

**LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE**

**FACULTY OF INFECTIOUS AND TROPICAL DISEASES**

**DEPARTMENT OF DISEASE CONTROL**

**RESEARCH ASSISTANT - Epidemiology and GIS**

**FURTHER PARTICULARS**

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



## **GENERAL INFORMATION**

### **The London School of Hygiene & Tropical Medicine**

The London School of Hygiene & Tropical Medicine is a world-leading centre for research and postgraduate education in public and global health. Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

Founded in 1899, the School has expanded in recent years at its two main sites on Keppel Street and Tavistock Place. Our staff, students and alumni work in more than 150 countries in government, academia, international agencies and health services. Research income has grown to more than £110 million per year from national and international funding sources including UK government and research councils, the European Union, the Wellcome Trust, Gates Foundation and other philanthropic sources. The School's multidisciplinary expertise includes clinicians, epidemiologists, statisticians, social scientists, molecular biologists and immunologists, and we work with partners worldwide to support the development of teaching and research capacity.

Our education provision has expanded to more than 1,000 London-based Master's and Research students, 3,000 studying postgraduate courses by distance learning, and 1,000 each year on short courses and continuous professional development. Our free online courses (Moocs) are studied by more than 30,000 participants globally.

The School performs well in various global university league tables. In the US News Best Global Universities Ranking 2017, we are ranked sixth in the world (together with Oxford University) in the fields of social sciences and public health. In the 2016 CWTS Leiden Ranking, the School was ranked fifth in the world for research impact across all disciplines, based on the share of institutions' outputs within the top 1% of papers by citation in all areas of science and independent of size of output.

The School was named University of the Year 2016 by Times Higher Education, in recognition of our response to the Ebola epidemic. The School is a member of the M8 Alliance of Academic Health Centers, Universities and National Academies, the Association of Schools of Public Health in the European Region, and the Consortium of Universities for Global Health.

### **Faculty of Infectious and Tropical Diseases**

The Faculty of Infectious and Tropical Diseases encompasses all of the laboratory-based research in the School as well as that on the clinical and epidemiological aspects of infectious and tropical diseases. It is headed by Brendan Wren, who is Professor of Microbial Pathogenesis. The range of disciplines represented in the faculty is very broad and inter-disciplinary research is a feature of much of our activity. The spectrum of diseases studied is wide and there are major research groups with a focus on malaria, tuberculosis, HIV/AIDS and other sexually transmitted diseases, vaccine development and evaluation, and vector biology and disease control. The Faculty is organised into four large research departments

comprising: Pathogen Molecular Biology, Immunology and Infection, Disease Control, and Clinical Research. There is close interaction between scientists in different research teams. The Faculty has strong overseas links, which provide a basis for field studies and international collaborations in developed and developing countries. The teaching programme includes MSc courses, taught in-house and by distance learning, which are modular in structure, a variety of short-courses and an active doctoral programme (PhD and DrPH). For further information on the Faculty see: <http://www.lshtm.ac.uk/itd/index.html>.

### ***Department of Disease Control (Head: Professor James Logan)***

This multidisciplinary Department includes epidemiologists, entomologists, anthropologists and social scientists, clinical scientists, public health engineers and geographers. This range of expertise provides us with a battery of tools for focusing on the control of diseases that are insect-borne, water-borne or associated with poor hygiene – mostly in developing countries. Much of the research can be categorised as: evaluating disease control interventions; investigating implementation strategies - including working with the private sector; understanding the factors underlying household behaviour in relation to family health; or determining how control resources can be targeted most efficiently. Particular attention is paid to research directed at current health policy issues, including the gap between policy and practice.

The Department's Environmental Health Group plays a leadership role in research and operational support for hygiene behaviour change, household water supply and sanitation. Three key programmes which contribute to the work of the Group are the DFID funded consortium Sanitation and Hygiene Applied Research for Equity (SHARE), the Hygiene Centre (Unilever) and the improved sanitation randomised, controlled field trial jointly funded by the Bill & Melinda Gates Foundation and International Initiative for Impact Evaluation (3ie).

The Department houses the largest research group in LSHTM working on malaria control. Ongoing projects include: research capacity strengthening in Africa through the work of the Malaria Capacity Development Consortium (MCDC); novel approaches to combating malaria in pregnancy (MiP) in both Africa and India; a number of projects which develop and evaluate delivery mechanisms to improve ACT access, targeting, safety and quality, all funded by the ACT Consortium. In addition, staff are involved in studies of Seasonal Malaria Chemoprevention (SMC) in West Africa and are supporting work on the large Phase 3 clinical trial study of the RTS,S malaria vaccine in children.

The Department is world-leading in applied entomology and insect borne diseases, and has provided a testing service for control products for over 20 years. The Arthropod Control Product Test Centre Arctec provides access to the Department's valuable mosquito colonies and in-house facilities for testing of repellents, insecticides and after-bite treatments. Its entomological field sites in Tanzania, Benin, The Gambia and Kenya are involved in a variety of vector borne disease control trials. The PAMVERC alliance between LSHTM and African partners work in partnership with WHO and the manufacturing industry on product development and evaluation under laboratory and semi-field conditions and in community trials.

Staff from the Department lead on studies investigating how meningococcal meningitis is spread in Africa and the impact of a new serogroup meningococcal A vaccine on reducing transmission (MenAfriCar Consortium). Staff are also assisting in the evaluation of the impact of introduction of a pneumococcal conjugate vaccine into the routine EPI programme of The Gambia and in the initial testing of a new pneumococcal protein vaccine in the same area.

Also based with the Department is the IDEAS (Informed Decisions for Actions) project, which aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice. The Department also includes a major grouping of researchers using spatial analysis in public health.

### ***Teaching***

The School offers 19 one year full-time taught courses leading to the Master of Science (MSc) degree of the University of London and the Diploma of the London School of Hygiene and Tropical Medicine (DLSHTM). The Faculty of Infectious and Tropical Diseases runs or contributes substantially to ten of these courses and the "Immunology of Infectious Diseases" course is run from within the Department of Immunology and Infection. In addition, the Faculty is responsible for the three-month Diploma in Tropical Medicine and Hygiene (DTM&H), the Diploma in Tropical Nursing and offers a range of specialist short

courses lasting usually one or two weeks. Five MSc courses are also offered by Distance Learning, including one on Infectious Diseases.

### **Teaching Requirements**

- For Research Assistant: commitment of minimum 10% of time, subject to any funding body restrictions

### **Research Training**

The School offers two doctoral training programmes. The MPhil/PhD degrees are designed for those who wish to go on to a full time research career. The DrPH is directed towards those who expect their careers to be more in the practice of public health.

### **Project information**

#### **London Applied and Spatial Epidemiology Research Group (LASER)**

The London Applied & Spatial Epidemiology Research (LASER) group combines expertise in the fields of spatial statistics and GIS technology, quantitative epidemiology and operational research to build the evidence-base around diseases of poverty and the communities they affect

LASER's research portfolio focuses on community and school health, malaria and Neglected Tropical Diseases (NTDs) – in particular, soil transmitted helminths, schistosomiasis, lymphatic filariasis and trachoma. Generally affecting the very poor, these diseases are termed 'neglected' due to their lack of visibility and recognition. Yet they have a devastating impact on millions of people worldwide. LASER lead a number of projects, including the Global Atlas of Helminth Infection (GAHI), an open access resource mapping the geographical distribution of NTDs caused by helminthic worms.

<b>Job Title:</b>	<b>Research Assistant in Epidemiology and GIS</b>
<b>Department:</b>	<b>Disease Control</b>
<b>Grade:</b>	<b>G5</b>
<b>Location:</b>	<b>London</b>
<b>FTE:</b>	<b>Full time (1.0)</b>
<b>Accountable to:</b>	<b>Head of Department through Principal Investigator (PI): Rachel Pullan</b>
<b>Job Summary:</b>	To support the improvement of the academic standing of the School by contributing to the conduct of research of the highest quality and the education of students to a high academic standard.

The portfolio of duties outlined below will vary in accordance with the detailed expectations of the role (attached), which may be varied from time to time, and agreed at your annual Performance and Development Review (PDR).

### **Main Activities and Responsibilities**

#### **KNOWLEDGE GENERATION**

- To undertake high quality research as directed by your line manager, including contributing to drafting grant proposals and peer-reviewed and other outputs;
- To support the administration of projects linked to your employment, helping ensure compliance with good practice in relation to the conduct of research, the ethics policy, and other relevant School policies.

- To contribute to the development of an ongoing research strategy to delineate the geographical distribution and disease burden of intensified disease management neglected tropical diseases (IDM NTDs);
- To finalize mapping protocols for IDM NTDs and develop standard operating procedures and training manuals;
- Contribute to journal articles and address conferences, seminars and the media to disseminate research findings;
- Provide technical advice on GIS methods, and analytical support for other group members.
- Teaching requirements: commitment of minimum 10% of time, subject to any funding body restrictions

## EDUCATION

- To participate in some aspects of the School's Education Programme or educational outreach activities.
- Contribute towards i. the development and delivery of short technical courses in NTD-endemic countries aimed at disease control programmes, and ii. the LSHTM MSc module Spatial Epidemiology and Public Health.

## INTERNAL CONTRIBUTION

- To undertake activities that support the Department, Faculty or the School;
- To participate in the School's PDR process.

## EXTERNAL CONTRIBUTION

- To demonstrate good external citizenship by supporting the external academic and practice communities.
- To provide technical support, guidance and training as needed by national NTD control programs during the in-county design and implementation of mapping activities

## PROFESSIONAL DEVELOPMENT & TRAINING

- To keep up-to-date with the latest research/thinking in your academic field and with changes to pedagogic practice within the School and more generally;
- For lab-based disciplines: to register for and complete a doctoral degree (if not already acquired);
- To undertake and successfully complete the mandatory training required by the School as appropriate to the role (a list of mandatory training requirements can be found at: [LINK](#)).

## GENERAL

All academic staff are free within the law to question and test received wisdom, and put forward new ideas and controversial or unpopular opinions, to enable the School to engage in research and promote learning to the highest possible standards.

All staff at LSHTM are also expected to:

1. Act at all times in the School's best interests;
2. Treat School staff, students and visitors with courtesy and respect at all times;
3. Comply fully with School policies, procedures and administrative processes relevant to the role;
4. Uphold and support the School's values (as set out in the School Strategy document);
5. Act as ambassadors for the School when hosting visitors or attending external events.

*The above list of duties is not exclusive or exhaustive and the role holder will be required to undertake such tasks as may reasonably be expected within the scope and grading of the role.*

*Role descriptions should be regularly reviewed to ensure they are an accurate representation of the role.*

## Academic Expectations: Research Assistant

Examples of expected types of activities are listed; the selection of activities will vary from year to year and not all activities in each category would necessarily be done in any one year. The statement in each shaded heading summarises the general expectations for contributions in each category. Given the nature of employment as a Research Assistant, it is expected that most activity will focus on knowledge generation, but some activity in other areas is desirable and will be required for career progression.

<p><b>Knowledge generation: High quality support for, and contribution to, research</b></p>
<p><i>Research and scholarship</i></p> <ul style="list-style-type: none"> <li>• Undertaking research, as directed by line manager</li> <li>• Contributions to funding applications including supporting more senior staff in completing applications</li> <li>• Contributing to peer-reviewed outputs as expected by the subject area/discipline in terms of types of output</li> <li>• Poster/oral presentations at conferences</li> <li>• Social media contributions such as twitter, blogs, web-based media or webinars</li> </ul> <p><i>Research degree supervision</i></p> <ul style="list-style-type: none"> <li>• None expected though involvement in advisory activities/roles or provision of practical skills training is encouraged where relevant</li> </ul> <p><i>Research management, leadership and support</i></p> <ul style="list-style-type: none"> <li>• Effective management of own time and activities</li> <li>• Supporting the administration of projects he/she is employed on, eg taking meeting minutes</li> </ul> <p><i>Professional development</i></p> <ul style="list-style-type: none"> <li>• Appropriate courses and other development activities, referenced to RDF</li> </ul>
<p><b>Education: Participation in educational activities<sup>1</sup></b></p>
<p><i>Teaching and assessment</i></p> <ul style="list-style-type: none"> <li>• Limited participation in some aspects of the School's Education Programme or education outreach activities e.g. contributions to taught courses, research methods training, mentoring school pupils on outreach programmes</li> </ul> <p><i>Educational development and innovation</i></p> <ul style="list-style-type: none"> <li>• Limited contributions to educational innovations or developments, e.g. helping to update the content or delivery of a course or module</li> </ul> <p><i>Educational leadership and management</i></p> <ul style="list-style-type: none"> <li>• None expected</li> </ul> <p><i>Professional development</i></p> <ul style="list-style-type: none"> <li>• Formal study/training and/or other activities that develop educational knowledge and expertise, referenced to UKPSF</li> </ul>
<p><b>Internal contribution: Support to the academic environment in the Department or beyond</b></p>
<p><i>Internal citizenship</i></p> <ul style="list-style-type: none"> <li>• Supporting Department/Faculty/Centre/School events or special interest groups; organising seminars/lab meetings/journal clubs; group or departmental social organising; support to Athena Swan activities; support to external partnerships</li> </ul> <p><i>General leadership and management roles</i></p> <ul style="list-style-type: none"> <li>• None expected</li> </ul>
<p><b>External contribution: Support to the external academic community</b></p>
<p><i>External citizenship</i></p> <ul style="list-style-type: none"> <li>• Involvement in journal or book reviews, if opportunities arise</li> <li>• Sharing examples of good practice (e.g. contributing to discipline-specific interest group or professional bodies)</li> </ul> <p><i>Knowledge translation and enterprise: not expected but options include</i></p> <ul style="list-style-type: none"> <li>• Collection of evidence of research impact for impact case studies (e.g. policy records, correspondence with policy makers, media highlights)</li> <li>• Engagement with policy/practice/industry/NGO communities and with the general public</li> </ul>

<sup>1</sup>It is accepted that some RA roles and/or funding make it difficult to give time to Educational activities, but some degree of engagement is encouraged

## **PERSON SPECIFICATION**

### **ESSENTIAL CRITERIA:**

- MSc qualification in epidemiology or related subject
- Experience using ESRI ArcGIS Desktop and QGIS to carry out geospatial data management, visualisation and analysis of point, polygon and raster data
- Familiarity with handling large datasets, and ability to effectively synthesise and clean data from a variety of sources
- Demonstrated experience in analysis of epidemiological data
- Ability to work independently and as a member of a multi-disciplinary scientific team, with excellent attention to detail and time management skills
- Excellent written and verbal communication skills
- Proficient knowledge of and ability to use statistical computing packages (Stata and/or R)
- Excellent working knowledge of Neglected Tropical Diseases
- Willingness to spend substantial periods of time (up to 35%) at partner sites overseas in sub-Saharan Africa and Asia

### **DESIRABLE CRITERIA**

- Experience conducting geostatistical analyses, or other advanced spatial statistical modelling approaches
- Proficient knowledge and ability to apply concepts, practices, and procedures within health information management systems, including DHIS-2
- Experience building effective working relationships with the implementers of disease control programmes (particularly in sub-Saharan Africa)

## **SALARY AND CONDITIONS OF APPOINTMENT**

The position is based in the London Applied and Spatial Epidemiology Research Group (LASER) in the Disease Control Department at the London School of Hygiene and Tropical Medicine, and will involve considerable travel to partner sites overseas (up to 35%).

This full-time appointment is funded by the AIM Initiative for one year, in the first instance, with a possibility for further renewal. The appointment will be made on the School's Academic Pathway Grade 5 scale in the range £33,006 - £37,889 (inclusive of London Weighting). The post will be subject to the LSHTM terms and conditions of service. Annual leave entitlement is 30 working days per year, pro rata for part time staff. In addition to this, there are discretionary "Director's Days". Membership of the Pension Scheme is available.

## **ASYLUM AND IMMIGRATION STATEMENT**

The School will comply with the Immigration, Asylum and Nationality Act 2006, which requires all employees to provide documentary evidence of their legal right to work in this country prior to commencing employment. Candidates will be required to bring their passport (and visa if applicable) to interview so that it can be copied and verified.

This role does not meet the minimum requirements set by UK Visas and Immigration to enable sponsorship of migrant workers. Therefore, we cannot progress applications from candidates who require sponsorship to work in the UK.

Further information about Certificate of Sponsorship and eligibility to work in the UK, can be found at: [www.ukba.homeoffice.gov.uk/employers/points](http://www.ukba.homeoffice.gov.uk/employers/points)

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