

The PhD Course in Microbiology, Immunology, Infectious Diseases and Transplants (MIMIT) provides an educational training of qualified researchers aimed at the acquisition of basic microbiological and immunological knowledge and at the deepening of some specific topics, mainly at defining the pathogenetic characteristics of some of the micro-organisms of greatest medical and scientific interest. Particular attention will be dedicated to the biomolecular aspects of pathogenesis process involved in the infectious diseases, host's immune response and transplantation-related diseases, and to the development of innovative diagnostic, therapeutic and vaccination approaches. The PhD program has interdisciplinary characteristics and allows students to acquire also skills in designing and conducting biomedical experiments in the field of organ transplants, cardio-thoracic surgery, liver disease, in immunocompromised patients, and/or hospitalized in intensive care, or with infections confined to the eye or skin.

The PhD student is supported in the research activity by a tutor who has the main task of leading him to acquire autonomy in the creation of a manuscript (drafting of protocols, experimentation, interpretation of results, and identification of a journal for publication). It is also desirable to introduce the doctoral student to the necessary steps for fund access or raising as well as to write a project, develop and make reports. A good knowledge of both spoken and written English is required to access the Course. Knowledge of the principal methods of word processing and construction of databases and electronic presentations is also required.

The PhD School is mainly (but not only) composed by Professors of the University of Rome Tor Vergata, with different specific skills and competences, whose integration allows the PhD students to a complete and cutting-edge scientific training course.

The PhD Course requires mandatory attendance of the research activities that take place at the PhD School. Participation to lessons, seminars, professional upgrading and specific courses is also mandatory. These activities cover all the areas of interest of the PhD students and will be carried out by MIMIT teachers and by other qualified experts.

The already existing collaboration and involvement in PhD research program of foreign University for similar or complementary research activities will be further implemented. Professors from foreign Universities are already enrolled for teaching activities and seminars in the PhD school. When possible, the interaction between teachers in the treatment of problems involving different aspects of common illnesses (infections in the immunocompromised host, prophylaxis of nosocomial infections, clinical and molecular diagnosis of retroviruses, viral hepatitis, etc.) will be studied to provide the PhD student with a framework as much as possible unitary of the most relevant clinical-surgical and infectious diseases.

Each year, the PhD students present, on the occasion of specific meetings, the data relating to the research activities carried out for the realization of the thesis. On such occasions, always in the presence of the respective tutors, the data are discussed and framed within the context of the problematic subject of the study. The results are generally presented by the individual PhD students, gathered in small groups at the institutional headquarters of the PhD program and/or in front of all other PhD students and tutors. The intent is to expose the experimental data in a broader context, which allows all participants to understand the state of the art and the aims of the researches carried out. During the exposition of the research data, simultaneous presence of the PhD tutors is always required. According to University rules, all PhD students must provide also at the end of the year a written report with the presentation and discussion of the results obtained and activities planned for the following year. The positive opinion of the Board of Professors for this yearly verification is a prerequisite for scholarship holders, to be able to access the provision of the subsequent annuity.

The majority of lessons and seminars are held in English. Each year PhD students have the opportunity to attend a medical statistics course that will provide the knowledge and the methodologies required for an adequate statistical evaluation of research scientific parameters. As part of the training program, the PhD students will also be involved in the evaluation of the innovativeness of the achieved results and their potential patent exploitation. The University provides specific courses, with the intent to implement the knowledge regarding the procedures for filing a patent, the evaluation of costs, the extension and the eventual patent property transfer.

Generally, doctoral students participate in about extra 20 seminar meetings, held by both Italian and foreign researchers, on topics of particular relevance and relevance in the field of scientific research.

As for the XXXV cycle, joint seminars / statistical modules are also planned for the XXXVI with other doctorates in the medical area. This shared activity is mostly in common with the Doctorate of Biochemistry and Molecular Biology (current Coordinator Prof. Eleonora Candi, belonging to the same Department) and with the Doctorate in Immunology, Molecular Medicine and Applied Biotechnology (Coordinated by Prof. Paolo Rossi) through the sharing of meetings, seminars and co-tutorages of PhD students, particularly foreigners from African countries.

In 2019, MIMIT has promoted (as in previous editions) the 13th Annual Liver Meeting "What is new in clinical hepatology in 2019" held in Rome, September 27, 2019. All PhD students have also been invited to participate in an international congress "17th European Meeting on HIV & Hepatitis - Treatment Strategies & Antiviral Drug Resistance, held in Rome, from 22 to 24 May 2019, which obtained sponsorship from the University of "Tor Vergata". During the year 2019, Prof. Alessandro Cozzi Lepri of the Institute for Global Health University College London, UK, already a member of the PhD college and Visiting Professor at the Department of Experimental Medicine, held a course in English statistics from title "Principles of Epidemiology and Biostatistics" divided into four modules for a total of 30 hours of frontal lessons (1st module of the Course 25 - 30 - 31 January; 2nd module 31 May - 3 - 4 June; 3rd module 1- 2 -3 July; 4th module 17 -18 - 21 October 2019).

Finally, also two scientific days have been organized for an "International Scientific Conference for the PhD course in "Microbiology, Immunology, Infectious diseases, Transplantation and associated diseases (MIMIT)" held in Rome on 16th and 17<sup>th</sup> December 2019. During these two days there were 14 oral presentations of PhD students from MIMIT and of the Doctoral Course in Immunology, Molecular Medicine and Applied Biotechnology, and 12 readings by expert professors.