

Lecturer in Molecular Microbiology Faculty of Biology, Medicine & Health

School of Biological Sciences

CONTENTS

- Page 2 Terms of appointment
- Page 2 Contact information
- Page 3 Role summary and job description
- Page 5 Person specification
- Page 6 The Division of Infection, Immunity & Respiratory Medicine
- Page 8 The School of Biological Sciences
- Page 10 The Faculty of Biology, Medicine and Health
- Page 11 Working at the University of Manchester
- Page 12 Commitment to equality, diversity and inclusion
- Page 14 Learning, development and progression

Building Our Future Together: through the delivery of outstanding teaching and learning in biology & biomedical sciences, underpinned by world leading research.





THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF BIOLOGY, MEDICINE AND HEALTH

SCHOOL OF BIOLOGICAL SCIENCES

DIVISION OF INFECTION, IMMUNITY & RESPIRATORY MEDICINE

LECTURER (Teaching & Research) IN MOLECULAR MICROBIOLOGY

Vacancy ref: BMH-15036

Terms of Appointment

- Salary: £41,526 to £51,034, depending on relevant experience
- Hours: 1 FTE Individuals who may wish to consider part-time or flexible working arrangements are actively encouraged to contact the recruiting managers.
- Duration: Permanent; postion available from February 2020
- **Probation:** The successful candidate will have a period of academic probation up to, but not exceeding, four years.
- Location: Oxford Road, Manchester

Responsible to: Head of Division Division of Infection, Immunity & Respiratory Medicine School of Biological Sciences

Contact information for enquiries

Professor Elaine Bignell Professor of Infection Biology Head of Division of Infection, Immunity & Respiratory Medicine elaine.bignell@manchester.ac.uk 0161 275 0768



Lecturer in Molecular Microbiology

Role summary

Purpose: Fungal diseases kill more people annually than TB or malaria but are very poorly understood and resistance to frontline antifungal agents is a growing public health concern due to extensive fungicide use in agriculture. Manchester hosts the largest centre in the world for research and treatment of fungal respiratory and mucosal diseases (> 70 university and NHS staff and students, including 10 academics/clinician academics). Since 2014, the group has secured >£2 million in MRC project awards (against a total of >£10 million funding). We are now seeking a fungal molecular geneticist having extensive experience in the study of host-pathogen interactions with particular emphasis on single cell analyses and/or confocal, microfluidic- and/or imaging flow cytometry-based experimentation, using cultured and primary human cells. Manchester is a thriving centre for multidisciplinary infection studies addressing AMR, antimicrobial strategy and immunology of infectious disease, particularly in sepsis, respiratory infections and multimorbidity and immediate opportunities exist for collaboration with UoM PIs across the Faculty of Biology, Medicine &Health.

You will convey a research vision having cross-cutting relevance for infection biology, including host-pathogen interactions, immunophenotyping, antimicrobial strategy, chronic respiratory disease, and respiratory immunology. You will be supported in the development of an independent research programme within the Division complementing the overall multidisciplinary strategy with a particular focus on fungal lung diseases. Working collaboratively, you will be a future leader in your field, driving world-leading research and enhancing our strengths in this area. You will also contribute to our outstanding undergraduate and postgraduate programmes within the School of Biological Sciences and wider University; with opportunities to develop curriculum, innovate teaching and provide an exceptional student experience through research-led learning. In particular, you will have a proven track record in supporting UGT and PGT teaching, and will deliver cellular and molecular mycology lectures for UGT year 1 Biosciences, as well as developing new advanced mycology units for UGT years 2 or 3; unit leadership on PGT Medical Microbiology & Infection courses and by supporting UGT and PGT research projects.

Main Responsibilities

Research and Scholarship

 Develop research objectives, projects and proposals to grow an independent, internationally recognised research programme in the broad area of fungal lung disease, complementary to existing research in the Division, and with an emphasis on the study of host-pathogen interactions using single cell analyses and/or confocal, microfluidic- and/or imaging flow cytometry-based experimentation, murine infection models, and cultured and primary human cells.



- Develop successful strategies to gain external funding for research projects from a variety of funding sources (e.g. research councils, charity funding or industrial partnerships) to support your work.
- Ensure dissemination of high quality research through attendance and presentations at national and international meetings and through the publication of papers in high quality, international peer-reviewed journals.
- Supervise postgraduate (PhD and Masters) research students and manage research projects.
- Extend, transform and apply knowledge acquired from scholarship to research, teaching, and appropriate external activities.

Teaching and Learning Support

Maintain a broad knowledge of current research and scholarship in relevant fields to ensure that teaching is cutting-edge and of the quality expected by the University of Manchester.

- Design teaching material and deliver either across a range of modules or within a subject area to relevant levels, i.e. undergraduate, postgraduate students, through lectures, seminars and personal supervision.
- Use appropriate teaching, learning support and assessment methods that will inspire and engage our students.
- Supervise student projects, and, where appropriate, placements.
- Identify areas where current provision is in need of revision or improvement.
- Contribute to the planning, design and development of objectives and material.
- Set, mark and assess work and examinations and provide feedback to students.
- Contribute to the enhancement of teaching quality within the subject, School and Faculty.

Communication

- Communicate effectively across a wide range of audiences.
- Liaise, establish and maintain positive links with external agencies and providers.
- Promote the research activity of the Division through the identification and development of collaborative links both within and beyond The University of Manchester.

Supervision

- Advise and support colleagues with less experience and advise on personal development where appropriate.
- Supervise the work of others, for example in research teams or projects or as PhD supervisor.

Teamwork

- Act as a responsible team member and develop collaborative and productive working relationships with other members of staff.
- Collaborate with colleagues across the University to build research programme and respond to students' needs.
- Play a central role in the development of strategic initiatives, in particular the Manchester Infection Network



• Participate in and develop external networks, for example, to identify sources of funding, secure student placements, market the institution, facilitate outreach work, generate income, obtain consultancy projects, or build relationships for future activities

Personal Development / Performance

- Demonstrate a commitment to continuing Personal/Professional Development.
- Demonstrate an ability to observe and define priorities and timetables in the achievement of strategic and operational objectives.
- Develop scholarship in learning and teaching and apply knowledge acquired to the development of high quality teaching and learning materials.
- Develop a research strategy that will allow continued development of research profile.
- Balance the pressures of teaching, research and administrative demands and competing deadlines.
- Undertake professional, organisational, management and administration roles in the delivery of the Faculty/Schools' objectives and personal development.

Work Environment/ Health and Safety

- Depending on area of work and level of training received, may be expected to conduct risk assessment and take responsibility for the health and safety of others.
- Co-operate with The University of Manchester in ensuring that Statutory Requirements, Codes of Practice, University Policies and School/Divisional health and safety arrangements are complied with.



Person Specification

Essential Skills, Knowledge and Experience

- Hold a PhD in a relevant subject
- Track record of experience in the mechanistic study of host-fungal interactions using single cell analyses and/or confocal, microfluidic- and/or imaging flow cytometry-based experimentation, murine infection models, and cultured and primary human cells.
- Extensive and up-to-date theoretical and practical knowledge in your subject area as evidenced by:
 - A research portfolio in an area of Medical Mycology
 - A publication record in peer reviewed journals in an area of Medical Mycology
- Proven ability to use initiative to efficiently plan, optimise and progress a project and communicate findings
- Excellent interpersonal and communication skills evidenced by:
 - o Previous collaborative work in either research or teaching
 - Clear communication of research to a variety of audiences and through different media
- Very good written and spoken English
- Evidence of contributing to the work of others by offering practical and intellectual help
- Experience of day to day supervision and support of postgraduate and/or undergraduate students
- Commitment to the delivery of outstanding teaching to students

Desirable Skills, Knowledge and Experience

- Have researched and published in the field of Medical Mycology
- Have knowledge and experience of host-fungus interactions
- Have a proven track record of obtaining external research funding
- Have a proven track record of presentation at external conferences/workshops
- Have synergies in your research with other research in the Division of Infection, Immunity & Respiratory Medicine and the School of Biological Sciences
- Ability to use a range of delivery techniques to enthuse and engage students at undergraduate or postgraduate level
- A qualification or significant experience in teaching (such as membership of HEA)

The above particulars are intended as a general guide to the duties of the post and the conditions of service. They do not constitute a contract of employment between the University and the person appointed. The successful applicant will, however, receive a full set of conditions of service on appointment.



Division of Infection, Immunity & Respiratory Medicine

Research in our Division seeks new ways to prevent and treat inflammatory and infectious diseases via a detailed mechanistic understanding of disease processes, how they impact human pathology, and the feasibility of therapeutically targeting them. Our multidisciplinary research is facilitated by proximity to clinic which provides access to data and tissues from relevant patient cohorts, and pathways for translation of discovery science. Amongst our 65 Academics we host 13 early stage researchers, 36 teaching and/or research academics including 5 Wellcome Trust Investigators, 16 clinical academics and 202 research-active honorary staff who significantly bolster and diversify the translational relevance and impact of our work, particularly in collaboration with our clinical colleagues at the Manchester University NHS Foundation Trust.

DIIRM hosts world-class critical mass in three areas of research: (i) Immunology, (ii) Fungal Diseases Research, (iii) Respiratory medicine & Allergy.

Immunology: The vast majority of DIIRM academics are affiliated with the Lydia Becker Institute for Immunology and Inflammation. The great breadth and diversity of research in the institute emphasises how immunology plays an ever-increasing role in modern medicine, including in the novel areas of neuro, cardiovascular, obesity, paediatric, barrier and comorbidity immunology.

Fungal Diseases Research: DIIRM hosts an internationally acclaimed cohort of 10 academics & clinician academics who, combined with > 70 university and NHS staff and students, comprise the largest centre in the world for research and treatment of fungal respiratory diseases. Collectively known as the Manchester Fungal Infection Group (MFIG) our centre is comprised of 10 academics, 4 consultants, 7 clinical/academic fellows, 2 clinical and 8 healthcare scientists, 2 medical laboratory assistants, 11 nurses, 2 physiotherapists, 1 pharmacist, 6 postdoctoral researchers, 6 research technicians and 16 PhD students.

Respiratory Medicine & Allergy: DIIRM hosts 16 clinician academics from the respiratory centre of the Manchester University NHS Foundation Trust which is the largest in Europe (50 consultants) and comprises the North West Lung Centre (serving a catchment of 5 million), the National aspergillosis centre (NAC) and the NIHR Respiratory and Allergy Clinical Research Facility (RACRF). Discovery science covers disease mechanisms through experimental medicine to clinical trials aiming to optimise treatment of common respiratory diseases by enabling precision medicine. Major themes in respiratory medicine are: Asthma, cough and breathlessness, infections, diagnostic and therapeutic aspects of allergy, molecular allergology, interstitial lung disease, bronchiectasis, cystic fibrosis.





The School of Biological Sciences

The School of Biological Sciences is one of three Schools which form the Faculty of Biology, Medicine and Health. The Faculty has a matrix structure with Divisions providing collaborative working environments and management and Research Domains bringing researchers from across the Faculty together to our build research strengths and drive large-scale, collaborative research.

The School of Biological Sciences has circa 1100 academic, research and professional service staff and our undergraduate and postgraduate programmes take in over 3000 students.

The six Divisions within the School are:

Cell Matrix Biology and Regenerative Medicine

We are interested in two main areas of biology and medicine - the role of the extracellular matrix in the building and repair of tissues and regenerative medicine research, examining new approaches to biological (cell and gene) therapies and tissue engineering.

Evolution and Genomic Sciences

We work right across Biology and Medicine looking at the evolutionary mechanisms involved with molecular, organismal and population based systems. We want to understand the biological functions that emerge from these systems, by interpreting the signals encoded in their genomes. We use this Knowledge in the context of human genetic diseases, to understand its origins, and devise new tests and treatments.

Molecular and Cellular Function

We look at a key aspect of all life: the cell. We research how a healthy cell works at both the molecular and cellular level by looking at a range of multicellular organisms: from key model organisms, like yeast and drosophila, to the human cell.

Musculoskeletal and Dermatological Sciences

We discover knowledge in two key areas of biology and medicine: the muscles and skeleton, and the skin. Our expertise ranges from basic science (genetics, epidemiology) through to early phase trials and clinical implementation.



Neuroscience and Experimental Psychology

We are a multi-disciplinary division adopting a broad range of approaches spanning the study of cell biology and genetics to neuroimaging, cognition and behaviour. We use these convergent approaches to explore questions in neuroscience, psychology, neurology and psychiatry across the lifespan. Our core aims are to improve understanding of the brain and nervous system in health and disease and to develop new opportunities for treatment and rehabilitation.

Infection, Immunity and Respiratory Medicine

Our work can be broadly split into how microbes are able to cause disease, how allergies impact our bodies and how our immune systems help fight against both. More specifically, we look at the biological and medical science behind infection, allergies and the immune system and try to translate this into better treatments for both infectious and noninfectious diseases. In Respiratory Medicine we conduct discovery science from disease mechanisms through experimental medicine to clinical trials, aiming to optimise treatment.



Faculty of Biology, Medicine and Health

The Faculty of Biology, Medicine and Health has an integrated structure to deliver a truly translational approach to the life sciences, ensuring smooth research pathways - from pure discovery science through to clinical application and patient care.

With a total annual income of over £300 million, and over 3,000 members of staff, the Faculty is comparable in size to a medium-sized UK university. Thirty undergraduate and 90 postgraduate programmes offer our 11,000 students opportunities to develop the skills and knowledge they need for a successful career.

The Faculty's matrix structure facilitates interdisciplinary working and enables us to interact, learn from each other and share best practice. Our eight, strategic Research Domains help to articulate our research strengths, drive large-scale, collaborative research activities and strengthen relationships with our research and healthcare partners.

The integration of discovery biology, clinical application and patient care within a single Faculty, particularly in a region with notable health inequality, provides us with a real opportunity to have a very significant and positive impact on people's lives.

Our strategic partnerships

The Faculty has a number of key strategic partnerships that underpin its ambitions to develop ground-breaking research.

Working alongside six local NHS Trusts, the Faculty is a key member of the <u>Manchester</u> <u>Academic Health Science Centre (MAHSC)</u> - a federation of equal partners that unites leading healthcare providers with world-class academics and researchers. It aims to be a global centre for the delivery of applied health research and education and provide leadership for our local and regional health systems.

It also plays a leading role in <u>Health Innovation Manchester (HInM)</u>, which was launched in September 2015, as part of the UK Government's decision to devolve health and social care responsibilities to Greater Manchester. HInM offers a unique opportunity to bring together health and social care, academic and life science related business resources across the region to deliver an innovative health ecosystem that can help accelerate innovation into our local health and social care systems, enhance our global scientific standing and act as a magnet for inward investment.

Key partnerships in the charitable sector include Cancer Research UK; Diabetes UK; and the Wellcome Trust; and the Faculty also has research and funding links to a number of commercial organisations including Unilever, AstraZeneca, GlaxoSmithKline and Boots, who will help us to bring new drugs and products to the market.



Working for the University of Manchester

The University of Manchester is the largest single-site university in the UK with around 38,000 students and more than 11,000 staff. We aim to become one of the top 25 research universities in the world by 2020 and are committed to delivering an outstanding teaching and learning experience; contributing to the social and economic success of local, national and international communities; producing the highest calibre graduates; and developing our staff to be amongst the very best of their peers.

To achieve our ambitious goals we aim to attract and retain the very best people to work across a range of academic disciplines and support functions.

The University of Manchester strives to make our community a welcoming, caring and enthusiastic one, fuelling ambition, combined with opportunities and support to help us all achieve our personal and professional goals.

Our diverse job opportunities include an attractive <u>benefits package</u> with family-friendly policies that provide for flexible working. We care deeply about career and personal development, offering a structured induction programme for new staff, an annual performance and development review, staff training for all career stages and mentoring opportunities to support your career development.

We have a genuine commitment to <u>equality of opportunity</u> for our staff and students, and are proud to employ a workforce that reflects the diverse community we serve.

As a global institution, situated at the heart of a lively, <u>culturally diverse city</u>, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful <u>information on passports and visas</u>, travel to the UK, accommodation and a number of other practical considerations.



Commitment to Equality, Diversity and Inclusion

The University of Manchester is committed to equality for all our staff, students, stakeholders and visitors.

Equality Objectives

- 1. Improve the representation of women and black and minority ethnic (BME) staff in senior leadership, academic and professional support positions.
- 2. Take action to further understand and improve the experience of disabled staff as indicated in the staff survey.
- 3. Take action to further understand and address any differential outcomes of undergraduate students in relation to access, retention, attainment and progression to a positive graduate destination in relation to disability, ethnicity, gender and socio-economic status.
- 4. Take action to understand and address any inequalities for researchers.
- 5. To better understand the challenges, obstacles and barriers faced by different groups at the University and to foster good relations between people who share a relevant protected characteristic and those who do not share it.
- Better understand the potential impact of University functions on certain groups by improving disclosure rates and reporting mechanisms for age, disability, ethnicity, caring responsibilities, religion or belief (including lack of belief) sexual orientation and gender reassignment.

Charter Marks





The School of Biological Sciences currently holds an Athena Swan Silver Award.

The Athena Swan Charter was established in 2005 to encourage and advance the careers of women in STEMM employment. In May 2015 the Charter was expanded to include non-STEMM Schools, professional and support staff, technical staff, and Trans staff and students. The Charter now also recognises work undertaken to address gender equality more broadly, and not just barriers to progression that affect women.

The <u>Race Equality Charter Mark</u> aims to improve the representation, progression and success of minority ethnic staff and students within higher education.

It is owned by the Equality Challenge Unit, ECU, which works to further and support equality and diversity for staff and students in Universities and Colleges.

The framework for the race equality charter mark builds on the experience and methodology of ECU's Athena SWAN Charter.





The University of Manchester was proud to be one of the 31 higher education institutions involved in the trial of the Race Equality Charter Mark

The University of Manchester placed 20th in the 2019 Stonewall Equality Index making it the most inclusive University in England for Lesbian, Gay, Bisexual and Trans* employees.

Stonewall is Britain's leading charity for lesbian, gay, bi and trans equality, working to create a world where every single person can be accepted without exception.

Stonewall's Top 100 is compiled from submissions to the Workplace Equality Index, a powerful benchmarking tool used by employers to assess their achievements and progress on LGBT equality in the workplace, as well as their wider work in the community and on service provision.

Each organisation must demonstrate their expertise in 10 areas of employment policy and practice, including networking groups, senior leadership, procurement and how well they've engaged with LGBT communities.



The University is a Disability Confident employer, commited to interviewing all disabled applicants who meet all of the essential criteria set out in the person specification.



Learning, Development and Progression

Staff Learning and Development

The Staff Learning and Development (L&D) team support the personal and professional development of all staff in the University.

They work closely with learning experts around the University including those based in local HR teams and those supporting academic staff and early career researchers (ECR)

L&D offer everything from off the shelf, face to face training, to bespoke one to one development support. By planning activity both in response to the strategic goals of the University and the learning needs of individuals, we aim to become a truly leading learning organisation.

Centre for Academic and Researcher Development

Based within the Faculty of Biology, Medicine and Health, the Centre for Academic and Researcher Development delivers a number of face-to-face training programmes providing a variety of development opportunities for postgraduate students, research staff and academic staff.

Their goal is to create an environment that supports you through every stage of your career, allowing you to excel and reach your full potential.

Development opportunities include:

- Faculty-specific 'New Academic and Fellows Programme'
- Academic Staff Development Programme supporting you through the different stages of your academic career
- Pedagogic and Staff Development Programme
- Mentoring
- Leaders in Teaching Programme
- Promotion workshops and access to 'Promotion Champions'

Academic Staff Promotion

As an equal opportunities employer, the Faculty of Biology, Medicine and Health is committed to promoting equality and diversity for all and will support all suitably qualified candidates for promotion.

The University has a transparent promotions processes and criteria. It seeks to reward activity that contributes to the success of the University in achieving its goals. Colleagues will be expected to take an active approach to their own career development, but will be given support and advice with their applications.