Theoretical and Applied Neuroscience

Research Program

Cycle 38°

Academic year 2022-2023

List of the Research Topics

CV	Research Project	Host Institution	N°	Awardee Name
Curriculum 1: Cognitive and Behavioral Neuroscience				
1.1	The role of multisensory and sensorimotor functions in higher-order cognition and social functions	University Sapienza of Rome	1	**Lamia Piero**
1.2	To study the network-level, region-level, and gene-level brain function correlates of unresponsive phenotypes in psychosis	University of Naples"Federico II"	1	**Billeci Martina**
1.3	Topographic mapping of multisensory processing and representation exploiting resting state or long-lasting naturalistic stimulation fMRI protocols	IMT School for Advanced Studies Lucca	1	**Ingenito Alessandro**
1.4	Behavioral neurophysiology in macaques	University of Parma	1	No eligible candidate
1.5	Language Acquisition in Typical Development and Hearing Impairment: Early Plasticity	University of Padua	1	**Aydin Zeynep**
1.6	The role of the motor system in associative learning	University of Bologna	1	**Degni Luigi**
1.7	Neural mechanisms underlying higher cognitive functions	SISSA	1	No eligible candidate
1.8	Cognitive- and noncognitive factors influencing the gender gap in mathematics	SISSA-Zanichelli	1	**Hadi Sichani Maryam**
1.9	Cognitive Reserve and brain plasticity	Pegaso University - SISSA	1	**Taccari Giovanni**
Curriculum 2: Neuroscience and Humanities				
2.1	Educational neuroscience in physical education and sport: embodied design to promote effective teaching and learning processes also in an inclusive approach	Pegaso University	1	**Pugliese Elisa**
2.2	Analysis of physical activity and sleep in Cystic Fibrosis patients and healthy subjects	Pegaso University	1	**Argentino Francesca**
2.3	Learning by playing: action and interaction to enhance learning processes	Pegaso University	1	**Forte Pasqualina**
2.4	Neuroscience and implications for education and lifelong learning	Pegaso University	1	**Ali Leila**

2.5	To study the psychophysiological correlates of hesitation and resistance to vaccination	University of Messina	1	**Casula Antony**
2.6	The body in the metaverse: Immersive virtual reality and higher order brain functions	Pegaso University - University Sapienza of Rome	1	**Placidi Valerio**

Curriculum 3: Preclinical Clinical and Translational Neuroscience

3.1	Advanced approaches to define new diagnostic and prognostic biomarkers in amyotrophic lateral sclerosis (ALS) and other motor neuron diseases (MNDs)	University of Torino	1	**Cabras Sara**
3.2	Neural correlates of a wearable supernumerary finger use in healthy subjects and paretic patients	University of Siena	1	**Giannotta Alessandro**
3.3	Study of innovative drugs and medical devices for developmental psychiatric diseases	Roma Tre University- Nova Mentis Life Science Corp.	1	**Ascone Fabrizio**
3.4	To study the cellular and molecular mechanisms of neurodegeneration and neuroinflammation in vivo and in vitro	University of Modena and Reggio Emilia	1	No eligible candidate
3.5	The role of neuroinflammation signaling in substance use disorders	Pegaso University – University of Bologna	1	**Lacorte Antonio**
3.6	Psycho-biological and psychometric correlates of the effects of meditative practices	University of Pisa	1	No eligible candidate
3.7	New methodologies for neurorehabilitation in pediatric patients	IRCCS MEDEA	1	**Boscarol Sara**
3.8	Role of sleep in shaping neural circuits and behavior	University of Camerino	1	No eligible candidate
3.9	To study the neurobiological, behavioral and pharmacological basis of drug addiction and chronic pain: Focus on the opioid system.	University of Camerino – Park Therapeutics	1	**Crook Caitlin**
3.10	To study individual vulnerability in substance use disorders: A genetic, molecular and neurocircuitry level approach in rodents.	University of Camerino	2	1) **Mrizak Hela** 2) No eligible candidate
3.11	To study individual vulnerability to social isolation-induced psychopathologies: Focus on the therapeutic effects of psilocybin in preclinical models.	Pegaso University – University of Camerino	1	**Bachetti Massimo**
3.12	Dissecting the neurobiological mechanisms underlying emotional and social dysregulations in anorexia nervosa	University of Milan	1	**Rizzi Beatrice**

3.13	Modulators of ion channels and transporters as new therapeutic options for neuropsychiatric diseases	University of Naples"Federico II"	1	**Gaspar Ingride**
3.14	Neural substrates of neuropsychiatric diseases	University of Ferrara	1	**Bonfanti Martina**
3.15	To study dysfunctional neuronal autophagy in spinal cord and traumatic brain injury	University of Messina	1	**Hasan Ahmed**
3.16	To study the impact of different neuromodulation strategies on cognitive rehabilitation in neurological disease	University of Palermo	1	**Catania Angela**
3.17	The brain renin angiotensin system as a target for intervention in Alzheimer's disease	University of Cagliari	1	No eligible candidate
Curriculum 4: Computational and System Neuroscience				
4.1	Innovative technologies for probing the gut-brain axis in health and disease	CLN2S - IIT	1	**D'Abbondanza Noemi**
4.2	The Neurophysiological Bases of Biological Motion: From Laboratory to Clinics	University of Bologna	1	**Brandolani Riccardo**
4.3	Methods to study the mechanisms for large-scale functional connectomics	University of Chieti-Pescara	1	**Ferrazza Martina**
4.4	Deep Neural Networks of emotional perception in the subcortical visual system	Pegaso University – University of Turin	1	**Borriero Alessio**
4.5	Neuro-inspired artificial intelligence for healthcare	Pegaso University – Scuola Superiore Sant'Anna	1	**Ranjan Pratik**
4.6	Computational models for neuroprosthetics	Scuola Superiore Sant'Anna	1	**Taddeini Fabio**
4.7	Brain decoding for neuroprosthetic control	Scuola Superiore Sant'Anna	1	**Privitera Luigi**
4.8	Bio-signals analysis and imaging in epilepsy	University of Messina	1	No eligible candidate
4.9	Cellular biophysics of (dys)functional signal transfer in *ex vivo* human cortical tissue samples	SISSA	1	**Ievglevskyi Oleksandr**
4.10	Behavioral and electrophysiological correlates of motor rehabilitation and motor learning	CNR	1	**Ferrari Laura**