



INSTITUTO DE HIGIENE E
MEDICINA TROPICAL
DESDE 1902

Immunity and Infection

CU characterization:

CU name:

Curricular Unit Immunity and Infection

Scientific area acronym:

XXXX

Duration:

Semiannual

Working hours:

56 hours

Contact hours:

20 hours

ECTS:

2

Observations:

Observations

Teacher in charge and respective teaching load in the CU:

Professor Catarina Gregório Martins – 14 hours

Other teachers and respective teaching load in the CU:

Professor Luís Miguel Borrego - 4 hours

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

- Understanding the Immune system as a whole;
- Knowing the innate immune response in the anti-infection defense, the T cell-mediated immune response and the humoral response;
- Understanding the mechanisms involved in regulating the immune response;
- Knowing the major histocompatibility complex;
- Understanding the different immunization processes;
- Realizing the concepts of infection and disease, infection patterns and mechanisms of pathogenicity;



- Recognizing the evasion mechanisms of microorganisms to the Immune System;
- Understanding the challenges of HIV Infection for the Immune System.

Syllabus:

- The immune system as a whole;
- The innate immune response in anti-infection defenses;
- Mechanisms of antigen presentation and Major histocompatibility complex;
- Maturation of T and B cells;
- Immune response mediated by T cells;
- Humoral response;
- Regulation of the immune response;
- Immunization;
- Immunological mechanisms in infectious diseases and evasion strategies of microorganisms;
- HIV infection and the immune system;
- The immune response in COVID-19.

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

The program of this Curricular Unit covers a diversity of Immunology topics, particularly applied to the infectious context, which will allow students to achieve the learning objectives mentioned above, namely knowing and understanding the general principles of the immune response, as well as the mechanisms involved in the relationship host-microorganism.

Thus, given that this Curricular Unit aims the student to understand and apply these concepts, it is established in a set of classes in which basic themes of the immune response are initially developed and deepened, with the final classes dedicated to their integration in the specific approach of interactions between various microorganisms and the host's immune system. The theoretical teaching taught in this Unit is adequate to achieve these objectives, with the occasional use of digital platforms (i.e., Office Forms, Padlet).

Teaching methodologies (including assessment):

The lectures will be taught by teachers of the Curricular Unit, depending on their respective specializations. Teachers will present the lectures as expositive classes, addressing topics considered fundamental, and providing the bases to guide students in their individual study.

Student´s evaluation will be carried out using a written final exam, on the QuizOne® platform. The test will consist of 40 multiple choice questions, with 5 possible answers, only one of which will be the correct answer. The test will last 60 minutes, and the classification will correspond to 100% of the final grade. The student will be excluded if the final classification is lower than 9.5.



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

Since this Unit aims at understanding the general principles of immune response and the mechanisms involved in host-parasite relationship, the theoretical lectures given in this Unit are adequate for achieving the objectives.

References for consultation / mandatory existence:

- Abbas, A., Lichtman, A.H., Pillai, S. (2021) 10th ed. Cellular and Molecular Immunology. Elsevier. ISBN 9780323479783.
- Arosa, F., Caetano, E., Pacheco, F. (2012) 2a ed. Fundamentos de Imunologia. Lidel. ISBN 978-972-757-856-6.
- Murphy, K., Weaver, C., Berg, L. (2022) 10th ed. Janeway's Immunobiology. W. W. Norton & Company, Inc. ISBN: 978-0-393-88489-0.
- Punt, J., Stranford, S., Jones, P., Owen, J. (2019) 8th ed. Kuby Immunology W.H. Freeman and Company. ISBN: 978 1 464 18978 4.
- Sompayrac, LM. (2019) 6th edition. How the Immune System Works (The How it Works Series). Wiley-Blackwell. ISBN 978-1-119-54212-4.