

Brain Metabolism Workshop: from rare diseases to common biological pathways

Summer School – HIBRID JOURNEY



Course Director

Dra. Angeles García-Cazorla

Dates

July 6-7, 2023

Imparting

SJD Barcelona Children's Hospital- Digital platform
Esplugues de Llobregat. Barcelona

Education

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Registration link

<https://formacion.sjdhospitalbarcelona.org/>

The workshop is supported by EJP RD NSS. Therefore we are able to offer this conference to you only for a minimal fee.*

In person: 25 €

Online: 15 €

Countries in which the registration of participants will be free of charge: Countries of Latin America (including Brazil), Africa, the Middle East, Asia (not including Japan, South Korea). In this case, please send an email with a document proving your LMIC country membership to: elisabet.hurtado@sjd.es

AIMED AT

- Health professionals dedicated to neurology (pediatric and adult) and/or inborn errors of metabolism and genetics.
- Researchers in the field of neuroscience, biochemistry and molecular biology.
- Family Associations.

FUNDED BY

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PROGRAM

Thursday, 06 July 2023

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08:30-9:10	WORKSHOP OPENING Representatives of the organizing committee and of the ERNs that include neurological disorders (MetabERN, RND-ERN, EpiCare, EURO-NMD, ERN-Ithaca).	
BRAIN ENERGY METABOLISM		<i>Chair: Shamima Rahman, London</i>
9:10 - 9.30	Brain energy homeostasis during neurodevelopment and aging	<i>Felipe Barros, Chile</i>
9:30 - 9:50	How is brain energy disturbed in inborn errors of metabolism? Main biological pathways	<i>Isaac Marín-Valencia, New York</i>
9:50 -10:10	Brain energy metabolism in rare genetic (non-classically metabolic) epilepsies	<i>C. Fons, Barcelona (EpiCare)</i>
10:10 -10:30	Mitochondria and Neurodegeneration	<i>Alejandra Darling (RND.ERN)</i>
10:30-11:20	Discussion	
COFFEE BREAK		
BRAIN AMINO ACID AND PROTEIN HOMEOSTASIS		<i>Chairs: Gumus Evren, Turkey</i>
11:50 - 12:10	Role of amino acids and the proteostatic network in the developmetal brain	<i>Gaia Novarino, Austria</i>
12:10 - 12:30	Rare diseases of amino acids and neurological symptoms	<i>Trine Tangeraas (MetabERN), Norway</i>
12:30 - 13:10	Discussion	
LUNCH BREAK		
14:10 -15:00	ROUND TABLE: AVENUES FOR INTERACTION BETWEEN ERNs involved in neurological disorders for the development of a BRAIN METABOLISM InterERN NETWORK. Coordinators of the 3 ERNs	
COMPLEX LIPID METABOLISM AND CELL TRAFFICKING IN THE BRAIN		<i>Chair: Manuel Schiff, Paris</i>
15:00 - 15:20	Biological Basis of Cell Trafficking in the Brain (proteins, exo, endocytosis, autophagy, transport across the cytoskeleton....) and pathophysiological categories of disease	<i>Alfonso Oyarzábal, Barcelona</i>
15:20 - 15:40	Complex lipid role in membrane composition, trafficking, and Neurological disorders.	<i>Pending confirmation</i>
15:40 - 16:00	Neurological Manifestations of Cell trafficking and complex lipid disorders	<i>A García-Cazorla, Barcelona (MetabERN)</i>
16:00 - 16:20	Disorders of autophagy	<i>Diego Martinelli, Rome (MetabERN)</i>
16:20 -17:00	Discussion	
COFFEE BREAK		
NEUROTRANSMISSION AND SIGNALING MOLECULES		<i>Chair: Roser Pons, Athens</i>
17:30 -17:50	Disease mechanisms and therapeutic strategies for SNAREopathies, caused by mutations in presynaptic genes	<i>Matthjis Verhage, Amsterdam</i>
17:50 - 18:10	Neurotransmission in channelopathies	<i>Gabriella Horvarth, Canada</i>
18:10-18:30	“SynGo Clinic” a database proposal integrating biological mechanisms, synaptic disorders and clinical manifestations	<i>Juliana Ribeiro, Barcelona</i>
18:30 - 18:40	Mitochondrial involvement in neurotransmitter disorders.	<i>Sabine Jung-Klawitter, Heidelberg</i>
19.00 -19:40	Discussion and End of Sessions	

Friday, 07 July, 2023		
BRAIN METABOLISM IN MOTOR DISORDERS		Chair: Thomas Opladen, Heidelberg
8:30 – 8:50	Metabolic pathways affected in Ataxia and Spastic Paraparesis	Roser Pons, Athens (RND-ERN)
8:50 – 9:10	Metabolic pathways affected in Parkinsonism	Vincenzo Leuzzi, Rome
9:10 – 9:30	Metabolic pathways affected in Dystonia and Chorea	Darío Ortigoza, Barcelona (RND-ERN)
9:30 – 9:50	Discussion	
COFFEE BREAK		
BRAIN METABOLISM IN INTELLECTUAL DISABILITY and NEUROPSYCHIATRIC DISEASES		Chair: Antonio Zorzano, Barcelona
10:20 -10:40	Energy cost of cognition	Felipe Barros, Chile
10:40 -11:00	Brain energy metabolism in Rett syndrome	Uliana Musokhranova, Barcelona
11:00 - 11:20	Effects of neuropsychiatric medication on mitochondrial function.	T. Kozick, USA
11:20 - 11:40	Discussion	
METABOLIC TREATMENTS also for RARE NEUROGENETIC “NON-METABOLIC” DISEASES		Chair: Alejandra Darling
11:40 - 12:00	Ketogenic Diet	Galina Stevanovic, Belgrade
12:00 - 12:20	Metabolic treatments for neurodegenerative disorders	Fanny Mochel, Paris (MetabERN)
12:20 -12:40	Strategies to cross the blood-brain-barrier---Brains for Brain Foundation	Pending confirmation
12:40 - 13:00	Discussion	
LUNCH BREAK		
14:00 - 15:00	ROUND TABLE - Patient advocacy	
LEUKODYSTROPHIES		Chairs: Enrico Bertini, Italy
15:00-15:20	White matter and metabolism in the brain	Odile Boespflug-Tanguy, France
15:20 -15:40	Factors predicting phenotypes in rare leukodystrophies amenable to treatment (X-ADL, MLD...)	Nicole Wolf, The Netherlands (RND-ERN)
15:40 - 16:00	“New treatments in genetic leukodystrophies	Caroline Sevin, Fanny Mochel, France
16:00 -16:20	Discussion	
COFFEE BREAK		
16:50 - 17:20	Young doctors	
17:20	WORKSHOP CLOSURE	