MALARIA

CU characterization:

CU name:
Malaria

Scientific area acronym:
PM

Duration:
Semestral

Working hours:
60

Contact hours:
28

ECTS:
2

Observations:
Optional CU

Teacher in charge and respective teaching load in the CU:
Ana Paula Arez – 9 hours

Other teachers and respective teaching load in the CU:
Carla Sousa – 6 hours
Fátima Nogueira – 8 hours
Henrique Silveira – 7 hours
João Pinto – 1 hour
Pedro Cravo – 6 hours
Joana Marques – 3 hours
Inês Morais – 3 hours

Intended learning outcomes (knowledge, skills and competences to be developed by the students):
After this unit, students should be able to:

1. To know the malaria life cycle – parasite and hosts – human and mosquito vector.

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2. To improve knowledge about interactions between the parasite and the two hosts.

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

3. To know different areas of interest in the study of malaria and its relevance.
4. To know and implement some basic methodologies for the experimental study of malaria, following the main phases of the parasite life cycle.

Syllabus:

I. Review of malaria basic concepts;
II. Aspects of the three components of malaria life cycle:
Parasite: resistance to antimalarial drugs ;
Interaction host-parasite
human – importance of the host cell and its metabolic pathways on the parasite development;
mosquito – response to the infection and use of experimental murine model.
III. Approach to the main means of preventing and treatment of malaria from a perspective of establishing control strategies and tools.

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

In the first phase of the Curricular Unit (CU), a revision on the main concepts of this parasitic disease, already gathered in previous CUs, in order to homogenize the students' background for the following thematic is done.
In a second phase of the CU, some aspects were selected as considered as more central and update regarding the knowledge and research on malaria and related to each life cycle biological component.
In a third phase, the malaria's impact and control in endemic areas is discussed as one of the more relevant areas in global health.
In all these parts, several experimental methodologies adequate to the different questions are performed.
Viewing this, and as required in the objectives, students end the CU knowing the life cycle and interactions between its biological entities as well as the main and the present state areas of research in malaria.

Teaching methodologies (including assessment):

The UC is organized into 4 introductory theoretical classes on the various topics covered, 2 theoretical-practical classes, 3 classes with laboratory practice, 2 tutorial classes and 1 written theoretical exam.
The assessment consists of a theoretical exam. The exam consists of 25 multiple-choice questions (0.5 points/question) and five medium development questions (addressing topics from practical classes, 1.5 points/question) and classified on a scale of 0-20 values.

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Approval is gathered if minimum attendance is accomplished and exam final classification is equal or above 10.
The evaluation on a 2nd phase, for students who fail or require an improvement of the examination note, is also done by an written exam with 25 multiple-choice questions five medium-length questions.
The evaluation of the CU as well as of its teachers is carried out through the evaluation system routinely used at IHMT.

Evidence of the teaching methodologies coherence with the CU intended learning outcomes:
Theoretical classes centered on a more formal expository learning process enable students to acquire a set of skills, both generic and specific, which allow a global and multidisciplinary approach to the themes dealt with in the following classes. Theoretical-practical and laboratory practice classes favor the acquisition of a growing degree of autonomy by students, starting to be able to plan, conceive, adapt and carry out laboratory research protocols, aiming at obtaining answers to previously formulated scientific hypotheses.

References for consultation / mandatory existence:
Slides shown at classes, the support material, laboratorial protocols, etc are available to students through *moodle* platform and/or directly by teachers. A specific list of bibliographic references is recommended for each class, being this information previously available together with summaries and contents of the classes.