



### CU Human cytomegalovirus infections

CU characterization:

*CU name:* Human cytomegalovirus infections

Scientific area acronym: XXXX

*Duration:* Semiannual

Working hours: 168 Hours

Contact hours:

T 16 TP PL 16 S E OT 1 T (Theoretical), TP (Theoretical-practical), PL (Laboratory Practice), S (Seminar), E(Internship).

ECTS:

6

**Observations:** Observations

*Teacher in charge and respective teaching load in the CU:* Paulo Jorge Pereira Cruz Paixão – 10 hours

Other teachers and respective teaching load in the CU: Maria de Jesus Chasqueira – 22 hours Augusta Marques – 16 hours Lúcia Rodrigues – 2 hours Bernardo Pereira – 8 hours Luísa Martins – 2 hours Luísa Monteiro – 2 hours Teresa Baptista Fernandes – 2 hours Perpetua Gomes – 2 hours



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

- Understand the epidemiology, main clinical aspects, diagnosis and treatment of CMV infections;

- To know how to perform the main steps of the diagnosis of these infections;
- To know the main steps of genotypic detection of antiviral resistance.

#### Syllabus:

- Introduction to the diagnosis of CMV infections. Application of different techniques depending on the host and the clinical context (immunocompetent, immunocompromised, pregnant, newborn);

- Real-time PCR (general concepts and specific application for CMV);
- Discussion of clinical and laboratory cases;
- Culture: Observation of the characteristic cytopathogenic effects;
- PCR (techniquel "inhouse"): extraction, amplification and detection.
- Realtime PCR: extraction, amplification, detection;
- Genotypic detection of ganciclovir resistance.

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

The program provides the tools that will enable students to achieve its objectives, including the general principles of epidemiology and associated clinical (lectures) and the different steps of the laboratory diagnosis (laboratory practical classes).

# Teaching methodologies (including assessment):

The lectures are taught by teachers of curricular unit, depending on the respective specializations. The form of lecture, in which they will address issues considered essential by providing data to guide students to individual study.

Laboratory practical classes will enable all students to practice the different methodologies used in the diagnosis.

Student assessment – Written examination finally multiple choice test of 20 questions (duration 30 minutes) 50%.

Oral presentation and discussion of topics by groups of two students. Themes are distributed in 1st class and the presentation of each theme has a duration of 20 minutes 50%.

The student will be excluded if the exam grade is less than 9.5.

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

The objectives of understanding the epidemiology, main clinical aspects and treatment of CMV infections will be taught during the lectures.

The diagnosis will require contact with the different laboratory methodologies, which will be guaranteed by practical classes in the laboratory.



*References for consultation / mandatory existence:* 

- Paulo Paixão, Sofia Almeida, Paula A. Videira, Dário Ligeiro, Teresa Marques.
  "Screening of congenital cytomegalovirus infection by a real time PCR in urine pools". European Journal of Pediatrics, 2012; 171 (1): 125129.
- Kotton CN, Kumar D, Caliendo AM, Asberg A, Chou S, DanzigerIsakov L, Humar A. Updated international consensus guidelines on the management of cytomegalovirus in solidorgan transplantation. Transplantation. 2013;96(4):33360.
- - Revello MG, Gerna G. Pathogenesis and prenatal diagnosis of human cytomegalovirus infection. J Clin Virol. 2004;29(2):7183.