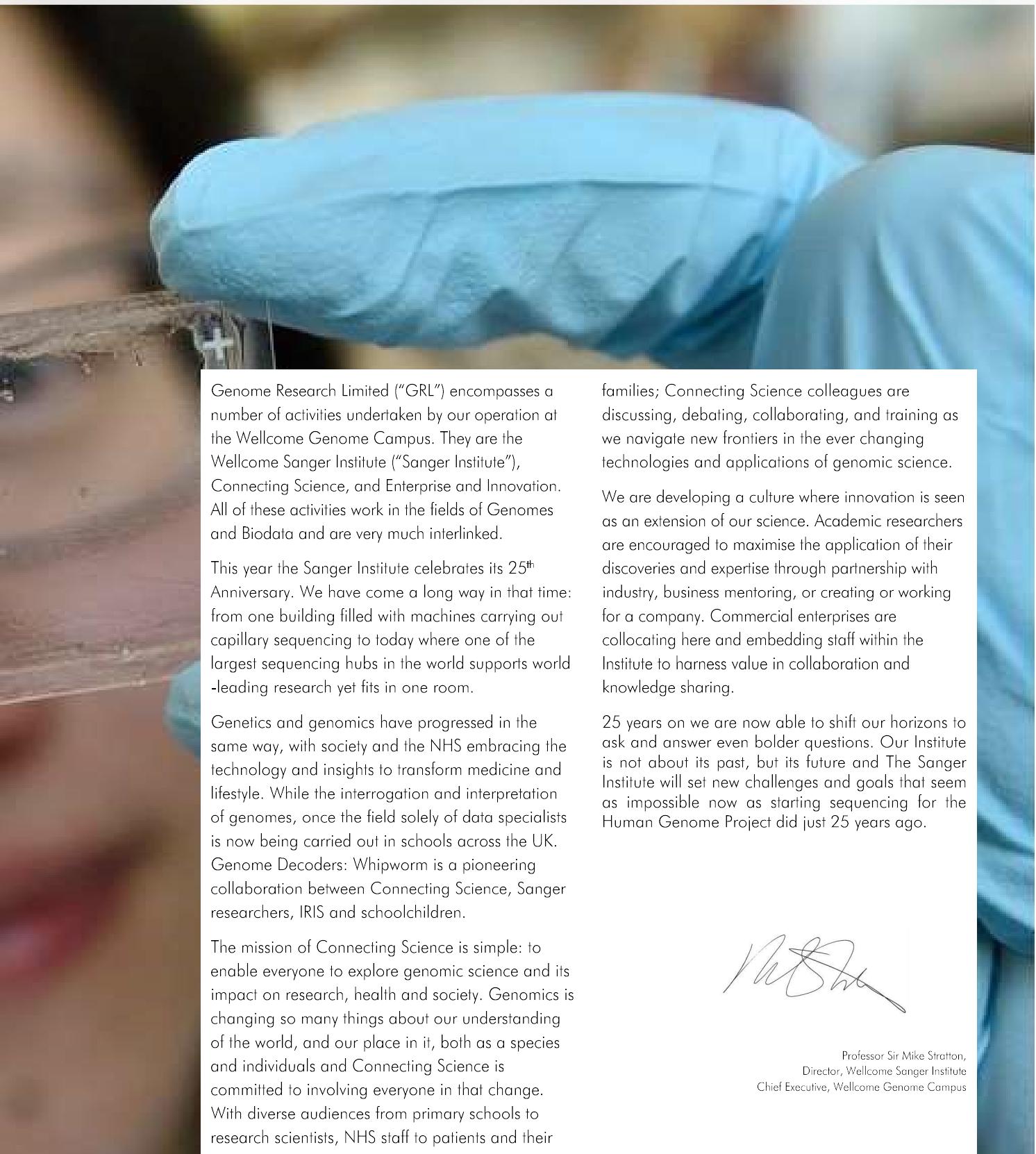
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Chief Executive's Introduction



Genome Research Limited ("GRL") encompasses a number of activities undertaken by our operation at the Wellcome Genome Campus. They are the Wellcome Sanger Institute ("Sanger Institute"), Connecting Science, and Enterprise and Innovation. All of these activities work in the fields of Genomes and Biodata and are very much interlinked.

This year the Sanger Institute celebrates its 25th Anniversary. We have come a long way in that time: from one building filled with machines carrying out capillary sequencing to today where one of the largest sequencing hubs in the world supports world-leading research yet fits in one room.

Genetics and genomics have progressed in the same way, with society and the NHS embracing the technology and insights to transform medicine and lifestyle. While the interrogation and interpretation of genomes, once the field solely of data specialists is now being carried out in schools across the UK. *Genome Decoders: Whipworm* is a pioneering collaboration between Connecting Science, Sanger researchers, IRIS and schoolchildren.

The mission of Connecting Science is simple: to enable everyone to explore genomic science and its impact on research, health and society. Genomics is changing so many things about our understanding of the world, and our place in it, both as a species and individuals and Connecting Science is committed to involving everyone in that change. With diverse audiences from primary schools to research scientists, NHS staff to patients and their

families; Connecting Science colleagues are discussing, debating, collaborating, and training as we navigate new frontiers in the ever changing technologies and applications of genomic science.

We are developing a culture where innovation is seen as an extension of our science. Academic researchers are encouraged to maximise the application of their discoveries and expertise through partnership with industry, business mentoring, or creating or working for a company. Commercial enterprises are collocating here and embedding staff within the Institute to harness value in collaboration and knowledge sharing.

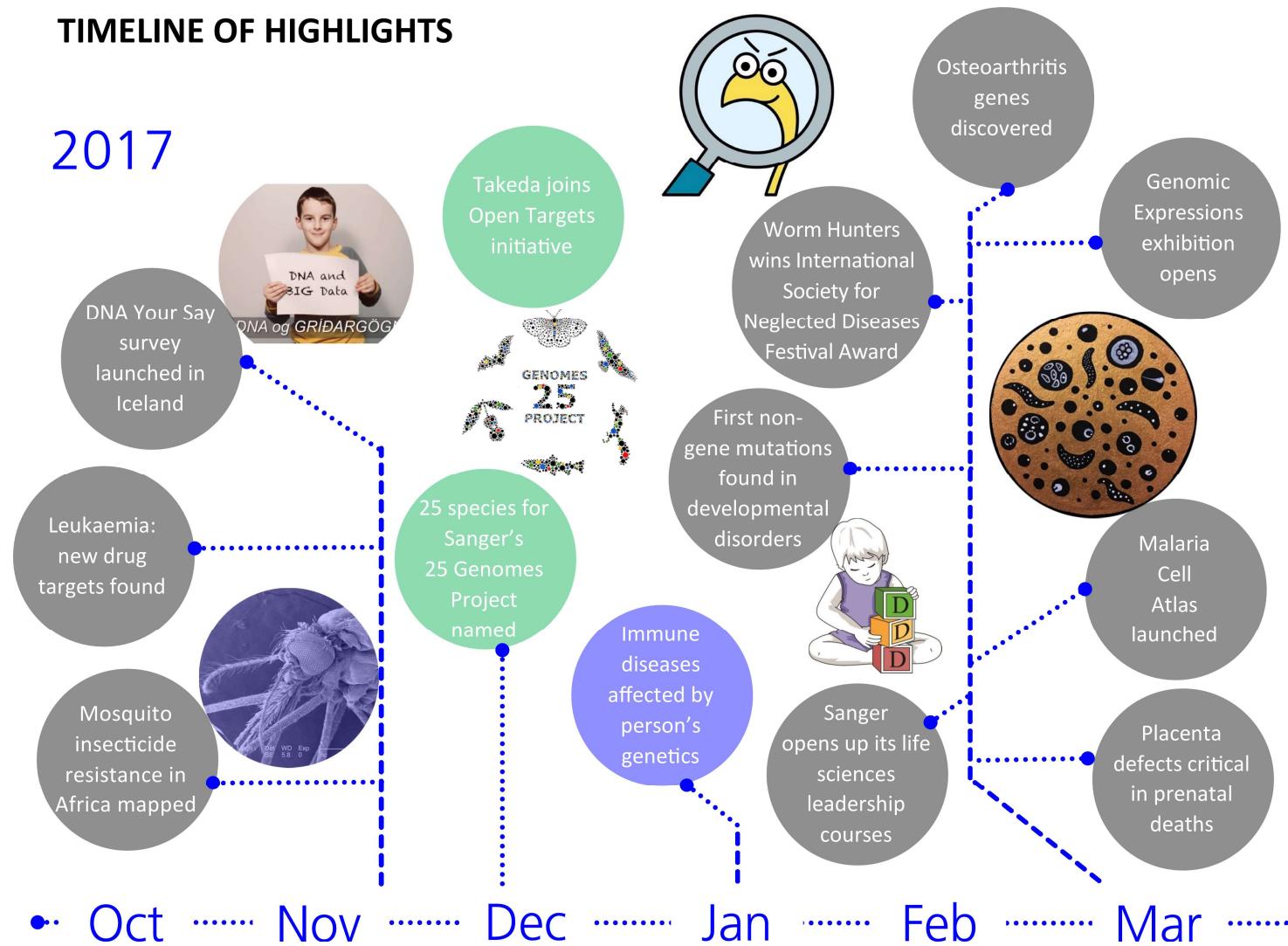
25 years on we are now able to shift our horizons to ask and answer even bolder questions. Our Institute is not about its past, but its future and The Sanger Institute will set new challenges and goals that seem as impossible now as starting sequencing for the Human Genome Project did just 25 years ago.



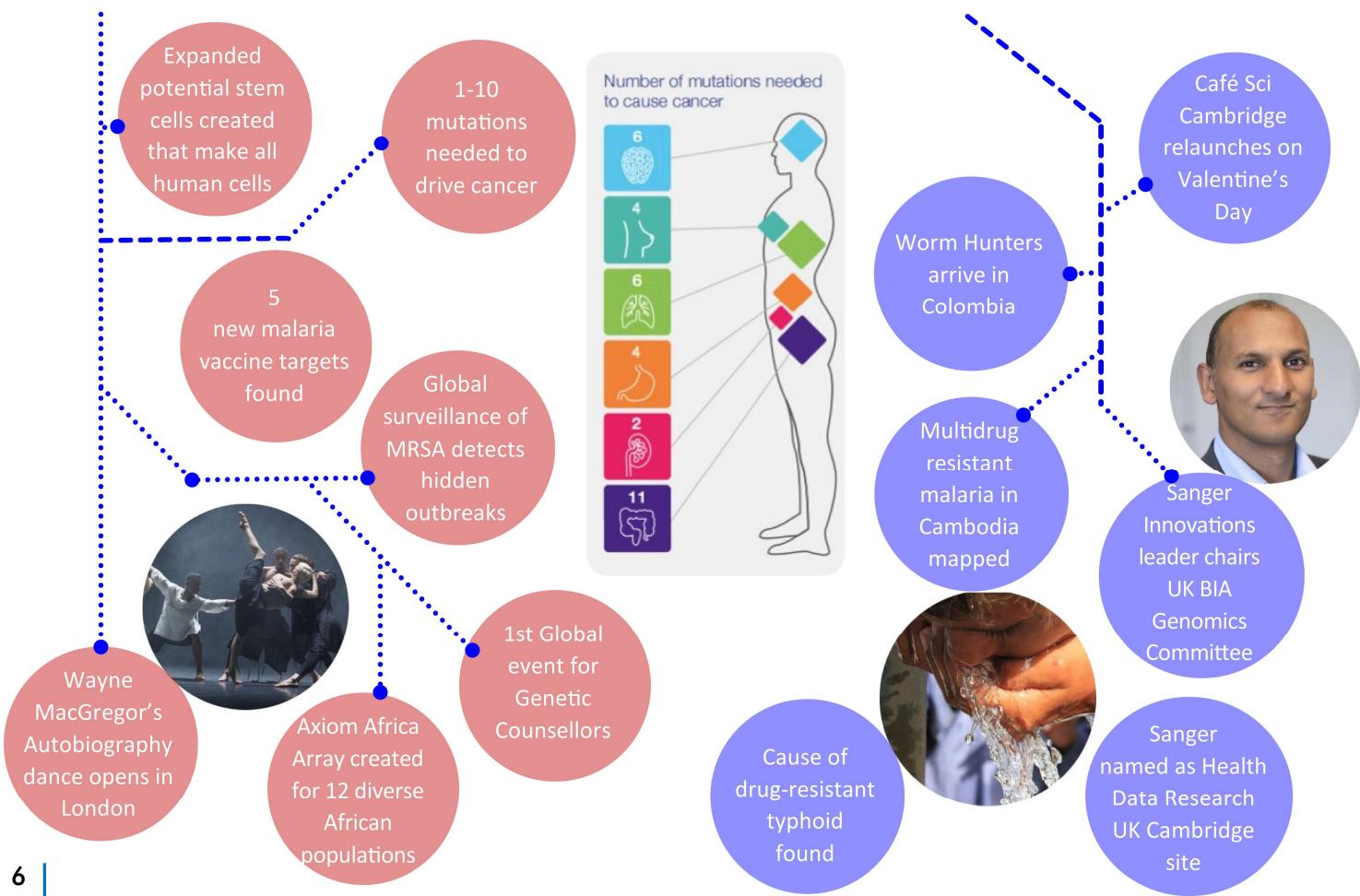
Professor Sir Mike Stratton,
Director, Wellcome Sanger Institute
Chief Executive, Wellcome Genome Campus

TIMELINE OF HIGHLIGHTS

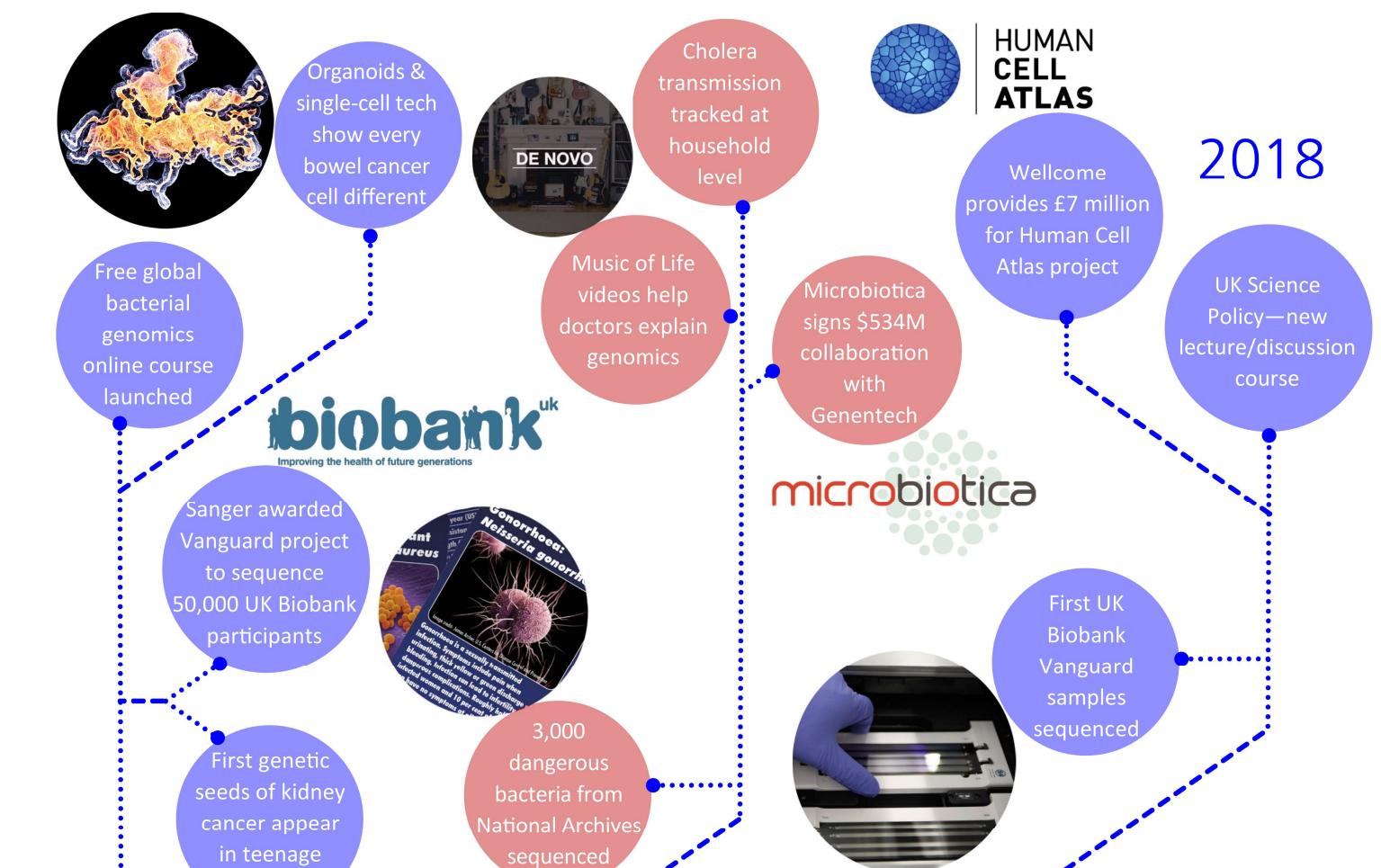
2017



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2018



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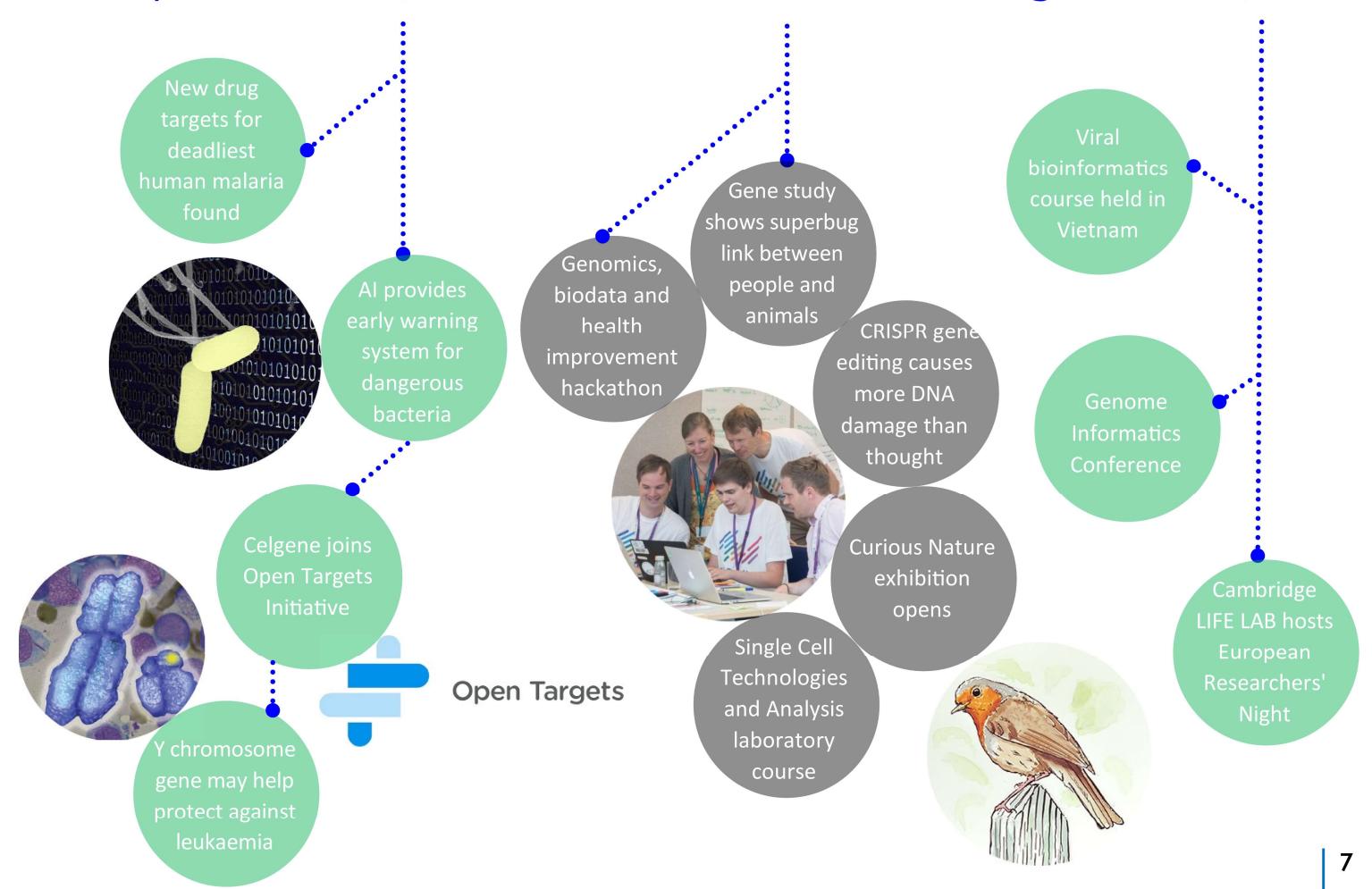
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Sep



Trustees' Report

The Directors of Genome Research Ltd ("the Company" or the "Charity") who are also the Trustees of Genome Research Limited for the purposes of the Charities Act 2011, present their Annual Report and audited Financial Statements for the year ended 30 September 2018.

Objectives and activities

Genome Research Limited's ("GRL") objects are:

- Advance understanding of biology using genome sequences and biodata
- Apply genome science for human health and other societal benefits
- Foster discussion of the scientific, medical and wider implications of genomes

Vision

Motivated by the remarkable challenges and opportunities presented to 21st century science by genome sequences, the ambition of GRL over the next two decades is to strengthen its well-established scientific foundations and to build on them, such that the Wellcome Genome Campus becomes an international centre for scientific, business, cultural and educational activities emanating from Genomes and Biodata.

The objectives are delivered via three main activities as follows:

- Sanger Institute
- Connecting Science
- Enterprise and Innovation

Mission

Sanger Institute

One of the major challenges and opportunities for biological science in the 21st century is to understand and utilise the DNA sequences that constitute the genetic code of humans and other living organisms.

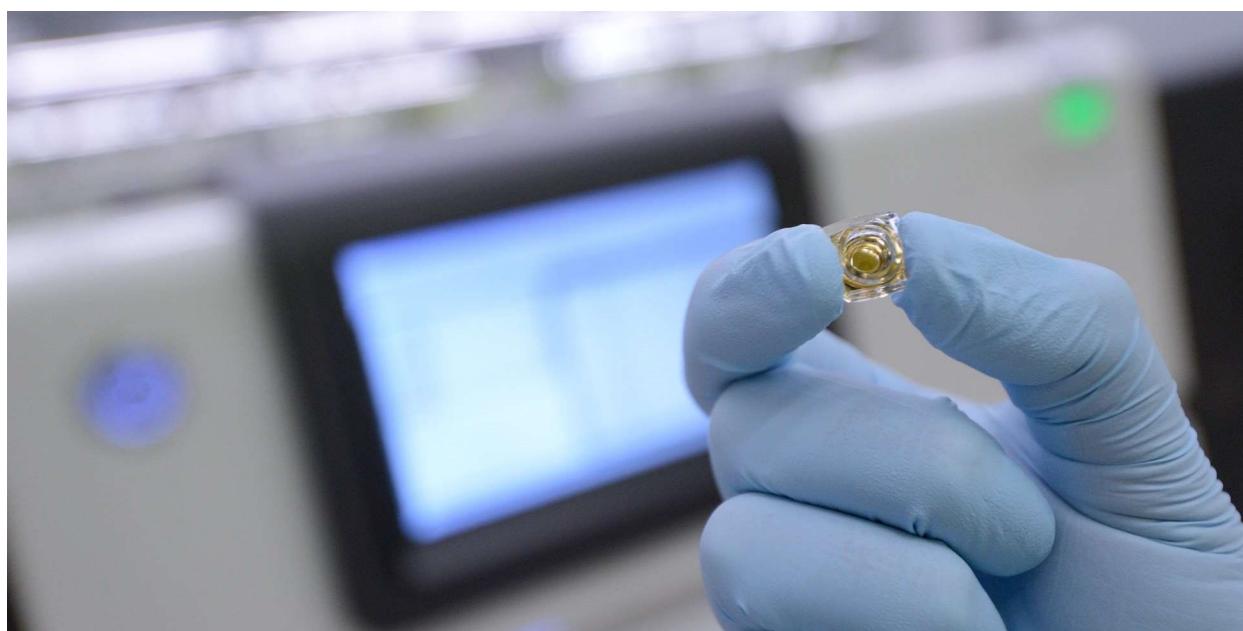
The Sanger Institute uses genome sequences to increase understanding of human and pathogen biology in order to improve human health.

To achieve this goal, we conduct basic and translational research delivered across four different research-focused programmes:

- Cancer, Ageing and Somatic Mutation
- Cellular Genetics
- Human Genetics
- Parasites and Microbes

Our scientific niche is in large-scale, high-throughput biology, often incorporating systematic genome-wide screens. This is enabled by major data generation platforms in DNA sequencing, cellular genetics and mouse genetics with an accompanying large IT platform supporting computational data interpretation and analysis.

An overarching theme of our science is genome variation; naturally occurring and engineered, inherited and somatic; explored in human beings, pathogenic microorganisms, human



cells and mice. These studies of genome variation will provide insights into human and pathogen evolution, the phenotypic consequences of genome variation and the processes which cause mutations. We will generate deeper understanding of the genetic causes, pathogenesis and epidemiology of human disease, of human development and ageing and of human gene function. We aim to identify therapeutic and vaccine targets and to explore the genomic changes influencing sensitivity and resistance to such agents.

The Sanger Institute sits at the centre of a global network of science, engaging proactively with researchers external to the Institute, enabling and empowering their science and extending our scientific repertoire through their biological insights and questions. A major priority of our research portfolio is the scientific questions arising from the health issues facing low and middle-income countries. We continue to champion the policy of early and open data release and ensure resources generated through our research enable the research of others through publicly accessible databases.

Connecting Science

Connecting Science's mission is to enable everyone to explore genomic science and its impact on research, health and society. It connects researchers, health professionals and the wider public, creating spaces and opportunities to inspire new thinking, spark conversation, support learning, and measure attitudes.

Enterprise and Innovation

Enterprise and Innovation represents a key third pillar in delivering our ambitious vision for the Genome Campus. We aspire to develop a more innovative Campus culture; to support those translational and entrepreneurial opportunities that arise from Campus research; and to establish the Genome Campus as a leading location for innovative Genome and BioData businesses seeking to benefit from, and contribute to, the exceptional Campus intellectual capital. Essential to our success is the creation of a diverse and strongly integrated Genome and BioData community with free flowing exchange of perspectives across organisations and sectors.

Strategic Report

Achievements and Performance

This year we celebrated many achievements made by our three activities – Sanger Institute, Connecting Science and Enterprise and Innovation. This report highlights just a few examples — more can be found on www.sanger.ac.uk. These achievements often reflect the results of many years of research. Scientific research is inherently cumulative and progressive, opening up new knowledge, understanding and applications. The majority of our research supports hypothesis-based investigation; by definition, the outcome of such activities cannot be predicted with certainty but the highlights below demonstrate how our people produce valuable information and insight in support of our overall mission.

i) The Sanger Institute

Below are presented selected highlights from each of the scientific programmes. For more scientific achievements, please [see our Sanger Institute Highlights](#) and [news archive](#).

Cancer, Ageing and Somatic Mutation

- Discovered that a gene on the Y chromosome, UTY, protects male mice from developing acute myeloid leukaemia; the first leukaemia protective gene
- Mapped the earliest genetic changes that lead to kidney cancer and demonstrated that the first key changes occur in adolescence and progress into cancer decades later
- Using organoid and single cell technology revealed that each and every bowel cancer is different and every cell within the cancer is genetically unique

Cellular Genetics

- The Human Cell Atlas, which will create genomic reference maps of all human cells sequenced the first 250,000 cells important for human development
- Outlined a new mechanism essential for processes that need a rapid response – such as organ repair, immune responses or cancer growth – that coordinates growth in response to signals from outside the cell
- For the first time used immune cells created from human adult stem cells to model the differences in immune responses between people and understand genetic risk of disease

Human Genetics

- Discovered the first non-gene mutations behind rare neurodevelopmental disorders providing an explanation for children with undiagnosed developmental disorders
- Through analysis of over 30,000 people with osteoarthritis and 300,000 without, discovered nine new genes linked to osteoarthritis
- Revealed genes whose roles appear to be vital in developing healthy placentas and linked 103 genetic mutations, most causing defects in the mouse placenta which cause embryos to die

Parasites and Microbes

- Sequenced and provided the reference genomes of 3000 bacteria held by the National Collection of Type Cultures, including deadly strains of plague, dysentery and cholera
- Led the largest ever genetic study of mosquitoes to reveal the movement of insecticide resistance between different regions of Africa
- Produced the first complete picture of MRSA spread across the east of England, tracking transmission within and between hospitals, and in GP surgeries and communities

More achievements are listed in the Timeline on pages 6 and 7, each bubble is a link to more detail

on the Sanger Institute's website.

Other achievements of Sanger Institute can be found below:

Faculty

Over the past year our researchers have made a substantial contribution to genome research across a broad range of scientific areas. We have published 480 (2017:569) research papers in peer-reviewed journals, of which 136 (2017:155) had a Sanger Institute first and/or last name author. In addition, 52 (2017:58) were in the following high-profile publications: 20 Nature, 15 Nature Genetics, 5 Cell and 12 Science and, of these 17 (2017:19) were first and/or last author. Our discoveries have roots in both basic and applied scientific questions and have formed a significant component of the wave of global genome science that is reshaping clinical management of inherited disorders, cancer and infection.

Associate Research Programme

Our Associate Research Programme provides opportunities to enrich and diversify our science portfolio, and for external organisations and scientists to access both the intellectual environment and data-generation/data analysis infrastructure. The aim is to enable scientific impact that cannot be delivered either (i) without Sanger's unique science and infrastructure; or (ii) through more conventional third-

Our Equality in
Science
programme
supports women
throughout their
careers





party academic collaborations.

Awards and Prizes

The research achievements of Sanger's scientists have been recognised by many outside bodies through prizes and awards. The awardees range from Faculty members through post-doctoral fellows to graduate students.

Equality, Diversity and Inclusion Programme

Our global reputation for excellence is underpinned by our commitment to fostering an environment where staff and students from all backgrounds can thrive. We expanded our GRL-wide activity in 2017 to establish our Equality, Diversity and Inclusion ("EDI") Programme to further support under-represented and marginalised groups and encompass broader diversity considerations. The key objectives are to catalyse cultural change, develop partnerships, communicate activities and champion our work at a national and international level and position ourselves as a sector leader in the area of EDI. The EDI Programme is supported by an EDI Forum, which provides long-term support and leadership and champions EDI across the Campus and beyond.

We have also expanded our Campus-wide 'Sex in Science' initiative, which has been running since 2011, to an 'Equality in Science' programme.

Our GRL-wide gender pay gap in 2017 showed a 10.2% median and 16.2% mean gender pay gap.

This is due to fewer women holding senior positions within GRL than men. While 53% of GRL employees are women, this drops to 32% at our senior salary grade, which attracts the highest level of remuneration. We have committed to a range of long-term targeted activities which promote gender equality in the key areas of recruitment, retention and progression. We are focussing on impactful and sustainable changes, which, in combination, will encourage and support a positive culture of equality, diversity and inclusion.

Our full gender pay gap report is published on the [Sanger Institute website](#).

Research Training

The Sanger Institute provides an exceptional intellectual environment and infrastructure for training and inspiring the next generation of leaders in genomics research. The Institute currently has 117 (2017:132) postdoctoral fellows, on time-limited appointments of 3-5 years, from 36 countries, supported by core funds and by eight different funding agencies.

Graduate Programme

The cutting-edge academic atmosphere, coupled with our exceptional facilities and resources, provides a unique training environment for science graduates. The Graduate Programme aims to use the physical and academic resources of the Sanger Institute to inspire and train the next generation of leaders in genomic research. The Graduate Programme is affiliated with the University of

Cambridge, and all Sanger Institute students graduate with a Cambridge degree, a globally recognised mark of excellence.

Specifically we operate a four-year PhD programme which accepts 12-13 graduate students each year from all over the world. We are also part of the University of Cambridge Clinical PhD programme jointly funded by ourselves and Wellcome, and we accept 2-3 registrar-level clinicians per year who are expected to submit their PhDs within three years. We also accept a small number of students each year from several other University of Cambridge based PhD programmes.

In addition, we have established an MPhil Programme for three students per year from low and middle-income countries in order to help facilitate their progress onto competitive graduate programmes. Including those funded by third parties, we currently have 77 (2017:80) PhD students and 7 (2017:6) MPhil students from 33 countries.

To date the Sanger Institute has had a total of 201 students successfully complete their PhD degree, of whom 16 were clinical PhD students. A further 19 students have successfully completed an MPhil degree.

The cohort of 127 PhD students in the 2006-2013 intakes has maintained an average four-year

submission rate of 87.4 per cent (2017: 90.0 per cent). While we strive for 100 per cent submission within four years and monitor progress very carefully to try to ensure it, in most years a few students fail to make the deadline, for an array of reasons. In all years however, we have exceeded the 70 per cent threshold for four-year submission expected by the Research Councils.

Next destination of our students

We keep a comprehensive record of all the graduate students who have trained at the Institute.

Of the 220 graduate student alumni to date (201 PhD, 19 MPhil), 37 hold faculty positions around the world. At least a further 92 are working as researchers in academia or in industry, and 30 are training to be or are working as clinicians, of whom many are actively carrying out research, some as principal investigators.

Our graduates are to be found in many top research establishments such as Harvard, Berkeley, Stanford, Oxford, Imperial College, the Karolinska Institute, the Crick Institute, the Gurdon Institute and the London School of Hygiene and Tropical Medicine, and companies such as Illumina, GSK, Syngenta, AstraZeneca and Roche.

Scientific Operations

We deliver high-throughput, large-scale biological





research, which is a defining characteristic distinguishing our science from that of most research institutes and universities. Conduct of science at this scale is critically dependent upon the existence of major core facilities and processes organised into complex platforms and pipelines. These require substantial infrastructure, subject matter experts and professional organisation and management.

The Institute has five major core platforms:

- DNA sequencing (including sample management and R&D)
- Animal facility (including mouse pipelines and mouse informatics)
- Cellular Generation and Phenotyping facility
- Single Cell Genomics
- IT

Translation

A highlight of the past year has been the creation of a Sanger-based company to develop the world's first fully automated pathogen sequencing and analysis pipeline for routine use in clinical settings. Next Generation Diagnostics (NGD) was born out of collaboration between a Silicon Valley biotech and Sanger scientists. NGD aims to run real time sequencing and analysis of hospital infections samples in order to rapidly identify and halt infection outbreaks. Rapid development of Sanger-developed technology has lead to beta testing in Addenbrookes, with further evaluations lined up at

the Henry Ford Hospital in Detroit and the Mayo Clinic.

Sanger spin outs have enjoyed an excellent year with Congenica continuing to support Genomics England and raising further investment that will facilitate their activities in China. Both Kymab and VHSquared have continued their clinical progress with Kymab having the exciting prospect of entering a phase 2 trial in 2019. Microbiotica – Sanger's youngest spin out – executed the world's second highest value deal in the microbiome field, securing a collaboration with Genentech to develop microbiome based intestinal bowel disease therapies.

Other activities have seen strong engagement with major pharma. These include collaborative efforts with AstraZeneca and others to better stratify both approved and early stage cancer therapeutics. COSMIC has continued to gain traction, generating revenues sufficient to grow the team and deliver greater data resources to the entire cancer community.

The Translation team have continued their outreach and thought-leadership activities. Sanger's Head of Translation was elected as inaugural Chair of the BIA's Genomic's Advisory Committee, which aims to promote the needs of the UK's innovative genomics industry at a national and international level. Following excellent feedback a second Commercialising Genomic Research course was delivered in October 2018 with participants spanning a broad range of both

commercial and not-for profit organisations.

Resources for the research community

Scientists at the Sanger Institute generate several types of biological resources to support research conducted by our Faculty or collaborators. All are subsequently released for the wider research community to use, together with relevant and appropriate metadata. Biological resources include engineered, heterozygous mutant mouse embryonic stem cells, knockout mice, mutant zebrafish, and human iPS (induced Pluripotent Stem) cells. Genomic science generates vast volumes of biological data and, in order to curate, organise and present data, we established publically accessible databases and organised data resources. These include Decipher, Havana, COSMIC and others.

ii) Connecting Science

A review of our work over the past year can be found at wellcomegenomecampus.org/connectingscience, but some of our highlights include:

Training and Learning: The Advanced Courses and Scientific Conferences team have developed and delivered over 50 learning events, which have been held on the Campus and in low and middle-income countries. These activities have reached approximately 3,000 research and healthcare professionals. New events for this year have included a biodata 'hackathon', as well as new courses on viral genomics and single cell technologies. A new suite of online training courses have also been launched on the Open University's FutureLearn platform.

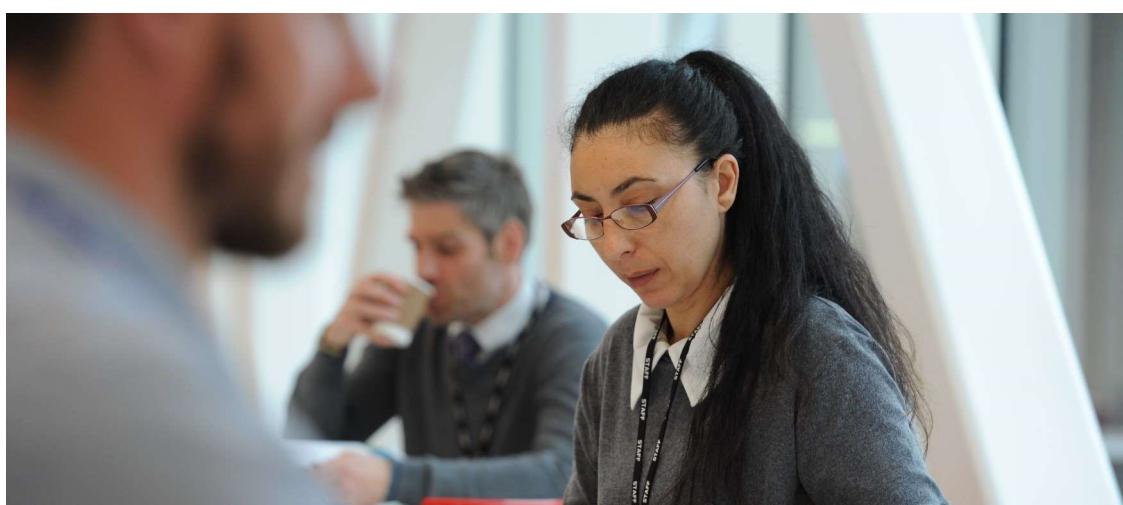
Engagement: The Public Engagement team have worked with partners to coordinate Genome Decoders, a citizen science project in which A-level students are annotating the human whipworm genome. The team have also launched a number of new initiatives to support researchers and embed engagement into Campus life, and have initiated targeted partnerships with schools in areas near the Campus that have low socioeconomic indicators.

Meeting and Event Spaces: The Conference Centre has continued to develop and refine its services and facilities, including its events management service. It has attracted a number of new clients from the research community, which have enabled it to hit record levels of sales revenue this year.

Society and Ethics Research: The team have recruited 25,000 participants to their global survey on public attitudes to the use of genetic data, Your DNA Your Say, and are currently analysing its outcomes. They have also launched the Music of Life project, a set of innovative and accessible films, which are being tested in clinic by genetic counsellors to assess their impact on supporting the communication of complex genetic information to patients.

iii) Enterprise and Innovation

The Enterprise and Innovation team is now well established and includes at a senior level, both an Entrepreneurship and Innovation Centre Manager and a Marketing Manager. In addition to the Translation achievements described above there continues to be excellent progress in building a Campus community of



Shared working
space in the
BIC's Pebbles
Cafe

Hinxton Hall and conference centre facilities



innovative BIC companies and developing a more entrepreneurial Campus culture.

Interest from Genome and BioData companies seeking to co-locate on Campus has exceeded expectations. The BIC remains at over 90 per cent capacity, housing nine organisations spanning public and private sectors, representing diverse aspects of the genomics value chain, and comprising Campus spin-out companies, Genomics England Limited activities and organisations from mainland Europe, Asia and Silicon Valley in the United States.

We have continued our focus on building a sense of community within the BIC, with a view to this being the centre of a Campus innovation and entrepreneurial ecosystem, through a series of events, open days and other activities to stimulate Campus engagement. We are beginning our second round of BIC annual reviews and now hold regular events with the leadership of BIC Companies. Feedback is exceptionally positive with particular praise for the efforts made to integrate companies into Campus activities.

Broader efforts to inspire Campus entrepreneurial intent have built upon the Bench to Boardroom seminars and BIC Affiliate programme. In July 2018 the Enterprise and Innovation Team delivered the first Campus hackathon in collaboration with industry partners. This 'high energy' event brought together over 100 participants to address five

challenges focused on improving health outcomes through genomes and biodata innovation and involved individuals and teams from entities across campus. Overall twenty teams presented visionary and innovative solutions and collectively we are continuing to support several teams as they further develop their solutions. Although the central objective of the hackathon was to galvanise the entrepreneurial spirit of the Campus, it also successfully and innovatively engaged the wider genomes and biodata ecosystem and we are currently undertaking a research study to explore and document the impact and value created as a result.

Financial review

Results

This is the second year of the 2016-2021 quinquennium award from Wellcome which GRL can draw down as required to meet its objectives as set out in the 2016-2021 scientific plan.

Income for the year totalled £144.8 million (2017 £135.3 million) of which 85% (2017: 78%) was provided by Wellcome. Resources expended in furtherance of its activities totalled £147.3million (2017 £143.9 million). Net expenditure for the year was £2.5million (2017 £8.6 million). The deficit has arisen due to the accounting requirements of the defined benefit pension

scheme. The net movement in funds, after other recognised gains of £27.8 million (2017: £81.2 million), was an increase of £25.4 million (2017: £72.6 million).

The deficit of £113.9 million (2017: £135.0 million) representing the year-end funding position on the staff defined benefit pension scheme is recognised in the financial statements as a 'pension liability' on an FRS 102 basis. This deficit represents the difference between an assessment of the liabilities of the pension funds and the current value of their underlying assets. The amount of the deficit is subject to considerable variability because it depends on a valuation of assets at the year-end date and a range of actuarial assumptions impacting the liabilities.

In 2018 there has been a 0.1% increase in the discount rate assumption reflecting the increase in long-dated corporate bond yields. FRS102 requires discount rates to be based on corporate bond rates of an appropriate duration, regardless of actual investment strategy and actual investment returns expected. The major assumptions used by the actuary are shown in note 8.

A full triennial actuarial valuation of the Genome Research Limited Pension Plan was carried out as at 31 December 2015. This valuation showed that the plan was 82% funded with a deficit of £24.8 million.

Wellcome and GRL previously agreed with the GRL

Pension Plan Trustee to put in place a Deed of Guarantee. The obligations of the Deed, guaranteed by Wellcome, are that GRL pays the necessary contribution as agreed with the Trustee and the Plan Actuary and that any deficit in the funding identified by a full actuarial valuation will be repaid over a period of five years or less. The Deed provides security to the pension scheme and allows the Pension Trustees to take a longer-term view when deciding their investment strategy.

Wellcome agreed to fund £6.2 million per annum over five years to 31 December 2020 payable to GRL under the terms of the guarantee. £3.9m was paid in September 2018 and Wellcome committed to pay £2.3m in December 2018.

An approximate annual update as of 31 December 2017 was carried out and showed that the fund was 96% funded with a deficit of £9.8m.

Reserves policy

Total funds (excluding the pension deficit) at the end of the year were £169.5 million (2017: £165.2 million). The impact of the reduction in the pension deficit has been to increase the reserves to a net asset of £55.6 million (2017 £30.2 million). As referred to above in the results section, this is due to the FRS 102 valuation of the defined benefit pension scheme. The Deed of Guarantee ensures that, for as long as GRL is a subsidiary of The Wellcome Trust Limited, as Trustee of the Wellcome Trust, Wellcome will fund any pension



Our open spaces and dining facilities are used to connect and



deficit as required.

The restricted funds consist of capital funds for buildings and capital equipment, a research fund and an investment fund. The year-end fund balances on the capital funds represent the net book value of the tangible fixed assets purchased from those funds. The balance on the year-end research fund represents restricted income funds available to spend in furtherance of its charitable purposes. The balance on the endowment fund represents funds for activities specified by the donor. The movement on reserves is shown in note 20 to the financial statements.

The unrestricted funds of £6.0 million (2017: £nil) represent funds generated from external sources that can be allocated at the discretion of the directors, including license fees, royalties, tenant services and exchange gains and losses. These were not separately identified in 2017.

As the Campus activities develop, more activities will generate, and be supported through, unrestricted funds. As a result Directors consider that a low level of unrestricted funds is acceptable. As activities develop, Directors will establish a more detailed target. Wellcome provides sufficient funding to enable the charity to finance its general activities and meet its obligations as they fall due.

This funding structure is reviewed every five years.

Expenditure policy

For planning purposes an annual budget is agreed with Wellcome. The GRL Board monitors the expenditure of GRL and provides oversight of the internal budgetary and financial control mechanisms in place.

Pensions Policy

GRL operates a funded defined benefit scheme and a defined contribution scheme into which both employee and employer contributions are paid. There is further disclosure in note 8 to the Financial Statements and in the results above.

Going Concern

Total reserves before the pension deficit were £169.5 million (2017: £165.2 million). After considering the Deed of Guarantee for the GRL Pension Plan, the 2018-19 budget and strategic plan for 2016-2021 and the award from Wellcome for 2016-2021, the Directors are satisfied that it is appropriate to adopt the going concern basis in preparing the financial statements of GRL. If any liability arises as a result of the matters disclosed in note 11, Wellcome Trust core funds can be used to settle this liability.

Plans for future periods

Genomes constitute enormous quantities of data and their advent has fostered a dramatic expansion of computing- and mathematics-based biological sciences together with infrastructure to support their handling and interpretation. Their influence and impact will further accelerate over the next couple of decades through more research, diverse applications, a flourishing of commercial entities using them and increasing familiarity of individual human beings with their own genomes, attended by societal consideration of their implications. The Wellcome Genome Campus and GRL will continue to provide a foundation for a broad front of activity over the next year to maximise scientific, health, economic and other benefits from Genomes and Biodata.

The Sanger Institute's science will further explore rare and common genetic diseases, cancer and infection through studying genome variation, naturally occurring and engineered, to:

- understand how humans and pathogens evolve
- chart the processes of human development and ageing
- link genome variation to their phenotypic and functional consequences, from the single cell to the whole organism
- discover the molecular interactions between pathogens and hosts

Connecting Science will continue to deliver a full

programme which addresses its key strategic objectives: to work with diverse communities to transform engagement with genomics; to impact policy, practice, and careers; and to establish the Wellcome Genome Campus as the recognised centre of excellence for learning and engagement with genomics. In the coming year they will host European Researchers Night events, develop new conferences on key breaking topics, deliver new training courses in Rwanda, Kenya, and Peru, and continue to evaluate and refine ongoing projects.

The Entrepreneurship and Innovation team will extend their efforts to integrate the diverse Campus activities, in order to realise new collaborations and other translational opportunities created by co-location. Based on our learnings from the BIC we will support development of the Campus Vision and strategy development around growth of the innovation and entrepreneurship on the Wellcome Genome Campus. We continue to explore how best to work with Wellcome to better deliver impact from the flagship science at the Sanger Institute.

Principal risks and uncertainties

The Directors have implemented a formal risk management process to assess financial and business risk and implement risk management strategies. They have identified the main risks GRL faces, prioritised them in terms of potential impact and likelihood of occurrence, and have identified means of mitigating the risks. The Directors have



Risk	Nature of risk	Management of risk
Campus Vision	As academic research is at the heart of the Campus we need to ensure that the implementation of the Wellcome Genome Campus vision enhances discovery research.	Effective governance structure in place to support the GRL strategic plan. Campus development team contains experienced and skilled staff to develop the Campus vision to the outline planning approval stage. Research gateway policy for allowing new entities to be part of the Campus ensures that the scientific theme of 'genomes and biodata' is supported. Project Board in place to support project team on delivery of the master plan. Regular consultation and communication activities with surrounding communities.
Recruitment and retention	Genomics is a specialist field within science with strong competition for a limited pool of senior people with the right leadership skills. Potential difficulty in encouraging relocation. Potential restriction/complication of movement of people, recruitment and retention due to Brexit and the perception that the UK is a less welcoming environment. Potential impact of negative perceptions arising from claims, see Diversity section (page 26).	HR improvement plan to attract and retain staff. A new market benchmarked pay framework has been implemented in 2018. Developing in house talent and making links with local universities. Strong focus within the organisation on improving diversity and implementation of initiatives to raise GRL's profile as a sector leader in equality, diversity and inclusion. Brexit scenario is still uncertain, but to mitigate the impact we have increased our support of VISA and residence support for staff and UK Border Agency workshops are planned with European staff. Actively campaigning to influence policy. Review of the faculty model and other policies and practices.
Management information	Management information procedures, processes and systems do not produce relevant, timely and accurate information and as a result do not allow an appropriate level of monitoring and decision making	Improved management information and policies developed to support decision making and the monitoring of the deliverables. Finance and HR systems upgraded in FY 2018. Implementation of further HR modules following full review of current functionality. Key service areas developing reporting structures and KPIs. Assessing development of integration of scientific management systems with finance systems
Funding	Significant budget pressures for the 2016-2021 Science Strategy, may result in the 5 year plan not being fulfilled. Impact of Brexit on EU funding is uncertain	Review current science platforms to ensure strategy for the next five years. Business development manager recruited. Review of third party grant strategy to ensure all opportunities are taken advantage of.
Data & Cyber Security	Cyber security threats are constantly changing posing ongoing challenges to address the risks to the confidentiality, integrity and availability of data	User Education Programme rollout Incident Response Plan adoption Implementation of detailed risk register specifically capturing cyber security and GDPR
Brexit	Uncertainty around Brexit deal impacting ability to work with EU members and citizens and security of supply chain. Current grant recipients and procurement contracts may be adversely affected by sterling weakness and volatility.	GRL consider the key risks around Brexit to be the impact on recruiting scientific staff and funding opportunities, as detailed above. and the possible interruption of key elements of the supply chain. A category management approach to procurement has enabled more resilience to be achieved. Continue to work closely in this area and with Wellcome to share information and identify additional risks.

reviewed the adequacy of GRL's current internal controls. The directors are pleased to report that the charitable company's risk management conform with the guidelines issued by the Charity Commission and are compliant with ISO 31000.

The Audit and Risk Committee reviews the risk management policy, risk processes and the Institute Risk Register at each meeting. It monitors progress against actions arising to address the risks identified. It also approves the annual risk-based internal audit plan that covers the major risks identified by management and the directors. It also monitors the reports from internal audit and progress against the audit plan and the progress against management actions arising from its reports.

The specific risks currently considered by the Directors to be the most serious are detailed in the table on page 19.

Structure, governance and management

GRL is considered to be a wholly-owned subsidiary of Wellcome Trust for accounting purposes. Its sole member is The Wellcome Trust Limited, as corporate trustee of the Wellcome Trust which appoints the GRL Board of Directors. The performance of the Directors is monitored by The Wellcome Trust and

any necessary development and training will be advised and managed by The Wellcome Trust.

Genome Research Trading Limited is a 100% subsidiary of GRL. Hinxton Hall Limited is a charitable company, and has only two members: The Wellcome Trust Limited as corporate Trustee of Wellcome Trust and GRL.

GRL Board of Directors

The GRL Board has overall legal responsibility and accountability for all activities of the Sanger Institute and for all other GRL activity at the Wellcome Genome Campus. It approves the management structure and operating budgets of the Sanger Institute and Wellcome Genome Campus and approves major policies such as on intellectual property. During 2017/18 the GRL Board met on three occasions.

A list of Directors, including details of 3 appointments and 2 resignations in the year, is shown on page 48.

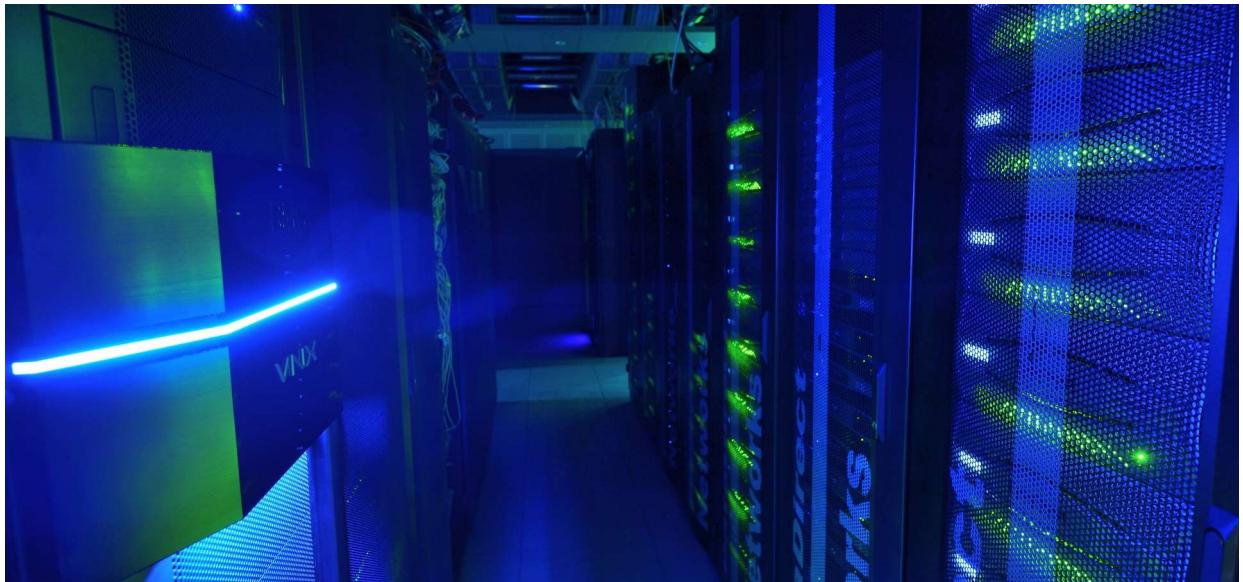
GRL Executive Board

The GRL Executive Board (chaired by the Director of the Institute who is also Chief Executive Officer of GRL) has delegated responsibility from the GRL Board to oversee the implementation of GRL's strategy. The



WGC from the air

Inside our data
centre,
supporting
science on scale



GRL Executive Board includes representatives from each of the main themes of GRL's strategy: Sanger Institute, Connecting Science, and Enterprise and Innovation.

The management of each part of the strategy is delegated as follows:

The Sanger Board of Management (BoM), chaired by the Director of the Institute, is responsible for the delivery of our scientific strategy.

The Campus Management Board (chaired by the Associate Chief Operating Officer) is responsible for the development and management of the buildings and infrastructure of the Wellcome Genome Campus and for oversight of the Enterprise and Innovation strategy.

The Connecting Science Management Board, chaired by the Director of Connecting Science is responsible for delivery of our education and public engagement activities.

Reporting and internal control

The GRL Board receives reports from the BoM and the Campus Management Board on the following specific matters:

- risk management policies;
- conflicts of interest policy;
- any significant issue affecting the staff of GRL,

including health and safety, HR policies and employment disputes; and

- financial budgeting and reporting.

The systems of internal control are designed to provide reasonable, but not absolute, assurance against material misstatement or loss. They include:

- a five-year strategic plan and an annual budget approved by the directors;
- regular consideration by the Directors of financial results;
- regular review of key processes by internal audit;
- delegation of authority and segregation of duties; and
- identification and management of business and financial risks.

Audit and risk committee

The Audit and Risk Committee reports to the Board on how it has discharged its responsibilities with regard to reviewing:

- the governance structure;
- the effectiveness of financial systems, processes and finance function;
- the systems of internal control;
- the integrity and transparency of the financial

- statements;
- compliance with legal and regulatory requirements;
- policies and procedures relating to fraud or misappropriation;
- the external and internal auditors' qualifications, independence and performance; and
- financial budgeting and reporting.

The members of the Committee were appointed by the Board and are independent of GRL staff.

Members are as follows:

- Mr Tim Livett (Chair)
- Ms Suzy Nibloe.

The Committee has met four times during the year.

Remuneration

The Board of Directors ensures that remuneration arrangements support the strategic aims of GRL, including approving senior staff salaries.

Responsibilities of the Board in respect of remuneration are:

- Approving the reward strategy and policies for the remuneration of staff, including the Executive Board;

- Determining individual remuneration packages and terms and conditions of employment above an agreed salary level;
- Exercising any powers of, and approving any decisions required by, the Trust in respect of the Genome Research Limited Pension Plan; and
- Ensuring remuneration practices and policies facilitate the employment and retention of talented people.

Conflicts of interest

GRL has a policy on conflicts of interest, which applies to directors and employees. The policy requires disclosure of relevant interests covering commercial and academic interests. The policy defines those financial interests, consultancies and external appointments that should be disclosed. Outside activities need prior approval and the policy acts out the process for establishing measures to mitigate the impact of potential conflicts.

Key Management Personnel

The Key Management Personnel of GRL have been defined as:

- The Board of Directors; and
- Members of the Executive Board to whom the





Board of Directors have delegated responsibilities for the day-to-day running of the organisation. These are: the Chief Executive, the Chief Operating Officer and the Director of Connecting Science.

The remuneration of the Board of Directors is governed by the Articles of Association. The remuneration of members of the Executive Board who are considered Key Management Personnel is determined by the Board of Directors as described above, by benchmarking against equivalent positions within the sector.

The total consideration given to Key Management Personnel is summarised in note 7 to the accounts.

Auditors

The auditors, Deloitte LLP, have indicated their willingness to continue in office and a resolution concerning their re-appointment was approved at the Annual General Meeting.

Public benefit

GRL reviews its aims each year to ensure that those aims remain focused on its charitable objects. GRL has referred to the guidance contained in the Charity Commission's general guidance on public benefit when reviewing its aims and objectives and in planning its future activities.

The directors are satisfied that due regard has been

given to the public benefit guidance published by the Charity Commission as required by section 17 of the Charities Act 2011.

In the opinion of the directors all of GRL's charitable activities are focused on the objects and aims set out above and are undertaken to further GRL's charitable objects for the public benefit.

Health and safety

The Wellcome Genome Campus (WGC) management recognises that proactive, well-managed health and safety is directly linked to its growth and success. The following have been achieved or recorded during the reporting period:

- The WGC Health, Safety and Wellbeing policy was revised in 2018 and signed by the directors from both the Sanger Institute and EMBL-EBI. Tenant and embedded contractor organisations are asked to sign a memorandum of understanding in terms of co-operation and communication of health and safety. All organisations have cooperated with this request.
- With increasing scientific initiatives, the number of new biological risk assessments continues to increase. Currently 77 different organisms are used on campus. The annual audit of active biological risk assessments was undertaken.

- Our musculoskeletal disorder (MSD) prevention programmes in both laboratory and office environments continues, with local champions from many areas supporting the training and advice provided by CH&S, to reduce the incidence of MSDs. An independent expert has reviewed this programme. MSDs continue to be the cause of the majority of incidents reported to the HSE.
- In 2018 the Campus Health, Safety, Wellbeing and Environment week of activities engaged with the campus community on laboratory and office ergonomics, fire, asbestos and chemical safety, as well as sessions focusing on women's health and the campus environmental strategy regarding waste minimisation and energy management.
- The campus has a rolling programme of fire risk assessments for the current sixteen buildings, as well as fire safety training.
- A mental health first aider (MHFA) volunteer team has been established and trained. This team is available to all individuals on campus. The role of the MHFA team is to support and signpost clients to external professional support services. This project forms part of a wider wellbeing strategy, that will be rolled out over the next year.
- Training continues to be a large focus of the CH&S team. 1,607 (2017:1,487) individuals attended 125 training sessions, delivered in 28 different topics, ranging from general induction,

risk assessment, management of health and safety, to more specialist training such as first aid and ergonomic programmes. Two new programmes were launched in 2018, focusing on improved ergonomics in the Research Support Facility and laboratory chemical safety.

- 75 workplace inspections are carried out annually.
- The safety helpdesk receives 180 requests per month.

Environment

- The GRL Environment and Green Travel Manager has instituted programmes to inform staff on environmental issues and biodiversity through themed days and presentations. She has consulted with the Site Vision Team to share objectives and benefits for inclusion in the master planning application.
- The Campus has expanded provision for electric vehicles by the addition of 6 additional charging points.
- After a successful trial period, we have instituted a shuttle bus service throughout the day from Campus to Whittleford Parkway rail station. This service allows more staff to travel by train by covering the 'last mile' trip to site which is poorly served by public transport.
- GRL has successfully achieved compliance with ISO 14001:2015 environmental management



The Campus has expanded its provision for electric vehicles

system excellence accreditation, the updated global standard.

- GRL has successfully achieved compliance with ISO 50001:2011 for Energy Management. This management system includes energy procurement, use and improvement initiatives, as well as improved stakeholder engagement.
- All new buildings, and where refurbishments are completed, are fully equipped with metering for electricity, gas and water to ensure that we have a detailed understanding of our utilities balance, so that, as well as minimising waste, we can provide information to our users to help them minimise use.
- We are examining options to utilise our on-site generator capacity to moderate peak loads in winter. This offers financial benefits as well as reducing the strain on the national grid.
- We are reviewing our provision for general waste disposal and recycling after a successful exercise last year on hazardous and offensive waste. We will put in place a new contract to provide a better-regulated service with some cost benefits.
- Our discharge of sewage with high phosphate content is now being managed. We have new agreed effluent strengths where the phosphate content is half that measured previously.
- Our grounds are enjoyed by all staff and visitors as an amenity, and this has also been interwoven into our environmental programme for biodiversity, with opportunities to study wildlife and flora in our wetlands abutting the River Cam, keep our own beehives and create wildflower meadow areas on site.

Employment and diversity

Employment

GRL is committed to employment practices, systems and policies that ensure legislative compliance and follow best practice, while promoting a working environment that supports the realisation of the organisation's scientific purpose. Policies and processes are reviewed on a regular basis, to ensure they remain fully compliant and appropriate to the needs of the organisation.

A new, integrated HR system has been implemented for all GRL employees, students and visiting workers

and we have commenced reviewing all our processes, to adapt them to maximise the impact of the system. This system will help to streamline GRL's people processes and provide more accurate, real-time management information that will measure the effectiveness of workforce strategies. In the coming 18 months, we are considering developing the system through implementation of further modules supporting key areas such as recruitment and development.

The Human Resources team are developing focus on projects that improve the employee experience. Key aspects of the employee experience, such as induction process and high impactful line management are current areas of focus. An Employee Engagement team has been established and are targeting enhanced employee health & wellbeing, as well as ensuring that the Great Place to Work survey remains in focus, with regular actions responding to the feedback received.

GRL has prioritised a number of other activities to ensure that we continue to build organisational resilience and stronger employee relations.

Firstly, a revised GRL Pay Framework has been implemented to deliver greater transparency and flexibility around pay progression. This framework focuses more specifically on job families and has enabled us to respond to issues with recruitment and retention in a competitive market.

Our workforce strategy has increased its focus on the development of talent, through broadened 'Grow your Own' initiatives that are adding apprentices to the workforce at a meaningful scale, in both scientific and support areas. Funding from HEFCE (Higher Education Funding Council for England) has supported a joint sector partnership with Anglia Ruskin University to develop a Bioinformatics degree level apprenticeship.

Revised training programmes supporting employees at all levels of the Institute are in full swing. We have also launched an external training programme, Scientific Education & Excellence Development and demand for this is growing at pace.

Our 'Employee Partnership' meets monthly and brings together leadership and staff representatives to discuss all aspects of employment. This

partnership underpins the aim of the Institute, to build strong employee engagement and operate in a transparent manner.

GRL's statement as required by the Modern Slavery Act 2015 is available on our website.

Diversity

GRL's scientific mission and global reputation for excellence, depends upon a collective effort of diverse expertise, skills and activities. We place great value on attracting, recruiting and retaining talent from all backgrounds and providing an environment where everyone is encouraged to thrive, contribute and reach their full potential irrespective of age, disability, gender, gender identity, sexual orientation, race, religion or belief, or marital and civil partnership status.

Mandatory unconscious bias recruitment training has been introduced for all employees who sit on interview panels, to help ensure that our recruitment process encourages the selection of the right candidates, regardless of their background, to help us drive the best science that we can. We also consciously strive to have balanced gender representation within the selection process - both candidate and applicant.

GRL remains committed to the Athena SWAN Charter, which promotes equality, inclusion and diversity in science. We have achieved Bronze status with Athena SWAN and our aim is to foster an inclusive culture and raise GRL's profile as a sector leader in equality, diversity and inclusion.

The Board of Directors commissioned an independent investigation this year into allegations of gender discrimination, wrongful exploitation of scientific work, misuse of grant monies and bullying. None of the allegations were upheld. However, the investigation has highlighted that further work is needed to address the imbalance between the number of men and women amongst its scientific leaders and the challenges faced by women in forging scientific careers. The Institute recognises the need for improvement in this area and is, in particular, reviewing its faculty model and other policies and practices that may inadvertently foster gender imbalance and inequality.

Learning and Development

Our strategy to grow the capability and potential of

managers and employees is based on the provision of an extensive selection of innovative learning and specialist development interventions and advice.

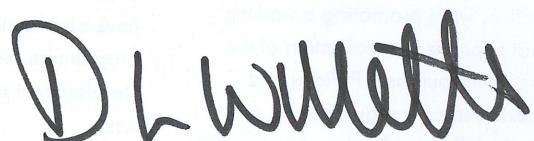
The organisation boasts a comprehensive portfolio of learning and development opportunities. In May 2016, a range of leadership development programmes were launched and since then 300 supervisors, managers and leaders have benefited from this training. These programmes have all been carefully crafted to meet the assorted development needs of both scientific and non-scientific managers operating at different career stages and levels, including training for postDocs.

Furthermore, GRL now has a well-established in-house Mentor and Coach Network to supports lifelong learning. This network features almost 40 internal mentors and coaches who are typically engaged to support career choices and journeys, as well as to help tackle specific skills challenges.

Improving our operational processes and systems

We are developing a business enterprise system that underpins our scientific operations. The works order system links our laboratory information management systems and process data warehouses to the finance software. Customers can submit samples, choose sample sets and create work orders through simple-to-use self-service web interfaces against validated cost codes. The project enforces additional rigour with ethical approval, reducing the risk of infringement. Our aim is to achieve cross-charging and billing which is seamless with the finance system and provide management information which is high-quality and up to date. The successful implementation of this development would future proof our scientific operations and have broader benefits such as enhancing our capabilities to support fee-for-service work.

This Trustees' report, incorporating the Strategic report, is approved by order of the Board of Directors



Lord David Willetts, Chair of the Board of Directors,
5 December 2018

Statement of Directors' responsibilities

The Directors are responsible for preparing the Directors' Report, the Strategic Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 102 "the Financial Reporting Standard applicable in the UK and the Republic of Ireland".

Company law requires the Directors 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 year. In preparing these Financial Statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the Financial Statements; and
- prepare the Financial Statements on the going concern basis unless it is inappropriate to presume

that the charitable company will continue its activities.

The Directors 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.

Disclosure of information to auditor

As far as the Directors are aware:

- there is no relevant audit information of which the charitable company's auditor is unaware; and
- the Directors 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 Directors 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.



Independent Auditor's Report to the Directors/Trustees of Genome Research Limited

Report on the audit of the financial statements

Opinion

In our opinion the financial statements of Genome Research Limited (the 'charitable company'):

- give a true and fair view of the state of the charitable company's affairs as at 30 September 2018 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 including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland"; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements of Genome Research Limited (the 'charitable company') which comprise:

- the statement of financial activities;
- the charitable company balance sheet;
- the statement of accounting policies; and
- the related notes 2 to 20.

The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs(UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report.

- We are independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard, and we have fulfilled our

other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We are required by ISAs (UK) to report in respect of the following matters where:

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

We have nothing to report in respect of these matters.

Other information

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

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in respect of these matters.

Responsibilities of trustees

As explained more fully in the Statement of Directors' Responsibilities, the trustees (who are also the directors of the charitable company for the purpose of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true

and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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

Report on other legal and regulatory requirements

Opinions on other matters prescribed by the Companies Act 2006

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

- the information given in the trustees' report, which includes the strategic report and the directors' report prepared for the purposes of company law for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report included within the trustees' report have been prepared in accordance with applicable legal requirements.

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

Matters on which we are required to report by exception

Under the Companies Act 2006 we are required to report in respect of the following matters 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.

We have nothing to report in respect of these matters.

Use of our report

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

Terri Fielding (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
London, UK
5 December 2018

Genome Research Limited

Statement of Financial Activities (incorporating an Income and Expenditure Account)
for the year ended 30 September 2018

		2018 £'000	2018 £'000	2018 £'000	2018 £'000	2017 £'000
	Note	Unrestricted	Endowment	Restricted	Total funds	Total funds
INCOME						
Income from charitable activities	3	-	-	136,446	136,446	127,118
Other income	3	3,850	-	4,491	8,341	8,183
Interest		-	17	8	25	35
Total income		3,850	17	140,945	144,812	135,336
EXPENDITURE						
Charitable activities	4	1,816	75	145,375	147,266	143,940
Total expenditure before tax		1,816	75	145,375	147,266	143,940
Net income/(expenditure)		2,034	(58)	(4,430)	(2,454)	(8,604)
Transfer between funds		2,561	85	(2,646)	-	-
Other recognised gains						
Unrealised gain on investments	10	1,437	-	-	1,437	2,533
Actuarial gains on defined benefit pension scheme	8	-	-	26,400	26,400	78,700
Net movement in funds		6,032	27	19,324	25,383	72,629
Total funds brought forward at 1 October	20	-	639	29,533	30,172	(42,457)
Total funds carried forward at 30 September		6,032	666	48,857	55,555	30,172

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

All income and expenditure derive from continuing activities.

2017 comparatives by fund are provided in notes 3 and 20.

The notes on pages 32 to 47 form part of these financial statements.

Genome Research Limited

Balance Sheet

as at 30 September 2018

	Total funds 2018 Note	Total funds 2017 £'000
Fixed assets		
Tangible fixed assets	9	167,038
Investments	10	5,921
Total fixed assets		172,959
		168,053
Current assets		
Stocks	12	6,086
Debtors	13	31,805
Cash at bank and in hand		1,995
Total current assets		39,886
		45,758
Creditors: amounts falling due within one year	14	(18,142)
Net current assets		21,744
		17,014
Total assets less current liabilities		194,703
		185,067
Creditors: Amounts falling due after one year	15	(21,924)
Provisions	16	(3,324)
Net assets excluding pension liability		169,455
		165,172
Defined benefit pension scheme deficit	8	(113,900)
Total net assets		55,555
		30,172
The Funds of the Charity		
Restricted funds	20	162,757
Endowment fund	20	666
Pension deficit	8	(113,900)
Total restricted funds		49,523
Unrestricted funds	20	6,032
Total Charity Funds		55,555
		30,172

The notes on pages 32 to 47 form part of these financial statements. The financial statements on pages 30 to 47 were approved and authorised for issue by the Board of Directors on 5th December 2018 and were signed on its behalf by:

Lord David Willetts
Chair

Registered company number: 2742969

1. Accounting policies

Basis of preparation and statement of compliance

The financial statements of Genome Research Ltd ("GRL") have been prepared on a going concern basis in accordance with Financial Reporting Standard 102 and with the Statement of Recommended Practice 'Accounting and Reporting by Charities FRS 102 as published in 2015' ("the SORP 2015") together with the Companies Act 2006 and the Charities Act 2011.

GRL meets the definition of public benefit entity under FRS 102.

The Financial Statements have been prepared under the historical cost convention, as modified by the revaluation of investments and on a basis consistent with prior years.

The Charity meets the definition of a qualifying entity under FRS 102 and has therefore taken advantage of the disclosure exemptions available to it in respect of its separate financial statements. The financial statements of GRL and its subsidiaries (Hinxton Hall Limited and Genome Research Trading Limited) are consolidated within the financial statements of its parent entity, the Wellcome Trust. As such, GRL has applied the disclosure exemption from preparing consolidated financial statements. Exemptions have been taken in relation to presentation of a Statement of Cash Flows , Financial Instruments and Related Party Transactions. The equivalent disclosures relating to the exemptions have been included in the Consolidated Financial Statements of the Wellcome Trust, its parent.

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

The preparation of financial statements in conformity with FRS 102 requires the use of certain accounting estimates. It also requires management to exercise its judgement in the process of applying the company's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in note 2.

Fund accounting

The charitable company's funds consist of restricted and endowment funds which are subject to specific conditions imposed by the donors, and unrestricted funds which may be spent at the discretion of the Directors. The endowment fund is an expendable endowment.

Revenue recognition

Income is recognised in line with the SORP requirements for entitlement, probability and measurement. The charity's core funding from the Wellcome Trust is in the form of a multi-period grant which is subject to annual approval based on a review of science and the agreement of annual budgets. The income for core funding is recognised when the conditions for grant recognition have been satisfied. Entitlement is when the expenditure has been committed.

Other research grants fall largely into two categories: those which are performance related and specify a level of service, and those with no conditions attaching. Income for performance-related grants is recognised when the expenditure is incurred as this reflects the service levels. Income for non-performance-related grants is recognised when awarded as this represents entitlement.

Capital grants with no performance related conditions are recognised when the charity is entitled, the receipt is probable and the amount is measureable which is when the award letter is received.

Other income is recognised under the same criteria of entitlement, probability and measurement. Judgement is required to determine the point at which these conditions are met. Income received in advance of meeting the recognition criteria is deferred and income earned but not received is accrued.

Expenditure

Liabilities are recognised as expenditure as soon as there is a legal or constructive obligation committing the charity to that expenditure, it is probable that settlement will be required and the amount of the obligation can be measured reliably. All expenditure is recognised on an accruals basis. The charity has three activities: Sanger Institute, Connecting Science and Enterprise and Innovation. Where possible, expenditure that relates to more than one activity is apportioned. Apportionment is in proportion to direct costs. Governance costs represent expenditure incurred in compliance with constitutional and statutory requirements including internal and external audit and are included within support costs.

Tangible fixed assets and depreciation

Tangible fixed assets are measured initially on the balance sheet at their historical cost. Tangible fixed assets costing more than £10,000 are capitalised together with any incidental costs of acquisition. Costs related to building projects are capitalised from the date the building project becomes viable. Prior to that date cost are written off as incurred. During the construction phase, buildings are classified as being in the course of construction until the date of practical completion when they are transferred to leasehold buildings.

Depreciation is calculated so as to write off the cost of the tangible fixed assets, less their estimated residual values, on a straight-line basis over the expected useful economic lives of the assets concerned. Impairment reviews are undertaken when, in the opinion of the directors, events or circumstances have arisen that indicate that the carrying value of an asset is impaired. They are reviewed annually and any impairment is recognised in the year in which it occurs. No depreciation is charged during the year on the assets in the course of construction. Where an asset has been purchased for use on a third-party funded activity, it is written off over the period of the funding.

The principal annual rates used for this purpose are:

Short leasehold buildings	Over the lease term
Laboratory equipment, fixtures and fittings	Over 5 years
Sequencing instruments	Over 3 years
Computing equipment	Over 3 years

All the charitable company's tangible fixed assets are used for direct charitable purposes. The short leasehold buildings are held under leases from the Wellcome Trust, at £nil cost p.a., which expire in February 2055.

Financial Instruments

The charity has chosen to adopt Sections 11 and 12 of FRS 102 in respect of financial instruments. Financial assets and financial liabilities are recognised when the charity becomes a party to the contractual provisions of the instrument.

i) Financial assets

Basic financial assets including trade and other receivables, cash and bank balances, and intercompany loans are initially measured at transaction price (including transaction costs), except for those financial assets classified as at fair value through profit or loss, which are initially measured at fair value (normally the transaction price excluding transaction costs).

Financial assets and liabilities are only offset in the Balance Sheet when, and only when, there exists a legally enforceable right to set off the recognised amounts and the charity intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Investments in equity instruments which are not subsidiaries, associates or joint ventures, are initially valued at fair value which is normally the transaction price. Such assets are subsequently carried at fair value with changes in fair value being recognised in gains and losses in the statement of financial activities, except that investments which cannot be measured reliably are measured at cost less impairment.

Financial assets are derecognised when (a) the contractual rights to the cash flows from the asset expire or are settled, or (b) substantially all the risks and rewards of the ownership of the asset are transferred to another party or (c) control of the asset has been transferred to another party who has the practical ability to unilaterally sell the asset to an unrelated party without imposing additional restrictions.

ii) Financial liabilities

Basic financial liabilities, including trade and other payables and loans from fellow group companies are recognised at transaction price.

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade payables are recognised initially at transaction price and subsequently measured at amortised cost using the effective interest method.

Stock

Stock is stated at the lower of cost and net realisable value less costs to complete and sell. Cost is determined on a first-in first-out basis. Where necessary, provision is made for obsolete, slow moving and defective stock.

Foreign currencies

Transactions denominated in foreign currencies are translated into sterling at the rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are retranslated at the rates ruling at that date. All differences are dealt with in the Statement of Financial Activities.

Investments

Unquoted investments are valued at management's best estimate of fair value in line with FRS 102.

Defined benefit pension plan

The Charity operates a defined benefit plan for certain employees. A defined benefit plan defines the pension benefit that the employee will receive on retirement, usually dependent upon several factors including age, length of service and remuneration.

The liability recognised in the balance sheet in respect of a defined benefit plan is the present value of the defined benefit obligation at the end of the reporting date less the fair value of plan assets at the reporting date. The defined benefit obligation is calculated using the projected unit credit method. Annually the Charity engages independent actuaries to calculate the obligation. The present value is determined by discounting the estimated future payments using market yields on high-quality corporate bonds that are denominated in sterling and that have terms approximating the estimated period of the future payments ('discount rate').

The fair value of plan assets is measured in accordance with the FRS 102 fair value hierarchy and in accordance with the Charity's policy for similarly held assets. This includes the use of appropriate valuation techniques.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to "Actuarial gains and losses on defined benefit pension plans" in the Statement of Financial Activities.

The net interest cost is calculated by applying the discount rate to the net balance of defined benefit obligation and the fair value of plan assets. This cost is recognised as part of resources expended.

Defined contribution pension plan

The Charity operates a defined contribution plan for certain employees. A defined contribution plan is a pension plan under which the Charity pays fixed contributions. Once the contributions have been paid the Charity has no further payment obligations. The contributions are recognised as an expense when they are due. Amounts not paid are shown in accruals in the balance sheet. The assets of the plan are held separately from the Charity in independently administered funds.

Provisions and contingencies

Provisions are recognised when the Charity has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated. Provisions are discounted to present value where the effect is material.

Contingent liabilities are potential future cash outflows, where the likelihood of payment is considered more than remote, but is not considered probable or cannot be measured reliably. These are not recognised but are disclosed in the financial statements.

Contingent assets are potential future inflows of economic benefits where the likelihood of receipt is considered more than remote, but is not considered probable or cannot be measured reliably. These are not recognised but are disclosed in the financial statements.

Taxation

The Charity is exempt from taxation on its income and gains falling within Part 11 of the Corporation Tax Act 2010 or section 256 of the Taxation of Chargeable Gains Act 1992 to the extent that they are applied to their charitable purposes.

In common with many other charities, the charity is unable to recover the majority of Value Added Tax ("VAT") incurred on expenditure. The amount of VAT that cannot be recovered is included within the underlying cost to which it relates.

2. Significant accounting judgements and key sources of estimation uncertainty

In application of the Charity's accounting policies which are described in note 1, the directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision only affects that period, or in the period of the revision and future periods if the revision affects both current and future periods.

2.1 Significant judgements in applying the entity's accounting policies

The following are the significant judgements, apart from those involving estimations (which are dealt with separately below), that management has made in the process of applying the charity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

Discount rate used to determine the carrying amount of the Company's defined benefit pension obligation

The Charity's defined benefit pension obligation is discounted at a rate set by reference to market yields at the end of the reporting period on high-quality corporate bonds. Significant judgement is required when setting the criteria for bonds to be included in the population from which the yield curve is derived. The most significant criteria considered for the selection of bonds include the issue size of the corporate bonds, quality of the bonds and the identification of outliers which are excluded.

Fair value measurement and valuation processes

Some of the Charity's assets and liabilities are measured at fair value for financial reporting purposes. The Charity applies judgement in selecting the appropriate valuation techniques for calculating the fair value for reporting purposes. There are no items where the amount of judgement is considered to be critical. The Charity holds unquoted investments. Where these are made with co-investors, the co-investor valuation is used to determine fair value. Where there is no co-investor, these investments are internally valued, generally using the price of recent investment.

Recognition of charitable income

The Charity recognises grant income to the extent it is entitled to the funds, has fulfilled the conditions set out by the grant funder and where the amount can be measured reliably and is probable. Judgement is required to determine the point at which these conditions have been met. The Charity assesses the grants on an ongoing basis to evaluate progress against grant.

Analysis of charitable expenditure

The appropriate method of allocating charitable expenditure and the related support costs to each activity requires judgement as some expenditure relates to more than one activity.

Impairment of assets

The Charity holds substantial fixed assets, including buildings. Judgement is required to assess whether these assets will continue to derive value for the organisation. The Charity impairs assets where they are no longer considered to provide such benefit to the users. No impairment was recorded in the current or previous year.

Intercompany loans

Loans payable to Wellcome Trust group entities are considered to be current liabilities and repayable on demand therefore no discounting of the liabilities for the timing of cashflows has been applied. However, there is no formal agreement for repayment terms, so this judgement has been reached based on the Charity's best understanding of the arrangements in discussion with the loan providers.

Provisions

The Charity recognises provisions in relation to faculty members continuing their research at other institutions. Judgement is required to assess the timing and amount of any potential liability, due to the inherent uncertainties in estimating the future

course of scientific research.

Foreign Exchange

The Charity's parent has provided the Charity with an open-ended facility to convert currency at a favourable rate. The Charity considers this service to be a donation-in-kind to which no value is attributed. The Charity recognises exchange gains arising on these transactions in the statement of financial activities.

2.2 Significant accounting estimates and assumptions

The Charity makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

Defined benefit pension scheme

The Charity 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 used. Management estimates these factors in determining the net pension obligation in the balance sheet. See note 8 for the disclosures relating to the defined benefit pension scheme including an analysis of the sensitivity to the principle assumptions of the value of the plan's liabilities. We discuss the critical assumptions relating to the defined benefit pension scheme in the Financial Review section on page 15.

3. TOTAL INCOME

The charitable company has three main activities: Sanger Institute, Connecting Science and Enterprise and Innovation.

Detailed analysis follows:

	2018	2017
	£'000	£'000
Sanger Institute	128,630	119,297
Connecting Science	5,096	3,554
Enterprise and Innovation (Campus)	2,720	4,267
Total grants from charitable activities	136,446	127,118

Core grants from Wellcome	105,970	92,911
Other grants from Wellcome	10,681	12,190
Grants from other funders	19,795	22,017
Total grants from charitable activities	136,446	127,118
Other income (including interest)	8,366	8,218
Total income	144,812	135,336

Income includes grant funding for both capital and revenue expenditure. Grants from other funders includes £5.6 million Government grants (2017 £7.2 million). Other income includes income from services and utilities, salary recharges, rental income, licences, the release of deferred income from EBI, interest and other immaterial income streams, of which £3.9 million (2017: £nil) relates to unrestricted funds. Interest income of £25,000 (2017: £35,000) has been recognised in the year, of which £17,000 (2017: £16,000) relates to the endowment fund.

4a. EXPENDITURE

The Charity has three activities. Expenditure relating to each activity comprises revenue expenditure, including depreciation.

	2018			2017		
	Direct £'000	Support £'000	Total £'000	Direct £'000	Support £'000	Total £'000
Sanger Institute	125,339	13,491	138,830	123,507	10,408	133,915
Connecting Science	4,965	535	5,500	5,574	470	6,044
Enterprise and Innovation	2,651	285	2,936	3,672	309	3,981
	132,955	14,311	147,266	132,753	11,187	143,940

Support costs have been allocated in proportion to direct costs. Support costs include staff costs of £8.2 million (2017: £7.8 million), depreciation of £0.6 million (2017: £0.4 million), premises costs of £1.4 million (2017: £1.4 million) and other costs of £4.1 million (2017: £1.4 million). Support costs include governance costs.

4b. GOVERNANCE COSTS

	2018 £'000	2017 £'000
External audit costs	69	68
Internal audit costs	69	69
	138	137

Governance costs have been allocated in proportion to direct costs.

5. GRANTS AWARDED

Expenditure related to grants awarded is as follows:

Grants to Institutions	2018 £'000	2017 £'000
Research Institute for Tropical Medicine, Philippines	639	-
University of California, San Diego	292	-
University of Cambridge	192	236
University of Oxford	174	144
Grants to other Institutions	491	713
	1,788	1,093

All grants awarded are for the field of genomic research, either through collaborative programmes or to build capacity in lower-middle income countries.

Grants are generally awarded to a particular individual, although the actual award is made to the host institution.

Included within Sanger Institute support costs (see note 4a) is an amount of £0.2 million (2017 £0.1 million) allocated to grant making activities.

All grants awarded are subject to performance conditions and as such the grant is recognised in line with the work performed by the sub-grantee. There are no outstanding liabilities for grants not paid other than those recognised as accruals for grants payable in note 14 (Creditors: amounts falling due within one year).

6. NET EXPENDITURE BEFORE OTHER RECOGNISED GAINS AND LOSSES

Net expenditure before other recognised gains and losses is stated after charging:

	2018 £'000	2017 £'000
Foreign exchange gains	(1,796)	(398)
Depreciation	10,932	12,058
Gain on disposal of fixed assets	(100)	(36)
Fees payable to the company's auditors for the audit of:		
Statutory financial statements	62	60
Pension Fund	7	8
Internal audit	69	69

7. EMPLOYEE INFORMATION

Number of employees

The average headcount of employees analysed by activity and function area, was:

	2018 Number	2017 Number
Sanger Institute	876	905
Connecting Science	43	36
Enterprise and Innovation	7	9
Administrative	144	125
	1,070	1,075

Analysed by

Sanger Institute

Human Genetics	68	78
Cancer	123	129
Cellular Genetics	54	61
Parasites and Microbes	112	115
Mouse and Zebrafish	8	9
Open Targets	34	32
Science Strategy	54	54
Science Support	87	90
Science Platforms	266	275
IT Platforms	65	58
Translation	5	4
Total	876	905

Connecting Science

Enterprise and Innovation	7	9
Administrative	144	125
	1,070	1,075

	2018	2017
	£'000	£'000
Employment costs		
Wages and salaries	43,832	43,217
Social security costs	4,295	4,179
Short term benefits	780	806
Pension costs	20,920	24,780
	69,827	72,982

The number of employees whose emoluments amounted to £60,000 or more (excluding employer's National Insurance Contributions, benefits in kind and employer's pension contributions) during the year was as follows:

	2018 Number	2017 Number
£60,000 to £69,999	20	16
£70,000 to £79,999	13	14
£80,000 to £89,999	18	10
£90,000 to £99,999	4	5
£100,000 to £109,999	2	7
£110,000 to £119,999	3	2
£120,000 to £129,999	5	1
£130,000 to £139,999	2	-
£150,000 to £159,999	-	5
£160,000 to £169,999	1	-
£170,000 to £179,999	1	-
£180,000 to £189,999	1	-
£250,000 to £259,999	-	1
£290,000 to £299,999	-	1
£350,000 to £359,999	1	-
£400,000 to £409,999	1	-

All employees earning more than £60,000 participated in one of the group's pension schemes.

The emoluments of the Director of the Wellcome Sanger Institute included in the table above totalled £351,399 (2017: £295,800). In the current year there was an individual whose emoluments exceeded those of the Director due to the inclusion of termination benefits.

Redundancy and termination payments

	2018 £'000	2017 £'000
Redundancy costs	330	380
Termination payments	259	197
	589	577

Directors' remuneration

Total remuneration and expenses received by the Directors of GRL in relation to their duties as directors was £15,226 (2017: £3,218). No other benefits or expenses were reimbursed to the directors of the charitable company. All but two of the directors are either salaried employees of Wellcome or Governors (Directors) of The Wellcome Trust Limited (the corporate trustee of the Wellcome Trust) and do not receive any additional emoluments for their role as Directors of the charitable company. None of these amounts are recharged to the charitable company.

Directors' indemnity policy

The charitable company is party to a group-wide directors and officers insurance policy which includes all of its current directors. This is not a Qualifying Third Party Indemnity Provision for the purpose of the Companies Act 2006.

Key management personnel remuneration and benefits

Key management personnel includes members of senior management and directors as described on page 22 of the Directors' report. The employee benefits paid or payable to key management for employee services is shown below:

	2018 £'000	2017 £'000
Salaries and other short-term benefits	693	588

8. PENSION SCHEME

The company operates a funded defined benefit scheme and a defined contribution scheme for its employees.

All contributions to the defined benefit scheme are held in trustee-administered funds (The Genome Research Limited Pension Plan) which is independent of the charitable company's finances. A full actuarial valuation of this scheme was carried out at 31 December 2015 and has been updated to 30 September 2018 by a qualified actuary, independent of the scheme's sponsoring employer. The major assumptions used by the actuary are shown below:

	30 September 2018	30 September 2017	30 September 2016
	% per annum	% per annum	% per annum
Inflation (RPI)	3.40%	3.40%	3.40%
Inflation (CPI)	2.40%	2.40%	2.40%
Salary Growth	3.90%	3.90%	4.15%
Discount Rate	2.85%	2.75%	2.35%
Allowance for revaluation of deferred pensions of RPI or 5% p.a. if less	3.40%	3.40%	3.40%
Allowance for pension in payment increases of RPI or 5% p.a. if less	3.25%	3.25%	3.30%
Allowance for pension in payment increases of CPI or 3% p.a. if less	2.00%	2.00%	2.30%
Commutation of pension to cash at retirement	90% of Post A Day	90% of Post A Day	90% of Post A Day

Mortality assumptions adopted imply the following life expectancies at age 60:

	30 September 2018	30 September 2017
Male retiring in 2018 (2017)	27.59 years	27.71 years
Female retiring in 2018 (2017)	28.61 years	28.68 years
Male retiring in 2038 (2037)	28.72 years	28.86 years
Female retiring in 2038 (2037)	29.89 years	29.96 years

The scheme funding valuation as at 31st December 2015 showed a deficit of £24.8m. The company has agreed with the trustees that it will aim to eliminate the deficit over a period of 5 years from 31 December 2015 by the payment of two contributions of £3.1m paid in September and December 2016, and four equal contributions of £6.2m payable by 31st December each subsequent year in respect of the deficit.

An approximate annual update as of 31 December 2016 was carried out and showed that the fund was 83% funded with a

deficit of £33.9m. Wellcome agreed to increase the annual deficit contribution to £7.8m with effect from 1 January 2017 to clear the deficit over 5 years. An annual update as of 31 December 2017 was carried out and showed the fund was 96% funded with a deficit of £9.8m. As a result the additional contribution was reduced back to £6.2 m. £3.9m was paid in September 2018 and Wellcome committed to pay £2.3m in December 2018.

(i) Charge to the Statement of Financial Activities and Other Comprehensive Income over the financial year:

Operating charge	2018 £m	2017 £m
Current service cost	16.3	19.5
Expenses**	0.3	0.2
Net interest cost	3.7	4.9
Net charge to Statement of Financial Activities prior to actuarial gain	20.3	24.6
Actuarial gain	(26.4)	(78.7)
Total charge to Statement of Financial Activities	(6.1)	(54.1)

** These figures exclude insurance premiums for death in service benefits and PPF levies. Administration expenses have been included with effect from 1 January 2017.

(ii) Defined benefit costs recognised in other comprehensive income:

	2018 £m	2017 £m
Return on plan assets (excluding amounts included in net interest cost) -gain	15.2	29.4
Experience gains and losses arising on the plan liabilities - (loss)/gain	(0.5)	0.6
Effects of changes in the demographic and financial assumption underlying the present value of the plan liabilities - gain	11.7	48.7
Total amount recognised in other comprehensive income -gain	26.4	78.7

(iii) Reconciliation of opening and closing balances of fair value of scheme assets

	2018 £m	2017 £m
Fair value of scheme assets at start of year	197.6	152.4
Expected return on scheme assets	5.6	3.7
Actuarial gains	15.2	29.4
Contributions by employer	15.0	13.9
Benefits paid and death in service insurance premiums	(2.4)	(1.8)
Fair value of scheme assets at end of year	231.0	197.6

Analysis of the sensitivity to the principal assumptions of the value of the plan's liabilities:

Assumption	Change in assumption	Impact on liabilities
Discount rate	Increase/decrease of 0.5% p.a	Decrease/increase by 14.4%
Rate of inflation	Increase/decrease of 0.5% p.a	Increase/decrease by 10.8%
Rate of salary growth	Increase/decrease of 0.5% p.a	Increase/decrease by 4.2%
Probability of death in any year after retirement	Increase/decrease of 10%	Increase/decrease by 2.4%
Long-term rate of mortality improvement	Increase/decrease of 0.25% p.a	Increase/decrease by 1.3%

Contributions payable to the defined benefit scheme during the year amounted to £15.0 million (2017: £13.9 million). In addition £0.3 million (2017 £0.5million) was paid in respect of scheme administration expenses and insurance premiums for death in service benefits. The actual return on the plan assets over the period ended 30 September 2018 was £20.8m (2017: £33.1m).

The best estimate of contributions to be paid by the employer to the scheme for the year beginning after 30 September 2018 is £13.6 million (2017 £13.3 million).

Scheme Assets

	30 September 2018	30 September 2017	30 September 2016
Equity	230.4	197.0	151.7
Other (Property, Cash, etc.)	0.6	0.6	0.7
Total Assets	231.0	197.6	152.4

(iv) Reconciliation of opening and closing balances of the fair value of the defined benefit obligation

	2018 £m	2017 £m
Scheme liabilities at start of year	332.6	355.4
Current service cost	16.3	19.5
Expenses	0.3	0.2
Interest cost	9.3	8.6
Actuarial gains	(11.2)	(49.3)
Benefits paid and death in service insurance premiums	(2.4)	(1.8)
Scheme liabilities at end of year	344.9	332.6

(v) Amounts for the current and previous four years:

	2018 £m	2017 £m	2016 £m	2015 £m	2014 £m
Fair value of assets	231.0	197.6	152.4	103.3	99.6
Present value of scheme liabilities	(344.9)	(332.6)	(355.4)	(205.5)	(180.1)
Deficit in scheme	(113.9)	(135.0)	(203.0)	(102.2)	(80.5)

Defined contribution scheme

The charitable company provides a defined contribution Group Personal Pension Plan.

The amount recognised as an expense for the defined contribution scheme was:

	2018 £'000	2017 £'000
Current period contributions	1,368	779

Contributions paid to the defined contribution scheme during the year amounted to £1.4m (2017:£0.8m).

9. TANGIBLE FIXED ASSETS

	Assets in the course of construction £'000	Short leasehold buildings £'000	Laboratory equipment, fixtures and fittings £'000	Total £'000
Cost as at 1 October 2017	6,649	184,805	124,524	315,978
Additions	1,029	4,254	9,118	14,401
Transfers	(6,620)	5,415	1,205	-
Disposals	-	(378)	(7,450)	(7,828)
As at 30 September 2018	1,058	194,096	127,397	322,551
Accumulated depreciation as at 1 October 2017	-	40,430	111,979	152,409
Charge for the year	-	4,011	6,662	10,673
Disposals	-	(119)	(7,450)	(7,569)
As at 30 September 2018	-	44,322	111,191	155,513
Net book value at 30 September 2018	1,058	149,774	16,206	167,038
Net book value at 30 September 2017	6,649	144,375	12,545	163,569

10. INVESTMENTS

	2018 £'000	2017 £'000
Unquoted investments		
At 1 October	4,484	1,951
Unrealised gains	1,437	2,533
At 30 September	5,921	4,484

Unquoted investments represent the Institute's holding of ordinary share capital of Kymab Limited, VHSquared Limited, Microbiotica Ltd and Congenica Ltd.

11. TAXATION

The company is a registered charity, and as such is entitled to certain tax exemptions on income and profits from investments, and surpluses on any trading activities carried on in furtherance of the charity's primary objectives, if these profits and surpluses are applied solely for charitable purposes.

The estimated cost of irrecoverable VAT suffered by the charitable company was £3.7 million (2017 £2.6million). This amount is charged in the accounts with its related expenditure.

The company has previously recorded as income claims made for Research and Development Expenditure Credits for relevant expenditure incurred in the years 30 September 2013, 2014 and 2015. The legislation was amended with effect from 1 August 2015 preventing further claims.

HM Revenue and Customs has paid the claimed amounts for 2013 and 2014 (£2,319,028 and £4,875,474 respectively); however, HMRC has raised assessments to protect its position in relation to the 2013 and 2014 claims, which have been

formally appealed. HMRC has requested information to support the claim of £4,162,271 for the year ended 30 September 2015. This information has been submitted and whilst no opinion has yet been given by HMRC, management is confident that we have complied with the rules which were applicable at the time and have provided sufficient support to demonstrate this.

12. STOCKS & WORK IN PROGRESS

	2018 £'000	2017 £'000
Raw materials and consumables	6,086	2,079

In the opinion of the Directors, replacement costs of stocks would not differ materially from that stated above. A stock take for September 2018 was carried out and all the obsolete stock was provided for.

13. DEBTORS

	2018 £'000	2017* £'000
Trade debtors	1,781	2,898
Amounts owed by parent undertakings	12,722	10,584
Prepayments	5,289	5,379
Accrued income	7,161	15,445
Other debtors	4,852	4,710
	31,805	39,016

*Amounts owed by the European Union and Medical Research Council are now presented within other debtors and accrued income

Other debtors in 2018 includes £4.2million (2017: £4.2million) relating to RDEC claim referred to in note 11.

14. CREDITORS: amounts falling due within one year

	2018 £'000	2017* £'000
Trade creditors	5,131	5,736
Taxation and social security	1,170	1,783
Other creditors	1,038	1,669
Payroll creditors	107	174
Accruals for grants payable	353	-
Other accruals	3,017	4,194
Deferred income	7,326	15,188
Total falling due within one year	18,142	28,744

*Amounts owed to the European Union are now presented within deferred income.

15. CREDITORS: amounts falling due after one year

	2018 £'000	2017 £'000
Amounts falling due after one year:		
Between one and five years - deferred lease premium	2,130	1,878
Between one and five years - employee share of investment gain	3,694	2,826
More than five years - deferred lease premium	16,100	15,191
	21,924	19,895

Deferred income	Lease premium	Grant income	2018 £'000	2017 £'000
At 1 October	19,296	12,961	32,257	28,114
Received during the year due within one year - other	-	8,660	8,660	17,317
Released to income during for the year	(532)	(15,882)	(16,414)	(13,174)
At 30 September	18,764	5,739	24,503	32,257

2018 deferred income includes a total of £18.8 million (2017 £19.3 million) which relates to a lease premium received from EBI (European Bioinformatics Institute). The grant deferred income of £5.7 million (2017: £13.0 million) relates to cash received in advance from third party grantors.

16. PROVISIONS

	2018 £'000	2017 £'000
Amounts owed in respect of transferring faculty members		
	3,324	-
	3,324	-
At 1 October		
Charge during the year	3,324	-
Utilised during the year	-	-
At 30 September	3,324	-

Certain members of faculty are awarded a transition allowance to continue their existing research outside of the Institute. The provision for faculty member transfers represents amounts committed to furthering this research at another institution.

17. CAPITAL COMMITMENTS

As at 30 September 2018 there were £nil commitments contracted but not accrued (2017: £3.8 million relating to construction of the Genome Campus datacentre).

18. ULTIMATE PARENT UNDERTAKING & CONTROLLING PARTY

The directors regard the Wellcome Trust as the ultimate parent company and controlling party, which is the smallest and largest group to consolidate these Financial Statements. Copies of the Wellcome Trust Annual Report and Financial Statements can be viewed on its website – <https://wellcome.ac.uk/what-we-do/reports>. Alternatively, they may be obtained from the Company Secretary. The registered address for Wellcome Trust is 215 Euston Road, London, NW1 2BE.

19. RELATED PARTY TRANSACTIONS

The company is wholly-owned by the Wellcome Trust and has applied the exemption in paragraph 33.1A of FRS 102 “Related Party Transactions”. The exemption permits the non-disclosure of transactions entered into between two or more members of a group, provided that any subsidiary undertaking which is a party to the transaction is wholly-owned by a member of that group.

Details of the Company's subsidiaries as at 30 September 2018 are as follows:

Name of subsidiary and company number	Proportion of ownership interest	Proportion of voting power held	Principal Activity
Genome Research Trading Limited (10058101)	100%	100%	Facilities management
Hinxton Hall Limited (03062160)	50%	50%	Education / Facilities management
Genome Research Pension Trustee Limited (09186099)	100%	100%	Dormant
GRL Construction Limited (09280062)	100%	100%	Dormant

All of the Company's subsidiaries are registered in England and Wales. Their registered address is 215 Euston Road, London, NW1 2BE.

The Wellcome Trust provide the Company with an open-ended facility to exchange dollars at a favourable rate. The Company recognised a gain in relation to this arrangement in the year ended 30 September 2018 of £1.7m (2017: £1.4m).

20. MOVEMENT IN FUNDS

	1 October		30 September			
	2017 £'000	Incoming £'000	Outgoing £'000	Gains £'000	Transfers £'000	
Building development	130,609	4,311	(4,011)	-	-	130,909
Capital equipment	13,223	9,989	(6,820)	-	-	16,392
Research fund	19,042	126,645	(129,244)	-	(987)	15,456
Investment fund	1,659	-	-	-	(1,659)	-
Restricted income funds	164,533	140,945	(140,075)	-	(2,646)	162,757
Endowment fund	639	17	(75)	-	85	666
Pension deficit	(135,000)	-	(5,300)	26,400	-	(113,900)
Total Restricted Funds	30,172	140,962	(145,450)	26,400	(2,561)	49,523
Investment fund	-	-	(867)	1,437	1,659	2,229
Unrestricted fund	-	3,850	(949)	-	902	3,803
Total Unrestricted funds	-	3,850	(1,816)	1,437	2,561	6,032
Total Charity Funds	30,172	144,812	(147,266)	27,837	-	55,555

	1 October	30 September			
	2016	Incoming	Outgoing	Gains	Transfers
	£'000	£'000	£'000	£'000	£'000
Building development	129,021	5,444	(3,856)	-	-
Capital equipment	15,580	5,844	(8,201)	-	-
Research fund	14,598	124,029	(119,585)	-	-
Investment fund	652	-	(1,526)	2,533	-
Restricted income funds	159,851	135,317	(133,168)	2,533	-
Endowment fund	692	19	(72)	-	-
Pension deficit	(203,000)		(10,700)	78,700	-
Total Charity Funds	(42,457)	135,336	(143,940)	81,233	-
					30,172

The building development fund relates to expenditure on leasehold buildings. The capital equipment fund relates to funding for other fixed assets. The research fund represents net income relating to non-asset expenditure incurred in running the Company during the year. The investment fund represents the increase in fair value of the Company's investments in unquoted securities, net of amounts owing to inventors and employees. The endowment fund is an expendable endowment. Research, capital and building funds are subject to conditions set by grantors and are therefore restricted. The unrestricted reserves represent net income generated from non-grant funded activities that can be allocated at the discretion of the Directors.

The transfer represents funds which were previously returned to a restricted activity which are now available for use at the discretion of the Directors, including gains arising on investments, and expenditure from the research fund being met by the endowment fund relating to previous years.

The assets and liabilities of each category of funds are as follows:

	Restricted	Endowment	Pension	Unrestricted	Total
	£'000	£'000	£'000	£'000	2018
Fixed assets	167,038	-	-	-	167,038
Investments	-	-	-	5,921	5,921
Current assets	34,595	666	-	4,625	39,886
Current liabilities	(17,322)	-	-	(820)	(18,142)
Long term creditors	(18,230)	-	-	(3,694)	(21,924)
Provisions	(3,324)	-	-	-	(3,324)
Pensions	-	-	(113,900)	-	(113,900)
Net assets	162,757	666	(113,900)	6,032	55,555

In 2017 all assets and liabilities were restricted, other than endowment current assets of £0.6 million and pension liabilities of £135.0 million.

Reference and administrative information

Constitution

The Company is a charity registered in England with the Charity Commission under the Charities Act 1993, as amended by the Charities Act 2011 (Charity registration number 1021457) and is a company limited by guarantee and registered in England (Company number 2742969). The sole member of the charitable company is The Wellcome Trust Limited, as trustee of the Wellcome Trust. In the event of the charitable company being wound up, the liability in respect of the guarantee is limited to £1.

Directors

The Directors of the Company who were in office during the year and up to the date of signing the financial statements were:

Lord David Willetts (appointed 6 November 2017) (Chair)
Professor Dame Kay Davies (appointed 8 December 2017)
Professor Rolf-Dieter Heuer
Mr Tim Livett
Sir James Smith (appointed 20 June 2018)
Dr Jeremy Farrar (resigned 1 January 2018)
Professor Patrick Vallance (resigned 8 December 2017)

Company Secretary

Henry Parkinson

Registered Office

The Wellcome Trust
Gibbs Building
215 Euston Road
London
NW1 2BE

Principal Place of Business

Wellcome Genome Campus
Hinxton
Cambridge
CB10 1SA

Independent Auditors

Deloitte LLP
Statutory Auditor
2 New Street Square
London
EC4A 3PA

Bankers

National Westminster Bank plc
King's Parade Branch
Bene't Street
Cambridge
CB2 3PU

Solicitors

CMS Cameron McKenna
Mitre House
160 Aldersgate Street
London
EC1A 4DD

Cambridge Employment Law
Stratford House
Ousden, Newmarket
Suffolk
CB8 8TN

Actuary

Jardine Lloyd Thompson
St James's House
7 Charlotte Street
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Charity Registration: 1021457
Company No: 2742969

