

## **APM 846 CELL GROWTH AND DIFFERENTIATION DISORDERS**

**Workload:** 30H

**Credits:** 3

**Professors:** From Pathology Department

**Nature:** Optional Master and PhD

**Discipline Syllabus:** Training discipline common to all areas of concentration, which aims to give the student a broad view of the disorders of cellular growth and differentiation. It aims to provide basic concepts while stimulating the critical analysis in order to allow the improvement and future updating of the necessary knowledge to a teacher / researcher. It includes: a) theory- discussion seminars in which the basic concepts are provided; B) practice - analysis of parts and slides; C) theoretical-practical part - presentation and discussion of scientific articles by students, eventually related to their work projects.

Program:

1. General conception of cell growth and differentiation disorders: hypotrophy, hypertrophy, hypoplasia, hyperplasia, metaplasia, dysplasia and neoplasia.
2. General characteristics of benign and malignant neoplasia.
3. Cell cycle. Biology of tumor growth, angiogenesis, graduation, tumor staging and prognostic factors.
4. Oncogenes.
5. Carcinogenicity.
6. Propagation and dissemination of neoplasias.
7. Tumor effects on the host (local and systemic)
8. Laboratory diagnosis of cancer (histological and cytological methods, immunohistochemistry, molecular diagnosis, flow cytometry, tumor markers).

### **Bibliographic References:**

KUMAR, ABBAS, FAUSTO. Robbins and Contran Pathologic Bases of Disease. Elsevier, 7th. ed. 2004.

BRASILEIRO FILHO, G. BOGLIOLO Patologia Geral. 2004, 3<sup>a</sup>. ed. Guanabara Koogan. Carmeliet P. Mechanisms of Angiogenesis and arteriogenesis. Nature Medicine 6(3): 389-395, 2000 .

Various scientific articles relevant to the topics under discussion