



UNIVERSITÀ DEGLI STUDI
DI GENOVA



ISTITUTO
ITALIANO DI
TECNOLOGIA

UNIVERSITY OF GENOVA
PHD COURSE IN
NEUROSCIENCE

SUMMER SCHOOL '24 PART II

September 23rd - September 27th
2024

Polo Didattico Biomedico (Ex Saiwa)
C.so Gastaldi 161, Genova
Edificio 2 - Monoblocco Chirurgico
Via Antonio De Toni 16, Genova

TUESDAY - SEPTEMBER 23RD

ROOM 3/4- GROUND FLOOR

NEURODEVELOPMENT DISORDERS & ASD: FROM MECHANISMS TO THERAPEUTIC STRATEGIES

Tutor : Anna Fassio, Laura Cancedda

09.00 - 10.15 - *From genetic testing to targeted disease management in pediatric epilepsies*

Prof. Pasquale Striano, DINOGMI, University of Genoa and Istituto G.Gaslini

10.30 - 11.30 - *Designing New Drugs for Neurodevelopmental Disorders: the long journey*

Dott. Laura Cancedda, Istituto Italiano di Tecnologia

DISCUSSION

Lunch Break

14.00-15.15 - *Exploring cerebellar role in autism spectrum disorders: insights from the IB2 KO mouse model*

Prof. Lisa Mapelli, Dipartimento di Scienze del Sistema Nervoso e del Comportamento, University of Pavia

15.30 - 16.30 - *2D and 3D Human Brain Models for Neurodevelopmental Disorder Research*

Dott. Bruno Sterlini, DIMES, University of Genoa

DISCUSSION

MONDAY - SEPTEMBER 24TH

ROOM 3/4 - GROUND FLOOR

MOVEMENT DISORDERS

Tutor : Laura Avanzino, Elisa Pelosin

09.00 - Welcome

09.30 - *The relationship between actions and emotions: behavioral and transcranial magnetic stimulation studies*

Prof. ssa Sara Borgomaneri, University of Bologna

11.15 - *The shared manifold of emotions and sensations. An embodied perspective*

Prof. Vittorio Gallese, University of Parma

Lunch Break

14.00 - *Emotional Dysfunctions in Parkinson's disease: the influence on motor control*

Dr.ssa Chiara Baiano, University of Campania "Luigi Vanvitelli"

15.45 - *The influence of Emotion on Motor Control in Parkinson's Disease: Something to be addressed in Rehabilitation*

Prof. Jorik Nonnekes, Radboud University Medical Center

WEDNESDAY - SEPTEMBER 25TH

ROOM 3/4 - GROUND FLOOR

EPILEPSY

Tutor : Flavio Villani, Pietro Baldelli

09.00 - 12.00 - *Clinical Aspects of Epilepsy*

Prof. Flavio Villani, Direttore U.O.C. Neurofisiopatologia, Centro Regionale per l'Epilessia e Centro Fisiopatologia del Sonno, presso IRCCS Ospedale Policlinico Universitario San Martino di Genova.

a. State of the art of diagnosis and treatment of epilepsy

Prof. Flavio Villani, Director Division of Clinical Neurophysiology and Epilepsy Center, IRCCS Policlinico San Martino

b. Precision medicine in rare and complex epilepsies

Dr..Sara Matricardi, Assistant Professor, University of Chieti

c. Developmental and epileptic encephalopathies: from diagnosis to the patient-centered management program

Dr. Antonella Riva (IRCCS Istituto G. Gaslini)

Lunch Break

14.00-17.00 - *Preclinical aspects of epilepsy*

Prof. Gabriele Lignani, Professor of Translational Neuroscience, Clinical & Experimental Epilepsy, UCL Queen Square Institute of Neurology - introduced by Prof. Pietro Baldelli

a. From bed to bench: how clinical knowledge informs new preclinical studies and back to the clinic.

b. Are Genetic Therapies for Epilepsy Ready for the Clinic?

Treating the Cause: 1) Gene Supplementation 2) Gene Modulation 3) Antisense Oligonucleotides and RNA Interference

Treating the Symptoms: 1) Neuropeptides 2) Engineered Channels 3) Endogenous Channels

THURSDAY - SEPTEMBER 26TH
ROOM 3/4 - GROUND FLOOR

NEUROTECHNOLOGIES

Tutor : Fabio Benfenati, Elisabetta Colombo

9:00-10:30 - Advanced neuroimaging for neurological disease: the example of Multiple Sclerosis

Dott. Daniele Boccia, Dipartimento di neuroscienze, riabilitazione, oftalmologia, genetica e scienze materno-infantili - DINOEMI, Università di Genova

Discussion - coffee break

11:00-12:30 - Bioinspired technologies for neuroregeneration: a focus on biomaterials

Dott. Gemma Palazzolo, Istituto Italiano di Tecnologia

Discussion- lunch break

14:00-15:30 - Nanotechnology and neuroprosthetics

Dott. Elisabetta Colombo, Istituto Italiano di Tecnologia

Discussion - coffee break

16:00-17:30 - Controlling cells with light: the power and promise of optogenetics

Dott. Dania Vecchia, Dipartimento di informatica, bioingegneria, robotica e ingegneria dei sistemi - DIBRIS, Università di Genova

Discussion - closing remarks

FRIDAY - SEPTEMBER 27TH
ROOM 02 - MONOBLOCCO CHIRURGICO

SCIENTIFIC WRITING

Tutor : Fabio Benfenati, Federico Zara

09.00 - 12.00 - *Scientific Writing*

Prof. Fabio Benfenati, University of Genoa & Italian Institute of Technology

1) *Thinking in words: how to write a scientific paper*

2) *The important choice: where to submit your paper*

Lunch Break

14.00-17.00 - *Grant Application*

Prof. Federico Zara, University of Genoa

1) *Writing a grant proposal ? why, when, to whom and how*

2) *10 tips for a successful grant application: A personal handbook*