



MELECULAR NEUROBIOLOGY AND

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	NEUROBIOLOGY
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	1st semester (01/10/2021 - 14/01/2022)
ECTS	6
Language	Italian
Prerequisites	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Learning outcomes	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Course contents	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Teaching methods	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Reccomended or required readings	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Assessment methods	This course is composed of two separate sub-courses. Please look at dedicated syllabus pages for details.
Further information	Final grade will be calculated by averaging the grades of the Molecular Neurobiology and the Neuropathology Complements sub-courses. Cum laude will be assigned only if obtained in both sub-courses.

The activity is split

508029 - NEUROPATHOLOGY

508028 - MOLECULAR NEUROBIOLOGY



NEUROPATHOLOGY

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	MED/26 (NEUROLOGY)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	NEUROBIOLOGY
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(01/10/2021 - 14/01/2022)
ECTS	3
Lesson hours	24 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	COMINCINI SERGIO - 3 ECTS
Prerequisites	Good knowledge in genetics and molecular biology as well as of related technologies
Learning outcomes	Knowledge of genetic and molecular mechanisms of major neuropathologies, with references to diagnosis and current therapies.
Course contents	Classical neuropathologies (Alzheimer, Parkinson, SLA, muscular dystrophy, Huntington) and conformational ones such as prionic disease (transmissible spongiform encephalopathies) will be analyzed.
Teaching methods	Direct lessons with slides and scientific movies. Slides are provided at the beginning of the course
Reccomended or required readings	None

	Scientific papers and web links will be suggested
Assessment methods	Oral examination. The final grade is determined by the average of the two modules that make up the course.
Further information	Reference teachers Proff. Federico Forneris, Sergio Comincini
Sustainable development goals - Agenda 2030	The goals



MOLECULAR NEUROBIOLOGY

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	BIO/11 (MOLECULAR BIOLOGY)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	NEUROBIOLOGY
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(01/10/2021 - 14/01/2022)
ECTS	3
Lesson hours	24 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	FORNERIS FEDERICO (titolare) - 3 ECTS
Prerequisites	Basic knowledge of biochemistry and protein structure, as well as mechanisms of signal transduction
Learning outcomes	The course provides a molecular overview of important macromolecular systems involved in CNS and PNS signal transduction, the methodological methods to achieve their characterization, plus a description of some important molecular mechanisms of receptor-drug interaction in the same molecular systems.
Course contents	<ol style="list-style-type: none">1. Recap of structural biology and biochemistry of molecular interactions2. Ion channels: structures, mechanisms, pharmacological targeting3. ECM: components and their structures, pharmaceutical targeting4. New approaches to molecular neurobiology

	dedicated softwares
Reccomended or required readings	N/A - Study materials will be provided during the course
Assessment methods	Oral Exam: presentation of a selected research article on course-related topics.
Further information	Final grade will be calculated by averaging the grades of the Molecular Neurobiology and the Neuropathology Complements sub-courses. Cum laude will be assigned only if obtained in both sub-courses.
Sustainable development goals - Agenda 2030	The goals