

PhD Program in Clinical and Molecular Medicine Academic Year 2020/2021

Co-ordinator:

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The objective of the three-year doctorate in "Clinical and Molecular 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 four 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 Co-ordinator, Prof. Cristina Mecucci, is one of the main worldwide experts on Cancer Genetics and Cytogenetics and has produced more than 300 international papers on preclinical and clinical studies, with impact on diagnostic and prognostic classification of hematological malignances.

The teaching staff include 48 (41 from Italy and 7 from European Countries and USA) Researchers and Professors with a great deal of experience in each curriculum.

The PhD Course is open to both Italian and Foreign students and it benefits from the collaboration of several International Research institutes that are hosting PhD Students to allow them to improve training and development of their research projects.