

PhD Program in Clinical and experimental medicine

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The objective of the three-year doctorate in "Clinical and experimental medicine" is to train high-quality researchers and to improve their scientific curriculum, as well as to foster their research autonomy in the field of high-social impact diseases. It is structured in 4 Curricula: 1. "Pathology and Clinics of atherosclerosis", involving the study of lipid metabolism, new methods for the study of liver steatosis, and research on the regulation and modulation of immune-mediated (indoleamine 2,3 dioxygenase-1) IDO tolerance in the plasma and in the adipose tissue of people with obesity, sepsis and inflammation; 2. "Neurosciences", aimed at improving the student's knowledge of pathogenic mechanisms and preclinical aspects of neurodegenerative, vascular and inflammatory diseases of the nervous system, headaches and epilepsy, synaptic activity and physiological plasticity as well as plasticity in experimental models of neurological diseases with particular reference to neurodegenerative diseases; 3. "Surgical sciences", devoted to improve surgical methodology of experimental research, especially in the area of oncology, with potential application (and translation) in the clinical field, and to develop new diagnostic and therapeutic strategies applied to diseases of several organs or apparatus (stomach and bowel, respiratory and urinary tracts, ear, nose and throat); 4. "Biotechnologies in human bone marrow transplantation" (with over 20 years of experience in haplo-identical transplantation) especially focuses on genome analysis and on the use of monoclonal antibodies in the diagnosis and monitoring of residual minimal oncohaematological diseases and also on the development of enrichment methods, the application of haematopoietic stem cells as well as post-transplantation immunological reconstitution of bone marrow in haematological diseases.

The Director, Prof. Paolo Calabresi, is one of the main experts on Parkinson's disease and has produced more than 300 international papers on its preclinical and clinical aspects, not only in the field of Movement Disorders but also with regard to other neurodegenerative and inflammatory diseases, as well as on headaches.

The teaching staff include 38 Researchers and Professors with a great deal of experience in each one of the PhD curricula.

The PhD benefits from the collaboration of several International Research institutes that will host some of the PhD Students to allow them to improve their training or involve them in common research projects.