

Faculty of Medicine



SBIM1304 General immunology

[45h] 4 credits

This course is taught in the 1st semester

Teacher(s): Pierre Coulie (coord.), Jean-Christophe Renauld, Benoît Van den Eynde
Language: French
Level: First cycle

Aims

This general immunology course covers the main mechanisms of an immune response. It is based on mendelian genetics, molecular biology, cellular biology, biochemistry, microbiology and histology. The lessons lead to the understanding of how the immune system works in healthy individuals and of the mechanisms of immune deficiencies or excessive immune responses as observed in diseases.

Main themes

1. History and key concepts
2. Antibodies and B lymphocytes
3. T lymphocytes
4. Development and organization of the immune system
5. Immune tolerance
6. Synthesis : immune responses against infectious agents
7. Elements of immunopathology

The course contains two parts. A unit of 30 h covers all seven items indicated above, and corresponds to a central core for all students (MED, DENT, PHRAM, SBIM). A second unit, of 15 h, runs concurrently for SBIM students. It provides additional information for each main topic, focused on practical and experimental applications. In addition to these ex cathedra units, 15 h are devoted to tutoring for smaller groups of students who wish, on a free will basis, to improve their learning immunology.

Content and teaching methods

Lessons are focused on an experimental approach, illustrating how key experiments have been performed and how their interpretation lead to the discovery of important new concepts. Notes are provided, which contain exercises and illustrations. Additional information is available on iCampus.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites include general microbiology (bacteria and viruses) ; basic biochemistry of proteins, polysaccharides and lipids ; mendelian genetics, molecular biology of genes (eukaryotes) ; histology of blood cells and lymphoid organs ; cytology.
 Evaluation : oral examination with a written preparation.

Other credits in programs

SBIM13BA	Troisième année de bachelier en sciences biomédicales	(4 credits)	Mandatory
SBIM13PM	Année d'études préparatoires au master en sciences biomédicales	(4 credits)	Mandatory