

Bordeaux, May 16th 2019.

Post-doctoral research fellowship in modelling of the immune response to Ebola vaccine

One postdoc position is available to work on the modelling of the immune response to Ebola vaccine at Inserm U1219 Bordeaux Population Health Center, Statistics in Systems and Translational Medicine team (SISTM) in Bordeaux (France) for a minimum period of 18 months.

Context

The EBOVAC3 project aims to assess, through clinical trials in children and adults in Africa, the safety and effectiveness of an Ebola vaccine regimen. As such it will help to improve the world's preparedness to deal with an Ebola outbreak. The project focuses on the 'prime-boost' Ebola vaccine regimen (Ad26.ZEBOV and MVA-BN-Filo) prime-boost' Ebola vaccine regimen, in which patients are first given a dose to prime the immune system, and then a boost dose which is intended to enhance the immune response over time. Building on work carried out under the EBOVAC1 (<http://www.ebovac.org/>) and the EBOVAC2 (<http://www.ebovac2.com/>) projects, EBOVAC3 (will run clinical trials in children in Sierra Leone, Guinea and the Democratic Republic of Congo. It will also follow up people who participated in earlier clinical trials in Sierra Leone, to assess the safety and efficacy of the vaccine in the longer term. Finally, the project aims to characterize the outbreak preparedness of Sierra Leone, Guinea and the Democratic Republic of Congo.

The SISTM (Statistics in Systems and Translational Medicine) team directed by Pr. Rodolphe Thiébaud is involved in EBOVAC1 and EBOVAC3 and coordinates EBOVAC2. In this context one of its main goal is to conduct the analysis and the modelling of the immune response to the Ebola vaccine strategy, using the data produced in Phase I and II clinical trials (in Europe and Africa), including immunological substudies recording many biomarkers (cell phenotype, functionality, gene expression, antibody titers...).

SISTM is a team belonging to INSERM U1219 [Bordeaux Population Health](#) and [INRIA](#) Bordeaux Sud-Ouest research institutes. The group is dedicated to the analysis and the modelling of the data generated in epidemiology and medicine with a special focus on vaccines and immune interventions in HIV and other infectious diseases. Its expertise is mainly in biostatistics with a special emphasis on dynamical models based on ODE and statistical learning using moderately high dimensional data.

Job Description

The main objective of this postdoc position will be to use the data gathered through the EBOVAC projects to build and fit a model of the immune response to the Ebola vaccine in order to better characterize the response (duration) and better understand the mechanism of its establishment.

The candidate will be integrated in a team of biostatisticians and modelers working on related topics: modeling of HIV vaccine response. The candidate will benefit from a very attractive environment with

computing facilities and close collaborations with mathematicians (from INRIA and INSERM research centers) and immunologists (from the EBOVAC consortia as well as from the Labex Vaccine Research Institute).

Qualifications and Personal Skills:

The candidate should hold a PhD in mathematics, physics or statistics. We are looking for an highly motivated candidate with an outstanding potential and a strong background in statistics and a deep interest in immunology and biological application. Proven experience in R language is required. The ideal candidates are able to work effectively as part of a team, but also to develop and pursue independent ideas. The successful candidates are expected to conduct innovative research at the highest international level.

Experience in modelling and applications in biology is highly recommended and previous work in immunology/Vaccinology, systems biology will be highly appreciated.

The expected starting date can be as soon as possible. Salary will follow Inserm rates and can be negotiated to be higher depending on previous experience and skills.

The application must include:

- A one-page text describing current research interests and potential contributions to the planned project.
- CV summarizing education, positions held, details of academic work, pedagogical and administrative experience and other qualifying activities
- List of publications
- Copies of educational certificates and transcripts of records
- Names and contact details of 2-3 referees stating relation to candidate, e-mail and telephone number

The application with attachments should be sent to Sandrine.darmigny@isped.u-bordeaux2.fr and melanie.prague@inria.fr. Foreign applicants are advised to attach an explanation of their University's grading system. Please remember that **all** documents should be in English or French. Deadline for Application is July 1st 2019.

Applicants may be called in for an interview. In accordance with the University of Bordeaux's equal opportunities policy, we invite applications from all interested individuals regardless of gender or ethnicity.

Region:

Bordeaux, Aquitaine, France

Working hours:

Full-time

Application deadline:

1/07/2019

Location:

Centre de recherche Inserm U1219
Université de Bordeaux, ISPED case 11
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