

Molecular Genetic Diagnostic

Code: 101973
ECTS Credits: 6

Degree	Type	Year	Semester
2500890 Genetics	OB	3	2

Contact

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Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: No
Some groups entirely in Spanish: No

Teachers

Noel Xamena López
Massimo Bogliolo

Prerequisites

It would be appropriate to have passed and achieved the competences corresponding to the subjects: Molecular biology of eukaryotes, Cytogenetics and Human Genetics. A part of the seminars will be conducted in English and therefore it would be better for students to have a minimum level of knowledge of English in order to continue the course.

Objectives and Contextualisation

The main objectives of this subject are:

- Understand and be able to describe the main molecular analysis techniques usually used in the genetic diagnosis.
- Select with critical sense the most appropriate diagnostic techniques in each case.
- Be able to propose a project for molecular genetic diagnosis in the field of health.

Content

Theory

Causes of phenotypic changes
Hybridization of nucleic acids
Blotting techniques
Molecular cytogenetic techniques
Amplifiers for PCR
Analysis of amplification and PCR products
Quantitative PCR
General techniques of SNP detection
Use of microarrays

New sequencing techniques

External seminars

It will consist of seminars given by specialists on the molecular genetic diagnosis of various genetic specific diseases or groups of diseases, which includes specific clinical cases.

Seminars given by the students

The content will be agreed with the responsible professor.