## M2-Immunology-Immunopathology

The I2P theme offers students from scientific and medical fields training in fundamental and applied immunology as well as in immunopathology. This training covers the physiology of the immune response in various situations: physiology, infectious immunity, immunology of tumours and transplants, local immunity, pathologies of the immune system (autoimmunity, immune deficiencies, allergies).

The I2P theme is organised in partnership with Université de Paris, and Pasteur Institute

The course is given in French and English.

## **PUBLIC**

Scientific students enrolled in the Master's programme, physicians, pharmacists, veterinarians, engineers with the necessary prerequisites for a total of 15 to 20 students.

This course is also open to continuous training.

## **ORGANISATION:**

The programme includes the following courses:

| Course   | credits |
|--|---------|
| I2P specialisation (From November to January)        | 12 ECTS |
| Scientific Analysis (From November to January)       | 6 ECTS  |
| Scientific Project (November-December)               | 6 ECTS  |
| Opening (From September to May)                      | 6 ECTS  |
| 6-month laboratory internship (From January to June) | 30 ECTS |

## I2P Specialisation UE (MU5BM531, 12 ECTS)

The specialization course includes 4 cycles of lectures to be chosen among the following themes: Autoimmunity & inflammation; Inherited immune deficiencies & Immunosenescence; Mucosal immunity; Transplantation & new therapies; Tumour immunology; Anti-viral immunity.

Depending on the options chosen, topics include physiology and immune system organisation, innate immunity, immune responses and homeostasis, tolerance, mucosal immunity, immune deficiencies and immunosenescence, anti-infectious immunity, transplantation immunity, anti-tumour immunity, autoimmunity and inflammation, allergies, immunotherapy. Registered students have the possibility to follow the Institut Pasteur's "In-depth Immunology "course, instead of the proposed teaching modules (number of participants limited)

Scientific analysis course (MU5BM051, 6 ECTS)

This course is devoted to scientific watch and bibliographical analysis. The students will train in carrying

out a bibliographical analysis (in groups), in connection with one of the blocks of the teachings followed. The students will work on the formatting and oral presentation of a scientific overview based on a set of

recent scientific papers.

Scientific project course (MU5BM091, 6 ECTS)

At the beginning of the training, during two weeks, the theme starts with a series of conferences entitled "Dialogues in immunology" plus the setting up working groups on the development of a scientific project

during the "Masteriales" event. These two activities constitute the scientific project course of the theme.

Opening course (of your choice, 6 ECTS)

Within the framework of the general curriculum of the "Molecular and Cellular Biology" Master's degree,

students have the possibility of freely choosing one or more optional opening courses for a total credit of 6 ECTS (1 x 6 ECTS) or (2 x 3 ECTS). This choice must allow the completion of the Master's training in order

to deepen the knowledge within the course or to open up to related or complementary concepts.

Internship (5BMSO7, 30 ECTS)

The internship, of a maximum duration of six months, will be initiated at the end of the course (mid-

January), possibly started before the beginning of the course, when possible, within a research team (in France or abroad) in an academic environment or a company. The project entrusted to the student trainee must be related to the training theme, with the objective of posing a research question in immunology,

defining and implementing an appropriate experimental strategy, analysing and interpreting the obtained results. A detailed internship report is submitted at the end of the internship and is the subject of an oral

defence.

CONTACTS

Head of teaching: :Dr Sophie Siberil

sophie.siberil@sorbonne-universite.fr

Pedagogical assistant :Belma CELIK

belma.celik@sorbonne-universite.fr

Tel: +33 1 44 27 20 27

Fax: 01 44 27 34 25