Title of PhD project	**Development, implementation and assessment of isothermal point-of-care molecular diagnostics for both Female Genital Schistosomiasis and Human Papillomavirus**	
Supervisor	Dr Amaya Bustinduy	LSHTM
Co-Supervisor	Professor Sanjeev Krishna	SGUL
Co-Supervisor	Dr Bonnie Webster	Natural History Museum
Brief description of project	This studentship will focus on the novel development, evaluation and implementation of a multiplex point-of-care diagnostic assay for the joint detection of ***Schistosoma haematobium*** **and Human Papillomavirus (HPV)**, causal agent of female genital schistosomiasis (FGS) and cervical cancer respectively. Applying **isothermal molecular techniques**, the outputs of this work are expected to provide a scalable alternative to costly diagnostics for the rapid detection of FGS and CC, that have a high burden in women across sub-Saharan Africa, so that appropriate interventions can be applied. The successful candidate will work with a team of expert supervisors at LSHTM, SGUL and also the Natural History Museum, providing specialist input from diagnostic development to real world evaluation. Additionally, there will be opportunity to work in the field in Zambia with the ongoing study team from Zambart for the field validation of the assay. https://www.lshtm.ac.uk/research/centres-projects-groups/zipime-weka-schista	
Skills we expect a student to develop/acquire whilst pursuing this project	Molecular biology methodologies Diagnostic development and evaluation Data analysis Field studies in African countries Clinical Gynaecological Screening Methods	
Particular prior educational requirements for a student undertaking this project	MSc in Parasitology, Molecular Biology, or related subject	

Project key words	FGS HPV Diagnostics Isothermal
Possible under 1+4 route? Master's options identified.	Yes LSHTM – MSc Medical Parasitology
MRC Core Skills developed through this project	Interdisciplinary skills
MRC LID themes	Global Health Translational and Implementation Research Infectious Disease
Further reading	Analytical and Clinical Assessment of a Portable, Isothermal Recombinase Polymerase Amplification (RPA) Assay for the Molecular Diagnosis of Urogenital Schistosomiasis. Genital self-sampling compared with cervicovaginal lavage for the diagnosis of female genital schistosomiasis in Zambian women: The BILHIV study