FURTHER PARTICULARS

THE SCHOOL

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.

THE FACULTY

The Faculty of Epidemiology & Population Health (EPH) houses a large group of epidemiologists, demographers, statisticians and nutritionists working on issues of major public health importance in the UK and globally. EPH has approximately 400 staff members organised into four research departments.

- Department of Infectious Disease Epidemiology
- Department of Medical Statistics
The Faculty has a teaching programme consisting of ten MSc courses: Epidemiology, Demography and Health, Medical Statistics, Public Health for Development (run jointly with the Faculties of Infectious & Tropical Diseases and Public Health & Policy), Nutrition for Global Health, Reproductive & Sexual Health Research, Veterinary Epidemiology (run jointly with the Royal Veterinary College), Global Mental Health (run jointly with Kings College London - Institute of Psychiatry) and the Distance Learning courses in Epidemiology, Clinical Trials and Demography and Health. The Faculty also has approximately 120 research students studying for an MPhil, PhD or DrPH degree.

The Dean of Faculty is Professor John Edmunds.

THE DEPARTMENT

Department of Infectious Disease Epidemiology conducts research on the epidemiology and control of infectious diseases of public health importance. It also conducts research on maternal and neonatal health. Work is carried out in low-, middle- and high-income countries, including the United Kingdom. Research ranges from ecological studies of variations in disease frequency in different populations, through observational case-control and cohort studies to define risk factors for disease, to randomized controlled trials to test the impact of specific preventive and curative interventions.

The Department Head is Prof Veronique Filippi.

THE VACCINE CENTRE

The Vaccine Centre at the LSHTM is a formed consortium of over 100 scientists based at the school and among its partner institutions with a common interest in research and training on vaccines. The Centre encompasses a tremendous breadth of vaccine research from vaccine design and immunological characterisation through clinical trials, and on to epidemiological evaluation, vaccine safety, economic modelling, social science and policy analysis. Centre scientists work in over 50 different countries worldwide and contribute to some of the principal global networks of vaccine investigation. The portfolio of current projects includes research on vaccines to control malaria, tuberculosis, pneumococcal and meningococcal diseases, influenza, measles, rubella, HPV, rotavirus, Hib, Hepatitis B, norovirus, dengue, Ebola, sleeping sickness and traveller's diarrhoea as well as veterinary pathogens. The Centre also aims to enhance the teaching of vaccine research skills spread across the School's post-graduate training programmes and in the short course for the Epidemiological Evaluation of Vaccines run each July.

THE CENTRE FOR MATHEMATICAL MODELLING OF INFECTIOUS DISEASES

The Centre for the Mathematical Modelling of Infectious Diseases (CMMID) is a multidisciplinary grouping of epidemiologists, mathematicians, economists, statisticians and clinicians from across all three faculties of the LSHTM. Research focuses on understanding and predicting the epidemiology of infectious diseases so that more effective control programmes can be devised. Researchers are developing and applying mathematical models to a range of infections including HIV and other sexually transmitted infections, HPV, tuberculosis, hepatitis C, influenza, rotavirus, measles, varicella, pneumococcal disease, Hib, malaria and sleeping sickness. More fundamental research includes developing methods to measure underlying contact patterns, sampling hard-to-reach populations (such as drug users), efficiently fitting complex mathematical models to data, and the integration of epidemiological models with economic analyses. CMMID runs the flusurvey, an online influenza surveillance platform. CMMID is actively engaged in developing links with other modelling groups; members of the CMMID include mathematical modellers working at Public Health England (formerly the HPA) and the Royal Veterinary College.
THE POST

JOB DESCRIPTION

**Posts:** Research Fellow in Vaccine Modelling

**Responsible to:** Mark Jit, Professor of Vaccine Epidemiology

**Grades:** Research Fellow (Grade 6)

**Main Activities and Responsibilities**

**RESEARCH**

1. Construct, parameterise and extend models of the impact of different vaccine strategies in low and lower-middle income countries;

2. Understand, discuss and advance the methodology of mathematical models of infectious diseases in areas such as sensitivity/uncertainty analysis, multi-model comparisons and parameter inference.

3. Lead and contribute to reports for key stakeholders as well as manuscripts for top peer-reviewed journals.

4. Liaise with key partners including collaborators in other universities; global experts in vaccine-preventable diseases; in-country stakeholders; funders such as BMGF and Gavi; as well as intergovernmental organisations such as WHO.

5. Identify, apply to and participate in consultations, Consortia meetings, scientific conferences and other dissemination fora.

6. Contribute to future grant applications in relevant areas.

**EDUCATION**

1. Participate in the teaching programme of the Faculty of Epidemiology & Population Health, including acting as an academic supervisor for MSc students.

**CITIZENSHIP**

1. Contribute to the activities of the multi-institution Vaccine Impact Modelling Consortium funded by Gavi and BMGF.

2. Contribute to the activities of LSHTM’s Vaccine Centre and the Centre for Mathematical Modelling of Infectious Diseases.

3. Contribute to the general activities of the Department, Faculty and School that help promote the objectives of the School.
PERSON SPECIFICATION

ESSENTIAL

- PhD degree in mathematical modelling, health economics, statistics, epidemiology or other relevant discipline with a strong quantitative component, OR Master’s degree and substantial research experience in a relevant discipline with a strong quantitative component.

- Experience in constructing mathematical models, preferably of infectious diseases.

- Experience in understanding and analysing epidemiological data.

- Publication record in good peer-reviewed journals.

- Ability to program in a suitable language, such as R (preferred), Python, C/C++ or Visual Basic.

- Ability to communicate findings both in writing and verbally for academic and policy audiences, including non-modellers.

- Ability to work with colleagues and collaborators from a range of countries and cultural backgrounds.

DESIRABLE

- Familiarity with the epidemiology of vaccine-preventable diseases such as measles, human papillomavirus, pneumococcus, rotavirus and Haemophilus influenzae.

- Experience in conducting research in low and middle-income country contexts.

- Experience in conducting health economic evaluations such as cost-effectiveness analyses.

SALARY AND CONDITIONS OF APPOINTMENT

The post is available immediately and is funded until March 2020, with the opportunity for renewal subject to further funding. The salary will be on the Academic pathways Grade 6 scale in the range £37,889 - £43,028 per annum (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

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