

Faculty of Medicine



MD1006

Cytology and general histology

[10h+40h exercises] 5 credits

Teacher(s): Jean-François Deneff (coord.), Marie-Christine Many
Language: French
Level: First cycle

Aims

1. To acquire the scientific and medical vocabulary used in morphological sciences and know the definition of the words used.
2. To know the definition of the tissues composing the human body and their main localisation.
3. To know the cytological, histological and sometimes macroscopical characteristics of the tissues, in other words, their identification criteria.
4. To know the elements of histophysiology: the role and function of tissues.
5. To be capable of analysing a morphological document (light or electronic micrography, macroscopic photography, histological preparation). This requires the capacity to examine the document as a whole, spotting the different constituents of the tissues, giving their description outlining shape, dimensions, their tinctorial affinities, their association..., picking out the essential elements from the accessory ones.
6. To summarise data obtained through observation and to elaborate one or several diagnostic hypotheses.

Main themes

The biological and medical sciences are based on three fundamental disciplines:

- BIOCHEMISTRY, which studies the molecules composing the organism and the chemical reactions happening within it,
- MORPHOLOGY, which studies the structures formed by assembling molecules,
- PHYSIOLOGY, which studies the function of diverse structures composing the organism.

Cytology is the study of the cellular components.

The objectives of this part of the course are to enable students to establish links between the morphology and the main cellular functions, between the cellular ultrastructure and the cellular aspect at light microscopy.

Just like cytology and anatomy, histology is a branch of morphology, and is itself divided into general and special histology. General histology is the study of tissues, the association of cells of the same type, sometimes with extracellular components, which form the elemental organ components. Special histology, also called microscopic anatomy, is studied later. It studies the architecture of organs composed of several tissues.

Content and teaching methods

- 1° Elements of cytology, 1 lesson
- 2° Epitheliums and glands, 4 lessons
- 3° Connective tissues - specialised and unspecialised, 3 lessons
- 4° Blood and defence mechanisms, 3 lessons
- 5° Nervous tissues, 2 lessons
- 6° Muscular tissues, 2 lessons

Method: The course is given in the form of 15 audiovisual sessions lasting approximately 4 hours. This method allows the integration of both theoretical and practical teaching, enabling students to develop their capacities and acquire knowledge simultaneously. These sessions are therefore training periods during which teachers help the students in their individual work. It is therefore in their interest to ask as many questions as possible.

Each student has an audiovisual cubicle at his disposal, once a week, where he can study at his own pace. His microscopy exercises are corrected. Each chapter is the object of one or two tests and is corrected and discussed in small groups with a teaching assistant.

It is in the interest of the student to prepare each audiovisual session in advance by reading the pertinent chapter. He has indeed a manual containing all essential theoretical elements at his disposal.

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

Prerequisite : a mastering of the French language

Evaluation: includes both a theoretical and a practical approach (identification of projected slides and microscopy slides unseen during the course)

Course material: syllabus, CD rom and internet website <http://www.md.ucl.ac.be/isto/>

Supervision: self-learning sessions supervised by assistants and student supervisors

Other credits in programs

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| DENT11BA | Première année de bachelier en sciences dentaires | (5 credits) | Mandatory |
| FARM11BA | Première année de bachelier en sciences pharmaceutiques | (5 credits) | Mandatory |
| MED11BA | Première année de bachelier en médecine | (5 credits) | Mandatory |
| SBIM11BA | Première année de bachelier en sciences biomédicales | (5 credits) | Mandatory |
| SBIM1PM | Année d'études préparatoires au master en sciences biomédicales | (5 credits) | Mandatory |