

Academic Year/course: 2022/23

66152 - Immune system and cancer. Tumor microenvironment

Syllabus Information

Academic Year: 2022/23

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

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

Training activity 1: Interactive master classes. Acquisition of basic knowledge through interactive master classes. 3 ECTS. The classes will be carried out by means of ?Power Point? presentations and debate. Students will have the presentations before classes begin through the University's Digital Teaching Ring. The presentations will include direct links to web pages that offer teaching material related to the topic that is being presented, animations, short teaching videos, etc. In this sense, the recommended books have very suitable associated web pages.

Training activity 2: Preparation of problems and exercises by students and resolution in the classroom. 1 ECTS. The problems and exercises will be available before classes start in the Digital Teaching Ring.

Type 3 training activity. Presentation and exposition of a work in the form of a seminar by the students. 2 ECTS

4.2. Learning tasks

The program offered to the student to help him achieve the expected results includes, in addition to the theoretical classes, the preparation of problems and exercises. The problems and exercises are solved by the students in the classroom. The problems and exercises will be available before classes start in the Digital Teaching Ring.

4.3. Syllabus

1. History of the theory of anti-tumor immunosurveillance.
2. Antitumor immune response. Activation of T lymphocytes against tumor antigens.
3. Antitumor immune response. Role and activation of NK cells
4. Theory of tumor immunoediting. Elimination, balance and escape.
5. Tumor antigens
6. General mechanisms of evasion of the immune response by tumors.
7. Regulation of the immune response by immune "checkpoints" and effect on tumor escape
8. Tumor microenvironment. I. Tregs, origin and molecular mechanisms of action

9. Tumor microenvironment. II. Myeloid suppressor cells (MDSC), molecular mechanisms of action.
10. Tumor microenvironment. III. Other immunosuppressive mechanisms

4.4. Course planning and calendar

The period of theoretical classes and problems will coincide with the officially established one.

When they become available, they will be available at: <https://medicina.unizar.es/masterinmunologia>

The calendar will be established in coordination with the rest of the subjects at the beginning of the course. For those students enrolled, the hours and dates of theoretical classes will be made public through the ADD in moodle and in the moodle of the subject.

The subject will be taught in the first semester, approximately between October 24 and December 3.

4.5. Bibliography and recommended resources

- Inmunología Tumoral e Inmunoterapia del Cáncer/ edited by Antonio Antón, Alberto Anel, Luis Martínez Lostao, Julián Pardo y Roberto Pazo. Amazing Books. 2018.

- Cancer Immunotherapy. Principles an practice / edited by Lisa H. Butterfield, Howard L. Kaufman y Franceco M. Marincola. SITC/Demos Medical. 2nd edition. 2021.

- Kindt, Thomas J.. Inmunología de Kuby / Thomas J. Kindt, Richard A. Goldsby , Barbara A. Osborne ; traducción, Roberto Palacios Martínez . 6ª ed. México D. F. ; Madrid [etc.] : McGraw-Hill Interamericana, cop. 2007 [7ª edición en acceso electrónico] @libro -