



INSTITUTO DE HIGIENE E
MEDICINA TROPICAL
DESDE 1902

IMMUNOLOGY

CU characterization:

CU name:

Clinical Pathology and Immunology of Tropical Infectious Diseases

Scientific area acronym:

I

Duration:

Semiannual

Working hours:

112 h

Contact hours:

33 h

ECTS:

4

Observations:

T: 14.5 h

S: 4 h

OT: 11 h

A: 3.5 h

Teacher in charge and respective teaching load in the CU:

Professor - Gabriela Santos-Gomes – 0.73 h

Other teachers and respective teaching load in the CU:

Ana Armada 0.22

Henrique Silveira 0.13

Claudia Moreno 0.22

Filomena Pereira 0.22

Convidadas (Teresa Baptista Fernandes & Susana Matos) – 0.22

Intended learning outcomes (knowledge, skills and competences to be developed by the students):

At the end of the course unit students should be able to:



- 1-Describe the structure and functioning of the immune system and the immunopathogenesis of infectious processes;
- 2- Understand the fundamentals of microbiological, parasitological, and molecular methods;
- 3- Describe the guidelines for collecting, transporting, and maintaining biological samples and specimens;
- 4- Understand the principles of use and the characteristics of laboratory techniques;
- 5- Interpret the evaluation parameters of diagnostic tests;
- 6- Describe the characteristics of a laboratory for diagnosing infectious diseases in a tropical environment.

Translated with DeepL.com (free version) Syllabus:

- 1- The constitution and functioning of the immune system (IS). Antigen recognition. Innate and acquired immunity. Lymphocyte differentiation and activation. Humoral response. Immunoglobulins. Regulation of the effector response. Immune homeostasis;
- 2- Immunopathogenesis of infectious processes;
- 3- Microbiological, parasitological and molecular methodologies;
- 4- Laboratory diagnosis of tropical infectious diseases. Rules for collecting, transporting, and maintaining clinical samples and biological specimens. Use of microscopes and other laboratory equipment. Multiparametric flow cytometry. Validation of diagnostic tests;
- 5- Structure of a diagnostic laboratory.

Evidence of the syllabus coherence with the CU intended learning outcomes:

The contents of this curricular unit aim to adapt learning about the response of the mammalian immune system to infection by pathogens through the composition and functioning of the immune system. It seeks to make the immune response to infectious agents compatible with available laboratory diagnostic methodologies, including rapid tests, technical equipment, and human resources training.

Teaching methodologies (including assessment)

- Lectures in theoretical classes
- Tutorial support available
- *Seminars given by students*

Assessment method:

The final assessment results from the weighted sum of the marks obtained in the continuous evaluation carried out in class related to spontaneous or prompted interventions by the students, performance in the seminars, and the final exam. A mark of 10 or more, expressed on a scale of 0-20, determines approval of the curricular unit.

Grade improvement: Through a written exam consisting of 7-10 open-ended questions with a progressive difficulty level.

Evidence of the teaching methodologies coherence with the CU intended learning outcomes:

Lectures aim to provide basic concepts and promote the systematization of acquired knowledge associated with free student intervention and small discussions. Seminars encourage student



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autonomy in the search for complementary information, its structuring, and oral presentation, followed by discussion, representing a formative assessment moment. The final summative exam evaluates the level of knowledge attained and makes it possible to understand the extent to which the learning objectives have been met.

References for consultation / mandatory existence:

Experimental and review scientific articles available (open access) in the biomedical literature database