PHARMACOGENETICS AND PERSONALIZED MEDICINE (3 CFU)

Educational Goals

Deepening of the study on human genome variability at the molecular level. Ability to use genetic, bioinformatics and biochemical approaches to address the concept of polygenic risk and genetic susceptibility.

Learning Outcomes

Ability to evaluate theoretical and experimental issues and strategies for potential applications to personalized medicine.

Program:

- Variability of the human genome: characteristics of different polymorphic markers and methods of detection.
- Association analysis to identify polymorphic variants responsible for complex genetic traits.
- Pharmacogenetics: effects of individual variation in genes encoding drug-metabolizing enzymes, drug transporters, or drug targets.
- Personalized medicine: examples of genetic polymorphism responsible for drug response