PhD in Neuroscience

Training offer

The aim of the doctorate in neuroscience is to make candidates able to acquire an autonomous capacity for scientific research that highlights creative originality and methodological rigor.
Professional training will allow students to acquire the knowledge of scientific methodologies tools and investigation techniques. Students will then choose to direct their interest mainly on some specific investigation techniques in a specific branch of neurobiology. The technical-scientific training will be completed with the attendance of highly qualified and biotechnologically advanced foreign laboratories with which our university has reports of an active scientific collaboration, such as the University of Harvard, Oregon and the Alabama, Columbia University, Northwestern University, Cedars-Sinai Medical Center (USA), the University of Montréal (Canada) but also in Europe (University of Bordeaux, France, Karolisnka Institut, Sweden). A network of scientific relations among various institutions will be nourished so that students will be an integral part of a broader scientific knowledge, not only confined to the reality of local research. Moreover, thanks to the development of laboratories in the clinical field, and the interdisciplinary nature of the teachers, it will be possible to implement research projects with a strong translational value. Fundamental, areas of clinical research that are the subject of our doctoral training programs are neurophysiology, neuropharmacology, neurology, psychiatry, child neuropsychiatry and neurosurgery.

The training of the PHD students will be based on direct research experience in laboratories and clinics. It will focus on the research issues that characterize the scientific interests of each teacher "tutor" or research group. The students will be trained and educated to follow different research topics and to become increasingly independent in the technical procedures and scientific reasoning. These objectives will be achieved through a process of specific mentoring, capable of making the PhD student completely autonomous in designing and carrying out researches in neuroscience. The educational program includes a part of theoretical and practical training. Basic knowledge of neurobiology will be provided in the fields of anatomy, biochemistry, electrophysiology, pharmacology, clinical neurophysiology, pharmacology, immunology, and genetics by intensive on-line courses provided by high-level professors. To this aim, students will participate to scientific seminars on a weekly or twice-a-week schedule and they will be actively involved in on-line webinar by presenting scientific articles during journal club sessions. Moreover, we specifically examine the ability of students to present their data and those of the laboratory in which they are mainly training, as annual exam. One of the objectives for the PhD course in Neuroscience is to encourage students in learning and developing the ability to communicate scientific results in English.
They will be also in contact, by modern communication tools, with the foreign teachers who are an essential part of our faculty. As a fundamental component of the training program we will be able to host with us for certain periods of time, teachers currently working in institutions different from Tor Vergata. We will also try to make it possible for students to attend to part of the scientific activities ongoing in other Neuroscience laboratories and institutes in Italy and abroad.