MANCHESTER 1824

The University of Manchester

Cancer Sciences

uom.link/PGR/CancerResearch

Cancer Sciences covers a broad area of research that aims to better understand cancer aetiology, prevention, biology, therapy, diagnosis and monitoring.

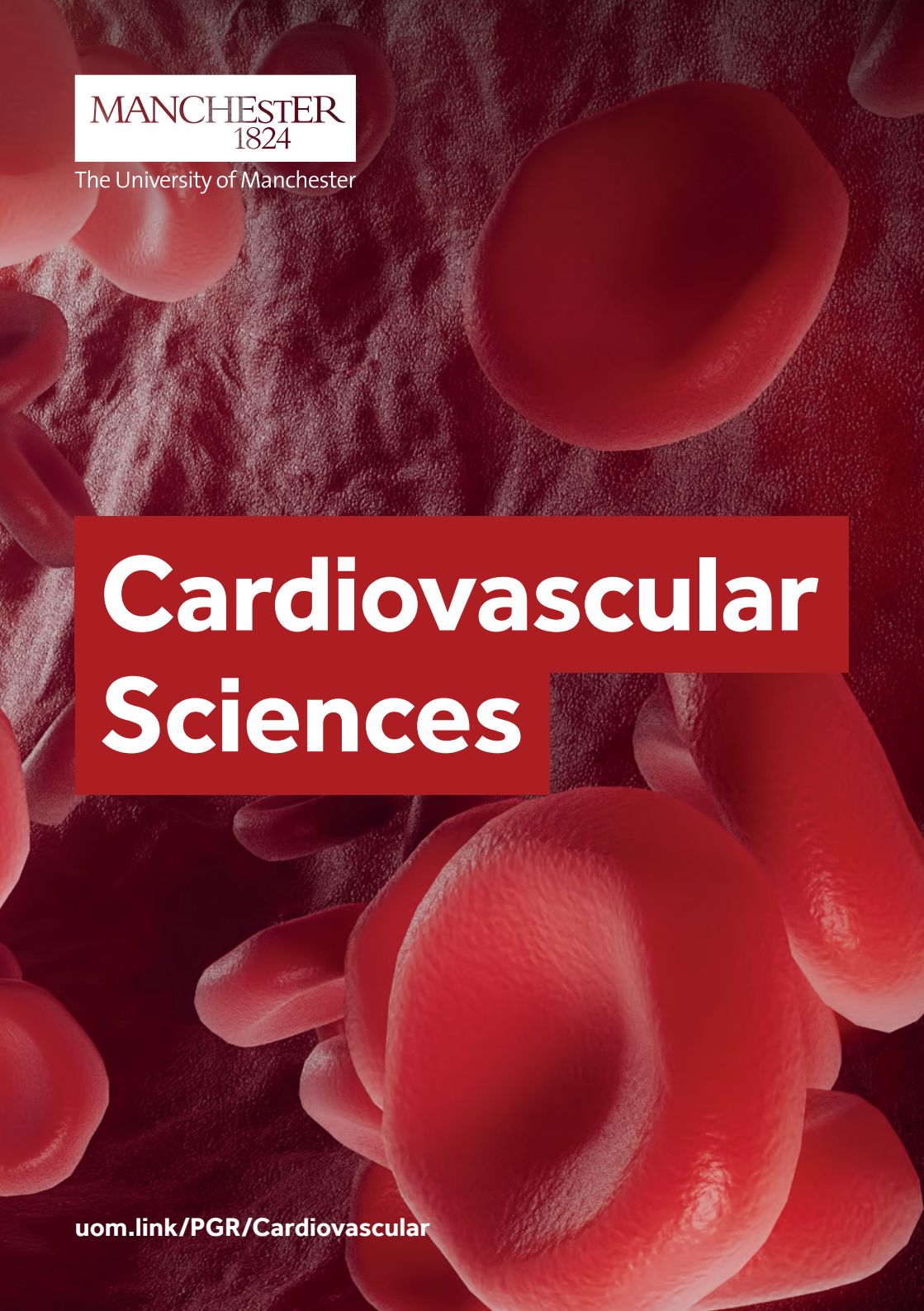
Research is interdisciplinary. We apply molecular and cell biology, bioinformatics, structural biology, imaging, metabolomics, medicinal and analytical chemistry to investigate how cancers develop, how we can define new targets for improved therapy, and how we can better diagnose and monitor both disease progression and treatment response.

Projects aimed at early detection and cancer prevention are a particularly high priority. Cancer research is widely distributed at various sites throughout the University, with close links to the Manchester Cancer Research Centre, the CRUK Manchester Institute and the Christie Hospital.

PhD programmes:

- Biochemistry
- Cancer Sciences
- Medical Genetics
- Medicine
- Pharmacology

uom.link/PGR/CancerResearch


MANCHESTER
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The University of Manchester
Cardiovascular Sciences
uom.link/PGR/Cardiovascular

Cardiovascular Sciences combines clinical, translational and basic science research. We aim to translate our understanding of the cellular and molecular processes underlying cardiovascular disease into improved clinical treatments and patient care.

Cardiac research

Clinicians and scientists work closely together to investigate mechanisms responsible for clinical conditions including congenital heart failure and cardiac rhythm disturbances. Areas covered include experimental cardiology, genetics and development, and clinical cardiovascular research, as well as adaptations of non-mammalian species to environmental challenges.

Vascular and stroke research

Vascular research uses multidisciplinary approaches to investigate the mechanisms underlying small and large artery function in health and disease. Stroke research includes translational studies of immune modulation in ischaemic stroke, primary intracerebral haemorrhage and subarachnoid haemorrhage, studies in stroke rehabilitation, and implementation into clinical practice.

Blood pressure research

Research into the regulation of blood pressure involves vascular and renal scientists and clinicians working to understand the genetics, molecular biology and pathophysiology of hypertension.

PhD programmes:

- Cardiovascular Sciences
- Genetics
- Medicine
- Molecular Biology
- Physiology

uom.link/PGR/Cardiovascular


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Dentistry
uom.link/PGR/Dentistry

World-leading research in Dentistry has significant impact on improving the delivery and quality of dental services and clinical care, and reducing oral health inequalities. Dentistry has three highly successful and innovative core research areas: health technology, evidence synthesis/evidence-based practice and craniofacial research. These research areas are delivered through programmes of both basic science and health service research.

PhD programmes:

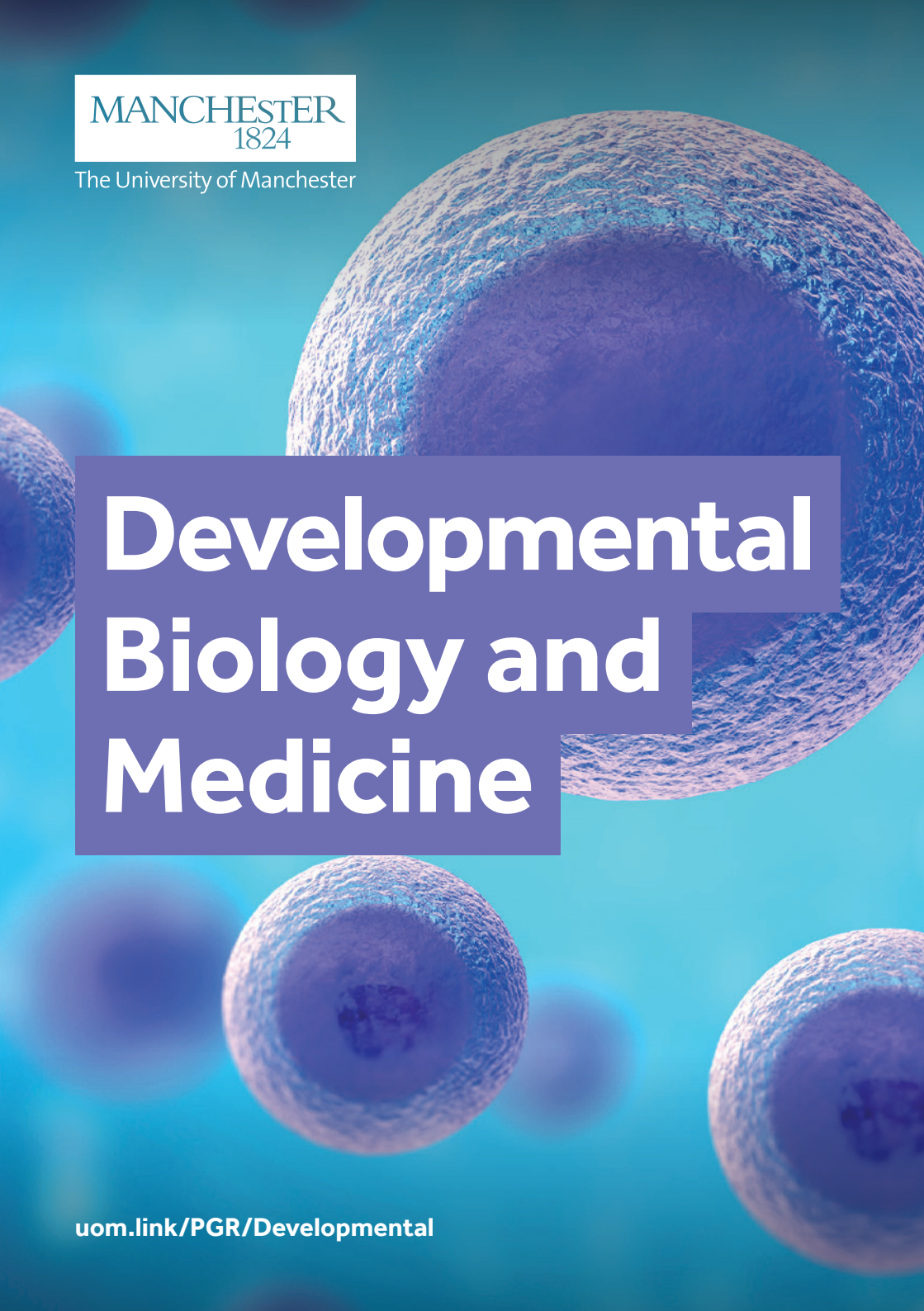
- Basic Dental Sciences
- Biomaterials Science and Dental Technology
- Clinical Dentistry
- Dental Health Sciences
- Endodontics
- Genomics
- Oral and Maxillo-Facial Surgery
- Orthodontics
- Prosthodontics

uom.link/PGR/Dentistry

MANCHESTER 1824

The University of Manchester

Developmental Biology and Medicine



uom.link/PGR/Developmental

Maternal and fetal health

Maternal and fetal health research focuses on all aspects of human pregnancy: reproductive medicine, implantation physiology, reproductive endocrinology, maternal vascular disease, maternal immune disorders, placental function, fetal growth disorders and stillbirth.

Paediatric growth and development

Paediatric growth and development focuses on growth disorders in children and improving treatment options. The main areas of research are in the pharmacogenomics and genetics of disordered growth, along with prediction of therapeutic responses and modelling of human growth trajectories using zebrafish.

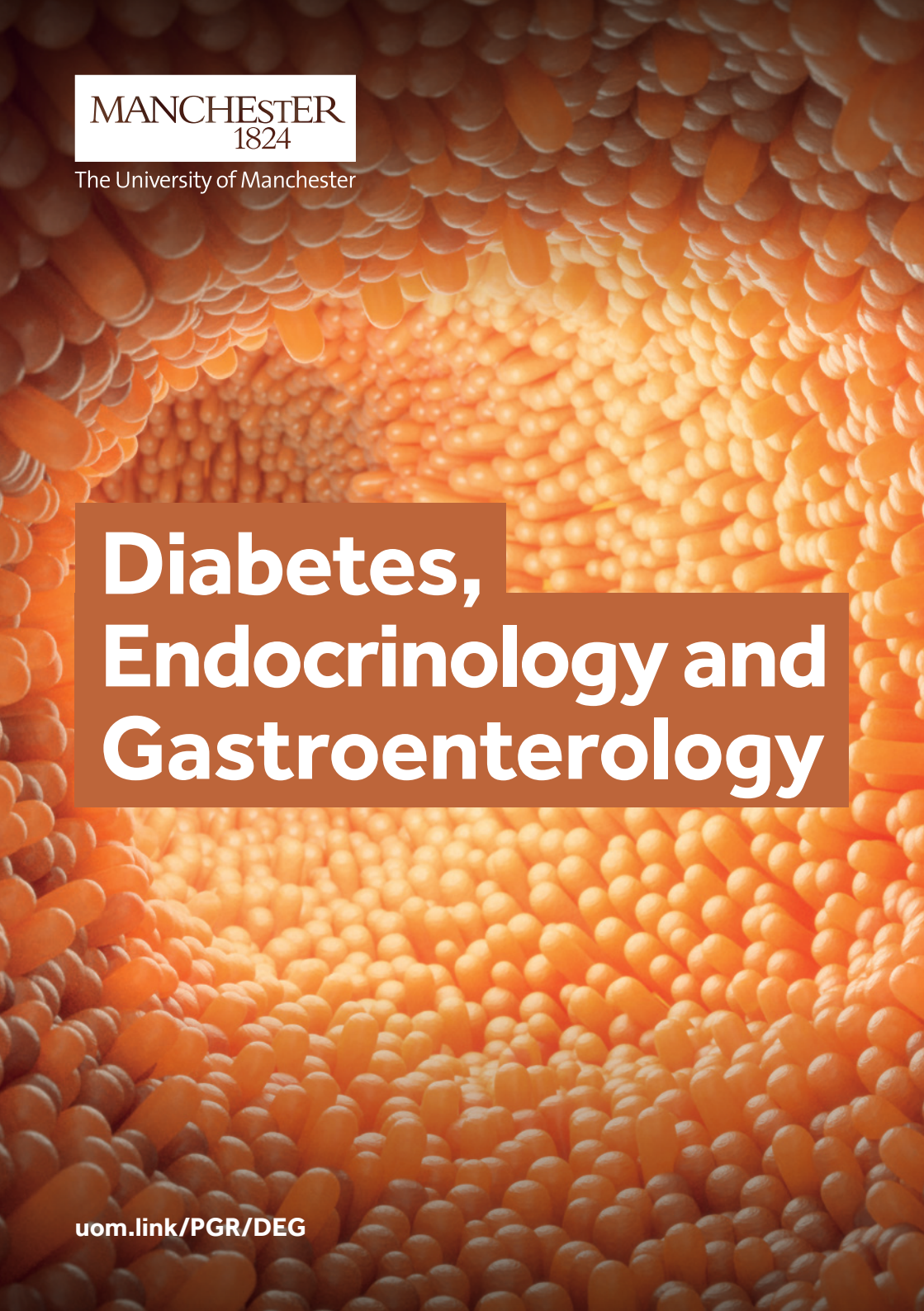
Developmental biology

Developmental biology covers a wide range of research. We aim to understand the dynamic processes involved in the transformation of a fertilized egg into a complex multicellular organism. Studies involve a host of model organisms and are directed at understanding fundamental mechanisms of gene expression, cell signalling and cell behaviour.

PhD programmes:

- Biotechnology
- Cell Biology
- Developmental Biology
- Drug Design, Development and Delivery
- Medicine
- Reproductive Sciences
- Physiology

uom.link/PGR/Developmental


MANCHESTER
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The University of Manchester
Diabetes, Endocrinology and Gastroenterology
uom.link/PGR/DEG

Research in Diabetes, Endocrinology and Gastroenterology is broad and seeks to understand major body systems and how they interact in biology and medicine. These include the endocrine, gastrointestinal and circadian systems and their roles in metabolic and inflammatory diseases, notably diabetes, obesity and fibrosis - major current health issues.

Biological timing

The body clock is essential for regulating physiology and behaviour. Research at The University of Manchester has pioneered the use of new genetic techniques in mouse models to disrupt clock function, and has demonstrated synchronisation of the body clock with pharmaceutical treatments. The potential is broad, opening up the possibility of treating issues associated with disruption of circadian rhythms, from inflammatory diseases to sleep disorders.

Endocrinology and diabetes

There are active research interests across endocrinology, including energy metabolism, diabetes complications, epidemiology, human development, and the interplay between circadian rhythms and the endocrine system. A variety of approaches is used, including cell biology, pre-clinical model organisms of behaviour, and human studies ranging from experimental medicine to large-scale cohort analysis.

Gastroenterology and nutrition

Research interests extend from understanding basic physiology and mechanisms of gut and liver disease, through to innovations in investigation and treatment. We use multidisciplinary approaches, from basic model systems to clinical studies and interventional trials.

Metabolism and obesity

Researchers are interested in the brain and how it regulates appetite, blood glucose levels, body weight and energy expenditure. Understanding these systems may allow them to be manipulated in the future to control metabolic diseases, such as obesity and diabetes.

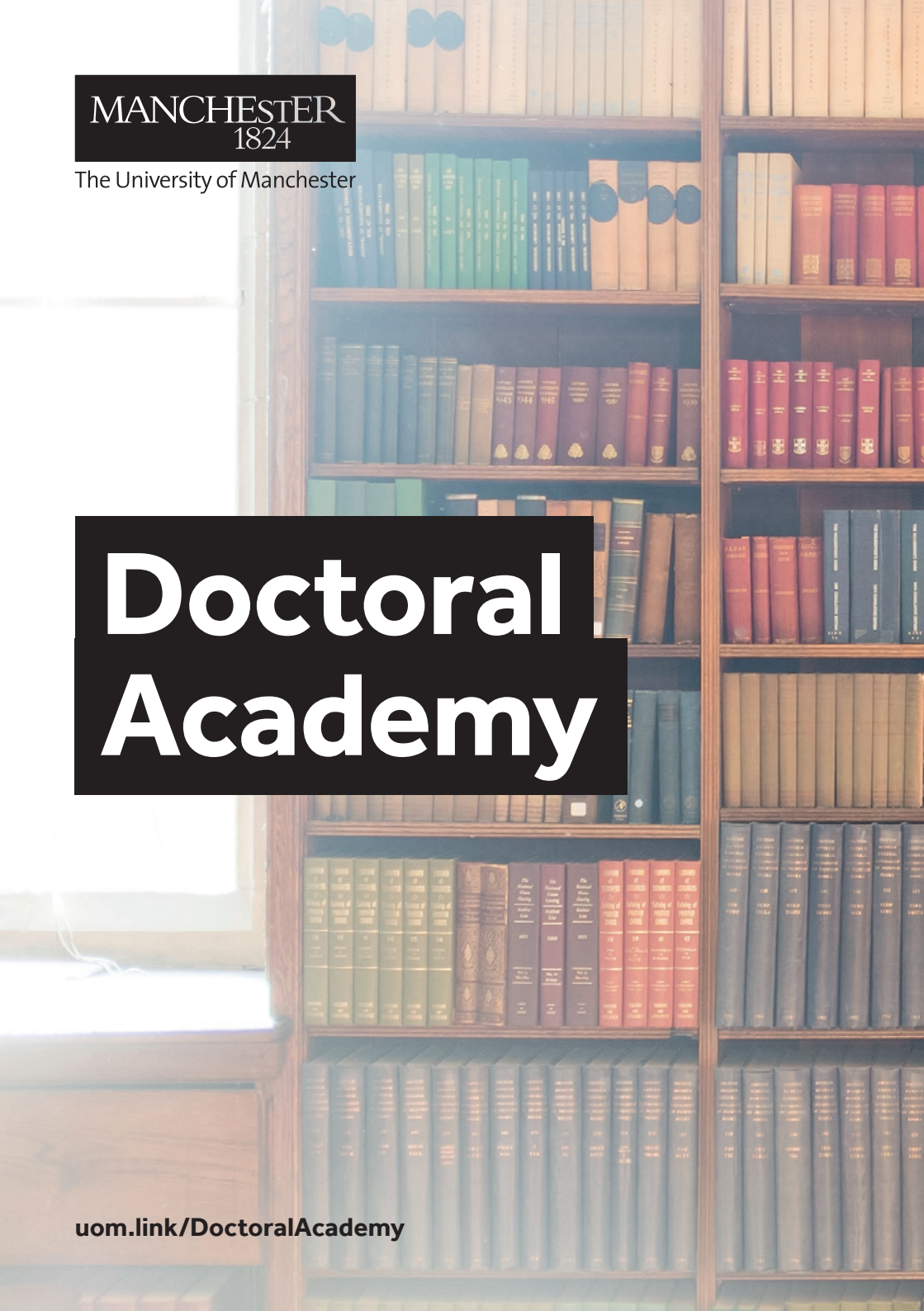
Molecular and cellular physiology

Research across physiology include the extracellular homeostasis and sensing of calcium, glucose, fatty acids, ions and other fundamental nutrients, both in health and disease. A variety of in vitro and in vivo approaches, including bioimaging, and advanced molecular and functional techniques are used to address a range of metabolic questions.

PhD programmes:

- Biochemistry
- Cell Biology
- Cell Matrix Research
- Endocrinology and Diabetes
- Gastroenterology
- Immunology
- Neuroscience
- Pharmacology
- Stem Cell Research

uom.link/PGR/DEG



MANCHESTER 1824

The University of Manchester

Doctoral Academy

uom.link/DoctoralAcademy

Students enrolled on our postgraduate research programmes are supported by the Doctoral Academy, which oversees all postgraduate research activity in the Faculty. We are here to support you throughout the application process and for the duration of your postgraduate research studies. We can help you select a project and supervisor and identify appropriate funding opportunities. We also offer:

- a range of funded PhD programmes offering interdisciplinary training for Home/ EU students;
- a unique 4-year PhD programme with an integrated PG Certificate in teaching for international students;
- a supervisory team including an independent advisor who will monitor your progression and provide support;
- Careers Service with staff dedicated to supporting postgraduate research students;
- a training programme to support your skills development and increase employability through our Centre for Academic Researcher Development (CARD);
- academic writing workshops are available throughout your programme via the University Language Centre;
- a supportive community through the Doctoral Academy's Student Society, Student Rep scheme and peer support for our overseas students.

Study on a postgraduate research programme at The University of Manchester and you will be part of a community whose work has an impact on people's lives across the globe.

Twitter: **@FBMH_DocAcad**
Website: **uom.link/DoctoralAcademy**
Email: **admissions.doctoralacademy@manchester.ac.uk**
Phone: **+44(0)161 275 5608**

MANCHESTER 1824

The University of Manchester

Evolution and Genomic Sciences

uom.link/PGR/EvolutionGenomic

Evolution and Genomic Sciences spans fundamental research into the evolution of molecules and organisms, through to applications of modern genomic techniques for the understanding, diagnosis and treatment of genetic disease in humans.

Evolutionary Biology

All life can be understood in terms of evolutionary processes, from microbial and viral biology through to entire organisms and human disease. Our research tackles fundamental questions in evolutionary biology, combining systems genetics, epigenetic and genomic approaches.

Functional Genomics

Functional genomics seeks to characterise and quantify all the molecules encoded in the genome, such as RNA and protein, to study how environment, life cycle or pathology lead to changes in these molecular signatures. This allows us to understand processes such as development, response to environmental stress, biological signalling, disease and dysfunction.

Genomic Medicine

The means for rapid sequencing of human genomes underpins a new age of percision medicine. Research covers a broad spectrum of healthcare and includes programmes in cancer genetics, neuropsychiatry, developmental and functional eye disorders, biochemical genetics and birth defects. The overarching aim is to identify the genetic basis of both single gene and complex disorders.

PhD programmes:

- Biochemistry
- Bioinformatics
- Biostatistics
- Biotechnology
- Cancer Sciences
- Cardiovascular Sciences
- Cell Biology
- Cell Matrix Research
- Endocrinology and Diabetes
- Environmental Biology
- Epidemiology
- Evolutionary Biology
- Genetics
- Genomics
- Infectious diseases
- International PhD in Biological, Medical and Health Sciences
- Medical Genetics
- Medical Microbiology
- Medical Mycology
- Medical Virology
- Medicine
- Molecular Biology
- Ophthalmology
- Stem Cell Research
- Structural Biology
- Wellcome Trust (Molecular and Cell Biology)
- Wellcome Trust (Quantitative and Biophysical Biology)

uom.link/PGR/EvolutionGenomic

MANCHESTER 1824

The University of Manchester

Funding opportunities

uom.link/PGR/Funding

The Faculty of Biology, Medicine and Health is committed to supporting postgraduate research students. Each year, we invest substantially in doctoral funding. The Faculty is successful in attracting sponsorship for our PhD programmes, in particular from research councils (ie BBSRC, EPSRC, MRC, ESRC, AHRC), industry, trusts and charities (ie Wellcome Trust, British Heart Foundation), where funding is linked to specific PhD projects with named supervisors. Some of these programmes offer interdisciplinary or structured training during the first year or placements outside of the lab. We also offer CASE studentships, backed by an industrial sponsor.

We have a thriving international student community and many of our students are supported through sponsors in their home countries such as China, Saudi Arabia, Mexico, Thailand, Pakistan, Kuwait, Iran and Nigeria.

The Faculty also offers the opportunity for international offer holders to apply to the President's Doctoral Scholarship (PDS) scheme, which provides fully funded studentships, as well as recognition awards that give successful applicants 'PDS' status plus a yearly £1,000 stipend enhancement. **uom.link/PGR/Funding**

If you would like more information about scholarship opportunities relevant to your country, please contact the Doctoral Academy Admissions Team at **admissions.doctoralacademy@manchester.ac.uk**

Twitter: **@FBMH_DocAcad**
Website: **uom.link/PGR/Funding**
Phone: **+44(0)161 275 5608**

MANCHESTER 1824

The University of Manchester

Human Communication, Development and Hearing

uom.link/PGR/Commuication

We live in an era where good language, hearing and communication skills are crucial. Impaired communication skills affect educational attainment, employment opportunities, and quality of life. Research in Human Communication, Development and Hearing is related to key topics in today's society including health and ageing, communication and development, the dynamic brain, and adapting to change. Our work ranges from basic science through to translating these discoveries into real-world applications that improve the quality of life for individuals of all ages. Research is broadly organised into two areas:

Language and Communicative Development

Basic research examining the factors, processes and mechanisms involved in successful language and communicative development in typically developing children and in those with developmental language disorders. We also examine real-world applications to support language learning and development.

Research activity in this area includes:

- ESRC International Centre for Language and Communicative Development (LuCID)
- Manchester Language Study (developmental language disorders)
- Social Communication Intervention Programme (SCIP)

Hearing

World-leading and innovative research translates basic hearing science into direct benefits to children and adults with a hearing dysfunction. Research activity in this area includes:

- the Hearing Health theme of the NIHR Manchester Biomedical Research Centre
- Manchester Centre for Audiology and Deafness (ManCAD)

PhD programmes:

- Audiology
- Communication Disorders
- Experimental Psychology
- Psychology

uom.link/PGR/Commuication

MANCHESTER 1824

The University of Manchester

Infection, Immunity and Respiratory Medicine

uom.link/PGR/Infection

The Division of Infection, Immunity and Respiratory Medicine spans fundamental biological research through to applied clinical research into infection, immunity and respiratory medicine. The division comprises; Manchester Collaborative Centre for Inflammation Research (MCCIR), Respiratory & Allergy, and the Manchester Fungal Infection Group (MFIG) as well as one Institute; The Lydia Becker Institute of Immunology and Inflammation.

The Lydia Becker Institute of Immunology and Inflammation and MCCIR

The Lydia Becker Institute of Immunology and Inflammation, which encompasses the MCCIR as a centre of excellence, is home to internationally renowned immunology and inflammation expertise in a vast array of basic and applied disciplines. The institute performs fundamental and translational exploratory science, applying the latest technologies to address the key new concepts in health and many areas of clinical unmet need, using in vitro and model organisms, as well as clinical studies. The great breadth and diversity of research in our institute emphasises how immunology plays an ever-increasing role in modern medicine.

Research in the Institute occurs over 10 branches and covers the role of immunity and inflammation in everything from cancer (immuno-oncology) and chronic inflammatory conditions in the lung and gut (barrier immunity), to the effect of inflammation on the brain (neuro-immunology) and how the cellular components of the immune system act to defend the body from pathogens such as worms and bacteria (cellular immunology/pathogens, parasites and commensals).

Respiratory and Allergy

Respiratory diseases are the third most common cause of death and the second most common cause of hospital admissions in the UK, yet effective treatments are lacking. At The University of Manchester, the Respiratory Centre is based predominantly at the University Hospital of South Manchester (UHSM) and is unique in its ability to deliver experimental medicine in respiratory, mainly through the Respiratory Theme of the Manchester NIHR Biomedical Research Centre and the NIHR funded Clinical Research Facility. We have the highest number of patients recruited in studies in respiratory medicine and allergy in the UK Clinical Research Network (UKCRN) portfolio. We are working towards earlier diagnosis and a more targeted approach, which matches an individual to the treatment most likely to provide the desired response. Our research will help to reduce disease progression and symptoms for those with respiratory conditions. **http://research.bmh.manchester.ac.uk/respiratoryandallergy**

Fungal Infection

The Manchester Fungal Infection Group (MFIG) is an international centre of excellence for fungal infection biology and translational antifungal research at The University of Manchester. Using the human pathogen Aspergillus fumigatus as our main experimental system, MFIG's research is focused on four integrated themes: Fungal cell biology, Host-pathogen interactions, Genetics and genomics and Antifungal drug discovery. MFIG's ultimate aim is to integrate its research with that of clinicians and industry. **http://research.bmh.manchester.ac.uk/mfig**

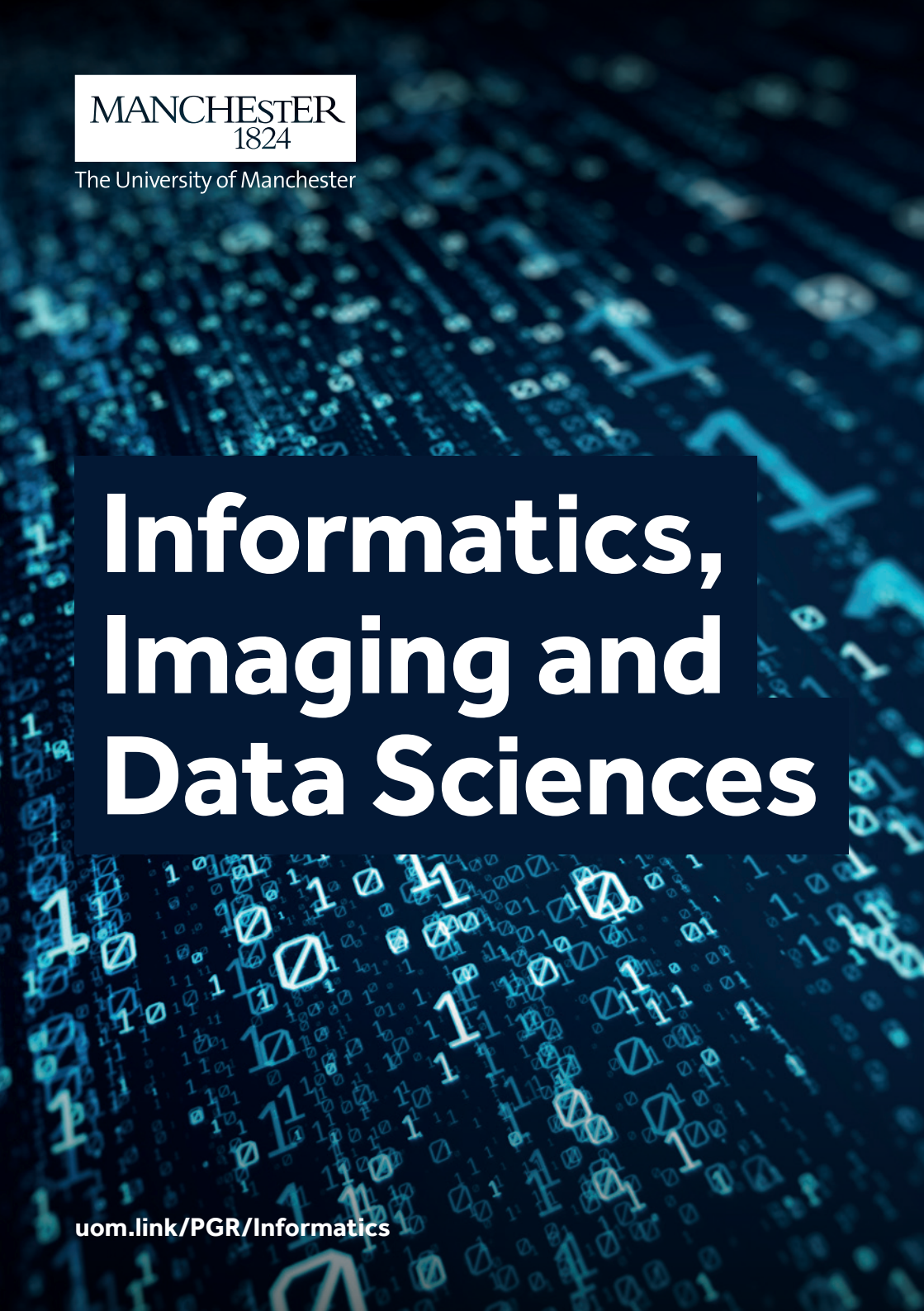
PhD programmes:

- Biochemistry
- Bioinformatics
- Biostatistics
- Cell Biology
- Developmental Biology
- Epidemiology
- Genetics
- Genomics
- Immunology
- Infectious Diseases
- Medical Microbiology
- Medical Mycology
- Medical Virology
- Medicine
- Microbiology
- Molecular Biology
- Nutrition
- Pharmacology
- Public Health
- Stem Cell Research
- Structural Biology
- Wellcome Trust (Molecular and Cell Biology)

MANCHESTER 1824

The University of Manchester

Informatics, Imaging and Data Sciences



uom.link/PGR/Informatics

Informatics

Informatics involves information processing and engineering of information systems. The University of Manchester has an international reputation for research with a broad portfolio encompassing precision medicine, epidemiology, citizen-driven health, public health, clinical trials and learning health systems. Multidisciplinary teams from clinical medicine, epidemiology, computer science, software engineering, statistics and mathematics work together with the NHS, academic centres and industry, both nationally and internationally.

Imaging Sciences

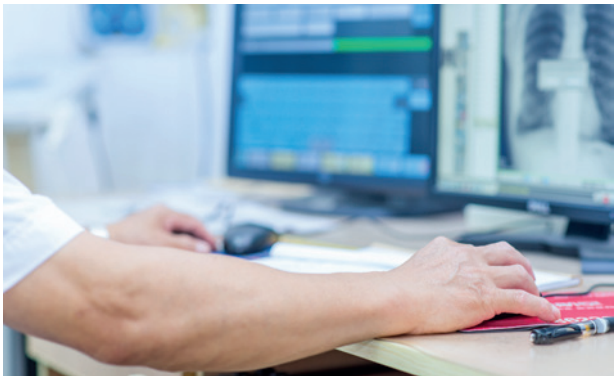
The mission of Imaging Sciences is to develop, validate and apply novel imaging and image analysis methods, and to facilitate their wider use in research and clinical practice. We have multidisciplinary research links with Physics, Mathematics, Chemistry, Computer Science, Radiology and other clinical and non-clinical sciences. The main application areas are positron emission tomography (PET), magnetic resonance (MR) imaging, MR spectroscopy and computer vision to enable the study of function and structure. We have close links with biological sciences (preclinical imaging), medical sciences (imaging of the brain, heart, lungs and muscles) and industrial partners.

Data Sciences

The Data Sciences group works on the interpretation of datasets by building predictive models of biological systems using computer algorithms. The group has developed methods to uncover the patterns underlying gene expression changes in time and to uncover the complex network of molecular interactions between DNA and proteins which regulate this process. Another interest is in how biological systems change and adapt over much longer evolutionary timescales using phylogenetic models.

PhD programmes:

- Bioinformatics
- Biomedical Imaging Sciences
- Health Informatics
- Epidemiology
- Medicine
- Neuroscience



uom.link/PGR/Informatics

MANCHESTER 1824

The University of Manchester

Studying in Manchester

www.research.manchester.ac.uk

Manchester is a name that lends weight to your postgraduate degree, not only because of our rich heritage, but also because of the excellent quality of our research, which is reflected in our current ranking among research institutions across the world. Our research focuses on some of the world's most difficult challenges, from poverty, cancer and sustainability to nuclear energy and applications of the wonder-material graphene.

Manchester has a history of transforming the world through research discoveries. Originally shaped by its success during the industrial revolution of the 19th century, Manchester's strong, pioneering character endures today – only now its achievements also include shaking up the music scene, nurturing artistic creativity and hosting international sporting events.

The importance and support we give to postgraduate research are key reasons why Manchester has such an impact. Our postgraduate researchers contribute to society through innovative discoveries and new levels of understanding, which makes them them more employable as a result.

You will benefit greatly from our continuous investment in the best research facilities and a dynamic research culture that encourages innovative, cross-disciplinary collaboration. Our programmes are led by distinguished researchers working at the forefront of their disciplines, ensuring that your qualification has a reputation that will open doors across the world.

Close partnerships with organisations from many sectors inform our postgraduate research programmes, providing exceptional opportunities for research with commercial applications, as well as the chance to develop business and entrepreneurial experience relevant to your future career.

Manchester is the largest city in the north of England with a vibrant cultural life. The city has excellent national and international transport links and is situated close to the beautiful countryside of the Peak District. It welcomes students from all backgrounds and cultures, and with so many cultures rubbing shoulders with one another, it's no surprise that Manchester has an excellent reputation for food and drink. You will find cuisine from practically every culture and to suit any budget. You will be part of a thriving international community and couldn't be in a better place to start your research journey.

www.research.manchester.ac.uk

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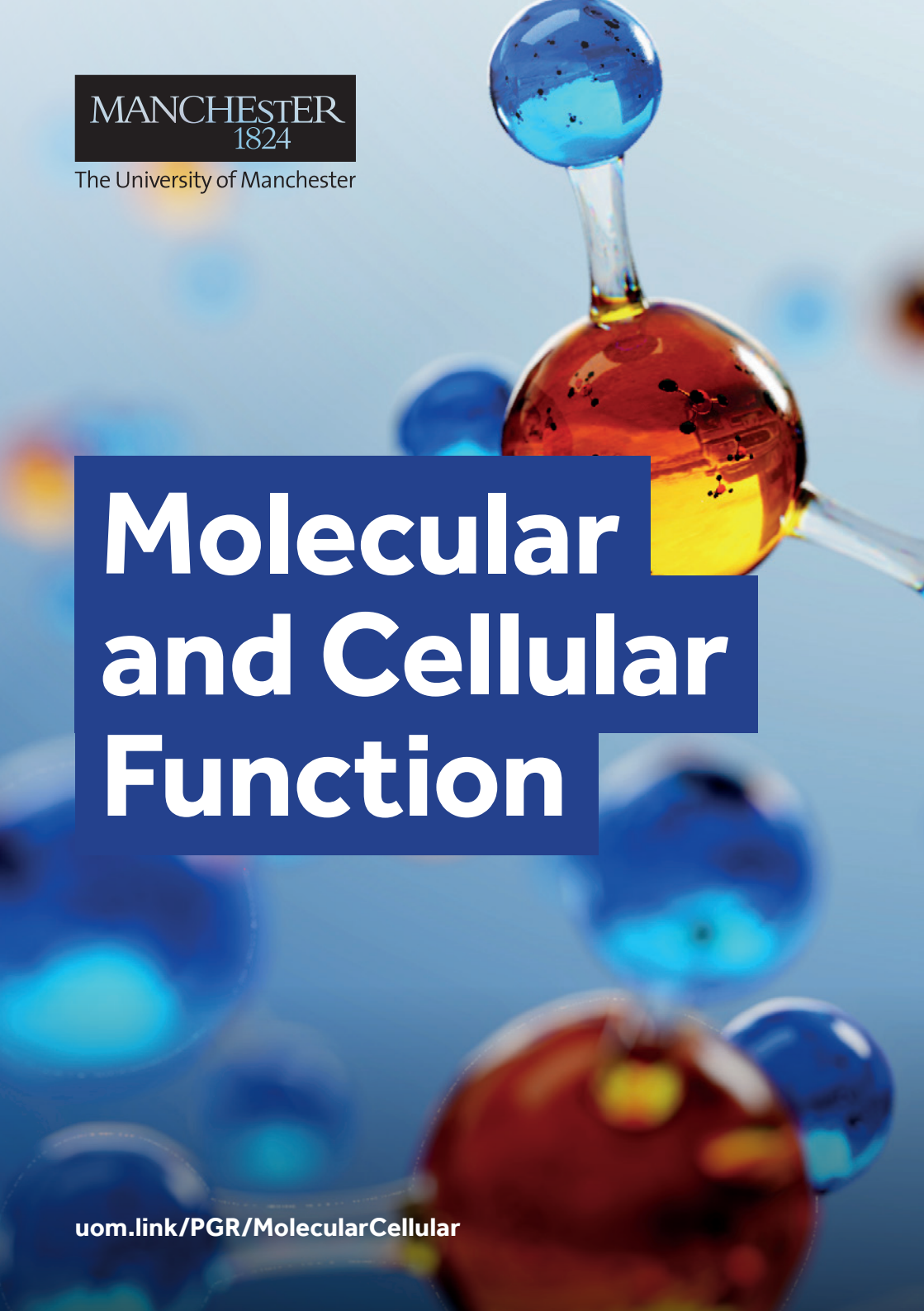


Molecular and Cellular Function

uom.link/PGR/MolecularCellular

Discovery research in Molecular and Cellular Function uses a wide range of model systems, including eukaryotic micro-organisms and plants, to study fundamental mechanisms of cell behaviour and how these can be applied in biotechnology, agriculture, biomedicine, health and wellbeing. As well as using state-of-the-art technologies in molecular and cellular biology, we also use a range of advanced techniques in structural biology.

Gene expression, chromatin and signalling

In humans, pathological states seen in disease and stressful environmental changes such as infections often lead to altered patterns of gene expression that modify cell fate. Research focuses on the molecular understanding of signalling to chromatin and the mechanisms that underpin changes in gene expression, which are often a key driver of disease development and progression.

RNA and protein fate

Altered patterns of gene transcription correlate with the potential to re-programme cell fate, but it is also clear that the control of RNA stability, protein synthesis and turnover are fundamental to normal cell function. Knowledge of the mechanisms that regulate RNA and protein metabolism and quality control are therefore critically important in biotechnology, ageing and disease.

Cell dynamics

Cells in tissues are continually responding to changes in their environment in order to fine-tune metabolic control, tissue-specific function and systems-level homeostasis. The signalling and metabolic networks that regulate cell function are complex and highly integrated and, in many cases, subject to sophisticated spatial control.

Other research

As well as the key areas of molecular and cellular biology described above, our division also focuses on multidisciplinary research to answer key fundamental questions in biology in diverse model systems, including eukaryotes, microorganisms and plants.

PhD programmes:

- Biochemistry
- Biotechnology
- Cancer Sciences
- Cell Biology
- Developmental Biology
- Genetics
- Microbiology
- Molecular Biology
- Plant Science
- Structural Biology

uom.link/PGR/MolecularCellular

MANCHESTER 1824

The University of Manchester

Musculoskeletal and Dermatological Sciences

uom.link/PGR/MDS

Centre for Genetics and Genomics Versus Arthritis

We investigate the genetics of major musculoskeletal disorders, including rheumatoid arthritis, juvenile idiopathic arthritis and psoriatic arthritis. Research in our Centre is divided into two main programmes of work. In translational genetics, we aim to translate our findings about susceptibility and outcomes of disease into prevention, predicting treatment response and developing personalised treatments. In functional genomics, we aim to determine the genes, biological pathways and mechanisms that lead to disease.

Centre for Epidemiology Versus Arthritis

The goal of the Centre for Epidemiology is to address clinically important questions in musculoskeletal disease that require a robust epidemiological approach, ultimately delivering results to improve the quality of life for people living with arthritis. Research themes include the occurrence and progression of disease, the effectiveness and safety of treatment, harnessing digital data, statistical design and analytics, and research into practice.

Dermatology Research

The mission of dermatology research in Manchester is to address questions that arise from direct patient care, so it has significant clinical and practical relevance. The Manchester Centre for Dermatology Research was established 24 years ago, and is one the largest dermatology research centres in Europe.

The Centre contains a European Academy of Dermatology and Venereology Centre of Excellence for Psoriasis, one of two World Health Organisation-designated Centres of Excellence for Skin Ageing and Healthy Life Course, and regional photobiology and hair disease centres. It runs the national Biologics Register for psoriasis (16,000 patients - BADBIR) and the IMPACT and PSORT programmes. It is a founder of the UK Translational Research Network in Dermatology.

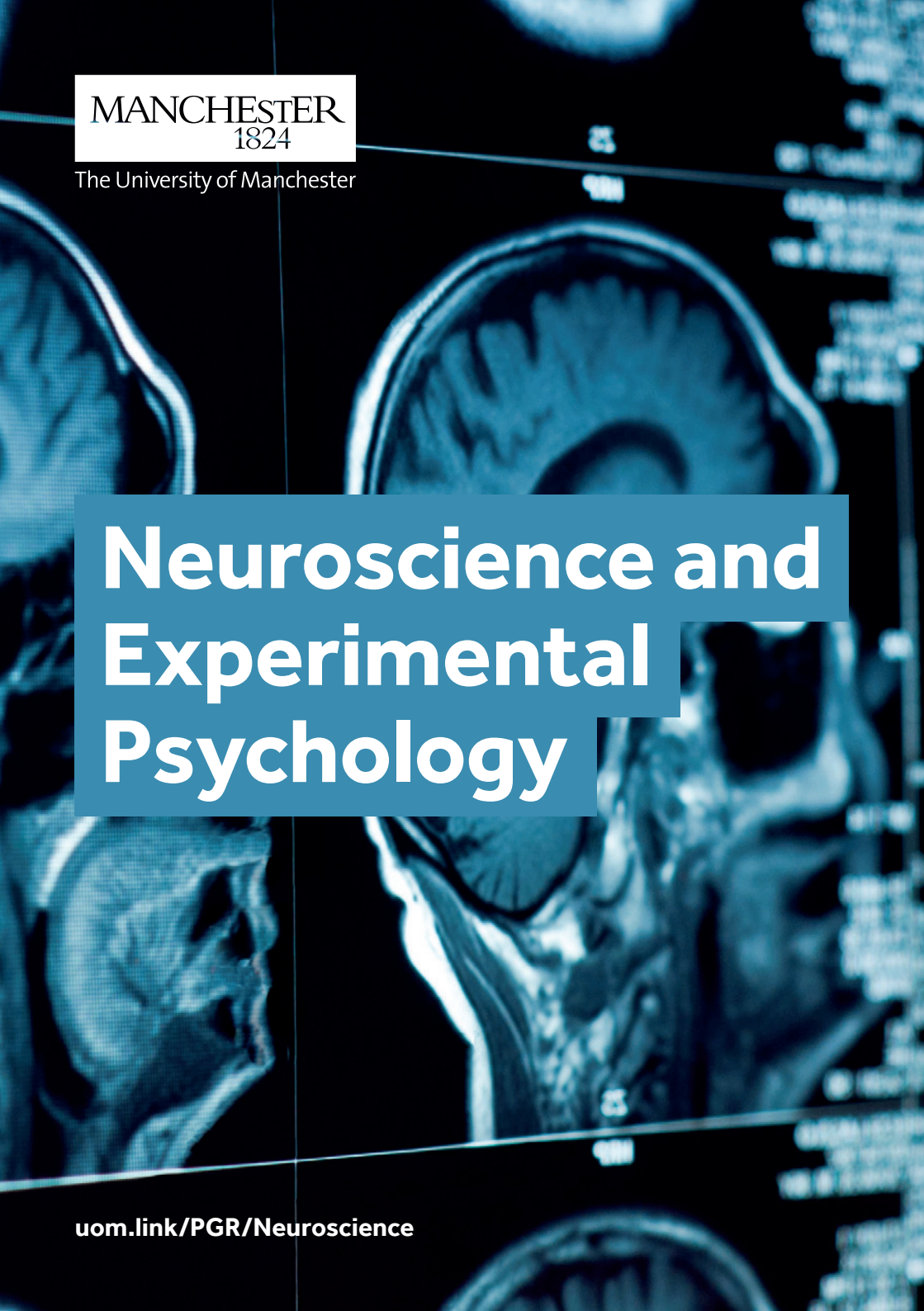
The Dermatopharmacology Unit is one of the foremost dermatology clinical research facilities (CRFs) in the world (100 trials in past 10 years) with 100% recruitment to time and target in the past two years. The capability of our early phase trials is exemplified by our leadership on all psoriasis biologics approved by NICE. World-class experimental medicine is enabled by the Dermatology Theme of the National Institute for Health Research (NIHR) Manchester Biomedical Research Centre and linkage to the Manchester NIHR CRFs and the Manchester Collaborative Centre for Inflammation Research (MCCIR).

The Centre's research focuses on psoriasis, biologics, Langerhans' cell biology, mast cell biology, and photodermatology and non-melanoma skin cancer. We also look at skin ageing and photo-ageing, brain-skin axis and cutaneous neuroendocrinology, hair follicle biology, pathology and stem cells, the skin microbiome, and wound healing. Recent bibliometric analysis (commissioned by the Faculty and performed by The University of Manchester Library using Elsevier Scival for 2009-13) demonstrated that the Centre ranks second in the world for dermatology citation impact, and fourth for dermatology citations. We are ranked first in the UK on recent RAND bibliometrics.

PhD programmes:

- Bioinformatics
- Biostatistics
- Dermatological Sciences
- Epidemiology
- Genetics
- Genomics
- Immunology
- Musculoskeletal
- Pharmacology
- Psychology

uom.link/PGR/MDS


MANCHESTER
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Neuroscience and Experimental Psychology
uom.link/PGR/Neuroscience

To understand the cognitive and neural bases of mental function is one of the most fascinating challenges of twenty-first century science. It is also essential to our understanding of brain disorders and to the development of effective treatments.

Basic neuroscience

Our research explores the fundamental principles by which neural circuits operate in both healthy and diseased brains.

We exploit a range of model systems, from Drosophila to human studies. Our areas of strength include sensory and motor systems, cellular neurophysiology, learning and memory, biological rhythms, computational neuroscience, stroke, neurodegeneration and epilepsy.

Cognitive neuroscience

We investigate how, where and when cognitive and behavioural processes occur in the healthy human brain, as well as in neurological disorders.

We use a variety of methods, including functional magnetic resonance imaging (fMRI), event-related electroencephalography (EEG), transcranial magnetic stimulation (TMS), computational modelling, and structural MRI-informed neuropsychology.

Experimental psychology

We research the basic mechanisms that underpin core cognitive functions such as perception, learning, memory, language processing, decision making and attention. A range of complementary techniques are used to recover behavioural performance measures, including perceptual biases and thresholds, reaction times and error rates. These measures are used to inform and further develop models of cognition.

Clinical neuroscience

A key aim is translating neuroscience discovery into clinical impact. Our major clinical programmes include research in dementia, stroke, neuro-oncology, autism and psychosis. Cutting edge neuroscience methodologies are used to understand these disorders at the molecular, genetic, neural and behavioural levels to develop new approaches to prevention and treatment.

Neuroimaging

Neuroimaging is a key activity of this Division, underpinning basic science discovery and clinical translation. We focus both on neuroimaging methodology development, and on its application to investigate basic and complex neural processes both in healthy individuals and those with neurological conditions.

PhD programmes:

- Cognitive Neuroscience
- Experimental Psychology
- Neuroscience
- Psychiatry
- Psychology

uom.link/PGR/Neuroscience

MANCHESTER 1824

The University of Manchester

Nursing, Midwifery and Social Work

uom.link/PGR/NMSW

Multidisciplinary projects in Nursing, Midwifery and Social Work aim to improve health and social care locally, nationally and internationally. Our research covers eight areas as follows:

Children and young people

Research aims to promote understanding of children's, young people's and their families' experiences of health, social work and care; and to develop and evaluate new interventions to inform practice and policy for children and young people. Research themes include support for self-care, families and personal life, children's and young people's palliative care, child protection, social work with children and families, families and diversity.

Dementia and Ageing

Interdisciplinary research explores the everyday experiences of people living with dementia their care partners and neighbourhood networks. Research is informed by creative social research methods and aims to use these approaches to transform and shape current policy, practice and thinking in dementia studies.

Healthy ageing

Research into older adults focuses on healthy and active ageing to ensure the promotion of good health and active participation in society. Research engages both the public patients and/or service users and demonstrates change in policy and practice for older people at a local, national and international level.

Mental health

High-quality national and international, interdisciplinary mental health research is undertaken that both influences and is responsive to contemporary mental health policy, practice and education. Research is informed by psychosocial models of mental health, particularly cognitive and behavioural approaches.

Midwifery and Women's Health

Research focuses on generating high quality evidence for health and social care practice in relation to midwifery and women's health. A wide range of methodologies ranging from mixed-methods discovery research to the robust testing of health and psychosocial interventions are used. We have a particular focus on work in low and middle income countries and have programmes on stillbirth, intrapartum care and respectful maternal and newborn care.

Social Research with Deaf people

Work with the Deaf community and other stakeholders aims to promote the wellbeing of d/Deaf individuals, families and communities through high-quality, multidisciplinary applied social research. Research is predominantly carried out in British Sign Language (and English) with a large proportion of staff and PGR students being Deaf. Particular areas of focus include mental wellbeing (including dementia), families with Deaf parents and/or deaf children and deaf youth.

Supportive and Palliative Care

High-quality, national and international research aims to improve the quality of life, physical and psychological wellbeing and support for patients and family carers receiving supportive and palliative care, whether from cancer or non-malignant disease.

Wounds

Research on wounds and their associated complications uses a range of innovative methodologies to generating evidence to improve patient outcomes. Work investigates the causes, experience of living with and treating of wounds and how best to deliver clinically and cost effective wound prevention and treatment.

PhD Programmes:

- Nursing
- Midwifery
- Social Work

uom.link/PGR/NMSW

MANCHESTER
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The University of Manchester

Pharmacy and Optometry

uom.link/PGR/PharmOpt

Pharmacy and Optometry has several dedicated research centres, including the Centre for Applied Pharmacokinetic Research, the Centre for Pharmacoepidemiology and Drug Safety, the Centre for Pharmacy Workforce Studies and the NorthWest Centre for Advanced Drug Delivery.

Our research groups are:

Medicines: Design and Delivery
Our research aims to address the challenges faced in developing new clinically viable therapies, integrating structural, analytical, computational and synthetic chemistry with expertise in target biology. We develop understanding in how and why therapies work in the body, using imaging techniques and computer modelling. Our group comprises medicinal chemists, molecular pharmacologists, biochemists, modellers, biophysicists and biologists.

Patients: Diagnosis and Therapy
We study clinical disease biology, identify targets suitable for therapeutic intervention, develop clinically relevant in vitro and in vivo models of disease, assess the efficacy of drug treatments and find biological markers that can predict the likelihood of developing a disease. Our group comprises cancer and cardiovascular biologists, neuropharmacologists, developmental biologists and microbiologists.

Optometry and Vision Science
We work on basic science and clinical projects to improve our understanding of structure and function of the human visual system and to translate new knowledge into useful clinical tests, devices and commercial products. Our group comprises optometrists (with a wide range of research backgrounds), vision scientists, neuroscientists, ophthalmologists and biologists.

Drug Usage and Pharmacy Practice
Our research seeks to improve medicines use and safety in society, and inform pharmacy policy and workforce behaviour, including education. We are developing, implementing and evaluating new models and systems of healthcare practice with the ultimate aim of ensuring the safe and effective use of medicines. Our multi-disciplinary team comprises epidemiologists, social scientists, statisticians, pharmacists and other healthcare professionals.

PhD programmes:

- Drug Design, Development & Delivery
- Ophthalmology
- Optometry
- Pharmacology
- Pharmacy and Pharmaceutical Sciences
- Pharmacy Practice
- Primary Care and Health Services Research

uom.link/PGR/PharmOpt


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PhD Programme with integrated teaching certificate (international students)
uom.link/PGR/Int4yr

This 4 year programme for international students gives you the opportunity to carry out independent research while gaining a Postgraduate Certificate in Teaching and Learning and specialist training across a range of biological, medical and health sciences.

Benefits

- Undertake a PhD project in an internationally recognised research environment
- Develop your teaching skills and gain a postgraduate certificate in higher education
- Enhance your critical thinking and research skills through taught courses
- Access support to develop your academic writing
- Broaden your research techniques and gain transferable skills
- Take courses in research methods in discipline-related topics
- Learn in an interdisciplinary research environment
- Gain a competitive edge for a career in higher education

The programme structure has been designed to complement your chosen research project and is made up of five elements:

- Supervised PhD research project
- Postgraduate Certificate in Teaching and Learning
- Academic literacy programme
- Optional master's units
- Skills and project training

If you are planning a career in higher education teaching or lecturing, this PhD programme can give you a competitive edge by providing you with both practical and theoretical skills in teaching and assessment in a variety of settings.

We can help you find the most appropriate research project, which will be complemented by structured training and a teaching certificate.

As an international student, you will benefit from an established support network, and we suggest you consider contacting one of our international student ambassadors. You can contact them to ask any questions about living and studying in Manchester before you apply.

We can also provide a pre-arrival 'buddy' on request to give you guidance up to and around registration. Once you arrive, there are plenty of social activities and peer support available through our Doctoral Academy Graduate Society.

Twitter: **@FBMH_DocAcad**
Website: **uom.link/PGR/Int4yr**
Email: **admissions.doctoralacademy@manchester.ac.uk**
Phone: **+44(0)161 275 5608**


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Population Health, Health Services Research and Primary Care
uom.link/PGR/Population

Research focuses on how health service interventions, from policies to lab-based sciences, impact on society more widely. The aim is to harness and coordinate efforts to produce a step-change in generating new knowledge through cutting edge research and translating that knowledge into improved health and reduced inequalities.

Centre for Biostatistics

Methodological research includes: Modern statistical approaches to causal inference; Design and analysis of randomised trials and other clinical experiments (including design and evaluation of complex interventions, interventions to improve trial retention, and outcome selection); Design and analysis of epidemiological and other observational studies; Management and analysis of large eHealth data sets; Complex statistical modelling; Measurement error evaluation and modelling; Genetic epidemiology; Survival, event-history and frailty models; prediction/ prognostic modelling. Statistical and methodological research for systematic reviews and meta-analysis; Journalology and the use of statistics for communication to lay audiences, increasing reproducibility and transparency in research write-up.

Centre for Epidemiology

Nationally and internationally important studies into the distribution and determinants of health and disease in human populations for the improvement of health are conducted. Research covers: Environmental and occupational epidemiology, Exposome, Genetic and molecular epidemiology, Public Health and applied epidemiology (eg of cancer and trauma), Substance Misuse epidemiology, policy-related health research, epidemiological methods and analysis of large and complex datasets.

Centre for Health Economics

Health economics involves further understanding of the behaviour of individuals, health care providers and health systems, and compares alternative uses of health care resources to improve the health of individuals, patient groups and populations. Research covers: Econometric analysis of administrative and survey datasets; Methods to value the benefits of health interventions; Methods to evaluate complex health and social care programmes; Health technology assessment; Workforce planning; Resource allocation and the design and use of financial incentives.

Centre for Primary Care and Health Services Research

Research is organised around four themes. These are (i) Health organisation, policy and economics which investigates the supply, organisation, management and financing of health and social care services; ii) Quality and safety, with a focus on conducting innovative, needs-driven and applied research to improve quality of care and patient safety particularly in general practice, community pharmacy and the interface of hospital and social care; (iii) Person centred care and complex health needs, with a focus on ensuring patient and professional experience is at the centre of this research; (iiii) Health in a wider context, with focus on how the wider context impacts on health and on health and care policy.

Manchester Personal Social Services Research Unit

Research is organised around the following themes: (i) assessment, performance and quality measurement and user satisfaction including the evaluation of the single assessment process, self□assessment, assessment in care homes and evaluation of different approaches to performance and quality measurement in older people's services; (ii) Care/Case management and care coordination in the NHS and care management in social care and (iii) Service arrangements and integration

PhD programmes:

- Biostatistics
- Epidemiology
- Health Economics
- Medicine
- Occupational and Environmental Health
- Primary Care and Health Services Research
- Public Health

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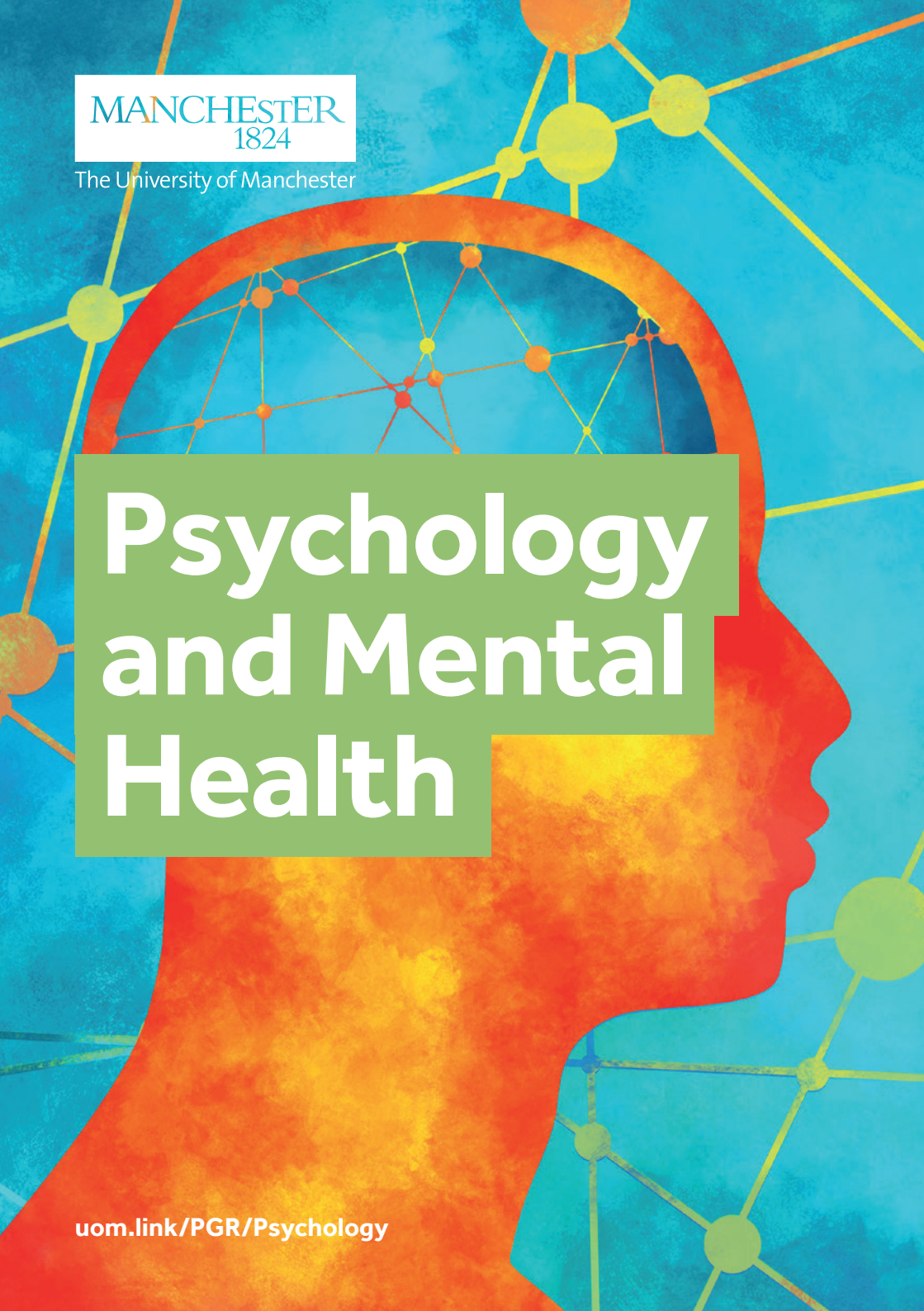
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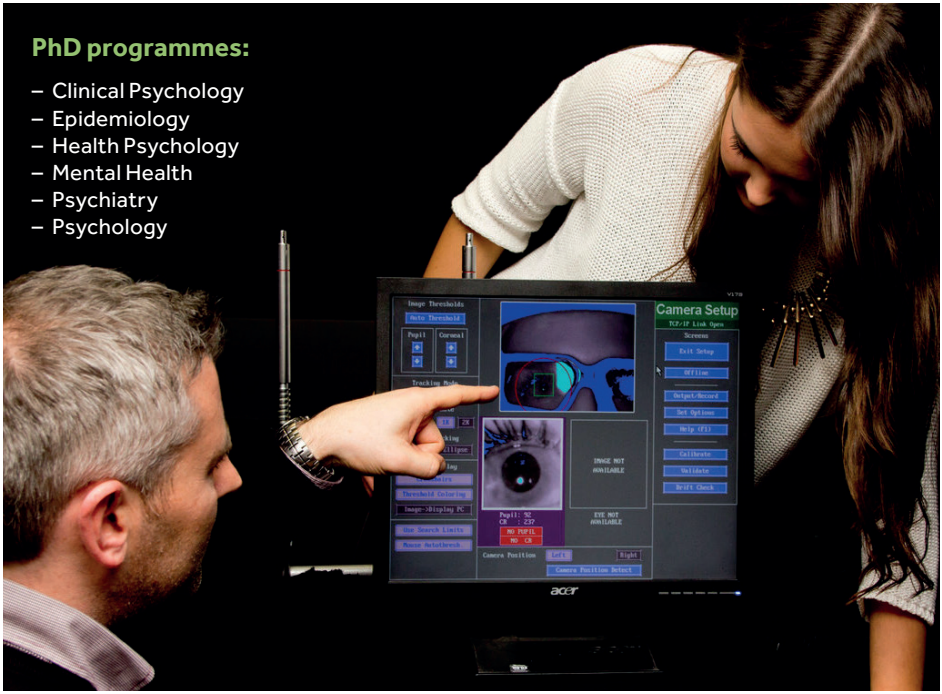
Psychology and Mental Health
uom.link/PGR/Psychology

Psychology and Mental Health is a multidisciplinary group which includes clinical psychologists, psychiatrists, health psychologists, mental health nurses and epidemiologists. Novel interventions for treating mental health problems, including new biological and psychological treatments, have been developed, and the group is working to turn these into services for people with mental health problems. The group also constitutes a centre of excellence for suicide prevention, forensic psychiatry and psychology, psychological treatments and health psychology.

Researchers liaise closely with NHS services, charities and public health bodies, as well as industry in the UK. Work has contributed to national guidelines and policy in relation to a number of areas, including NICE guidance for a range of mental health problems. A large number of international collaborations help in translating research findings into services in less developed areas in the world. Many staff have shared clinical contracts and continue to practice in health services locally and nationally, ensuring that research is embedded in clinical practice. This makes a real difference to the quality of the training, giving our postgraduate research students a clear understanding of the needs of service users.

PhD programmes:

- Clinical Psychology
- Epidemiology
- Health Psychology
- Mental Health
- Psychiatry
- Psychology



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Postgraduate Research Student Wellbeing

www.research.manchester.ac.uk

The Faculty of Biology, Medicine & Health's Doctoral Academy supports your wellbeing through a variety of initiatives, in conjunction with the Manchester Doctoral College and other University support services.

We encourage all students to take control of their own personal wellbeing in a number of ways, including:

- Getting involved in social activities organised by the Doctoral Academy Graduate Society
- Making use of online wellbeing resources, from online cognitive behavioural therapy, such as Silvercloud and Moodgym, to podcasts on relaxation, meditation and reducing stress
- Joining one of our peer support groups - for example, the PGR Parents Group is a great opportunity to meet other students with caring responsibilities at monthly get-togethers
- Engaging in the Faculty's online community by visiting the student-led Research Hive at **uom.link/PGR/ResearchHive**, which has a dedicated Wellbeing section containing information on the support available to you, as well as first-hand advice from other students
- Allowing time for relaxation in one of the University's wellbeing rooms
- Attending workshops or one-to-one appointments at the University Counselling Service

Support during your postgraduate research programme:

- Supervisory team
- Independent advisor
- Postgraduate research student Reps
- Disability Advisory Support Service (DASS)
- Student Services Centre
- Students' Union
- University Occupational Health

www.research.manchester.ac.uk


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History of Science, Technology and Medicine
chstm.manchester.ac.uk

The Centre for the History of Science, Technology and Medicine (CHSTM) is globally renowned for its innovative and exciting research in history of science, medical humanities, environmental history, animal and multispecies studies and history of technology. Research explores how ideas of science, nature, animals, health have been historically, socially and culturally conditioned.

Our research areas are:

- Contemporary science and medicine policies
- Science and Health Communication
- Colonial and Global Science
- Animal and Multispecies Studies
- Contemporary and Historical Biomedicine
- Environmental Humanities
- Scientific Expertise and Governance

PhD Programmes:

- History of Science, Technology and Medicine

chstm.manchester.ac.uk


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Cell Matrix Biology and Regenerative Medicine
uom.link/PGR/CMBRM

Research ranges from the mechanisms underpinning cell interactions with matrix in tissues, to understanding tissue development, regeneration and stem cell biology. This underpins translation towards clinical applications, such as engineered tissues and methods for delivery of novel cell and gene therapies for patient benefit. Our multidisciplinary research brings together clinicians and basic scientists and utilises state-of-the-art technologies.

Cell matrix biology

Matrix is essential for multicellular life. It surrounds and supports cells and accounts for one-third of our body mass. Defining the principles that govern the interaction between cells and matrix is fundamental to understanding vertebrate development, healthy ageing, and tissue failure in disease. Dysregulation of matrix is central in the pathogenesis of chronic diseases affecting the cardiovascular system, the kidney and musculoskeletal tissues, and is a feature of multisystem cancers. Using multidisciplinary approaches, our research aims to understand the regulation of matrix in health and its dysregulation in disease.

Key research themes are determining the molecular basis for matrix homeostasis and how breakdown in homeostatic mechanisms (including peripheral circadian rhythms) contribute to ageing and lead to disease, determining how matrix controls immune responses, contributes to host protection and drives the restoration of tissue homeostasis after injury or infection, and defining the molecular basis of the two-way dialogue that exists between cells and the mechanical status of their environment.

Regenerative medicine

Regenerative medicine aims to use cell or gene therapy and tissue engineering to repair, replace or regenerate tissues and organs that are damaged during disease, injury or ageing. This requires a multidisciplinary approach, bringing together biologists, material scientists, bioengineers and clinicians to develop our understanding of the basic mechanisms of cell and developmental biology and translate this knowledge to the clinic.

Research areas that address unmet clinical needs include regenerating musculoskeletal tissues; developing stem cell gene therapies for inherited genetic diseases; renal tract regeneration; developing methods for reconstruction of nerves, tendons and blood vessels; regulating inflammatory responses during tissue repair; disease modelling for drug and therapeutic development; and enhancing chronic wound healing.

Human embryonic and adult stem cells have great therapeutic potential. Our research is seeking to identify new molecular pathways that regulate stem cells, using 'omics technologies, and to apply human stem cells to the development of in vitro models of disease and the generation of novel therapeutics.

PhD programmes:

- Biochemistry
- Biotechnology
- Cell Biology
- Cell Matrix Research
- Developmental Biology
- Immunology
- Molecular Biology
- Musculoskeletal
- Stem Cell Research
- Structural Biology
- Wellcome Trust (Molecular and Cell Biology)

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