



Title of PhD project / theme	Epidemiology and pathogenesis of <i>Treponema pallidum</i> infections in the Philippines
Supervisory team	David Mabey and Michael Marks (LSHTM) Nick Thomson (Sanger Centre) Koya Ariyoshi (Nagasaki)
Brief description of project / theme	We are interested in the epidemiology and pathogenesis of both yaws and syphilis. Yaws is known to have been previously endemic in the Philippines, but there is a lack of recent data, so the first step would be to establish its epidemiology. This would involve field work and lab work to establish the aetiology of skin ulcers by PCR. In the case of syphilis, we would like to study the aetiology of genital ulcers, also using PCR, in the first instance. We have a productive collaboration with Nick Thomson at the Sanger Centre, so the next step would be to get whole genome sequence data on samples from both yaws and syphilis cases positive by PCR, in an attempt to define virulence factors and identify systematic differences between strains from syphilis and yaws cases.
Particular <i>prior</i> educational requirements for a student undertaking this project	Some lab experience in the field of molecular diagnostics . Experience of clinical infectious diseases and training in epidemiology would be advantageous but are not essential
Skills we expect a student to develop/acquire whilst pursuing this project	Field epidemiology, data management and analysis, genomics.