

66152 - Immune system and cancer. Tumor microenvironment

Teaching Plan Information

Academic year: 2024/25

Subject: 66152 - Immune system and cancer. Tumor microenvironment

Faculty / School: 104 - Facultad de Medicina

Degree: 637 - Masters degree in Tumor Immunology and Cancer Immunotherapy

ECTS: 6.0

Year: 1

Semester: First semester

Subject type: Compulsory

Module:

1. General information

This is a basic compulsory subject of the master's program. The general objective of the subject is to provide the student with the fundamental knowledge about the physiological immune response against cancer and how tumours develop mechanisms to escape immune surveillance. In addition, a historical perspective will be given on how thinking in this field has evolved.

2. Learning results

The student, in order to pass this subject, must demonstrate the following results:

- Use and understanding of basic terminology used in immunology and oncology.
- Understanding of the main characteristics of the immune response against tumours.
- Understanding the immunosuppressive nature of the tumour microenvironment and its multiple mechanisms.

3. Syllabus

1. History of the theory of anti-tumour immunosurveillance.
2. Activation of T lymphocytes against tumour antigens.
3. Activation of NK cells against tumours.
4. Theory of tumour immunoediting.
5. Tumour antigens
6. Mechanisms of evasion of the immune response by tumours.
7. Immune "checkpoints" and their effect on tumour escape
8. Tumour microenvironment. I. Regulatory T cells
9. Tumour microenvironment. II. Myeloid suppressor cells
10. Tumour microenvironment. III. Other immunosuppressive mechanisms

4. Academic activities

- Participative master classes. Acquisition of basic knowledge through participative lectures. 3 ECTS.
- Preparation of problems and exercises by students to be solved in the classroom. 1 ECTS.
- Presentation and exposition of a work by the students in a seminar. 2 ECTS

The program offered to the student to achieve the expected results includes, in addition to the theoretical classes, the preparation of problems and exercises. Problems and exercises are solved by students in the classroom. Problems and exercises will be available in the *Anillo Digital Docente* prior to the start of classes.

5. Assessment system

The student must demonstrate achievement of the intended learning results through the following assessment activities:

- Practical problem solving: 25% of the grade
- Seminars to be presented by the students: 50% of the grade
- Active participation in master classes: 25% of the grade.

6. Sustainable Development Goals

- 3 - Good Health & Well-Being
- 4 - Quality Education
- 8 - Decent Work and Economic Growth