Research Technician
Department of Biology

Closing date: 2 June 2019
Interview date: To be confirmed
Vacancy reference: 7611
INTRODUCTION

Professor Mottram has been awarded a Wellcome Trust Investigator Award to carry out a kinome-wide functional analysis of Leishmania growth and differentiation. Leishmania species are trypanosomatid parasitic protozoa that are the causative agents of a spectrum of diseases, the leishmaniases. Whilst significant progress has been made in understanding the unique cell biology of Leishmania and its interaction with the mammalian host, little is known about the signalling pathways that regulate key events in the parasites’ life cycle and which protein kinases are essential and therefore potentially amenable to chemotherapeutic modulation. To address this we will carry out gain-of-function and loss-of-function genetic screens in Leishmania mexicana to identify protein kinases involved in signalling pathways regulating parasite differentiation during transition between animal and sandfly hosts. We will also identify those protein kinases essential for proliferation and survival of Leishmania once an infection is established in the two hosts. This will be possible because of recent development in genetic manipulation of Leishmania, including CRISPR-Cas9 genome engineering, tetracycline inducible over-expression and the use of rapamycin induced diCre recombinase to study the function of essential genes. The expected output of the project will be novel insights into protein kinase function in Leishmania and a holistic overview of cell signalling pathways that will integrate into ongoing "omics" analyses within the Leishmania community.
Main purpose of the role

To provide technical and scientific support on a Wellcome Trust research project. To conduct parasitology research on experimental leishmaniasis, collecting and analysing research data from genetic manipulation experiments, under supervision. To provide general laboratory support and assist the Senior Research Technician with responsibility for the organisation, housekeeping and operational management within the Mottram Group and other research groups located within buildings.

Key responsibilities

(Role holders will be required to undertake some or all of the duties below)

- Work on own initiative to help solve problems which achieve the objectives of the work area, raising any issues with more senior staff.
- Plan and perform experiments or other tasks using a range of scientific techniques, sometimes working from a limited brief.
- Liaise with appropriate staff and external service providers to ensure the work area and equipment are kept operational.
- Be responsible for the maintenance, modification, repair and operation of equipment in the work area.
- As required solve faults, and maintain and repair technical equipment.
- Work effectively with others, providing technical advice in relation to the work area activities and the techniques used, to staff and students, as required.
- Pro-actively update and improve processes, contribute to and support change in the work area.
- Understand, promote and apply COSHH/Risk Assessment and departmental health and safety protocols ensuring procedures are followed at all times.
- To be compliant with all regulations pertaining to work with pathogens.
- Maintain accurate records of work undertaken, including reports, using appropriate (bespoke) software.
- Contribute to the development of protocols, standard operating procedures and maintenance schedules for the work area.
- Assist with purchasing including ordering and distributing goods.
- Manage a small budget, monitor resource usage and maintain supplies of key items.
- Communicate and, if required, make presentations of own work activities to others in the team.
- Provide inclusions, training and demonstrations of specialist techniques ensuring compliance with safety and regulatory guidelines to staff, students and external stakeholders.
- To actively demonstrate a commitment to professional development by continuing to advance knowledge, understanding and competencies.
## PERSON SPECIFICATION

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<thead>
<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tbody>
<tr>
<td>HNC, HND, Degree or equivalent in appropriate science discipline or appropriate experience</td>
<td>Essential</td>
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<td>RSciTech / EngTech or willingness to work towards these or equivalent professional qualifications</td>
<td>Essential</td>
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### Knowledge

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<tr>
<td>Relevant theoretical knowledge in microbiology and molecular biology</td>
<td>Essential</td>
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<td>In depth knowledge of relevant safety regulations and procedures for example, COSHH and risk assessment</td>
<td>Essential</td>
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<tr>
<td>Knowledge and ability to implement practical techniques used in relevant work area for example, genetic manipulation of parasites</td>
<td>Desirable</td>
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<td>Knowledge of Home Office regulations and experimental design in animal studies</td>
<td>Desirable</td>
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### Skills, abilities and competencies

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<th>Essential / Desirable</th>
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<tr>
<td>Ability to coordinate and monitor members of the team, allocating work as appropriate</td>
<td>Desirable</td>
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<td>Ability to perform complex technical tasks to a consistently high standard with attention to detail</td>
<td>Essential</td>
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<td>Competency in the use of advanced equipment and techniques</td>
<td>Essential</td>
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<td>Ability to plan and take responsibility for own work using initiative, seeking advice where necessary</td>
<td>Essential</td>
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<tr>
<td>Ability to analyse and interpret data, and explain complex information to others, written and verbally</td>
<td>Essential</td>
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<td>IT skills for a wide range of applications, including Google Apps, Microsoft Word and Excel and specialist software where appropriate</td>
<td>Essential</td>
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<td>Ability to assess non-routine problems and implement solutions within own expertise</td>
<td>Essential</td>
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## PERSON SPECIFICATION

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<th>Experience</th>
<th>Essential / Desirable</th>
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<tr>
<td>Evidence of having contributed to activities using a variety of sometimes specialist technical skills in a research environment</td>
<td>Essential</td>
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<td>Experience of working on own initiative and as part of a team</td>
<td>Essential</td>
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<td>Current Home office personal licence holder (or equivalent), or willingness to attain</td>
<td>Desirable</td>
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<td>Experience in parasitology</td>
<td>Desirable</td>
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## Personal attributes

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<th>Essential / Desirable</th>
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<tr>
<td>Good interpersonal skills and the ability to communicate effectively with staff and students</td>
<td>Essential</td>
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<td>Actively demonstrates a commitment to professional development by continuing to advance knowledge understanding and competencies</td>
<td>Essential</td>
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<td>Dependable, reliable and self-motivated</td>
<td>Essential</td>
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<tr>
<td>Able to maintain a positive, open attitude toward others, to value and support colleagues, to adapt to change quickly and easily and demonstrate personal resilience</td>
<td>Essential</td>
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Our department welcomes staff and students from around the world. We celebrate excellence, breadth and diversity across the spectrum of modern biology.

Our research is focused around fundamental science research foci, which are Cell and Developmental Biology, Molecular and Cellular Medicine, Bioinformatics and Mathematical Biology, Infection and Immunity, Ecology and Evolution, Microbiology, Biochemistry and Biophysics, Cancer and Plant Biology. The Department has successfully continued to establish state-of-the-art laboratory space and a new teaching building opened in Autumn 2016. In the 2014 Research Excellence Framework (REF) exercise, the Department of Biology was again placed in the top 10 in the UK. We are ranked 1st for impact outside academia - our research has had major influence on environmental policy, industry and health. This demonstrates our strengths across the biological sciences: from ecology to biochemistry, biotechnology and biomedical sciences. The Department of Biology covers the spectrum of contemporary biological sciences with no internal barriers, and collaboration internally and externally is strongly encouraged. Our Department comprises >70 academic and teaching staff, >100 research associates, >140 professional support staff (technical and administrative), 180 graduate students, and approximately 860 undergraduates.

The Department places high value on its research-led undergraduate teaching which is reflected in our performance in university league tables and the National Student Survey (NSS). The University holds a Gold Teaching Excellence Framework (TEF) award and we are preparing for departmental TEF awards in 2020. Our staff are committed to delivering high-quality teaching and developing and applying innovative and appropriate teaching techniques using material which creates interest, understanding and enthusiasm amongst students. Staff carry out on-going curriculum review, the review of module content and materials and contribute to the development of teaching and learning strategies.

We currently offer the following degrees within the Department:

- BSc/MBiol Biology
- BSc/MBiol Ecology
- BSc/MBiol Genetics
- MSc Biodiversity, Ecology and Ecosystems
- BSc/MBiochem Biochemistry
The department is strongly involved with two prestigious Doctoral Training Partnerships (DTP); the White Rose Doctoral Training Partnership in Mechanistic Biology (BBSRC) and Adapting to the Challenges of a Changing Environment (NERC). The former brings together the very best molecular, chemical and cellular bioscience research across the White Rose Consortium of Universities (Leeds, Sheffield and York), while the latter encompasses environmental, ecological and evolutionary research across the Universities of York, Sheffield and Liverpool, together with the Centre for Ecology and Hydrology. Students benefit from PhD training programmes with interdisciplinary collaboration at their core. This enables students to develop a range of research skills in biological, biochemical, ecological and environmental areas as well as equipping them with core mathematical, data analysis and generic professional skills that are necessary for bioscience research in the coming decades.

As befits a department of our size, we have extensive professional support services which underpin our teaching and research. This includes teams in operational services; horticulture; stores and logistics and teaching laboratory technicians. We provide excellent biological services facilities and mechanical and electronic workshops. We also have administration teams which cover; Health and Safety; Research support to assist with external funding proposals for research activities; a Student and Academic Services team in place to support academic staff and students; a core Department Management Team Hub who support a broad range of administrative processes in order to facilitate the smooth running of departmental activity.

We also have our Bioscience Technology Facility which is a unique resource providing a purpose-built facility for our world-class scientists and technologists working across six bioscience research capabilities. Collectively it brings together a unique range of expertise and equipment, and is
recognised as a leading example of how to provide research support in the 21st Century. The focus is on six core areas: Bioinformatics, Genomics, Imaging & Cytometry, Molecular Interactions, Protein Production, and Proteomics. The Department has a dedicated bioinformatics support team within the Technology Facility who can provide help and assistance with a wide range of bioinformatics software.

The York Biomedical Research Institute

The York Biomedical Research Institute is a recently created virtual institute that brings together researchers across the biomedical research spectrum. Research is consolidated into three themes, Immunology, Haematology and Infection (IHI), Neurosciences and Molecular and Cellular Medicine. IHI represents an evolution of the work of the previous Centre for Immunology and Infection, which was established in 2010 to forge greater links between the Hull York Medical School and the Department of Biology at the University of York. Research within IHI ranges from fundamental studies on immunology, haematology, microbiology and parasitology through to first-in-human and other early phase clinical research. Our aim is to develop a greater understanding of the processes underlying chronic infectious and non-infectious disease, and thus to develop new approaches to prevention and treatment. The JCPL will be part of the IHI theme in YBRI.

Within the current 2000m2 of research and office space, IHI has excellent laboratory facilities for research on ACDP HG3 organisms. Proximity to the Biosciences Technology Facility and Biological Services Facility of the Dept. of Biology ensure ready access to state of the art and well-supported cutting edge technology platforms (http://www.york.ac.uk/biology/technology-facility/) and animal facilities (to CL3).

Clinical research is often a joint venture, utilising the expertise and resources of the University of York and York Teaching Hospital NHS Trust as well as overseas partners. We aim to provide an environment that can deliver early phase trials (phase 1 and phase 2) and support basic scientific research, which will result in high impact results (https://www.york.ac.uk/cii/clinicaltranslationalresearch/). The University of York also holds a Human Tissue Authority research license, managed via the York Tissue Bank. This initiative aims to develop networks with clinical care teams and help provide researchers from both the Hospital and University with access to human tissue for basic and translational research.

Research in the IHI has a focus on chronic diseases of infectious, autoimmune and haematological origin. Details of specific research projects can be found at our staff pages (https://www.york.ac.uk/cii/staff/). This is an exciting time to join the IHI with major new investments in academic posts, partly funded by expansion of the Medical School. Investment in immunology over the next two years will see the appointment of two clinical academic Chairs, one clinical SL, a non-clinical Assistant / Associate Professor and a Research Fellowship.

The Department of Biology operates a set of family-friendly policies and welcomes applications that are made on a part-time and job share basis. We will do our best to accommodate such requests where possible. Staff working patterns are flexible and a formal flexitime system is also in operation and the University has a nursery on site. We are proud to foster a supportive culture that helps staff and students reach their full potential and we embrace equality, diversity and inclusion as well as the values of the Athena SWAN Charter in all our departmental activities. Our philosophy is that poor working practices discriminate disproportionately against women whereas good practices support all. We have a Gold Athena SWAN award in recognition of our culture, ethos and activity.
THE UNIVERSITY

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2019 it is the home of more than 18,000 students across more than 30 academic departments and research centres. Since opening over fifty years ago, we have become one of the world's leading universities and a member of the prestigious Russell Group.

We are consistently recognised as one of the leading Higher Education Institutes and one of just six post-war universities to have appeared in the world top 100. We were rated 22nd in the 2019 Times & Sunday Times league table. The University of York has won six Times Higher Education (THE) Awards and five Queen’s Anniversary Prizes.

The University is proud of its association with Athena SWAN, holding multiple awards in support of gender equality, representation and success for all, with gold awards for Chemistry and Biology and a University-wide bronze award.

Of 154 universities that took part in the Research Excellence Framework (REF) in 2014, The University of York ranked 14th overall and 10th for the impact of our research. The University is consistently in the top ten UK research universities and attracts over £60m a year of funding from research alone.

Our vision is to make the University of York a world leader in the creation of knowledge through fundamental and applied research, the sharing of knowledge by teaching students from varied backgrounds and the application of knowledge for the health, prosperity and well-being of people and society.
Attractive workplace

Centred around the picturesque village of Heslington on the edge of the city of York, our colleges are set in an attractive landscaped campus. York enjoys a safe, friendly atmosphere with facilities including bars, shops, theatres and concert halls all within easy walking distance.

The University has undergone an unprecedented period of expansion and renewal since 2000. We have invested in twenty new buildings on the original campus and have completed the first and second phases of a £750m campus expansion. Our investment in new colleges, teaching and learning spaces, laboratories, research facilities and a new sports village mean there has never been a better time to join us.

During this period of change we’ve worked hard to retain our friendly, informal and collegiate atmosphere, which is important to our core values of inclusivity and interdisciplinarity.

We have a thriving international community and are committed to providing staff moving to York with as much support as possible through our Relocation Package and Welcome Officers.

The University is committed to promoting a diverse and inclusive community - a place where we can all be ourselves and succeed on merit. We offer a range of family friendly, inclusive employment policies, flexible working arrangements, staff engagement forums, campus facilities and services to support staff from different backgrounds.

For further information please visit our employee benefit pages.
THE CITY AND THE REGION

The City of York
Internationally acclaimed for its rich heritage and historic architecture, York's bustling streets are filled with visitors from all over the world. Within its medieval walls you will find the iconic gothic Minster, Clifford's Tower and the Shambles - just a few of the many attractions.

But York isn’t just a great place to visit - it’s also a great place to live and work. While nourishing a vibrant cosmopolitan atmosphere, York still maintains the friendly sense of community unique to a small city.

Visit www.visityork.org for more information on the city of York

Shopping, culture and entertainment
York boasts specialist and unique boutiques but also all the high street stores on its busy shopping streets. Alongside them you will find cinemas, theatres, an opera house, art galleries, a vast range of restaurants, live music venues and clubs. York is particularly renowned for its multitude of pubs and bars, from the modern to the medieval.

Housing and schools
Whether you choose to live close to the city, in one of the surrounding villages or further afield, you will find a wide range of housing within comfortable distance of York and the University. For families, the area has a range of excellent schools both in the state and independent sector.

Great location
York is one of Britain’s best-connected cities. Halfway between London and Edinburgh on the East Coast mainline, on intercity trains you can reach London King’s Cross in less than two hours and Edinburgh in two and a half hours. York is also well served by road links, and it is easily accessible from the A1, M1 and the M62.

For those travelling from overseas, Manchester Airport is two hours away and Heathrow Airport just three and a half. Flights from nearby Leeds Bradford Airport provide easy access to mainland Europe. By Eurostar from London St Pancras, Paris is just over six hours away.

Yorkshire
The Lonely Planet guide recently declared Yorkshire the third best region in the world to visit. There is something to cater to every taste, whether it be the rugged landscapes of the Moors or the Dales, the picturesque seaside towns of Scarborough and Robin Hoods Bay, the gothic architecture of Whitby or the vibrancy of cosmopolitan Leeds.
Apply online

- Go to https://jobs.york.ac.uk
- Find this job using reference 7611
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 2 June 2019

What will I need?

We will ask you for details of:
- your employment history
- relevant qualifications
- two referees

You need to be ready to show us how you meet the requirements of the job, either in a written statement and / or by answering questions.

Help and assistance

Direct any informal queries to Professor Jeremy Mottram (jeremy.mottram@york.ac.uk) or Dr Nicola Baker (Nicola.baker@york.ac.uk)

If you have any questions about your application, contact the HR Services team:

recruitment@york.ac.uk
+44 (0)1904 324835