

# IMMUNOTHERAPY OF CANCER AND IMMUNE-BASED DISEASES

## Degree in Medicine

CURSO 2021-22

**Code:** 805028

**Módulo 6:** Complementary Teaching

**Content:** Immunotherapy

**Status:** Optative

**Target students:** Medicine degree 2º to 6º

**Department:** Immunology, Ophthalmology and ENT

**Crédits:** 3 ECTS

**Prerequisites:** Immunology subject.

**Semester:** Second

**Calendar:** February to May

**Time:** 1 day per week (3,30-5,00 h. pm)

**Site:** School of Medicine

**Number of students:** 20

**Group:** unique

**Language:** English

## PROFESSORS

### Responsible Professors

*Carbone Campoverde, Javier, M.D. (Ph.D.)*

Immunology, Ophthalmology and ENT Department

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### Professors

Carbone Campoverde, Javier

Cubero, Francisco Javier

Gil, Juana

Nevzorova, Yulia A.

Sánchez Mateos, Paloma

Sarmiento Marchese Elizabeth

## OBJECTIVES

To teach the students basic concepts and skills allowing to:

- Know and understand the bases of immunotherapy of Cancer and Immune-Based Diseases.
- Know and understand the most important modalities of Immunotherapy in Cancer and Distinct Immune-Based Diseases.
- Know how to indicate and monitor immunotherapies in selected immune based diseases.

## COMPETENCES

Those related with the acquisition of skills.

**General Competences:** CG.01 to CG.37.

**Specific Competences:** CEM6.01, 6.02, 6.03, 6.04 y 6.05.

## METHODOLOGY

**THEORY** Presentation of information to understand the basic concepts in immunotherapy. Discussion. See programme below.

**PRACTICE.** Discussion of practical clinical cases of application of selected immunotherapies. The resolution of cases will target students seeking general, analyze and synthesize information. Preparation of oral presentation and written report. Type: Autonomous

Interpretation of data from a scientific publication or from a clinical case.

## PROGRAMME

Cells, cellular receptors, genes, proteins in immunotherapy.

Basis of immunotherapy of cancer.

*Check-points* inhibition in cancer immunotherapy.

Cellular immunotherapy. Tolerogenic, anti-infection.

Immunotherapy in immunodeficiency.

Immunotherapy of Autoinflammatory Diseases

Gene therapy in immunodeficiency.

Immunotherapy in transplantation.

Immunotherapy in autoimmune diseases.

Immunotherapy in allergy

Immunotherapy in infectious disease. SARS CoV-2

Liver tumorigenesis and immunotherapy

Immunotherapy in Human Reproduction.

Immunotherapy in cancer. CAR-T and other.

The clinical trial: How to evaluate immunotherapeutic protocols.

## EVALUATION

The academic efficiency and final score of the course will be computed according to the following percentages:

Part A. Active participation and critical ability of the student during classes. Clinical Case: Students will present orally a work, which will be selected among the different topics imparted during lessons. The work, clarity of the presentation and answers to questions by the professor and other students will be evaluated: **75%**.

Part B. Written assessment: **25%**.

**Measures to apply in the event of breaking examination regulations, whether the nature of these be deliberate or accidental:**

Violation of these regulations result in failure to evaluate exam, an oral exam can be accepted as proof of knowledge on the subject. If evidence shows intent of misconduct under exam conditions, this will be treated as a severe examination behaviour and special measures will be taken.

## BIBLIOGRAPHY

### Books

- **Abbas, Abul K.** Cellular and Molecular Immunology 8th Edition. Saunders 2015. ISBN: 9780323316149.
- **Carbone, Javier.** Inmunoterapia de Enfermedades de Base Inmunológica, 1ª edición, Ed. Elsevier España, 2018. ISBN-10: 8490228868. ISBN-13: 978-8490228869.
- **Prendergast G, Jaffee E.** Cancer Immunotherapy. 2ª ed. eBook ISBN: 9780123946331. Editorial Academic Press, 2013.
- **Regueiro, Jose Ramón:** "Inmunología. Biología y Patología del Sistema Inmunitario", 4ª edición, Ed. Médica Panamericana, 2011.
- **Rich, Robert R.** Clinical Immunology, Principles and Practice. 5th Edition. 2018. Elsevier Title. ISBN: 978-0-7020-6896-6.
- **Manel, Juan.** Inmunoterapia del Cáncer. Realidades y perspectivas. Editorial S.A. Elsevier ESPAÑA. 2016 ISBN: 9788490228876
- **Sánchez Ramón, Silvia.** Inmunodeficiencias Congénitas y adquiridas. Marbán. ISBN: 9788471019271.
- **Spickett, Gavin.** Oxford Handbook of Clinical Immunology and Allergy (Oxford Medical Handbooks 2013. ISBN-10: 0199603243. ISBN-13: 978-0199603244.

### Other Resources

- Bibliography about the topics will be provided in the Virtual classroom.
- International Society for Heart and Lung Transplantation. [www.ishlt.org](http://www.ishlt.org).
- ESID. European Society for Immunodeficiencies. <http://esid.org>.
- National Cancer Institute (USA): [www.cancer.gov/research/areas/treatment/immunotherapy-using-immune-system#1](http://www.cancer.gov/research/areas/treatment/immunotherapy-using-immune-system#1).
- European Academy of Allergy and Clinical Immunology (EAACI): [www.eaaci.org](http://www.eaaci.org)
- Clinical trials: <https://clinicaltrials.gov/>
- Online Mendelian Inheritance in Man (OMIM) [www.omim.org](http://www.omim.org)