

University of Naples Federico II (ITALY)

School of Medicine

ENGLISH COURSE IN MEDICINE AND SURGERY

ADE (Educational Elective Activity)

2nd year, academic year 2024-25

NEW FRONTIERS IN HUMAN AND MEDICAL GENETICS

Coordinator: Prof. Brunella Franco

European Credit Transfer and Accumulation System = 1

Educational contents of the course:

The course offers insights on aspects of Human and Medical Genetics of particular and topical relevance in order to provide to the student the tools to keep up with the advances of genetics in the biomedical field.

In particular, the following topics will be discussed:

- a) High-throughput sequencing (NGS). The results of the genome project and the availability of high-throughput sequencing techniques have had important effects on medicine. During the ADE the use of NGS in the medical practice will be investigated with practical examples of the use of the technique in the diagnostic field.
- b) New therapeutic approaches for genetic diseases: the example of ocular diseases, inherited metabolic disorders and cystic fibrosis.
- c) Genome editing in medicine: opportunities and risks.

Faculty	Position	Department	Scientific field	Hours	e-mail
Capasso Mario	Associate professor	Molecular Medicine and Biotechnological application	MED/03	2	mario.capasso@unina.it
Surace Enrico Maria	Associate professor	Translational Medical Sciences	MED/03	2	enricomaria.surace@unina.it
Giancarlo Parenti	Full Professor	Translational Medical Sciences	MED/38	2	giancarlo.parenti@unina.it
Napolitano Gennaro	Researcher	Translational Medical Sciences	MED/03	2	gennaro.napolitano2@unina.it
Luis J V Galietta	Associate professor	Translational Medical Sciences	MED/03	2	luisjuanvicente.galietta@unina.it

First meeting: April 22, 2025, at 10.00 AM, Building 6, room D

- **Luis JV Galietta:** Pharmacological approaches to genetic diseases: The example of cystic fibrosis 22/04/25 10.00-12.00
- **Gennaro Napolitano:** Genome editing 23/4/25 10.00-12.00
- **Mario Capasso:** The impact of NGS in human genetics 24/04/25 10-12
- **Giancarlo Parenti:** Treating inherited metabolic diseases 28/04/25 10.00-12.00
- **Enrico Maria Surace:** New avenues in the treatment of genetic diseases: the examples of eye inherited disorders 29/4/25 10.00-12.00