**M2 Immunology, Genetics and Oncology (IGO)**

**Objectives and contents**

The immunology and genetics courses are combined in a new theme entitled IGO standing for "Immunology, Genetics and Oncology", which leads to a double specialisation in genetics and immunology. The objective of this theme is to acquire a solid training in integrative cancer research by tackling aspects of cancer genetics, translational and systemic immunology, as well as gene and cell therapy. The pedagogical contract for students following this theme will include both courses associated with the immunology programme and courses from the genetics programme. Candidates for this theme can apply, according to their profile, either within the framework of the genetics course or the immunology course.

**Publics and pre-requisites**

As the number of students in this field is very limited, candidates must be highly motivated to acquire this double specialisation and to carry out research in the field of cancerology, and must have completed genetics and immunology courses in M1. In addition, a good understanding of English is required as most of the teaching will be in English.

**Keywords**

Immunology, Oncology, mouse models for cancer research

**Organisation**

The programme includes the following courses and activities:

- **Mouse Genetics course Institut Pasteur** (MU5BM813, 12 ECTS): five-week laboratory and lecture course (From January to mid-February)
- **Scientific project course** (MU5BM091, 6 ECTS): scientific project (integrated in Mouse Genetics course) **applied to onco-immunology** (From January to mid-February)
- **Scientific analysis course** (MU5BM051, 6 ECTS): composed of "Molecular, cellular and gene immunotherapy" course (MU5BM564, 3 ECTS) and "Data Analysis in Immunology" course (MU5BM578, 3 ECTS) (November-December)
- **Opening courses (6 ECTS):** "Lecture in Systems Immunology" (MU5BM560, 3 ECTS) (November-December) and "Anti-tumour immunology" (MU5BM558, 3 ECTS) (November-December)
- **Internship (5BMSO7, 30 ECTS) :** The internship, of a maximum duration of six months, will be initiated, when possible, in September-October and will be extended from mid-February to June, within a research team in an academic environment or a company. The project entrusted to the student trainee must be related to the training theme (immuno-oncology and genetics), with the objective of developing a research question, defining and implementing an appropriate experimental strategy, analysing and interpreting the acquired results. A detailed internship report is submitted at the end of the internship and is the subject of an oral defence.

**Contacts**

Educational manager: Pr Franck Toledo (Genetics, franck.toledo@curie.fr) & Sophie SIBERIL (Immunology, sophie.siberil@sorbonne-universite.fr)

Educational assistant: Carine Joseph (Genetics, carine.joseph@sorbonne-universite.fr) & CELIK Belma (Immunology, belma.celik@sorbonne-universite.fr)