UNIVERSITÀ DI PARMA

Medical Sciences - V.P. POSITION

DESCRIPTION OF THE PHD PROGRAM

The Faculty of the PhD Program ("Corso di Dottorato") in Medical Sciences of the University of Parma is composed by 36 faculty members of the University of Parma, 2 faculty members of the University of Brescia and 1 faculty member of the University of Trieste (all located in Italy). The faculty members of the PhD Program are well respected opinion leaders in biomedical fields encompassing internal medicine, geriatrics, pediatrics, nephrology, hepatology, and infectious, skin, respiratory, gastrointestinal, oncologic, endocrine, metabolic and occupational diseases. This ensures a wide range and diversity of expertise, as well as a critical mass of laboratory and technological resources. As a result of these opportunities and fostered by a lively spirit of cooperation among different labs and research groups, the PhD Program is an ideal learning, stimulating and testing environment for the average 30 postgraduate students that at any time are attending it. The total output of scientific papers per year by the faculty of the PhD program in Medical Sciences counts in the hundreds and documents the vibrant, enthusiastic atmosphere in the labs and within the research groups. The Visiting Professor of the PhD Program in Medical Sciences will be selectively involved in a long-lasting research regarding HBV infection of one of the most prominent research groups of the PhD Program. In this context, transcriptomic studies are in progress to identify dysregulated genes and pathways expressed by peripheral blood HBV-specific CD8 cells and associated with T cell exhaustion, with the final aim of developing new therapeutic strategies for chronic HBV infection. Some of these dysregulated pathways may represent novel molecular targets for functional T cell reconstitution approaches to treat chronic HBV infection. The initial results of these studies are now in press in Nature Medicine and grants from the Italian Ministry of Health and from the Government of the Emilia-Romagna Region, Italy, have been awarded to more deeply characterize the molecular basis of these cellular defects and to extend gene profiling analysis to liver infiltrating T cells.

DESCRIPTION OF THE SCIENTIFIC FIELD & VISITING PROFESSOR PROFILE

New therapies are needed for Chronic Hepatitis B. Alternative strategies comprise the usage of new direct anti-viral action molecules or immuno-modulating approaches aimed at stimulating the protective immune resources, strongly insufficient during a chronic infection. We are, hence, presented with the need to deepen the research on the molecular mechanisms responsible for the lymphocyte dysfunction, for the purpose of defining new molecular targets, whose correction could fully reset the cellular function. Given this context, the collaboration with a researcher with proven experience in the field of molecular virology and functional genomics becomes pivotal; said researcher, beyond being a leader in the field HBV virology, would further possess the knowledge in terms of molecular fields and genomics, one that would allow the implementation of innovative technologic approaches that would ensure the progress of the project and give definitive responses to the therapeutic problem of the HBV hepatitis.

DESCRIPTION OF THE DIDACTIC ACTIVITIES OF THE VISITING PROFESSOR

The didactic activities would be carried out through:

1. Teacher-led lessons and seminars on the PhD-specific topic (new advances in the HBV biologic cycle knowledge; new acquisitions related to the interaction between virus and the host's innate immunity);
2. Analysis and interpretation of the results obtained in the project's scientific field, contributing to the re-modulation of the objectives and the types of foreseen experimental approaches in consideration of the obtained results, when this would be deemed necessary.

Presence at the University of Parma: At least one week every 3 months.