GEMO2110 Molecular and medical genetics

[30h] 2 credits

This course is taught in the 1st semester

Teacher(s): Christine Dumoulin
Language: French
Level: Second cycle

Aims

Illustrate the impact of molecular biology on our understanding of hereditary and acquired human diseases. Technical aspects are left out, as they are dealt with in other courses.

Main themes

1. Basic concepts reminder: the eukaryotic genome and the regulation of gene expression.
2. Methodological concepts : principles of genotypic analyses, restriction polymorphisms, mapping the human genome, inverse genetics, genotypic diagnostics.
3. Molecular biology and diseases. Molecular genetics of a few constitutive diseases, diseases caused by exogenous DNA, filiation analysis through molecular pedigree, gene therapy, industrial molecular biology.

Content and teaching methods

1. Basis concepts.
2. Methods.
3. Molecular genetics of some constitutive diseases.
4. Diseases caused by exogenous DNA.
5. Molecular pedigree.
6. Gene therapy.
7. Industrial molecular biology

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Lecturing.
Evaluation through either a personal essay on one of the topics included in the lectures, or a conventional written examination.

Programmes in which this activity is taught

NUT2	Licence en sciences biomédicales (nutrition humaine)
SBIM3DS	Diplôme d'études spécialisées en sciences biomédicales
SBIM3DS/TE	Diplôme d'études spécialisées en sciences biomédicales (toxicologie expérimentale)

Other credits in programs

CHIM22	Deuxième licence en sciences chimiques		
MD3DA/BI	Diplôme d'études approfondies en sciences de la santé (sciences biomédicales)		Mandatory
MED12BA	Deuxième année de bachelier en médecine	(2 credits)	Mandatory
SBIM32DS/TE	Deuxième année du diplôme d'études spécialisées en sciences biomédicales (toxicologie expérimentale)	(2 credits)	