UNIVERSITY OF GLASGOW
COLLEGE OF MEDICAL, VETERINARY AND LIFE SCIENCES
INSTITUTE OF BIODIVERSITY, ANIMAL HEALTH & COMPARATIVE MEDICINE

POSTDOCTORAL RESEARCH POST

A Research assistant/associate post is available on a three year collaborative project (funded by the BBSRC & the Department of Biotechnology and Technology, Indian Government) under the Farmed Animal Disease and Health programme. The aims of the project are to conduct research on bovine tick borne disease (TBD) in India to: establish key features of TBD epidemiology, develop predictive models for different control strategies, investigate the molecular basis of breed resistance to TBD, and identify & characterise diversity in genes encoding antigens that are candidates for reducing pathogen transmission. The project would provide training/experience in a suite of generic modern technologies that would allow the successful applicant to develop a career in infectious disease research. The programme involves collaboration between two UK labs (Glasgow & Edinburgh) and three Indian labs (Nagpur, Chennai & Namkkal).

The available post would be based in Glasgow under the supervision of Prof Brian Shiels but would involve collaborative work at the Roslin Institute (Prof Glass, Edinburgh) and with the three Indian labs. The primary research area for the position is to investigate breed resistance and antigen/pathogen diversity. Applicants should have a PhD and expertise/knowledge in the molecular analysis of infectious disease. Experience with transcriptomics/genomics or genetics would be desirable. Preliminary enquiries would be welcome and should be made to Brian Shiels (brian.shiels@glasgow.ac.uk) or Andy Tait (andy.tait@glasgow.ac.uk). Full application details and procedures are available on the Glasgow University web site (ref M00571).

Tick-borne diseases (TBD) affect 80% of the world's cattle population, and are a significant threat to global food security. Tropical theileriosis, caused by *Theileria annulata*, is an important tick-borne disease of cattle and buffalo in India, with estimated losses of $499 million per annum. Cattle and buffalo are also infected with *Babesia*, and the rickettsia, *Anaplasma* and *Ehrlichia*. Current control of TBD has significant limitations and new methods of control are needed if livestock productivity and food security is to be increased. In India, knowledge of the relative importance of the different pathogens and tick species, and the role of cattle breeds and buffalo in transmission and clinical disease is incomplete. Young calves suffer clinical disease and most adult animals carry the infection. Both native cattle and cross breeds are considered more resistant to disease compared to highly productive but susceptible European breeds – but the genetic traits involved needs to be evaluated. To develop new control strategies it is necessary to understand TBD epidemiology, breed resistant animals with higher productivity and limit/block pathogen transmission by ticks. The project is designed to provide greater knowledge of TBD in India with emphasis on strategies to control disease, increase resistance and reduce economic loss.