SYLLABUS DEL CORSO

Microbiologia Clinica

2324-2-I0302D009

Aims

To provide the student with the basic knowledge of Clinical Microbiology and Systematic Microbiology with the general presentation of microorganisms and diagnostic techniques to be applied in the Biomedical Laboratory for the diagnosis of infectious diseases.

To provide the knowledge of main routes of transmission of zoonotic diseases and of analytical methods for the diagnosis in biomedical and veterinary laboratories.

Contents

Student's skills:

- Classification and identification of bacteria.
- Basic knowledge of infectious diseases.
- Gram positive and gram negative bacteria. Aerobe and anaerobe bacteria.
- Antibiograms and their interpretation according to EUCAST.
- Diagnosis of bacterial, viral, parasitical, fungal infections.
- Classification and identification of bacteria.
- Basic knowledge of infectious diseases.
- Gram positive and gram negative bacteria. Aerobe and anaerobe bacteria.
- Collection, transportation and treatment of biological samples.
- Techniques of culture, identification, susceptibility testing interpretation.
- Basics of phenotypic and microbial genotypic characterization techniques.
- Microbial biobanking.
- Quality controls: CQI and VEQ in Clinical Microbiology lab.
- Alert study, infectious diseases and nosocomial infections.
- The biological risk in Microbiology lab.

- Study of pathogens, in human and veterinary medicine, applied to laboratory diagnosis.
- Definition and classification of zoonoses, main diffusion routes. Role of the laboratory technician in the diagnosis of zoonosis.
- Diagnosis of viral, parasitic or mycotic zoonoses, in relation to different biological samples.

Detailed program

Classification and identification of bacteria.

Basic knowledge of infectious diseases.

Main Gram-positive and Gram-negative pathogens. Aerobe and anaerobe bacteria. Mycobacteria. Fungal pathogens. Main viral pathogens.

Collection, transportation and treatment of biological samples. Techniques of culture, identification, interpretation.

Diagnosis of bacterial, viral, parasitical, fungal infections.

Antibiograms and their interpretation according to EUCAST.

Quality controls: CQI and VEQ in Clinical Microbiology lab.

Microbial Biobanking.

The biological risk in Microbiology lab.

Methods for the diagnosis of infectious diseases in the biomedical and veterinary laboratories.

Definition and classification of zoonoses, main diffusion routes.

Role of the laboratory technician in the diagnosis of zoonosis.

Prerequisites

Teaching form

Lectures and exercises

Textbook and teaching resource

Eudes Lanciotti - Microbiologia Clinica - V edizione - CEA Casa Editrice Ambrosiana

E. W.Koneman, S.D.Allen, W.M.Janda, Introduzione alla Microbiologia, Antonio Delfino Editore.

Antonelli, Clementi, Pozzi, Rossolini - Principi di Microbiologia Medica - IV edizione - CEA Casa Editrice Ambrosiana

SOPs consultabili sul sito della Health Protection Agency, all'indirizzo:
http://www.hpa-standardmethods.org.uk/pdf_sops.asp

AMCLI Percorsi diagnostici

EUCAST www.eucast.org

M.Scaglia, S.Gatti, E.G. Rondanelli PARASSITI E PARASSITOSI UMANE Selecta Medica

F.Bernieri, D.Crotti, D.Galli, A.Raglio MANUALE ILLUSTRATO DI DIAGNOSTICA PARASSITOLOGICA Bio-Dev

I.De Carneri PARASSITOLOGIA GENERALE E UMANA Casa Editrice Ambrosiana

Semester

First semester

Assessment method

The final mark, based on the weighted average score obtained by the student in the various assessments, is set at the end of the oral interview of the Clinical Microbiology module with the student.

Office hours

By appointement

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING