Funded PhD Project

Disease and host association of African *Campylobacter*

**Supervisor:** Prof Julian Parkhill, Department of Veterinary Medicine, University of Cambridge

**Project details:** Disease and host association of African *Campylobacter*

*Campylobacter jejuni* and *C. coli* represent the major cause of bacterial gastroenteritis in humans in Europe and an important cause worldwide. There is considerable variation in the symptom severity, but the mechanisms determining variation in the virulence of *C. jejuni* and *C. coli* in both human and animal hosts are not yet fully understood. To understand the evolution of the virulence at a detailed level we will conduct a comparative study between the bacterial populations occurring in industrialized and developing countries. To achieve this we have sampled *C. jejuni* and *C. coli* extensively in Burkina Faso and Ghana from patients, animals and asymptomatic human carriers. Several hundred samples have been subject to both short and long-read genome sequencing, and this data can be contextualised with many hundreds of genome sequences that already exist from developed countries. The student will use phylogenetics and genome-wide association approaches to discover genetic determinants of disease manifestation and host association, and investigate how these might vary in developed and developing country settings.

This is a joint project with scientists in Burkina Faso and Ghana (in addition to Oslo and Bath), and there will be a strong element of collaborative capacity-building in those countries. Results from the project will inform surveillance and intervention to control Campylobacter disease in developing and developed countries.

**Funding:**
Full EU/Home fees plus a maintenance stipend (£14,500) per annum will be available to the successful candidate.

The successful candidate will join the Cambridge School of Biological Sciences Doctoral Training Programme (SBS DTP) and as such will:
- Undertake a PIPS (Professional Internship for PhD students) of 3 months
- Participate in training and cohort building events with other BBSRC and SBS DTP students – [info here](http://www.vet.cam.ac.uk/grad/Prospectivestudents/apply)

**How to apply:**
Contact the Supervisor to discuss before submitting an application.
In order to be formally considered please submit an application via the [Applicant Portal](http://www.vet.cam.ac.uk/grad/Prospectivestudents/apply) by deadline: 16th March 2020.
Applicants will be invited to attend an interview in the week beginning 30th March 2020.

More details on how to apply process here:
http://www.vet.cam.ac.uk/grad/Prospectivestudents/apply