Brain conference

TORINO 2025

OCTOBER 29 • 30 • 31, 2025

PRELIMINARY SCIENTIFIC PROGRAM

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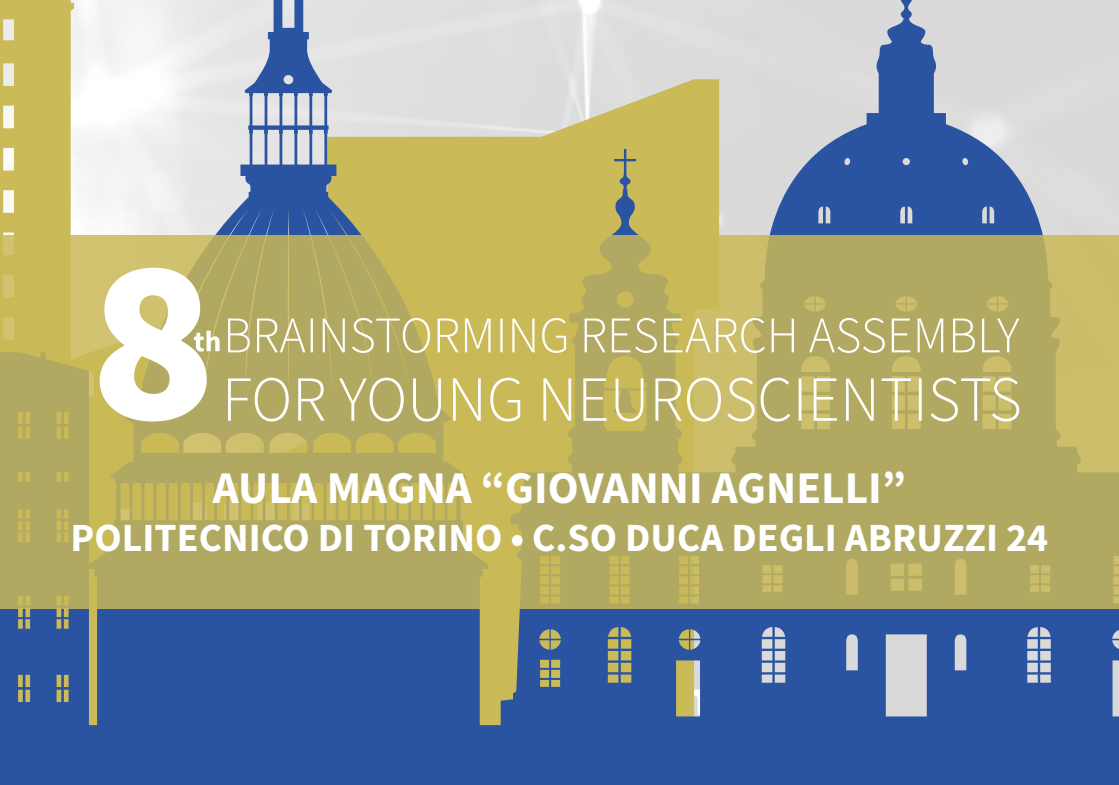

8th BRAINSTORMING RESEARCH ASSEMBLY FOR YOUNG NEUROSCIENTISTS

AULA MAGNA "GIOVANNI AGNELLI"

POLITECNICO DI TORINO • C.SO DUCA DEGLI ABRUZZI 24

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Giovanna Calabrese	University of Messina (Italy)
Marco Cambiaghi	Department of Neurosciences, Biomedicine and Movement Sciences. University of Verona (Italy)
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Simona Schiavi	University of Genoa (Italy)
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MENTORS

Martin Chalfie	Department of Biological Sciences, Columbia University, New York (USA)
Monica M.G. Diluca	Univerisity of Milan (Italy)
Michela Fagiolini	CNR Istituto di Neuroscienze (Italy); Boston Children's Hospital Harvard Medical School (USA)
Michela Matteoli	Humanitas University, Rozzano (Italy)
Thomas C. Südhof	Nobel Laureate • Department of Molecular and Cellular Physiology, Howard Hughes Medical Institute, Stanford University School of Medicine (USA)
Antonio Uccelli	IRCCS San Martino Hospital, Genoa (Italy)

INVITED SPEAKERS

Burkhard Becher	Institute of Experimental Immunology, Universität Zürich (Switzerland)
Benjamin Deneen	Baylor College of Medicine, Houston, Texas (USA)
Michael Heneka	LCSB – Luxembourg Centre for Systems Biomedicine, The University of Luxembourg (Luxembourg)
Simona Lodato	Humanitas University, Rozzano (Italy)
Edvard Ingjald Moser	Kavli Institute for Systems Neuroscience, Norwegian University of Science and Technology (Norway)
Marzia Munafò	European Molecular Biology Laboratory (EMBL), Rome (Italy)
Gaia Olivo	Psykologiska Institutionen, Göteborgs Universitet (Sweden)
Tommaso Pizzorusso	Scuola Normale Superiore, Pisa (Italy)

BRAYNIACS

Federica Anastasi	BarcelonaBeta, Brain Research Center (BBRC) (Spain)
Ingrid Battistella	Department of Cellular, Computational & Integrative Biology, Università degli studi di Trento (Italy)
Elisabetta Battocchio	Neuroscience Institute - National Research Council of Italy, Milan (Italy)
Alessandro Bombaci	IRCSS Policlinico San Donato, San Donato Milanese (Italy); Vita-Salute San Raffaele University, Milan (Italy)
Sveva Bonomi	Department of Science and High Technology, University of Insubria, Busto Arsizio, Varese (Italy); Escuela de Doctorado, Universidad Católica de Valencia, San Vicente Mártir (Spain)

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Marta Bottero	Department of Molecular Medicine, «Sapienza» University of Rome (Italy)
Elena Cerutti	IRCCS San Martino Hospital, Genoa (Italy)
Ludovica Iovino	Neuroscience Institute, National Research Council, Pisa (Italy)
Umberto Manera	"Rita Levi Montalcini" Department of Neuroscience, University of Turin (Italy)
Noemi Marino	Istituto Romagnolo per lo Studio dei Tumori (IRST) and University of Bologna (Italy)
Elisabetta Mori	Scuola Normale Superiore, Pisa (Italy)
Samuele Negro	University of Padova (Italy)
Gabriele Sansevero	Neuroscience Institute - National Research Council of Italy, Pisa (Italy)
Erica Tagliatti	IRCCS Humanitas Research Hospital, Rozzano (Italy); University College London, London (UK)

INTERNATIONAL BRAYNIACS

Pablo Blanco	CNIO, Madrid (Spain)
Fionä Caratis	Medical University of Gdańsk (Poland)
Rina Demjaha	Medical University of Graz (Austria)
Marta Ibáñez Navarro	CNIO, Madrid (Spain)
Antonio Masone	Taub Institute - Columbia University (USA)
Paola Pacifico	Feinberg School of Medicine, Northwestern University, Chicago (USA)
Leire Pedrosa Eguílaz	Hospital Clínic de Barcelona (Spain)
Aleksandra Rutkowska	Medical University of Gdańsk (Poland)
Maria Velasco	CNIO, Madrid (Spain)

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Valerio Chiurchiù	CNR and IRCCS Santa Lucia Foundation, Rome (Italy)
Paola Infante	«Sapienza» University of Rome (Italy)
Nunzio Iraci	Dept. BIOMETEC, University of Catania (Italy)

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Valentina Agostini	Biomedical Engineering Lab, Dipartimento di Elettronica e Telecomunicazioni, Politecnico di Torino (Italy)
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Sara Bonzano	Dept. of Life Sciences and Systems Biology (DBIOS), University of Turin (Italy)
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Francesco Ferrini	Dept. of Veterinary Sciences, University of Turin (Italy)
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Stefano Zucca	Dept. of Life Sciences and Systems Biology (DBIOS), University of Turin (Italy)

BRAYN NEWS AND SOCIAL TEAM

Ingrid Battistella	Department of Cellular, Computational and Integrative Biology, Università degli studi di Trento (Italy)
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Marco Cambiaghi	Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona (Italy)
Samuele Negro	University of Padova (Italy)

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BRAYN SCIENTIFIC SESSIONS

NEUROIMAGING & CLINICAL NEUROLOGY is a comprehensive scientific session exploring the intersection of advanced neuroimaging techniques and clinical neurology applications. This session delves into the utilization of various neuroimaging methodologies to probe the structure, function, and physiology of the nervous system, alongside the translational aspects of clinical neurology. The session covers two primary neuroimaging approaches: structural imaging, which aids in the diagnosis of large-scale intracranial diseases and injuries, and functional imaging, crucial for diagnosing metabolic diseases like Alzheimer's and facilitating neurological and cognitive psychology research. Techniques such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Electroencephalography (EEG), and Positron Emission Tomography (PET) will be discussed in the context of their applications alone or in combination to investigate neurological diseases. Moreover, the session emphasizes the integration of neuroscience data and basic research with clinical neurology to enhance understanding and treatment of nervous system disorders.

NEUROINFLAMMATION is a scientific session focused on exploring the mechanisms the inflammatory response initiated in the central nervous system (CNS) by resident cells or triggered by infiltrating immune cells, which causes the neuronal dysfunctions observed in inflammatory and neurodegenerative disease of the CNS. The NI session mainly focuses on basic and clinical research in multiple sclerosis (MS), Neuromyelitis Optica Spectrum Disorder (NMOSD) and other inflammatory diseases of the CNS that have a significant impact on the lives of young adults. Although the scientific discoveries of recent decades have improved the therapeutic approaches used for the treatment of such pathologies, many questions still remain unanswered. The NI session aims to discuss the basic pathogenic mechanisms governing CNS inflammation, the role of immune system in CNS autoimmunity, and the importance of genetic and environmental factors in the development of neuroinflammatory diseases, with a patient-centered focus.

NEURODEGENERATION is a scientific session focused on key aspects of a large number of diseases characterized by progressive damage of the nervous system that leads to irreversible neuronal death. The ND session will update on the more recent advances in the field. Specifically, the session will mainly focus on Parkinson's disease (PD), a slowly progressive syndrome that begins insidiously, gradually worsens in severity, and usually affects one side of the body before spreading to involve the other side, and Alzheimer's disease (AD), the most common type of dementia and an irreversible, neurodegenerative and progressive central nervous system disorder that slowly destroys memory and thinking skills, and, eventually, other mental abilities. Other neurodegenerative diseases, such as tauopathies, narcolepsy, depression and psychiatric disorders, will be also discussed in this session.

NEURO-ONCOLOGY session will cover the field of investigation that studies nervous system tumors. As many of brain tumors can cause severe nervous system damage, neuro-oncology represents a trending research area in neuroscience, which may identify the molecular mechanisms involved in tumor pathogenesis. This session will also discuss the development of novel therapeutic approaches for the treatment of life-threatening diseases such as glioma, and medulloblastoma.

NEUROPHYSIOLOGY & NEURAL PLASTICITY session will cover the molecular mechanisms underlying the function of the nervous system and the capacity of the nervous system to modify itself, functionally and structurally, in response to experience and injury. All levels of function and plasticity changes will be discussed, from receptors and cellular physiology to systems and behaviour. This session will delve into approaches such as molecular and cellular neurobiology, functional neuroanatomy, neurochemistry, neuropharmacology, electrophysiology, and behavioural analysis, in both in-vivo, ex-vivo and in-vitro models in invertebrate or vertebrate species, including humans.

NEURODEVELOPMENT session will cover the mechanisms and the genetics underlying human and animal brain development in health and disease. This session will focus on neurodevelopmental disorders, including autism spectrum disorder, intellectual disability, and epilepsy. The session will also discuss about the contribution of both genetic and environmental factors, as well as the role of neuronal and non-neuronal cells in the etiopathology of these disorders. This session will delve into the genetics and the molecular and cellular neurobiology underlying brain development. In this session we will also discuss on the implementation of novel therapeutic strategies to tackle neurodevelopmental disorders.

29 OCTOBER • Day 1

10:00 Registration

11:00 Opening Ceremony • **Giovanni Ferrara**

BRAYN STARTING GRANT SESSION

Chairpersons

11:15 **Veronica Ceci** (Starting Grant 2024 Winner)
Specialized pro-resolving lipid mediators modulate choroid plexus inflammatory activity.

11:30 **Alessandra Martello** (Starting Grant 2024 Winner)
Neural and Cardiac Dysfunctions in a Parkinson's Mouse Model.

11:45 Lectio Magistralis | **Edvard Ingjald Moser**

12:45 Lunch Box with Poster Session 1

SESSION 1 • NEURODEVELOPMENT ORAL COMMUNICATIONS

Chairpersons

14:45 *(oral communication)*

14:30 *(oral communication)*

14:45 *(oral communication)*

15:00 BraYn Educational Symposium

15:15 SpeedTalk

15:20 SpeedTalk

15:25 SpeedTalk

SESSION 2 • NEUROINFLAMMATION
ORAL COMMUNICATIONS

Chairpersons

15:30	Lecture | **Burkhard Becher**
16:00	*(oral communication)*
16:15	*(oral communication)*
16:30	BraYn Educational Symposium
16:45	BraYn Educational Symposium
17:00	*(oral communication)*
17:15	*(oral communication)*
17:30	SpeedTalk
17:35	SpeedTalk
17:40	SpeedTalk
17:45	SpeedTalk
17:50	SpeedTalk
17:55	Closing remarks

30 OCTOBER • Day 2

SESSION 3 • NEURODEGENERATION
ORAL COMMUNICATIONS

Chairpersons

9:00	*(oral communication)*
9:15	*(oral communication)*
9:30	*(oral communication)*
9:45	*(oral communication)*
10:00	*(oral communication)*
10:15	*(oral communication)*
10:30	*(oral communication)*
10:45	BraYn Educational Symposium
11:00	Lecture | **Michael Heneka** *Innate Immunity in Alzheimer disease*
11:30	SpeedTalk
12:00	SpeedTalk
12:05	SpeedTalk
12:10	SpeedTalk
12:15	Techincal Talk (30 min) | **Marzia Munafò**
12:45	Lunch Box with Poster Session 2

	SESSION 4 • NEURO-ONCOLOGY ORAL COMMUNICATIONS Chairpersons
14:45	Lecture | **Benjamin Deneen**
15:15	*(oral communication)*
15:30	*(oral communication)*
15:45	BraYn Educational Symposium
16:15	*(oral communication)*
16:30	*(oral communication)*
16:45	BraYn Educational Symposium
17:15	SpeedTalk
17:20	SpeedTalk
17:25	SpeedTalk
17:30	SpeedTalk
17:35	SpeedTalk
17:40	Closing remarks

31 OCTOBER • Day 3

SESSION 5 • NEUROIMAGING & CLINICAL NEUROLOGY
ORAL COMMUNICATIONS

Chairpersons

9:30	*(oral communication)*
9:45	*(oral communication)*
10:00	*(oral communication)*
10:15	Lecture | **Gaia Olivo**
10:45	SpeedTalk
10:50	SpeedTalk
10:55	SpeedTalk
11:00	BraYn Educational Symposium
11:45	Poster Session 3 with Lunch Box

SESSION 6 • NEUROPHYSIOLOGY & NEURALPLASTICITY
ORAL COMMUNICATIONS

Chairpersons

13:30	Lecture | **Tommaso Pizzorusso**
14:00	*(oral communication)*
14:15	*(oral communication)*
14:30	*(oral communication)*
14:45	*(oral communication)*
15:00	BraYn Educational Symposium
15:15	SpeedTalk
15:20	SpeedTalk
15:25	SpeedTalk
15:30	SpeedTalk
16:00	SpeedTalk
16:05	Closing remarks & BraYn Awards

UNDER THE PATRONAGE

DIPARTIMENTO DI NEUROSCIENZE
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HU HUMANITAS UNIVERSITY

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

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