Oncology and Surgical Oncology School– Hematologic diseases

The project regarding the hematologic malignancies is aimed at scrutinizing the biological and molecular mechanisms involved in the development and growth of malignant cells in different hematological malignances, such as B cell chronic lymphocytic leukemia, hairy cell leukemia, multiple mieloma, T and Natural Killer cell leukemias, through the investigation of signal transduction pathways and the related protein kinases, with the ultimate goal to identify new drugable targets and pharmacological tools for innovative therapeutic approaches for treating hematologic diseases.

The training of PhD students will deliver researchers endowed with multidisciplinary expertise, in a scope of activities ranging from molecular sciences to the clinical treatment of hematological malignancies. This intent will be reached through the development of an integrated teaching program including:

a) weekly seminars by international and national outstanding researchers in the field of molecular medicine;

b) organization of monthly meetings with progress reports and exchange of experiences among the PhD students and researchers involved in the project;

c) weekly presentations of results in progress by PhD and postdoc investigators under the supervision of the coordinator of the research;

d) active involvement of PhD students in the preparation of manuscripts and in presentations of the research at national and international meetings.

Titolo

Nuovi marcatori di diagnosi, prognosi e risposta alla terapia delle malattie onco-ematologiche, identificati attraverso approcci molecolari high-throughput.

Le recenti innovazioni in ambito molecolare attraverso l'impiego di piattaforme high-throughput stanno rapidamente ampliando le nostre conoscenze in ambito onco-ematologico, mediante la scoperta di nuovi fattori utilizzabili in ambito di diagnosi della malattia, di prognosi e, in relazione al trattamento farmacologico, di possibile resistenza ad una specifica terapia. Scopo di questo progetto è l'individuazione di marcatori molecolari che, pur presenti a livello di sub-cloni cellulari, abbiano un impatto clinico/terapeutico sulla neoplasia ematologica.

New markers for diagnosis, prognosis and response for the treatment of onco-hematological diseases, identified through high-throughput molecular approaches.

Recent innovations in the molecular field through the use of high-throughput platforms are rapidly expanding our knowledge in the onco-hematological field, through the discovery of new factors that can be used in the field of disease diagnosis, prognosis and, in relation to drug treatment , of possible resistance to a specific therapy. The purpose of this project is the identification of molecular markers which, although present at the level of cellular sub-clones, have a clinical/therapeutic impact on the hematological neoplasm, such as B cell chronic lymphocytic leukemia, hairy cell leukemia, T and Natural Killer cell leukemias.