



INSTITUTO DE HIGIENE E
MEDICINA TROPICAL
DESDE 1902

FUNDAMENTALS OF PARASITIC IMMUNOLOGY

CU characterization:

CU name:

Fundamentals of Parasitic Immunology

Scientific area acronym:

B

Duration:

Semiannual

Working hours:

98

Contact hours:

32

ECTS:

3

Observations:

In this academic year, the classes of this UC were distributed as follows:

T: 9 hours; P: 4 hours; S: 2 hours; OT: 12 hours; Evaluation: 2 hours

Teacher in charge and respective teaching load in the CU:

Gabriela Santos-Gomes – 15.5 hours

Other teachers and respective teaching load in the CU:

Silvana Belo - 9 hours

Ana Armada - 9 hours

Henrique Silveira - 8,5 hours

Armanda Rodrigues - 9 hours

Pedro Ferreira - 3 hours

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

After this unit, students should be able to:

1. Know the constitution and the functional activity of the mammalian immune system.
2. Understanding the interactions that take place between the different elements that make up the immune system and parasites.



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

3. To recognize the invasion strategies, evasion and subversion of the immune system of parasitic activity.
In addition, it is intended that students develop the following general skills:
4. Working methods in the laboratory.
5. To know how to carry out experimental designs and select the most appropriate analytical methodologies (in vivo, in vitro or in silico) for the proposed problems.
6. Transmit and discuss scientific information or facts in a clear and accurate way.

Syllabus:

- I. Lecture contents
Immune system of mammals. The complement system. Classical and alternative pathways. Models of parasites activation. Infection and inflammation. Chemokines. Leukocyte recruitment.
Acquired immune response. Processing, presentation and recognition of antigens. Major histocompatibility complex. Cellular immunity. T lymphocyte. Cytokines. Humoral immunity. Antigenic selection. B. Lymphocyte specific antibody production. Orchestration of the immune response. Macrophages / lymphocytes cross talk.
- II. Practical contents:
Morphological identification of different cell types
Interpretation of dot plots of flow cytometric
Immunoassays

Teaching methodologies (including assessment):

Lectures.

Laboratory practical classes.

Project.

The evaluation of learning outcomes will take into account:

1. The performance in the preparation and presentation of the project (seminar)
3. The level of success in the final examination

Rating equal to or greater than 10 on a scale of 020 provides the approval of the present curricular unit.

References for consultation / mandatory existence:

- Immunology. 7th edition. Roitt I., Brostoff J., Male D. (Ed.), Mosby, London, 544 pg.
- The cytokine handbook. 3rd edition. Thomson A. Academic Press, London, 1017 pg.
- Advanced immunology. 2nd edition. Male D, Champion B, Cooke A, Owen M., Grower, London.
- Scientific papers provided in each lecture.