



### LEVELLING THE FIELD

WE ARE WORKING TO ADDRESS INEQUALITY, DEPRIVATION AND MARGINALISATION AROUND THE WORLD.

Tackling entrenched inequalities is a global challenge. At Glasgow, we recognise that a one-size-fits-all answer does not exist. We work with communities, governments and international organisations to understand and address the processes that generate inequalities and their profound effects on individuals, communities and populations across the world.

Our research informs policy and practice. Our innovative UK Collaborative Centre for Housing Evidence is a major consortium of 13 expert partner organisations, led by Glasgow. It will advance knowledge of the housing market and produce robust evidence to influence and improve housing policy across the UK.

We are also investigating the impact that investment in housing, regeneration and neighbourhood renewal has on the health and wellbeing of individuals, families and communities.

Our internationally recognised network for refugees, asylum and migration research brings together practitioners, government ministers, NGOs and policymakers. We work to promote knowledge exchange, build capacity and develop strong and active collaborative research links, and we have established Glasgow as one of the leading centres for integrated research in this field.

Our researchers work with local and national governments to develop and assess policies to reduce health inequalities. This work is now influencing urban planning and development, with the long-term aim of changing people's environments and reducing health inequalities.

Our goal is to support real world change so that everyone can fulfil their potential, irrespective of who they are or where they come from.





SHAPING OUR CREATIVE FUTURE

OUR RESEARCH IMPACTS ON THE GLOBAL CULTURAL AND CREATIVE ECONOMY.

revenue and employment opportunities collections that attract more visitors than

Our partnership with Glasgow Life and the National Library of Scotland has transformed one of the city's iconic buildings, Kelvin Hall, and reinvented it for the future as a cultural centre of excellence in research, heritage, public engagement, sport and commercial activities. Access to our world-class collections for teaching and research has been greatly improved, with more than 1.5 million items brought out of storage.

Our international research centre CREATe, which specialises in copyright and information law, focuses on innovation in the creative economy. CREATe's core concern is the future of creative production, and in particular the relationship between law and digital innovation.

Our Centre for Cultural Policy is renowned internationally for its rigorous, high-impact research into media, communications and cultural policy. Its researchers, who have strong links

with media and cultural industries and policy-making communities, provide highly respected critical analyses that contribute to public debate and inform policy development throughout the world.

We are developing digital methods to enhance research. Our Historical Thesaurus of English was integrated into the online Oxford English Dictionary and work on the second edition is underway, using new digital processes to update our evidence for the past. The thesaurus has won a Queen's Anniversary Prize for Higher Education, the highest accolade for any academic institution, for its world-leading research into the English language.

Our collaborations with prestigious arts institutions such as the Smithsonian in Washington have helped to build stronger links for knowledge exchange and greater learning opportunities for all of our communities.

WE USE THE PAST TO ENGAGE COMMUNITIES AND INSPIRE THE FUTURE. OUR RESEARCH ENGAGES, INFORMS AND CONNECTS THE PUBLIC AND POLICYMAKERS WITH THEIR HERITAGE.

### APPROACH

WE ARE PIONEERING NEW TREATMENTS AND PRECISION DIAGNOSTICS FOR CHRONIC DISEASES. Responding to the increasing prevalence of chronic diseases is a global challenge. At Glasgow, our world-leading biomedical researchers are at the forefront of new developments to treat diseases such as cancer, diabetes and arthritis.

Scotland has a high incidence of chronic diseases, impacting on the population's quality of life and increasing costs to the NHS. However, by using cutting-edge molecular technologies, we can now tailor treatments to patients' individual needs – reducing costs and improving treatment outcomes across a wide range of conditions.

This revolutionary approach, called precision (or stratified) medicine, is already having a transformative effect on healthcare, driving innovation and economic benefits for healthcare providers, the pharmaceutical industry and the medical technologies supply chain.

We have established a world-leading biomedical innovation cluster at the

Queen Elizabeth University Hospital in Glasgow, the Clinical Innovation Zone, which is attracting companies at the forefront of precision medicine, including MR CoilTech from Germany and BioClavis from California.

The University leads the Scotland-wide Stratified Medicine Innovation Centre, a consortium comprising four Scottish universities, NHS Scotland, the global biotechnology company Thermo Fisher Scientific, and a Scottish bioinformatics company, Aridhia Informatics.

We offer dedicated space for companies to engage with academic and NHS experts to drive clinical innovation and breakthroughs in precision medicine. Facilities include the Imaging Centre of Excellence, a £32m facility which incorporates Scotland's only 7T MRI scanner – the first of its kind integrated within a clinical site in the UK.

Glasgow is now one of the foremost locations in the world to pursue advances in precision medicine.

CHRONIC DISEASES, SUCH AS HEART DISEASE, STROKE, CANCER AND DIABETES, ACCOUNT FOR 70% OF ALL DEATHS GLOBALLY.



# THE FUTURE IS NOW

WE ARE EXPLORING THE ORIGINS OF LIFE, RESEARCHING INTELLIGENCE AND COGNITION, AND DEVELOPING NEW TECHNOLOGIES TO PREDICT AND TREAT DISEASE.

Our research brings together groups from complex chemical systems, biomaterials and stem cell engineering, neuroscience, psychology and medical technologies.

We are creating ways to reverse-engineer human cognitive processes — where, when and how specific information is processed — from complex brain activity. These formal models could then be implanted into neuro-circuits, human avatars and robots, giving them human-like flexible cognitive abilities.

We are exploring the digital control of chemical reactions using robotic systems, allowing us to investigate complex chemical processes. This approach not only enhances the efficiency with which we can discover novel chemistry, but also promises to rewrite the rules of chemical synthesis.

Our novel diagnostic solutions are helping to eliminate infectious diseases, particularly in sub-Saharan Africa. A new paper-based, low-cost DNA sensor is being used to detect levels of infection in remote, under-served, rural communities. The technology is extremely sensitive, providing early detection of infection often before patients show symptoms, so providing early treatment of disease.

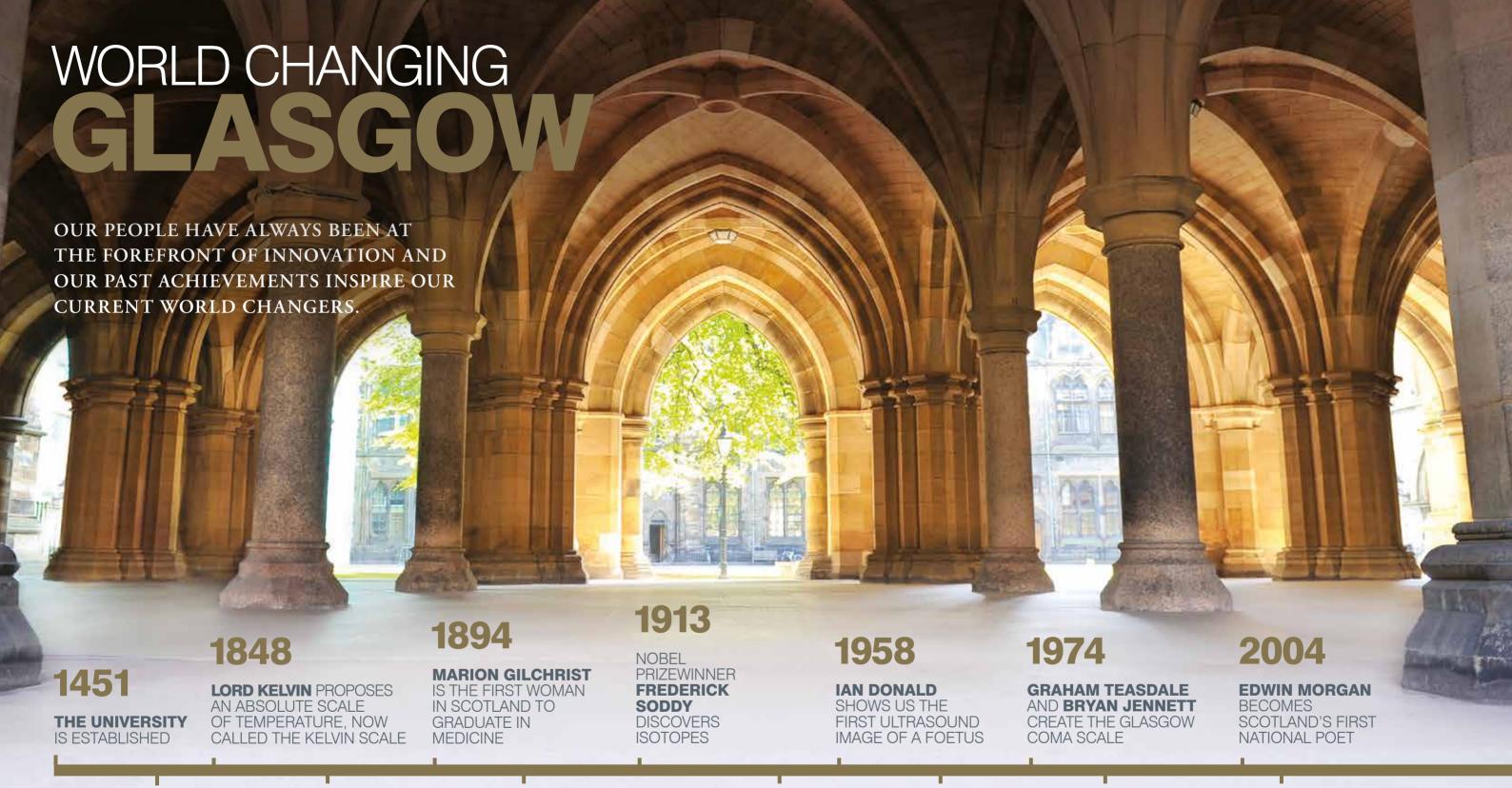
We have developed a revolutionary technique to promote bone regeneration using a polymer which helps stimulate growth factors – molecules that orchestrate development and, if harnessed correctly, can drive regeneration. By coating materials such as hip implants, bone grafts or spinal cages in a thin layer of this polymer, we can encourage bone regeneration targeted on the areas where it is required.

By understanding the limits of the processes of current biology, we will develop advanced healthcare technologies that can have a positive impact on people's quality of life and life expectancy.

knowledge further. We are producing single-photon visible and infrared cameras of unprecedented sensitivity, as well as small but powerful gravitymeasuring devices.

We are also members of the prestigious international Max-Planck Partnership in Measurement & Observation at the Quantum Limit.

innovation infrastructure and quantumrelated companies, the future is looking bright at Glasgow for exploring the huge possibilities of nano science and quantum technology.



1776

ADAM SMITH
PUBLISHES THE
WEALTH OF
NATIONS

1867

JOSEPH LISTER
INTRODUCES
ANTISEPTIC IN
SURGERY

1896

JOHN MACINTYRE
OPENS THE
WORLD'S FIRST
X-RAY DEPARTMENT

1926

JOHN LOGIE BAIRD INVENTS TELEVISION 1967

JOCELYN BELL BURNELL DISCOVERS RADIO PULSARS 1999

DONALD DEWAR
BECOMES THE
INAUGURAL FIRST
MINISTER OF
SCOTLAND

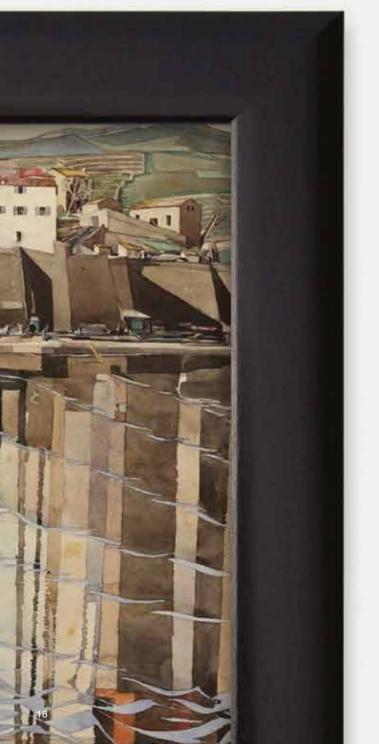
2015

SHEILA ROWAN LEADS THE GLASGOW TEAM THAT FIRST DETECTED GRAVITATIONAL WAVES















### WE HAVE WORLD-CLASS COLLECTIONS AND IMPRESSIVE COLLABORATIONS IN THE ARTS.

The Hunterian, our museum and art gallery, is one of the leading university museums in the world, and is home to one of the largest collections outside the National Museums.

We have the world's largest permanent display of the work of James McNeill Whistler and the largest single holding of the work of Charles Rennie Mackintosh.

Our Special Collections is one of the foremost resources in Scotland for academic research and teaching, and our holdings of medieval and renaissance manuscripts and emblem literature are of international importance.

Access to our collections for teaching and research has been transformed with the opening of Glasgow's iconic Kelvin Hall building as a state-of-the-art collections study centre and cultural education space. This partnership between the University, the city and the National Library of Scotland has enabled 1.5 million items from our collections to be relocated to purpose-designed study and storage facilities.

Our collaborations with prestigious arts institutions build stronger links for knowledge exchange and greater learning opportunities for all of our communities.

The Smithsonian Museum in Washington DC and the University have a long-standing relationship. Our shared values of an interdisciplinary and collaborative approach to the arts and sciences, and the diffusion of knowledge, enable us to work together for mutual benefit and significant international impact.

# "We have a way with words."

FROM THE THIRTY-NINE STEPS TO DOCTOR WHO, OUR WRITERS HAVE STIMULATED OUR EMOTIONS AND INSPIRED NEW THOUGHT.

Glasgow is a breeding ground for talented writers. Our list of literary graduates includes William Boyd, Catherine Carswell, Anne Donovan, William McIlvanney, Janice Galloway, Tobias Smollett and Louise Welsh.

Writer and producer Steven Moffat, best known for his work as showrunner, writer and executive producer of TV series Doctor Who and Sherlock, found his passion for TV with Glasgow University Student Television.

John Buchan, author of many adventure and historical novels including *The Thirty-Nine Steps*, studied at Glasgow during the 1890s. As well as an acclaimed novelist he was also a politician, holding the post of Governor-General of Canada.

Professor Edwin Morgan (pictured) was one of the greatest poets of his

generation and inspired the world and his students at Glasgow with his work. In 2004 he became the first official National Poet for Scotland.

Glasgow is also a place for readers and thinkers to feed their love of literature. We have a long history of building a better understanding of the impact of literary works.

Our Centre for Robert Burns Studies is keeping the work of Scotland's national poet alive through its research and teaching.

And we are compiling the first ever comprehensive online corpus and digital archive of Scottish Gaelic, which will enable innovative research and development of the Gaelic language and will be the basis for a comprehensive historical dictionary of the language.





Alongside new sales in international markets, the new products have enabled the company to substantially increase its profit margins.

Our research partnerships bridge the gap between industry and academic knowledge.

Through the GLAZgo Discovery Centre, we are combining our understanding of disease pathology with global company AstraZeneca's drug discovery and development expertise, to create more targeted medicines for patients.

the use of a proprietary microRNA therapy in the treatment of tendinopathies in both humans and animals. The initial focus is on the development of EquiMiR™ to treat equine tendinopathies which affect up to 30% of competitive and working horses.

Gold Standard Simulations Ltd brings 20 years of our research on semiconductor transistors and circuits to the marketplace. Its innovative tools help predict performance in future generations co-locate to easily access our facilities, of miniature transistor design. The company's success led to it being

as MindMate, which develops apps for brain health, and Staels Design, which develops innovative products for wheelchair users, received practical advice, mentorship and free office space in our incubator hub.

Our campus developments include supported environments such as the Clinical Innovation Zone at the Queen Elizabeth University Hospital where new and established businesses can clinical know-how and research in the field of precision medicine.

AND £20M STRATIFIED

**MEDICINE SCOTLAND** 

INNOVATION CENTRE.



#### WE ARE INSPIRING PEOPLE WITH AMBITION TO SUCCEED AT UNIVERSITY AND BEYOND.

We believe everyone should have the opportunity to reach their potential.

That's why here at Glasgow we are proud of our long tradition of helping talented people to fulfil their ambitions regardless of their background or circumstances.

Through our widening participation work we encourage, prepare and support students who are under-represented in higher education to achieve entry to university. We work with over 100 target schools, as well as colleges, local authorities and other organisations to

support school leavers and adult learners alike to prepare for, apply to and succeed at university.

If students have the potential, drive and ambition to succeed, we will do all we can to support them to overcome barriers and realise their aspirations.

From giving support to access university, to helping students flourish during their studies, to supporting them as they launch their career - we are with our ambitious people at every stage of their journey.

Our history of openness at Glasgow stretches back over the centuries. After being refused entry to university in his own country because of his race, James McCune Smith came to study at Glasgow. In 1837 he became the first African-American to receive a university medical degree. He was influential in more than just medicine, however. He was a dedicated and committed slavery abolitionist.

At Glasgow, we are proud of our diverse, vibrant and talented people and their ambitions to change the world.



ACROSS THE POLITICAL PARTIES, AMBITIOUS **GLASGOW ALUMNI HAVE** BEEN LEADING THE WAY FOR GENERATIONS.

the top job in Scottish politics in 2014. She made history as the first female First Minister of Scotland, and the first female leader of any of the devolved UK administrations.

Our Glasgow University Union debating chamber has come to be considered one of the finest training grounds for young

as former leaders Charles Kennedy and Sir Menzies Campbell, former Leader of the Labour Party John Smith and Scotland's inaugural First Minister Donald Dewar.

Another of our history makers is Sir Henry Campbell-Bannerman who became our first graduate to be elected Prime Minister

Our long tradition of inspiring people to change the world continues. Over 30 graduates currently hold seats in either the Scottish or UK parliament, including Mhairi Black who was elected as a member of the UK parliament for the SNP in 2015, only weeks before graduating.

CHAIRS THE STANDING COUNCIL ON EUROPE -A GROUP OF INDEPENDENT **EXPERTS ADVISING THE** SCOTTISH GOVERNMENT ON SCOTLAND'S FUTURE RELATIONSHIP WITH THE EUROPEAN UNION.

### BUILDING OUR FUTURE

### WE ARE CREATING A CAMPUS TO INSPIRE THE NEXT GENERATION OF WORLD CHANGERS.

It's a once-in-a-lifetime opportunity.

Over the next ten years, a major programme of investment heralds one of the most significant expansions and developments of a UK university city campus for over a century.

We are increasing our footprint on the city by 25%. An area covering 14 acres of land next to our Gilmorehill campus is in our possession and planning is underway to create a campus for the 21st century.

We are entering a momentous chapter in our history, one that will transform our teaching, learning and research spaces. We will bring together the best minds of today and tomorrow within world-class facilities – large interdisciplinary

research spaces that offer flexibility and stimulate collaboration, and modern study spaces that will combine study and social learning space with multi-styled teaching and smart campus technologies.

Our campus development is about more than just extra land and buildings. Thanks to our ambitious development, we will soon be able to attract even more world-class expertise to Glasgow, enable more groundbreaking discoveries and inspire the next generation of world changers and researchers.

THE FIRST MAJOR
PROJECT IN OUR CAMPUS
DEVELOPMENT IS THE
LEARNING & TEACHING
HUB. THIS BUILDING WILL
INCREASE OUR TEACHING
CAPACITY AND GIVE
STUDENTS ROUND-THECLOCK ACCESS TO A RANGE
OF SOCIAL AND INDIVIDUAL
STUDY SPACES.



**CHANGING THE WORLD SINCE 1451** 

glasgow.ac.uk/meetglasgow

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