

Faculty of Medicine



MIGE3140 Advanced Immunology

[30h] 3 credits

Teacher(s): Pierre Coulie (coord.), Jean-Paul Coutelier, Dominique Latinne, Jean-Christophe Renauld, Benoît Van den Eynde, Pierre van der Bruggen
Language: French
Level: Third cycle

Aims

To cover some major new developments in immunology through the analysis of experimental results.

Main themes

Illustrate some aspects of modern immunology through experimental observation and analysis. For each topic: a brief reminder of basic concepts followed by the analysis of important experiments and the description of the resulting new concepts

Content and teaching methods

HLA molecules: structure, serological and molecular typing, transplantation.
 Antigen processing for HLA class I and class II molecules.
 Monoclonal antibodies, principles, humanization, examples of new drugs.
 Innate immunity: NK cells, inhibitory receptors, viral escape mechanisms.
 Toll-like receptors and ligands.
 Regulatory or suppressor T cells.
 Cytokines and their receptors, signal transduction mechanisms.
 Anti-viral immunity and viral escape mechanisms.
 Anti-tumor immunity and cancer vaccines.

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

Lecturing by several senior investigators.

Evaluation through a personal essay based on a scientific paper selected with the coordinator.

Other credits in programs

BIOL22/A	Deuxième licence en sciences biologiques (Biologie moléculaire, cellulaire et humaine)	(3 credits)	
FARM31DS/AN	Première année du diplôme d'études spécialisées en sciences pharmaceutiques (analyses biologiques)		Mandatory