

THE OPEN UNIVERSITY and THE HUMANITAS RESEARCH Foundation
International Ph.D. Programme in Immunology and Immunopathology

CALL FOR APPLICATIONS 2014

The HUMANITAS Research Foundation, Milan, Italy, seeks to recruit bright, enthusiastic students for its PhD Programme in Immunology and Immunopathology.

Enrolled students will undertake a 3-4 year training programme of higher education for a PhD degree awarded by The Open University, UK, in collaboration with the HUMANITAS Research Foundation.

Students will develop an independent research project and will participate also to academic and tutorial activities related to Immunology and Cell Biology.

Created in 2005, the HUMANITAS Research Foundation is directed by Prof. Alberto Mantovani and comprises 16 research groups and over 100 scientists, focused on innate immunity and inflammation, adaptive immunity and immunodegenerative diseases

Project information

We are seeking a highly motivated PhD student in the group of Antonio Inforzato. The group is part of the Department of Immunology and Inflammation at Humanitas Clinical and Research Center, Rozzano (MI). A major focus of our research is on investigating the biochemical properties and biological functions of soluble Pattern Recognition Molecules (sPRM) of the innate immune system, with main regard to the long pentraxin PTX3.

This is an oligomeric glycoprotein that is endowed with non-redundant protective roles against selected pathogens, including the opportunistic fungus *Aspergillus fumigatus*, the primary etiologic agent of Invasive Aspergillosis (IA) (Garlanda et al, 2002, *Nature*, **420**:182-6).

This infectious disease is a leading cause of mortality amongst immunocompromised individuals, where PTX3 is believed to have a great therapeutic/prophylactic potential in the treatment of IA (Cunha et al, 2014, *N Engl J Med*, **370**:421-32). Based on this rationale, our current investigations mostly aim at defining the structure/function relationships of PTX3 as a paradigmatic PRM of the antifungal immunity. To this end, Dr Inforzato has recently been granted funding from the Italian Ministry of Health (Project Title: The long pentraxin PTX3 as a functional ancestor of antibodies in the immune response to *Aspergillus fumigatus*. Project Code: GR-2011-02349539).

A major line of research within this project grant is on studying the role that protein quaternary structure and glycosylation play in the PTX3-dependent recognition and phagocytosis of *A. fumigatus*, in order to provide ground for rational design of PTX3-based molecules with enhanced opsono-phagocytic and therapeutic properties.

Eligibility of PhD students

Students are eligible for admission to the PhD program, following these criteria:

- Applicants should have a University degree obtained in Biomedical Sciences, Medicine, Veterinary Medicine. Foreign students must have a University degree that would formally qualify them to enter a PhD programme in their home country.
- Only full time students are accepted in the PhD Programme
- Be highly motivated for scientific research
- Have good written and spoken English communication skills.

Selection procedure

Applications will be evaluated on the basis of:

- Detailed CV, including a list of publications and a short overview of research activities
- Two reference letters from previous supervisors
- Personal motivation to perform scientific research
- Skills of written and spoken English

Selected candidates will be invited to sustain a telephonic interview, or a visit at the Institute for a vis-a-vis interview. Successful candidates will be enrolled in the PhD programme starting in February 2015.

Funding information

Studentship for 3 years funded by the HUMANITAS Research Foundation of € 20.000/year (gross salary, approximately €16.000 tax free).

Accommodation: dedicated rooms are available within the campus of the HUMANITAS Research Foundation