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### PORTO, PORTUGAL AUGUST 08-11, 2023

## **Program Book**

Organized by:



ISN International Society for Neurochemistry



Jointly with:

**www.neurochemistry.org** #ISNESN2023 | #WeAreNeurochemistry

ANTA TATATA







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## ISN OFFICERS AND COUNCIL

### Officers

President, Flávia Gomes, Brazil Secretary, Caroline (Lindy) Rae, Australia Treasurer, Alessandro Prinetti, Italy Secretary-Elect, Babette Fuss, USA

### Council

Past President, Historian, Ralf Dringen, Germany Company Secretary, Monica Carson, USA Publications Committee Chair, Anthony Turner, UK ISN Council member, Vladimir Parpura, USA ISN Council member, Ago Rinken, Estonia ISN Council member, Constanze Seidenbecher, Germany ISN Council member, Christian Gonzalez Billault, Chile ISN Council member, James Olopade, Nigeria ISN Council member, Vania Prado, Canada ISN Council member, Akio Wanaka, Japan ISN Council member, Amadi Ihunwo, South Africa ISN Council member, Jean-Pierre Mothet, France ISN Council Elect, Cheah Pike See, Malaysia ISN Council Elect, Joao Duarte, Sweden

## ESN OFFICERS AND COUNCIL

### Officers

President, Johannes Hirrlinger, Germany Secretary, Illana Gozes, Israel Treasurer, Carlos Duarte, Portugal

### Council

Historian, Anthony J Turner, UK Company Secretary, Marcus Rattray, UK Past-President, Natalia N Nalivaeva, US Sara Grassi, Italy Pavle Andjus, Serbia Dimitra Mangoura, Greece

Nico Mitro, Italy Angelo Poletti, Italy Antonio Rodriguez-Moreno, Spain Elena Rybnikova, Russia Aiman Saab, Switzerland

## **PROGRAM COMMITTEE & LOCAL HOST COMMITTEE**

### Program Committee- ISN-ESN meeting 2023

Cheah Pike See (Program Chair), Malaysia Vania Prado (Past-Program Chair), Canada Flávia Gomes, Brazil Caroline Rae, Australia Alessandro Prinetti, Italy Carlos Duarte, Portugal Illana Gozes, Israel Johannes Hirrlinger, Germany Andrew Lawrence, Australia Mohammed R Shaker, Asia Natalia Nalivaeva, UK

### **Local Host Commitee**

Carlos B. Duarte, University of Coimbra Ana Luísa Carvalho, University of Coimbra Ana Maria Sebastião, University of Lisbon Cecília Rodrigues, University of Lisbon Helena Vieira, Universidade Nova de Lisboa Isaura Tavares, University of Porto Ago Rinken, Estonia Sara Xapelli, Portugal Peng Lei, China Kenji Tanaka, Japan Simone Engelender, Israel Carlo Sala, Italy Chinna Orish, Nigeria Arturo Ortega, Mexico Tim Bredy, Australia Dwight Bergles, USA Alysson Muotri, USA

João Laranjinha, University of Coimbra João B. Relvas, University of Porto Mónica Sousa, University of Porto Patrícia Maciel, University of Minho Tiago F. Outeiro, Universidade Nova de Lisboa and University of Göttingen







## **ISN-ESN-2023 WELCOME LETTER**

We are delighted to announce that the joint meeting of the International Society for Neurochemistry (ISN) and the European Society for Neurochemistry (ESN), will take place during August 8-11, 2023 in Porto, Portugal. On behalf of the organising committee, we are pleased to invite you to join the exciting program at this biennial scientific meeting of ISN and the sister society, ESN.

The Program brings a collection of Plenary Lectures, Symposia and Workshops, carefully selected by the Program Committee. These activities embrace a diverse array of topics ranging from cellular, molecular, systemic to behavioral neurochemistry. Excitingly, we will have the third "Marthe Vogt Lecture" gracing the event. This prestigious award recognises the work of female scientists who have made outstanding contributions to Neurochemistry. To ensure a balanced meeting program, we have allocated ample time for poster presentations, exhibits and events. These activities offer an opportune time for delegates to meet colleagues, foster ongoing contacts, build new collaborations, and facilitate professional development.

ISN and ESN are also committed to supporting the development of the next generation of researchers. We offer Travel Awards to provide funding for travel to attend ISN-ESN 2023. We also offer the Young Scientist Lectureship Award and Emerging Group Leaders Symposia to outstanding mid career scientists, and Young Members' Symposia Awards to outstanding early career scientists to showcase their exciting work.

Lastly, the social side of the event is just as important as the scientific content. A series of engaging and enjoyable social events have been planned so that delegates of ISN-ESN 2023 can continue to engage with each other in a relaxed, friendly and pleasant atmosphere.

We welcome you to the magnificent city of Porto and hope that you all have a successful and rewarding 2023 ISN-ESN Meeting.



Cheah Pike-See (Program Chair)



Flávia Gomes (ISN President)



Carlos Duarte (Local Host Chair)



Johannes Hirrlinger (ESN President)

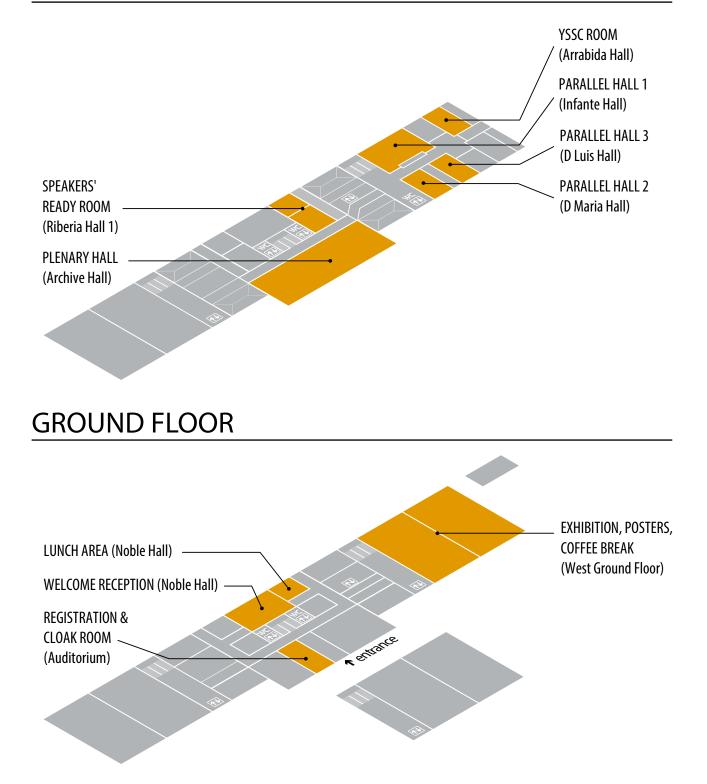






## **VENUE FLOOR PLAN**

## 2ND FLOOR



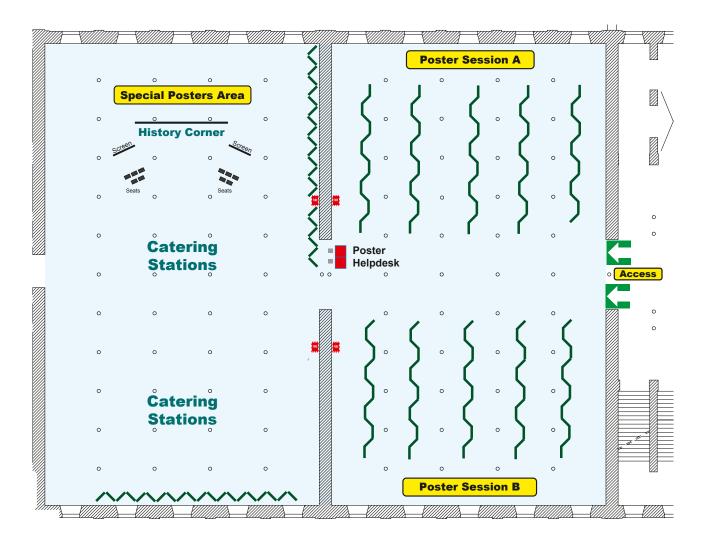




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## **POSTER & EXHIBITION AREA**







## **MOBILE APPLICATION**

Be sure to download the official ISN-ESN 2023 app!

- Navigate the meeting program
- Customize your own schedule
- Post to social media accounts
- Follow meeting news as well as see the posts from other meeting attendees

You may download the app from IOS/App Store or Android/ Google Play through the below QR codes:



Download from IOS/App Store

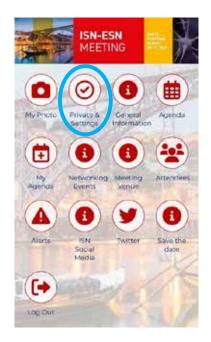


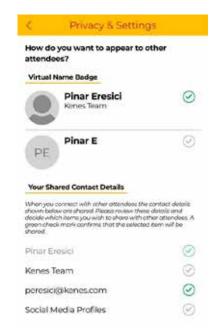
Download from Android/Google Play

The event code for the mobile application **isnesn23**. To login the mobile app, please use the credentials that have been sent to you via e-mail before the meeting.

### PERSONALIZE THE MOBILE APP

You need to personalize your profile in the app in order to have your full name appear within the attendees. Please go to **"Privacy & Settings"** tab of the app and select your "Virtual Name Badge" from the list as shown below.





## ISN International Travel Support (ITS)

Short term research visits of young ISN members (Student and Postdoc members) in the labs of established ISN members (Full Member) who are based in another country (from any country to any other country, to which ISN is able to provide funding).

Find out more!





www.neurochemistry.org



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## **GENERAL INFORMATION**

### **MEETING VENUE**

Alfandega do Porto Edifício Da Alfândega 4050-430 Porto / PORTUGAL Telephone: (+351) 223 403 000/24 Website: https://www.ccalfandegaporto.com/en/

### LANGUAGE

The official language of the Meeting is English.

### **REGISTRATION DESK HOURS**

7 August 2023, Monday	15:00 – 17:00
8 August 2023, Tuesday	07:00 – 19:00
9 August 2023, Wednesday	07:30 – 17:00
10 August 2023, Thursday	07:30 – 12:30
11 August 2023, Friday	07:30 – 14:00

### POSTER VIEWING AND PRESENTATION TIMES

### Tuesday, August 08

10:30 - 11:00Posters Viewing A&B (Coffee Break)17:00 - 19:00Posters Session A

### Wednesday, August 09

10:30 - 11:00Posters Viewing A&B (Coffee Break)16:30 - 18:30Poster Session B

### Thursday, August 10

10:00 – 10:30 Poster Viewing A&B (Coffee Break)

### Friday, August 11

10:00 – 10:30 Poster Viewing A&B (Coffee Break)

### **NAME BADGES**

All participants and exhibitors are requested to wear their name badges throughout the Meeting to be admitted to the lecture halls and scheduled activities.

### PHOTOGRAPHY IN SCIENTIFIC SESSIONS AND POSTER PRESENTATIONS

Photography in scientific sessions, in poster presentations, and of any scientific information is strictly forbidden. Any photos taken will be deleted. We reserve the right to ask the unofficial photographer to leave the meeting venue.

We have a hired photographer to take photos throughout the meeting, these pictures will be published.

### **MOBILE PHONES**

We ask that you have your mobile devices on silent or switched off in the scientific sessions







## **GENERAL INFORMATION**

### WIFI

Free WIFI is available to Meeting participants in public areas and in the Exhibition Area.

USERNAME: ISN 2023 PASSWORD: Porto2023

### **MOBILE APP**

There will be an official ISN-ESN 2023 app that will allow participants:

- Navigate the meeting program
- Customize your own schedule
- Post to social media accounts

• Follow meeting news as well as see the posts from other meeting attendees

You may download the app from IOS/App Store or Android/ Google Play through the below QR codes:





Download from IOS/App Store Download from Android/Google Play

The event code for the mobile application **isnesn23**. To login to the mobile app, please use the credentials that have been sent to you via e-mail before the meeting.

### ABSTRACTS

Abstracts will be accessible and searchable to all delegates via the My ISN Account page during and after the Meeting.

### **ONLINE JOURNAL PUBLICATION**

The Abstracts from the meeting will be published in a supplement of the Journal of Neurochemistry (JNC).

### **COFFEE BREAKS**

Coffee, tea, and light refreshments will be served to all participants in the Exhibition and Poster Area as indicated in the timetable.

### **REGISTERED PARTICIPANT ATTENDANCE POLICY**

All event activities (including scientific sessions, meal functions, exhibit hall, etc.) are exclusively reserved for registered attendees. Non-registered guests are not allowed in any of the event areas. An exception will be made for young children, they will need to get a child-guest badge at the registration desk. Badges provided at registration are required for entrance into all functions and will be strictly enforced.







### SOCIAL GUEST ATTENDANCE POLICY

Social Guests may enter for the Welcome reception and the Farewell. This excludes the Exhibition and Poster Area. They may not enter the scientific sessions. Badges provided at registration are required for entrance into all functions and will be strictly enforced.

Children are welcome in all areas under the supervision of a legal guardian.

### LIABILITY AND INSURANCE

The Meeting Secretariat and Organisers cannot accept liability for personal accidents or loss of or damage to private property of participants. Participants are advised to take out their own personal travel and health insurance for their trip.

### **ISN-ESN 2023 MEETING SECRETARIAT**



ISN-ESN Meeting Office: ISN Secretariat Office Contact: secretariat@neurochemistry.org Website: www.neurochemistry.org

## **ISN Career** Development **Grants (CDG)**

Funds for research for young investigators who are long-term ISN members to establish themselves as independent researchers.

Find out more!





www.neurochemistry.org



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## **INFORMATION FOR PRESENTERS**

### **ORAL PRESENTATIONS**

You are kindly requested to upload your presentation at least **3 hours before** the start of your session at the Speaker Ready Room. If your presentation is early in the morning, you are strongly encouraged to load your presentation the day before in order to avoid the morning rush.

The presentation document must be prepared in **16:9 format**. Please bring your presentation with a **USB** to upload at Speaker Ready Room before the start of your session (not individual talk).

Due to the networking system, internet connection will not be available on uploading computers. It will not be possible to download your presentation in the Speaker Ready Room.

To minimize technical problems and delays during the actual presentation, we require you to load your presentations at the Speaker Ready Room.

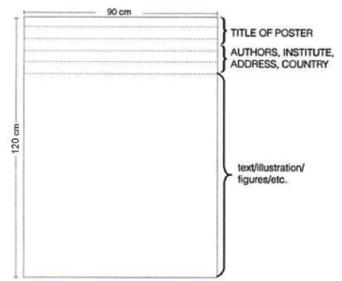
If you prefer not to load your presentation in the Speaker Ready Room and wish to use your own computer, please **bring your connection cable/adapter** with you and **do notify Speaker Ready Room a day before your presentation**.

The Speaker Ready Room will be marked clearly with a signage at the meeting venue. Please refer to the Scientific Program for the date and time of your presentation.

### **POSTER PRESENTATIONS**

Your poster should be displayed on the poster board with the abstract code you have received via email. The abstract codes can also be found in the program book.

- All posters will stay up for 4 days.
- Setup time starts at 07:00 on Tuesday, August 08. Please make sure you hang your poster by 17:00. Posters have to be taken down on Friday, August 11 from 13:30 until 15:00 or posters not taken from the board on time will be discarded.
- Please prepare your poster on one sheet of Bristol board or laminated paper. Alternatively, presenters may display their material on several smaller sheets.
- The dimensions of the poster should not exceed 90 cm wide x 120 cm high (35 inches x 47 inches). Allocate the top of the poster for the title and authors.



- The text, illustrations, etc should be bold enough to be read from a distance of two meters (six feet).
- Tacks and technical equipment will be available for the mounting of posters.





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## **INFORMATION FOR PRESENTERS**

### Tuesday, August 08

10:30 – 11:00 Posters Viewing A (Coffee Break) 17:00 – 19:00 Posters Session A

\*Poster presenters with odd numbers should be at their poster between 17:00-18:00 and those presenting posters with even numbers between 18:00-19:00.

### Wednesday, August 09

10:30 – 11:00 Posters Viewing B (Coffee Break) 16:30 – 18:30 Poster Session B

\*Poster presenters with odd numbers should be at their poster between 16:30-17:30 and those presenting posters with even numbers between 17:30-18:30

### Thursday, August 10

10:00 – 10:30 Poster Viewing A&B (Coffee Break)

### Friday, August 11

10:00 – 10:30 Poster Viewing A&B (Coffee Break) 13:30 – 15:00 Take down all posters

Authors are kindly requested to stand next to their poster boards where possible during the dedicated poster session viewing times. Authors are responsible for setting up and removing their posters. Posters nor taken from the board on time will be discarded

## **ISN Schools** Initiative

Financial support for the organisation of international neurochemistry schools worldwide, with a special focus on schools in emerging nations and regions.

Find out more!





www.neurochemistry.org



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	Tuesday 08 August, 2023			
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
08:00 - 08:30	Opening Ceremony			
08:30 - 09:30	PL01 Plenary Session: Klaus Armin Nave (Germany) Novel roles of oligodendrocytes in brain energy metabolism and neurodegenerative diseases Chair: ISN President - Flávia Gomes (Brazil)			
09:30 - 10:30	Emerging Group Leaders Chair: Amadi Ihunwo (South Africa) Co-Chair: Abdel Ali Belaidi (Australia) Abdel Ali Belaidi (Australia) Apolipoprotein E signaling in Alzheimer's disease: mechanisms and novel drug targets Sunan Li (United States) Energy Matters: Resetting synaptoenergetics is a new mechanistic target for the anti- bipolar actions of lithium Galyna Malieieva (Spain) Photopharmacological control of inhibitory brain receptors LuísRibeiro (Portugal) Neuroligins induce dendritic outgrowth in an ICAM5-dependent manner	Emerging Group Leaders Chair: Akio Wanaka (Japan) Co-Chair: Yuuki Fujiwara (Japan) Yuuki Fujiwara (Japan) Identification of a novel protein- degradation pathway by lysosomes required for neuromuscular homeostasis Carina Soares-Cunha (Portugal) Genetic and functional maps of neuronal ensembles encoding associative learning Domenico Azarnia Tehran (Germany) Selective endocytosis of Ca2+- permeable AMPARs by the Alzheimer's disease risk factor CALM controls synaptic plasticity Theodora Kalpachidou (Austria) Nerve injury induced deregulation of microRNAs differentially involved in neuropathic pain vs. peripheral nerve neuroregeneration	Emerging Group Leaders Chair: James Olopade (Nigeria) Co-Chair: Blanca Aldana (Denmark) Blanca Aldana (Denmark) Unraveling the link between microglia metabolic reprograming, neuroinflammation and neurotransmission Ignacio Fernandez Moncada (France) A lactate-dependent shift of glycolysis mediates synaptic and cognitive processes Philipp Mews (United States) Epigenome reprogramming underlies cell-type specific priming of striatal gene responses in cocaine relapse Veronica Pastor (Argentina) Exploring the role of a7 nicotinic acetylcholine receptors in the medial prefrontal cortex on memory processing	Emerging Group Leaders Chair: Vladimir Parpura (China) Co-Chair: Shahriar SheikhBahaei (United States) Shahriar SheikhBahaei (United States) Using animal models in stuttering research Rafael Almeida (United Kingdom) Axonal neurotransmitter release regulates myelination in vivo – insights from zebrafish Patricia Monteiro (Portugal) HANK3: an autism spectrum disorder associated gene Asaf Marco (Israel) Uncovering the genome-wide effects of intermittent fasting on chromatin modulation and transcription to improve brain health
10:30 - 11:00		Coffee Break / Poster	Viewing A/ Exhibition	
11:00 - 13:00	S01 T#7 Neurochemical ground for oxytocin modulation of mammalian social behaviors Chairs: Valery Grenevich (Germany) Silvana Valtcheva (Germany) S01-01 Neural circuitry for maternal oxytocin release in response to infant vocalizations Yongsoo Kim (USA) S01-02 Anatomical and functional characterization of oxytocin receptor neurons in the dorsal endopiriform nucleus in mice Yevgenia Kozorovitskiy (USA), S01-03 Neuromodulatory landscapes shaping social reward Yulong Li (China), S01-04 Compartmental neuropeptide release measured using a new oxytocin sensor	S02 T#4 Homeostatic regulation of neural circuits: From basic principles to brain disorders Chairs: Inna Slutsky (Israel) LU CHEN (USA), S02-01 Retinoic acid signaling in spinal cord homeostatic plasticity and neuropathic pain Davis Graeme (USA), S02-02 Homeostatic Signaling at Central and Peripheral Synapses in Health and Disease Ege Kavalali (USA), S02-03 Functional nano- organization of central synapses, a substrate for plasticity Inna Slutsky (Israel), S02-04 Regulation and dysregulation of homeostatic activity set points in hippocampal circuits	S03 T#2 The emerging roles of D- amino acids in Neurochemistry: from physiology to disease Chairs: Jonathan van Syckle Sweedler (USA), Isis N O Souza (France) Shengzhou Wu (China), S03-01 Serine racemase modulates insulin signaling in the brain Isis N O Souza (France), S03-02 D-serine tunes cortical neuronal inhibition Alessandro Usiello (Italy), S03-03 Early D-Aspartate metabolism signals neurodevelopmental process with relevance for psychiatric disorders Jonathan van Syckle Sweedler (USA), S03-04 Speaker	S04 T#14 Next-generation tools to shine a new light on neurochemical dynamics Chairs: Tommaso Patriachi (Switzerland) Tommaso Patriachi (Switzerland), S04-01 Optical tools to monitor and control endogenous neuropeptide activity Robert Campbell (Japan) S04-02 New genetically encoded sensors for ions and metabolites Jin Zhang (USA), S04-03 Genetically encoded biosensors for kinase activity Olivia Masseck (Germany), S04-04 A genetically-encoded sensor for imaging serotonin release in vivo
13:00 - 14:00		LUNCH	BREAK	

Legend:	Plenary Lecture	Workshop	Symposium
Legendi	Young	Young	ESN YMS
	Member Symposia	Scientist Lectureship	Symposia



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	Tuesday 08 August, 2023			
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
14:00 - 16:00	S05 T#9 The functional organization of axons Chairs: Matthew Rasband Matthew Rasband (USA), S05-01 Ankyrin and spectrin cytoskeletons regulate the functional organization of axons Elior Peles (Israel), S05-02 Role of axoglial cell adhesion molecules in sodium channel clustering Maren Engelhardt (Australia), S05-03 Organization and functional plasticity of the axon initial segment Dies Meijer (UK), S05-04 LGI3/2-ADAM23 interactions drive the accumulation and stability of Kv1 channels in myelinated axons	S06 T#15 New insights into the neurochemical basis of 'food addiction': genetic, epigenetic metabolic and circuit mechanisms Chairs: Robyn Brown (Australia) Rafael Maldonado (Spain), S06-01 Advances in the understanding of the epigenetic factors leading to food addiction Paul Kenny (USA), S06-02 GPR151 signalling in medial habenula regulates blood glucose homeostasis and food and drug- motivated behaviours Robyn Brown (Australia), S06-03 A paraventricular thalamus to insular cortex glutamatergic projection gates "emotional" stress-induced binge eating in females Serge Luquet (France), S06-04 The addiction-susceptibility TaqlA/Ankyrin repeat and kinase domain containing 1 kinase (ANKK1) and brain susceptibility to food-related diseases	<ul> <li>S07 T#6 Insulin signaling and brain energy metabolism: a key connection for cognitive function Chairs: Eugenio Barone (Italy) Eugenio Barone (Italy) S07-01 Aberrant insulin signalling alters mitochondrial bioenergetics and cell stress response in the brain: a route toward neurodegeneration Joao Duarte (Sweden)</li> <li>S07-02 Impact of insulin resistance on energy metabolism of neurons and gilal cells Bindu Paul (USA)</li> <li>S07-03 Gaseous signaling molecules in metabolism and neurodegeneration</li> <li>Fernanda G De Felice (Brazil)</li> <li>S07-04 Insulin resistance and allostatic load in Alzheimer's disease</li> </ul>	S08 T#11 Novel modes and mechanisms of synaptic vesicle recycling Chairs: Michael Cousin (UK) Michael Cousin (UK) Dynamin-1 function and dysfunction at the presynapse Shigeki Watanabe (USA) Dynamin condensates for ultrafast endocytosis Natali Lujan Chadanay (USA) Novel signaling pathways that regulate synaptic vesicle recycling Sarah Gordon (Australia) Activity-dependent phosphorylation of alpha-synuclein reveals its function as a protein trafficking chaperone
16:00 - 17:00	Marthe Vogt Lecture: Marina Picciotto (USA) Stress-induced acetylcholine signaling in the hippocampus: too much of a good thing? Chair: Cheah Pike-See (Malaysia)			
17:00 - 19:00	P	oster session A (odd numbers 17:0		0)
19:00		Welcome	Reception	

Legend:	Plenary Lecture	Workshop	Symposium
Legena	Young	Young	ESN YMS
	Member Symposia	Scientist Lectureship	Symposia



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## **MEETING PROGRAM**

	Wednesday 09 August, 2023			
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
08:00 - 08:30	ESN YSLA Lectureship Award 01 Chair: Natalia Nalivaeva (UK) Boaz Barak (Israel) Novel mechanistic insights on myelination regulation in health and illness	ESN YSLA Lectureship Award 02 Chair: Dimitra Mangoura (Greece) Giuseppe Gangarossa (France) Leveraging gut-brain interoception to reappraise reward events and mechanisms		
08:30-09:30	PLO2 Plenary Session: Nancy Ip Yuk- yu (Hong Kong SAR, China) Understanding the biomarkers of Alzheimer's disease – Insights into the development of diagnostics and therapeutics Chair: ESN President - Johannes Hirrlinger (Germany)			
09:30 - 10:30	YMS01 Young Members Symposia Chair: Vania Prado (Canada) Co-Chair: Vanessa Coelho-Santos (Portugal) Vanessa Coelho-Santos (Portugal) Live imaging of microglia behaviour across the life stages of the brain: From neonatal to aging <b>Opeyemi Ogunsuyi (Nigeria)</b> Donepezil's Therapeutic Effects Are Influenced by Curcumin: A Food- Drug Interaction Approach to Alzheimer's Disease Management <b>AmiKobayashi (United States)</b> The role of tRNA-derived fragments in tau aggregation and propagation in Alzheimer's disease <b>Cristina Marti-n-Monteagudo</b> (Spain) Astrocytic Ensembles in Nucleus Accumbens: What Role do they Play in THC-Related Impairments?	YMS02 Young Members Symposia Chair: Constanze Seidenbecher (Germany) Co-Chair: Roberta Goncalves Anversa (Australia) Roberta Goncalves Anversa (Australia) Role of a thalamo-cortical glutamatergic projection in stress-induced binge eating in female mice Oren Princz Lebel (Canada) Cognitive and motor phenotypes induced by injection of different strains of human alpha-synuclein pre-formed fibrils in mice Daniela Monteiro-Fernandes (Portugal) Therapeutical potential of 5HT1AR agonism on behavioural and neuropathology in a clinically relevant mouse model of Rett Syndrome Felipe Ribeiro (Brazil) Synaptic proteasome is inhibited in Alzheimer's disease models and is associated with memory impairment in mice	YMS03 Young Members Symposia Chair: Jean-Pierre Mothet (France) Co-Chair: Cory White (United States) Cory White (United States) Variability in Lipid Composition in the Virally Suppressed SIV-infected Macaque Brain Marta Cozzi (Italy) Molecular mechanisms in KIF5A- related neurodegeneration Akhilesh (India) Targeting TRPA1/TRPV1 with Bergenin: Mitigating Chemotherapy- Induced Neuropathy and Neuroinflammation Helena Targa Dias Anastacio (Australia) Induced pluripotent stem cell derived neurons from Alzheimer's disease patients show elevated Ca2+ responses to AMPA	YMS04 Young Members Symposia Chair: Christian Gonzalez-Billault (Chile) Co-Chair: Luana Chagas (Brazil) Luana Chagas (Brazil) The TNF-a signalling in the rapid plasticity of visual system following monocular enucleation. Adriano Chaves Filho (Brazil) R- and S-Ketamine modulate microglia reactivity and gene expression in lipopolysaccharide (LPS)-induced depression model Adrianne Watson (Canada) Fractalkine enhances oligodendrogenesis and remyelination from central nervous system precursor cells Tyler Wenzel (Canada) Microglia in brain organoids exhibit different immune responses if developed innately versus microglia integrated by co-culture
10.30 - 11.00		Coffee Break / Poster	Viewing B/ Exhibition	
10:30 - 11:00		Coffee Break / Poster	Viewing B/ Exhibition	

Legend:	Plenary Lecture	Workshop	Symposium
2090	Young	Young	ESN YMS
	Member Symposia	Scientist Lectureship	Symposia

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	Wednesday 09 August, 2023			
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
11:00 - 13:00	S09 T#2 Optical exploration of brain molecular signalling: New advances Chairs: Dmitri Rusakov (UK) Jonathan Marvin (USA) Exploratory development of genetically encoded sensors for glucose and ATP Lin Tian (USA) Biosensors for multi-dimensional analyses and manipulation of functional neural circuits in vivo Dmitri Rusakov (UK) Exploring spatiotemporal dynamics of extracellular glutamate and GABA Tatiana Korotkova (Germany) Neurotransmitter-targeting optogenetic manipulations of neural circuits that control selected behaviours	S10 T#4 Axonal cytoskeleton and transportation in neurodegeneration and regeneration Chairs: Yang Hu (USA) Monica Sousa (Portugal) Axon stretch triggers remodeling of cytoskeleton dynamics and trafficking Zdenek Lansky (Czech Republic) Regulation of microtubule accessibility by tau envelopes Wei Li (USA) Hibernation and neuroprotection in axonal injury Yang Hu (USA) Optineurin in axonal transportation and neurodegeneration.	S11 T#3 Targeting the complement system in brain injury and neurodegeneration Chairs: Marcela Pekna (Sweden), Beth Stevens (USA) Beth Stevens (USA) Complement-mediated synapse elimination: novel mechanistic insights and implications for therapy of neurodegenerative disorders Stephen Salton (USA) The role and therapeutic manipulation of the VGF/TLQP- 21/C3aR1 pathway in neurodegenerative disease John Lee (Australia) The yin and yang of complement C3a and C5a in amyotrophic lateral sclerosis Marcela Pekna (Sweden) Therapeutic potential of C3aR agonists in the post-acute phase after stroke	S12 T#13 Interrogating the plasticity brake: How does neural extracellular matrix regulate neuroplasticity? Chairs: Jessica C F Kwok (UK) Markus Morawski (Germany) Aggrecan and brevican in the CNS - two sides of one coin? Daniella Carulli (Netherlands) Boosting brain plasticity by manipulating the extracellular matrix component Semaphorin3A Jessica C F Kwok (UK) Sugar coat or sugar code - how do perineuronal nets regulate memory in ageing? Amy Lasek (USA) Involvement of cortical perineuronal nets in compulsive alcohol consumption
13:00 - 13:30		LUNCH	BREAK	
13:30 - 14:30	ISN Annual Business Meeting			
14:30 - 16:30	S13 T#7 Diversification of the Endoplasmic Reticulum in neuronal structure and function Chairs: Marina Mikhaylova (Germany) Marina Mikhaylova (Germany) Calcium-mediated ER dynamics during synaptic plasticity Mathieu Letellier (France) Local translation of synaptopodin enables input-specific homeostatic synaptic plasticity. Marijn Kuijpers (Netherlands) Autophagy controls neurona ER calcium stores to regulate neurotransmission Ginny Farías (Netherlands) ER organization in axonal identify	<ul> <li>S14 T#9 Astrocyte phagocytosis and brain functions</li> <li>Chairs: Schuichi Koizumi (Japan) Yosuke Morizawa (USA)</li> <li>Bergman glial synaptic nibbling mediates synaptic structural plasticity upon motor learning Chiara Zurzolo (France)</li> <li>Clearance of extracellular molecules via tunneling nanotubes.</li> <li>Won-Suk Chung (South Korea)</li> <li>Phagocytic roles of astrocytes in maintaining neural circuit plasticity and homeostasis</li> <li>Schuichi Koizumi (Japan)</li> <li>Alexander disease pathology caused by mutant astrocyte-mediated phagocytosis</li> </ul>	<ul> <li>S15 T#4 Cortical Malformations: from Patients to Mechanistic Insights</li> <li>Chairs: Koh-Ichi Nagata (Japan) Ghayda Mirzaa (USA)</li> <li>The genetic underpinnings of brain overgrowth and focal cortical dysplasia: from diagnostics to mechanistic insights</li> <li>Orly Reiner (Israel)</li> <li>Brain malformations: The Secrets of the progenitors</li> <li>Koh-Ichi Nagata (Japan)</li> <li>Pathophysiological mechanisms of variants of Rho family members, RAC1 and RAC3, in cortical malformations</li> <li>Jay Gopalakrishnan (Germany)</li> <li>Defective primary cilia dynamics as a basis to trigger human cortical malformations</li> </ul>	JNC Workshop: Breaking through the noise: designing, publishing, and communicating your research for impact Chair: Marco A M Prado (Canada) Frank Middleton (USA) Designing Andrew Lawrence (Australia) Publishing Kim Kwan (Australia) Communicating
16:30 - 18:30	P	· · · ·	80-17:30, even numbers 17:30-18:3	0)
19:30	ISN Presidents Reception (By Invitation)			

Legend:	Plenary Lecture	Workshop	Symposium
	Young	Young	ESN YMS
	Member Symposia	Scientist Lectureship	Symposia





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	Thursday 10 August, 2023			
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
08:00 - 08:30	Mark A Smith Award: João Victor Cabral-Costa Mitochondrial sodium/calcium exchanger NCLX regulates glycolysis in astrocytes, impacting on cognitive performance.			
08:30 - 09:30	PL03 Plenary Session: Richard L. Huganir (USA) Regulation of neurotransmitter receptors during synaptic plasticity in health and disease Chair: Carlos B. Duarte (Portugal)			
09:30 - 10:00	Young Scientist Lectureship Award 02 Chairs: Alessandro Prinetti (Italy) Anastassia Voronova (Canada) Fractalkine signalling is a critical regulator of oligodendrocyte genesis and myelination in the developing and demyelinated brain		Young Scientist Lectureship Award 01 Chairs: Babette Fuss (USA) Tommaso Patriarchi (Switzerland) A next-generation optical toolkit to study neuromodulatory signaling	
10:00 - 10:30		Coffee Break / Poster V	/iewing A&B/ Exhibition	
10:30 - 12:30	S17 T#4 Biomolecular condensates in synaptic function and neurodegenerative diseases Chairs: Frederic Meunier (Australia), Shanley Sanders (Australia) Sandra Encalada (USA) Axonotoxic Prion Protein Endoggresomes and Membraneless Organelles Form within Endolysosomal Pathways Ramon Martinez-Marmol (Australia) Tau forms functional synaptic nano- biomolecular condensates Susanne Wegmnann (Germany) Neuronal implications of Tau condensates Akihiro Kusumi (Japan) SynGAP condensate formation and recruitment of PSD95 and receptors: single molecule imaging	<ul> <li>S18 T#9 Microglia in physiology and disease</li> <li>Chairs: Margaret Ho (China)</li> <li>Margaret Ho (China)</li> <li>Glial autophagy in Parkinson's disease</li> <li>Renzo Mancuso (Belgium)</li> <li>Molecular mechanism of human microglial contribution to neurodegeneration</li> <li>Rosa Chiara Paolicelli (Switzerland)</li> <li>Dysfunctional microglia in the pathogenesis of brain disorders</li> <li>Qiaojie Xiong (USA)</li> <li>Microglia modulate stable wakefulness in mice</li> </ul>	<ul> <li>S26 Neuroimmunology: a common thread across diverse CNS disorders Chairs: Tammy Kielian (USA) David Loane (Ireland),</li> <li>Microglial dysfunction in the aged and injured brain</li> <li>Etty (Tika) Benveniste (USA)</li> <li>The JAK/STAT Pathway: Role in Neuroinflammation Ukpong Eyo (USA)</li> <li>Novel sex differences in microglial identity and regulation of neural behavior</li> <li>Jessica Williams (USA)</li> <li>Protective functions of immune- modulated astrocytes during autoimmune demyelination</li> </ul>	S20 T#S Cellular and molecular regulation of neurodevelopment and disorders Chairs: King-Hwa Ling (Malaysia) Shubha Tole (India) Neuron-glia cell fate regulation in the neocortex and hippocampus John Mason (UK) PAX6 controls cell fate choice in human cerebral organoids Elaine Lim (USA) Genotype-to-cell type discoveries using cerebral organoids in autism King-Hwa Ling (Malaysia) REST-JAK-STAT in the neurogenic-to- gliogenic shift in Down syndrome
12:30 - 13:30	ESN Business Meeting		FRNOON	
	FREE AFTERNOON			

Legend:	Plenary Lecture	Workshop	Symposium
	Young	Young	ESN YMS
	Member Symposia	Scientist Lectureship	Symposia





Friday 11 August, 2023				
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
08:00 - 09:00	ESN Bachelard Lectureship Award Chair: Illana Gozes (Israel) Juan P. Bolaños (Spain) Metabolic shapes of brain cells and functional consequences			
09:00 - 10:00	PL04 Plenary Session: Carmen Sandi (Switzerland) Mitochondrial dynamics in neuronal structure and function: Behavioral implications Chairs: Caroline (Lindy) Rae (Australia)			
10:00 - 10:30		Coffee Break / Poster V	iewing A&B/ Exhibition	
10:30 - 12:30	ESN YMS Symposia 01 Chairs: Dimitra Mangoura (Greece) and Johannes Hirrlinger (Germany) Rita Abrunhosa Soares (Portugal) Uncovering Mitochondrial properties as novel targets for neural stem cell differentiation in the Subventricular Zone Diogo M. Lourenço (Portugal) Cannabidivarin and its neurogenic potential as a novel target for Rett Syndrome Charikleia (Charoula) Peta (Greece) NLS-neurofibromins are important mitotic MAPs in astrocytes Nadine Denker (Germany) Metabolism of pyruvate in astrocytes Ismail Gbadamosi (Poland) Depletion of neurodegeneration- associated protein TDP-43 perturbs cellular energy metabolism in motor neurons	ESN YMS Symposia 02 Chairs: Illana Gozes (Israel) and Carlos Duarte (Portugal) Milorad Dragic (Serbia) Neuroprotective effect of intermittent theta-burst stimulation in experimental Parkinsonism - the role of adenosine signaling Olayemi K. Ijomone (Nigeria) Acrylamide-induced behavioural deficits and neuroinflammation in rats: potential role for Sesamum radiatum extract Katarina Milićević (Serbia) Trimethyltin disrupts calcium homeostasis and promotes inflammatory phenotype in astrocytes in vitro Maria Francesca Palmas (Italy) Repurposing pomalidomide as a neuroprotective drug in an alpha-synuclein-based model of Parkinson's disease Maram Ganaiem (Israel) Pleiotropic Mechanisms in Brain Disease: NAP (Davunetide), the Microtubule Protecting ADNP Drug Candidate, Penetrates Cell Nuclei Marialuisa F. de Ceglia (Spain) Impact of western diet or d-pinitol in cognitive behaviour and hippocampal protein expression of Sxfad Alzheimer mouse model	S16 T#16 ISN History Symposium Chairs: Philip Beart (Australia) Catarina Resende Oliveira (Portugal) ISN Biennial Meeting 1989 in Albufiera Ana Luisa Carvalho (Portugal) ISN Special Neurochemistry Meeting 2016 in Coimbra Douglas Feinstein (USA) History of Astrocyte Research Fernando de Castro (Spain) History of Microglia Research Anne I Boullerne (USA) History of Oligodendrocyte Research	S22 T#10 The multifaceted biology of repeat expansion diseases Chairs: Rosanna Parlato (Germany) Riccardo Cristofani (Italy) Molecular pathways controlling unconventional non-AUG translated proteins levels Jannigje Rachel Kok (UK) Astrocyte-induced DNA damage as a mechanism of motor neuron death in ALS Rosanna Parlato (Germany) Dysregulation of quality control in HD and ALS Masahisa Katsuno (Japan) Molecular basis for early-phase pathogenesis of SBMA
12:30 - 13:30		LUNCH	BREAK	

Legend:	Plenary Lecture	Workshop	Symposium
	Young Member Symposia	Young Scientist Lectureship	ESN YMS Symposia



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Friday 11 August, 2023				
Time	Archive Hall (Plenary Hall)	Infante Hall (Parallel 1)	D Maria Hall (Parallel 2)	D Luis Hall (Parallel 3)
13:30 - 15:30	S21 T#9 Disease-specific astrocyte responses: from molecules and function to treatment strategies Chairs: Elly Hol (Netherlands) Elly Hol (Netherlands) Human iPSC-derived organoid models to study glia in Alzheimer's and Alexander disease Robert Krencik (USA) Neuromodulation of bioengineered organoids with human reactive astrocytes Milos Pekny (Sweden) Astrocytes as key modulators of CNS responses to stroke Michael Sofroniew (USA) Convergent and divergent transcriptional regulators of astrocyte reactivity across disorders	S24 T#4 Regulation of Synaptic Proteins Associated with Neurodevelopmental Disorders Chairs: Katherine Roche (USA) Ana Luisa Carvalho (Portugal) Aberrant hippocampal transmission, excitability and behaviour associated with an intellectual disability-linked stargazin mutation Katherine Roche (USA) Deficits in the synaptic targeting of NMDA receptors with ASD- associated GluN2 variants Eunjoon Kim (South Korea) NMDA receptor dysfunctions in Shank2-related brain developmental disorders Gavin Rumbaugh (USA) Neuron subtype-specific synaptic and non-synaptic functions of Syngap1 throughout development	S19 T#14 Interrogation of the nervous system with fluorescence spectroscopy and optical superresolution microscopy Chairs: Francisco J Barrantes (Argentina) Ana Melo (Portugal) Untangling the distinct conformational signatures of the flanking polyQ regions in huntingtin exon 1 at the membrane surface: insights into Huntington's disease Giovanna Coceano (Sweden) Live cell compatible 3D superresolution fluorescence microscopy: from protein trafficking to synaptic plasticity in firing neurons Francisco J Barrantes (Argentina) Cholesterol modulation of nicotinic acetylcholine receptor topography, single molecule trajectories and nanocluster assembly	S23 T#15 Neuropeptide modulation of pain Chairs: Marc Landry (France) Bradley Taylor (USA) Spinal and brainstem neuropeptide Y Y1 receptor-expressing neurons in neuropathic pain Marc Landry (France) Mechanical vs thermal analgesia induced by relaxin-3/RXFP3 peptidergic transmission in anterior cingulate cortex and amygdala Edita Navratilova (USA) Dynorphin link between chronic pain and comorbid conditions.
19:00 - 22:30			Reception m Convention center	

Legend:	Plenary Lecture	Workshop	Symposium
	Young Member Symposia	Young Scientist Lectureship	ESN YMS Symposia

## ISN Committee for Aid and Education in Neurochemistry (CAEN)

CAEN provides funds towards travelling to another laboratory to develop new technical or conceptual expertise, purchasing research supplies, attending workshops / training courses / satellite meetings or organizing a workshop / small school.

Find out more!





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PORTO, PORTUGAL AUGUST 08-11, 2023



## **BUSINESS MEETINGS**

### **ISN BUSINESS MEETING**

### WEDNESDAY, AUGUST 9, 13:30-14:30 | PLENARY HALL / ARCHIVE HALL Please note that only ISN members can vote at Business Meeting

### **ESN BUSINESS MEETING**

**THURSDAY, AUGUST 10, 12:30-13:30** PLENARY HALL / ARCHIVE HALL Please note that only ESN members can vote at Business Meeting

### What is a Business Meeting and why should I attend as a member?

The Business meeting (also known as an Annual General meeting - AGM) is a crucial event for our society. During this meeting, we will discuss important matters concerning the operation, growth, and future direction of our society.

The business meeting provides an opportunity for all members to come together and actively participate in decision-making processes. We will present a comprehensive overview of our achievements, challenges, and financial performance over the past year. Additionally, key strategies and initiatives for the upcoming year will be shared, allowing everyone to contribute their valuable insights and ideas.

It is essential for each member to attend this meeting as your input and perspectives are vital to the success of our organization. Your attendance will not only enhance your understanding of the Society's current state but also enable you to have a direct impact on its future.

Both ISN and ESN look forward to engaging with their members at the Business Meetings

## ISN Conference Committee (ISN-CC)

Financial support for the organisation of small conferences on specialised neurochemical topics and sponsors neurochemistry symposia within meetings of other scientific societies or groups.

### Find out more!







www.neurochemistry.org



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Poster presentation by authors between 10:30 – 11:00 on Tuesday, August 08 Poster presentation by authors with odd numbers between 17:00 – 18:00 on Tuesday, August 08 Poster presentation by authors with even numbers between 18:00 – 19:00 on Tuesday, August 08 Poster presentation by authors between 10:00 – 10:30 on Thursday, August 10 Poster presentation by authors between 10:00 – 10:30 on Friday, August 11

### A01 - Gene regulation & genetics

- A 01-01 Effect of Chronic Unpredictable Mild Stress (CUMS) and ketamine treatment on circRNAs expression in rat hippocampus Luiz Filipe Bastos Mendes
- A 01-02 An integeative GWAS followed by functional investigation reveals possible involvement of CNTNAP5 in glaucomatous neurodegeneration Sudipta Chakraborty
- A 01-03 Unravelling the epigenetic of resilience: H3K36me3 as a target in the development and heritability of Resilience to Depression Lucas Silva
- A 01-04 Understanding the effect of SNCA overexpression in apoptotic cell death via lung cancer model Yong Qi Leong

### A02 - Signal transduction & synaptic transmission

- A 02-01 Opto-evoked neurotransmitter detection with graphene nanobiosensors Mafalda Abrantes
- A 02-02 Ketogenic diet regulates presynaptic proteome by PKA and BDNF signaling pathway activation in prefrontal cortex of aging mice Diego Acuña-Catalán
- A 02-03 Overlapping substrate selectivity between dopamine and serotonin transporters: implications for monoamine homeostasis Ana Sofia Alberto e Silva
- A 02-04 α-Synuclein overexpression impairs the trafficking of crucial SNARE protein synaptobrevin-2 Elyas Arvell
- A 02-05 Glutamate transporters: targets of Cadmium toxicity in human astrocells Yaneth Castro-Coronel
- A 02-06 Synaptic transmission is affected by the lack of plasmalogens Bárbara Correia
- A 02-07 Glycine transporter type 1 inhibitor promotes neuroprotection in a model of Alzheimer's disease Onésia Cristina Oliveira-Lima
- A 02-08 The interplay between BDNF signaling and hippocampal dendritic mitochondria. Filipe Duarte







- Investigating the synaptic localization of endogenous Neuroligin-1 with a new mouse line A 02-09 Charles Ducrot
- A 02-10 Microtubule-anchoring to excitatory synapses of PV neurons Daniela Hacker
- The Developmental Trajectory of Synaptic Vesicle Endocytosis in ASD Models A 02-11 Nawon Kim Michael A. Cousin

### A03 - Neuroinflammation & neuroimmunology

A 03-01	Neuroinflammation in the posterior dorsomedial striatum facilitates goal-directed action through an astrocyte mediated mechanism Arvie Abiero
A 03-02	P2X7 antagonist A438079 or Panx1 inhibition with Probenecid can "deactivate" rat activated astrocyte in vitro Marija Adžić Bukvić
A 03-03	Meninges as an overlooked pharmacological target for Globoid Cell Leukodystrophy Alessia Amenta
A 03-04	Impact of LRRK2-G2019S mutation on microglial NLRP3 inflammasome activation Luca Ballotto
A 03-05	Dendritic nanoarchitectures for the treatment of psoriasis Mani Bhargava
A 03-17	Cola acuminata extract against neuroinflammation in Parkinson's disease by inhibiting NLRP3 inflammasome components in THP-1 cells Ngoungoure Ndam Viviane Laure
A 03-08	ASTROCYTES UNDERGO MORPHOLOGICAL AND MOLECULAR CHANGES IN AN IN VITRO MODEL OF CELLULAR SENESCENCE AND IN AGED MOUSE HIPPOCAMPUS João Bastos
A 03-09	The role of glial cells in neuroinflammation in the context of Alzheimer's disease Rafaella Ferreira
A 03-10	Sex-specific alteration of midbrain inflammatory transcripts following maternal immune activation and estrogen receptor modulation Sophie R. Debs
A 03-11	Neuronal Gene Transcription in Multiple Sclerosis and Mouse Model Implicate a Senescence-like Phenotype Sienna Sage Drake
A 03-12	Transplanted iPSC-derived vascular endothelial cells recruit regulatory T cells and promote recovery of white matter infarct. Yasuki Ishizaki







- A 03-13 GSK2795039 a novel NOX2 inhibitor, reduces proinflammatory microglial activation in vitro and in a model of traumatic brain injury Janeen Laabei
- A 03-14 Studies on prefrontal ultrastructural changes following interaction with Tenofovir-silver nanoparticles conjugate in diabetic rats SODIQ KOLAWOLE LAWAL
- A 03-15 Vicious cycle of socially isolated depression and alcoholic dependence Jin-Seok Lee
- A 03-16 Cerebral and peripheral response to maternal immune activation by viral mimetic; the relevance to Alzheimer's disease Marta Matuszewska

### A04 - Molecular basis of disease

A 04-01	Aqueous lyophilisate of Malvaviscus arboreus Dill. Ex Cav. leaves exerts antiepileptogenic properties in rats Maxwell Blesdel ADASSI
A 04-02	Purinergic signaling-dependent microglial activation in the cerebral cortex in a valproic acid-induced rat model of autism Lidia Babiec,
A 04-03	GluN2A reduced expression induces a delay in neuron maturation involved in seizure susceptibility. Veronica Baez
A 04-04	Analysis of the neuronal extracellular matrix in the Syrian hamster during hibernation Valerie Berrouschot
A 04-05	Apoptosis-related Proteins in PBMC as Markers for Parkinson's Disease Development – A Pilot Study Mária Brodňanová
A 04-06	Multi-omics analysis of the metabolome and microbiota in a rat model of cerebral amyloidosis. Lorenzo Campanelli
A 04-07	Behavioral and anatomical phenotypes in a mutant for the Transglutaminase enzyme Jorge M Campusano
A 04-08	The participation of activating transcription factor 6 alpha (ATF6 $\alpha$ ) in Alzheimer's disease Mariana Chauvet
A 04-09	SUMOylation-mediated neuroprotection in models of Parkinson's disease Helena Cimarosti
A 04-10	Fragile-X Mental Retardation protein (FMRP) mediates BDNF-induced upregulation of synaptic NMDA receptors Elisa Corti
A 04-11	mTOR: The key link between Activating Transcription Factor-4 and neuronal apoptosis in Parkinson's disease models. Matthew Demmings







- A 04-12 Structural comparison of the human NET and AChe for the study of dual inhibitors: An in silico and in vitro approach. Luis Dinamarca A 04-13 Multidimensional functional profiling of human neuropathogenic FOXG1 alleles in primary cultures of pallial precursors Simone Frisari Impaired nitric-oxide-dependent neurovascular coupling and spatial memory in type 2 diabetes are A 04-14 rescued by dietary nitrate João S. Gonçalves A 04-15 Metformin improves cognition and restores microglial autophagy in experimental models of type 2 diabetes mellitus Nicolas Gabriel Gonzalez Perez Characterization of cellular and molecular bases of Moyamoya angiopathy A 04-16 Gemma Gorla A 04-17 The role of the fuzzy coat in the cellular uptake and seeding ability of a-synuclein fibrils **David Hicks** A 04-18 Unfolded protein response in mitochondria and endoplasmic reticulum of SH-SY5Y cells induced by 3-nitropropionic acid Ľuboš Hudák Applying novel human iPSC-derived neuronal models to investigate modulators of TDP-43 pathology A 04-19 Matisse Jacobs GM3 Synthase Deficiency causes lysosomal and mitochondria impairment A 04-20 Emma Veronica Carsana A 04-21 Levetiracetam modulates adenosinergic pathway in the brain: in silico and in vivo mechanistic study in model of epilepsy Muhammad Jamal ApoE4 impairs Rab-mediated vesicular trafficking via GFAP dysregulation in astrocytes A 04-22 Onyedikachi Ojiakor A 04-23 Waves of increased chaperone abundance may have anti-aggregation activities in a mouse model of ALS Rebecca San Gil A05 - Brain development & cell differentiation
- A 05-01 The Ontogenesis of the neuronal extracellular Matrix in the hominoid brain Jan Philipp Alter
- A 05-02 Evaluating Neuroprotective Effects of Sulforaphane in a VPA-Induced Autism Model Riley Bessetti
- A 05-03 Cadherin 13 expression in somatostatin-positive interneurons regulate auditory sensory processing. Pegah Chehrazi







- A 05-04 Relationship between reelin expression with age in the human and mouse hippocampal formation. Vanessa Despotovski
- A 05-05 Vanadium improves memory and spatial learning and protects pyramidal cells of the hippocampus in juvenile hydrocephalic mice Omowumi Femi-Akinlosotu
- A 05-06 The Development of the Inhibitory System Changes is Regulated by the Methylenetetrahydrofolate Reductase (Mthfr) Gene. Hava Golan
- A 05-07 RTTN mutations impair the growth of human brain organoids Adva Hadar
- A 05-08 Septin 5 and 6, dual regulators of stability and maintenance of the axon initial segment Hamdan Hamdan
- A 05-09 Klf4 and Klf5 have opposing effects on the determination of neural precursor cell fate in the developing mammalian brain
- A 05-10 Filopodia in the z-direction of the growth cone, identified using superresolution microscopy Michihiro Igarashi
- A 05-11 Chemogenetic modulation of human in vitro motoneuron development accelerates maturation trajectory and electrophysical properties Sean Morrison
- A 05-12 Tenascin C modulates biochemical composition of adult hippocampal neurogenic niche Milena Tucić

### A06 - Bioenergetics & metabolism

- A 06-01 NEURONAL ENERGY METABOLISM AND INTEGRITY IN THE VISUAL CORTEX OF RATS FOLLOWING WITHDRAWAL FROM LEAD-INTOXICATION Michael Ajenikoko
- A 06-02 Functional Metabolic Mapping Shows Preferential Metabolism of Butyrate over Acetate in Mouse Astrocytes Aisha Ameen
- A 06-03 Itaconate esters deplete the glutathione content of cultured primary astrocytes Christian Arend
- A 06-04 Myelin lipids as nervous system energy reserves Ebrahim Asadollahi
- A 06-05 GAT1 and GAT3 gene expression associates with brain glucose metabolism in typically Alzheimer's disease hypometabolic regions Giovanna Carello-Collar
- A 06-06 Investigation of NAD Metabolism in Mitochondrial Metabolism in the Dorsal Root Ganglion Marina Chichierchio







A 06-07	Multi-omics reveals lipidomics alterations validated in an Alzheimer's disease mouse model and risk loci
	carriers
	Monica Emili Garcia-Segura

- A 06-08 Increased Brain Fatty Acid Oxidation After Neonatal Brain Injury Regina Fernandez Fernandez
- A 06-10 Leucine catabolism serves as a possible endogenous source of acetyl-CoA and ketone bodies in human neural cancer cells Eduard Gondas1
- A 06-11 Fatty acid metabolism maintains cellular ATP levels in glucose-starved cultured astrocytes Antonia Regina Harders
- A 06-12 "Purine" omic alterations predict mortality following severe head injury Nathan Strogulski

### A07 - Neuronal plasticity & behaviour

A 07-01	Selective deletion of beta2* nicotinic acetylcholine receptors in prefrontal cortex regulates specific social response Alice Abbondanza
A 07-02	Cellular mechanism underlying increased brain volume in L-DOPA-induced dyskinesia mouse model Yoshifumi Abe
A 07-03	CBD-enriched Cannabis extract induces neuroplastic changes in the hippocampus of long-term treated male rats Andrey Aguiar
A 07-05	Investigating the neuronal ensembles encoding valence in the laterodorsal tegmentum Ricardo Bastos-Gonçalves
A 07-06	Glutamatergic mechanisms underpinning stress-induced vulnerability to cocaine abuse in BDNF Met prodomain carriers María Julieta Boezio
A 07-07	Selective implications of ATM and ATR kinases in hippocampal neurons Sabrina Briguglio, Clara Cambria Flavia Antonucci
A 07-08	Exploring the Involvement of the Laterodorsal Tegmentum in Reward and Aversion Processing Barbara Coimbra,
A 07-09	High-fat diet induces memory impairment and alteration of protein synthesis in the hippocampus of mice Anna Conceição
A 07-10	SILDENAFIL DUAL EFFECTS ON MEMORY. SEARCH FOR A PHARMACODYNAMIC MODEL FOR DERIVATIVES WITH RESTRICTED ACCESS TO THE BRAIN. Maria Florencia Constantin
A 07-11	Spaced learning improved memory persistence in elementary-school students. Julieta Correa







- A 07-12 D2-MSN projections from the Nucleus Accumbens to the Ventral Pallidum are implicated in anxious-like behavior Raquel Correia
- A 07-13 Forget about It! Potential Role of Rac1 in the VTA as an Active Forgetting Mechanism for a Consolidated Aversive Memory Juliana Dalto
- A 07-14 Microglia depletion prevents lactation by inhibition of prolactin secretion Arpád Dobolyi
- A 07-15 Encoding of valence by nucleus accumbens neurons Ana Verónica Domingues
- A 07-17 The potential role of histone methylation in the development of Major Depression Disorder resilience phenotype. Nicole Taís Fröhlich
- A 07-18 Transcriptional lability of brain oxytocin receptor (Oxtr) generates diversity in brain OXTR distribution and social behaviors. Qi Zhang
- A 07-19 Maternal nematode infection positively influences development of hippocampal long-term potentiation in the juvenile mouse pup Sophia Noel

### A08 - Clinical studies, biomarkers & imaging

- A 08-02 Brain gene expression association with [18F]FDG-PET signal Luiza Santos Machado
- A 08-03 Association of dysregulated noradrenergic response and cognition in schizophrenia Rogerio Panizzutti
- A 08-04 Identification and characterization of plasma/CSF biomarkers for empowering the progression risk in cerebral amyloid angiopathy Giuliana Pollaci

### A09 - Glia and neuron-glia interactions

- A 09-01 Serotonin1A-Receptor-mediated signaling in Astrocytes and its influence on Major Depressive Disorder Svenja Bremshey
- A 09-02 Visualizing live myelinic channels for a mechanistic understanding of myelin wrapping Daryan Chitsaz
- A 09-03 THE ROLE OF MINOCYCLINE THERAPY ON THE LIVER OF RAT INDUCED WITH ISCHEMIC STROKE BY COMMON CAROTID ARTERY OCCLUSION. Chukwu Bright







A 09-05	Chemogenetic activation of Gq-signaling in astrocytes modulates functional connectivity and improves spatial pattern separation Alycia M. Crooks			
A 09-06	Astrocyte senescence is associated with an altered nuclear envelope morphology and composition Isabella Damico			
A 09-07	ADENOSINE A2A RECEPTORS CONTROL THE ALTERATIONS OF ASTROCYTIC AQUAPORIN-4 UNDER STRESS CONDITIONS Liliana Dias			
A 09-08	Aging promotes an increase in mitochondrial fragmentation in astrocytes. Luan Diniz			
A 09-09	Naringin rescues visual deficits by modulating ocular oxidative stress and astrocytic activation in glaucomatous rats. Adedamola Fafure			
A 09-10	Role of sphingolipids in fractalkine mediated myelin repair Sara Grassi			
A 09-11	Licochalcone E, a β-amyloid aggregation inhibitor, promotes M1 to M2 microglia polarity via inhibition of CTL1 function Masato Inazu			
A 09-12	Neuron-microglia interaction during Parkinson's disease: the role of the cytokine CCL21 Flavia Lima			
A 09-13	Functional characterization of DNA methylation in the transcriptional regulation of glutamate glial transporters Jaqueline Loaeza			
A10 - Neurodegeneration and neuropsychiatric disorders				
A 10-01	Black seed oil reverses chronic antibiotic-mediated depression and social behaviour deficits Mujeeb Adedokun			
A 10-02	From the molecular hallmarks to motor behavior: characterization of a new transgenic mouse model for Spinocerebellar Ataxia type 2 Inês T. Afonso			
A 10-03	Investigating the Impact of Apolipoprotein E4 on Amyloid and Tau Pathology in an Alzheimer's Disease Mouse Model Aya Arrar			
A 10-04	Evaluation of Antioxidant, Anti-inflammatory, and Anticholinesterase Activities of Selected Medicinal Plants Used in Dementia Soliu Atunwa			
A 10-05	Brain ischemia and metabolism of amyloid precursor protein Eva Babusikova			







- A 10-06 Myricitrin elevates striatal dopamine levels via Monoamine oxidase inhibition: therapeutic implication against Parkinson's disease Chayan Banerjee
- A 10-07 Ceramide synthesis in Alzheimer's Disease; From small extracellular vesicles to the development of the pathology in a mouse model. Melina Bellotto
- A 10-08 ASTROGLIAL ACTIVATION AND INSULIN RESISTANCE COMPRISE A JOINT RESPONSE IN EXPERIMENTAL ALZHEIMER'S DISEASE Melisa Bentivegna
- A 10-09 FastProtAct FAST-throughput phenotypic assay to identify compounds with PROTeostasis ACTivity. Daniela Vilasboas-Campos
- A 10-10 Schizophrenic patients hiPSC-derived astrocytes impair synaptic engulfment by induced microglial-like cells (iMGs) in vitro Pablo Leal Cardozo
- A 10-11 Evaluation of the effect of sarcosine in animal model of Alzheimer's desease Raphaela Chiareli
- A 10-12 Mutant Androgen Receptor Alternative Translation Initiation as novel strategy to block toxicity in SBMA. Marta Chierichetti
- A 10-13 Correction of mTORC1-mediated brain protein synthesis rescues memory in mouse models of Alzheimer's disease Danielle Cozachenco
- A 10-15 Pre-clinical evaluation of phosphonate analogues of lanthionine ketenamine as potential therapies for neurological disorders. Travis Denton
- A 10-16 Oligodendroglial Ank3 in paranodal maintenance and etiology of bipolar disorder Xiaoyun Ding
- A 10-17 Neurosteroid Ganaxolone attenuates β-amyloid toxicity through activating Liver X receptor in Alzheimer's disease Divya Goel
- A 10-18 Investigation of adeno-associated vírus as a therapeutic approach for Alzheimer's disease Tayna Ferreira
- A 10-19 Nigella sativa OIL MODULATED MK801-INDUCED SCHIZOTYPY IN BALB/c MICE Royhaan Folarin
- A 10-20 Lysosome orchestrates autophagy and integrated stress response: new insights from Sephin1 Giulia Frapporti
- A 10-21 Intersectional approaches for probing sex differences in dopamine neuron resilience Zachary Freyberg



A 10-22

motor neurons





## POSTER SESSION A / TUESDAY, AUGUST 08

Ismail Gbadamosi A 10-23 AXONAL REGENERATION MEDIATED BY EXTRACELLULAR VESICLES OF NEURAL STEM CELLS IN RESPONSE TO ISCHEMIA. Fernando H Real PIP3 interacts with alpha-synuclein and initiates its aggregation of Parkinson's disease-related fibril A 10-24 polymorphism Kensuke Ikenaka A 10-25 Brain translational control and eIF2B in the pathophysiology of major depressive disorder Alinny Isaac A 10-26 The mTORC 2 signaling and functions in neurotoxicity induced by 1-methyl-4-phenylpyridinium (MPP+) and 6-hydroxydopamine (6-OHDA) Marija Jeremic A 10-27 GLABRIDIN ATTENUATES TIO2NP INDUCED BEHAVIOURAL AND MOLECULAR CHANGES INADULT ZEBRAFISH Karamjeet Kaur A 10-29 An antioxidant and anti-ER stress combination therapy alleviates post-TBI neurodegeneration Charles K Davis Modulation of microglial phagocytosis of amyloid beta via lipids A 10-30 Izabela Lepiarz-Raba A 10-31 THE ROLES OF KOLAVIRON ON THE BRAIN OF ADULT FEMALE WISTAR RATS EXPOSED TO ALUMINIUM CHLORIDE Folashade Lewu A 10-32 Modeling non-motor symptoms in Parkinson's disease: Systematic review and behavioral characterization in rats **Cleiton Lopes-Aguiar** A 10-33 Molecular signatures of inherited Frontotemporal Dementia with TDP-43 aggregates converge upon lipid metabolic dysfunction Oana Marian The antidyskinetic potential of cannabigerol in an animal model of tardive dyskinesia A 10-34 Rafaela Moraes A 10-35 Exploring the potential therapeutic impact of Trmt2a modulation in Spinocerebellar ataxia type 3 / Machado-Joseph Disease Tiago Moreira-Gomes A 10-36 Amelioration in Enriched Environment and acute administration of aqueous-methanolic Extract of Garlic on mice model of depression Philemon Paul Mshelia

Depletion of neurodegeneration-associated protein TDP-43 perturbs cellular energy metabolism in

A 10-37 Development of brain-penetrating peptide therapeutics for neurodegenerative diseases Azin Amin







- A 10-38 Limited Therapeutic Impact of Intermittent Fasting and Ketogenic diets in a Mouse Model of Spinocerebellar Ataxia Type 3 Cármen Vieira
- A 10-39 GM1 oligosaccharide acts as a mitochondrial modulator: implication in neurological diseases Giulia Lunghi
- A 10-40 Therapeutic potential of tauroursodeoxycholic acid in stress-related brain pathologies Rita Nóbrega-Martins
- A 10-41 Neurodegeneration-induced activation of adult neurogenesis in hippocampus of Alzheimer's disease modelled rat brain Konstantin Yenkoyan

### A11 - Intracellular organelles and trafficking

- A 11-01 Microtubule dynamics determines DRG axon asymmetry and regenerative capacity Ana Catarina Costa
- A 11-03 Tau phosphorylation impedes functionality of protective tau envelopes Eva Lanska

### A12 - Stem Cells and regeneration

- A 12-01 Treatment with hyperbaric oxygen reduces death of immature neurons in the adult hippocampal dentate gyrus following brain injury Rada Jeremic
- A 12-02 Cannabidivarin and its neurogenic potential as a novel target for Rett Syndrome Diogo M. Lourenço
- A 12-03 Run, brain, run! In vitro and in vivo modulation of adult oligodendrogenesis by BDNF Joana M Mateus
- A 12-04 TARGETING MIR-145 ENHANCES REMYELINATION AND RECOVERY IN A MOUSE MODEL OF MULTIPLE SCLEROSIS Monique Marylin Alves de Almeida
- A 12-05 Mesenchymal stem cells extracellular vesicles to promote neurite outgrowth and axonal protection in vitro. Paula Andrea Soto

### A13 – Lipids and glycobiology

A 13-01 The role of LPA6 receptor signaling in CNS myelination Jazmín Soto-Verdugo







### POSTER SESSION A / TUESDAY, AUGUST 08

#### A14 - Neurochemical technologies and resources

- A 14-01 Novel fluorescent probes for imaging the serotonin transporter Oliver John Belleza
- A 14-02 In Silico Study of Bryophyllum pinnatum Leaf Phenolic Compounds Molecular Interactions with Enzymes Linked with Neurodegeneration Olasunkanmi Omojokun
- A 14-03 Quantification of pregnanolone isomers and progesterone by liquid chromatography-tandem mass spectrometry in serum and brain Felipe Borges Almeida

#### A15 - Pain / Addiction

- A 15-02 Effect of low-Dose Combination of Gabapentin and Indomethacin on Brain-Derived Neurotrophic Factor Modulation In CIA Rat Model Zaid Abdul Razzak
- A 15-03 PLASMA LEVELS OF SEX-RELATED HORMONES AND PROTEINS IN ALCOHOL DEPENDENT SUBJECTS AND CONTROLS Victor Karpyak
- A 15-04 Protein Parkin in Methamphetamine Use Disorder Anna Moszczynska
- A 15-05 Tozasertib ameliorates CFA-induced inflammatory pain in rats by Modulation of KIF17/NR2B signalling Anurag Kumar Singh
- A 15-06 Effect of positive GABAergic modulators on nucleus accumbens dopamine in rats treated with cocaine William Norbey Sanchez Luna

#### A16 - Other topics

- A 16-01 The role of zinc in amyotrophic lateral sclerosis development: a toxicogenomic perspective Katarina Živančević
- A 16-02 Ficus capensis Attenuates Anxiety-like behaviour via Inhibition of Cholinergic and Antioxidant Enzymes in Hypertensive Rats Olufunke Ajeigbe
- A 16-03 N-Acetyl Cysteine ameliorates mitochondrial dysfunction in ischemic injury via attenuating Drp-1 mediated mitochondrial autophagy. Mubashshir Ali
- A 16-04 Microstructural Characterization of Short Association Fibers in the Human Brain David Edler von der Planitz
- A 16-05 Comparison of quantification techniques for assessment of astrogliosis via GFAP immunohistochemistry Lauren Luijerink

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Poster presentation by authors between 10:30 – 11:00 on Wednesday, August 09 Poster presentation by authors with odd numbers between 16:30 – 17:30 on Wednesday, August 09 Poster presentation by authors with even numbers between 17:30 – 18:30 on Wednesday, August 09 Poster presentation by authors between 10:00 – 10:30 on Thursday, August 10 Poster presentation by authors between 10:00 – 10:30 on Friday, August 11

#### B01 - Gene regulation & genetics

- B 01-01 A novel RNA-targeted therapeutic approach against Tau-driven neuronal pathology in Alzheimer's and Down syndrome brain pathologies Carlos Campos-Margues
- B 01-03 MODAFINIL AFFECTS GLUTAMINE SYNTHETASE AND NEUTRAL AMINO ACID TRANSPORT ACTIVITY IN CEREBELLAR GLIAL CELLS Janisse Silva-Parra
- B 01-04 Genetic polymorphism of GABA transaminase affects opioid-induced somnolence in patients with cancer pain Mizuho Sumitani

#### B02 - Signal transduction & synaptic transmission

B 02-01	Novel steroid-based allosteric modulators of M1-muscarinic receptors Jan Jakubík
B 02-02	Characterization of a novel MDMA derivative 1,3-Benzodioxolylbutanamine (BDB) and its structural analogs. Nina Kastner
B 02-03	Molecular Biomimicry and the Synthetic Synapse: Engineering a Stable Synaptogenic Extracellular Matrix Timothy Kenned
B 02-04	sDarken – Genetically encoded serotonin sensor Martin Kubitschke
B 02-05	Dopamine and cyclic AMP regulate AKT phosphorylation in the developing avian retina Roberto Paes-de-Carvalho
B 02-06	In vitro and in vivo anti-convulsant activity of hydromethanolic extract and fractions of Pterolobium stellatum Samson Sahile Salile
B 02-07	Activation of the $\beta$ 2-adrenoceptor induces calcium-dependent exocytosis ofsynaptic vesicles at the mouse neuromuscular junction Kivia Santos
B 02-08	Development of perineuronal net - like structures at cochlear inner hair cells of the mouse Melanie Schulz
B 02-09	Effect of microtubule polymerization on the structure of postsynaptic density Tatsuo Suzuki







### POSTER SESSION B / WEDNESDAY, AUGUST 09

#### B03 - Neuroinflammation & neuroimmunology

B 03-01	Tramadol upregulates hypothalamic BMAL1 gene expression and modulates lipid-immune signalling in sleep-deprived rats Smart Mbagwu
B 03-02	Cannabinoid receptor CB2 antagonist SR144528 blocks LPS/IFN-gamma-induced microglial activation in a CB2 independent manner Bolanle Fatimat Olabiyi
B 03-03	Evaluation of the Neuroprotective Potential of Trans-Cinnamaldehyde in a Rat Model of Insulin Resistance Samson Olorunnado
B 03-04	Effect of Moringa oleifera supplemented diets on cognition and inflammations in the Brain of diabetic rats treated with Acarbose Idowu Oyeleye
B 03-05	A novel hexapeptide AIDS attenuates Spike S1-associated behavioral and neuronal inflammation in invitro and in vivo models Ramesh Kumar Paidi
B 03-06	Carbon Monoxide Modulation of Microglia-Neuron Communication: Anti-Neuroinflammatory and Neurotrophic Role Inês Paiva
B 03-07	Anti-VCAM-1 following stroke in obese mice leads to reduced neuroinflammation, infarct volume, and improved functional recovery Todd Peterson
B 03-08	Effects of selective TGF $\beta$ 1- /2- receptor inhibition in an in-vitro glial scar model Luise Schlotterose
B 03-09	Extracellular vesicles derived from mesenchymal stromal cells as a treatment for sepsis-associated encephalopathy Maria Barbosa-Silva
B 03-10	Ameliorative Potential of Furanocoumarins Against Acute and Chronic Pain: Synthesis, Biological studies and Molecular Docking Gurjit Singh
B 03-11	Olfactory dysfunction precede motor impairment and neurochemical alterations in the rat model of multiple sclerosis Andjela Stekic
B 03-12	Role of LRRK2-G2019S mutation in neuroinflammatory pathways Camila Tiefensee-Ribeiro
B 03-13	Spatiotemporal profile of myocardial infarction-induced brain alterations Lotte Vanherle
B 03-14	Hypothalamic changes caused by Zika virus in adult mice Emanuelle V de Lima







- B 03-15 Brain-gut interaction originate from intestinal lipid sensor suppresses the PGD2-microglianeuroinflammation cycle Keisuke Yoshikawa
- B 03-16 Toll-like receptor 8 the role of an innate immune receptor in neuronal excitability Alice Santagostino

#### B04 - Molecular basis of disease

- B 04-01 Dopamine agonist post-treatment offers neuroprotection against ischemic stroke injury in rats. Pooja Kaushik
- B 04-02 Dehydroascorbic acid accumulation affects neurite length, which is partially prevented by RIPK1 inhibition Rocío Magdalena
- B 04-03 ApoER2 trafficking and Reelin signaling are affected by AP-4 deficiency: Implications for Hereditary Spastic Paraplegia Maria-Paz Marzolo
- B 04-04 Effects of spinal cord injury and tamoxifen in skeletal muscle physiology Jorge D. Miranda
- B 04-05 Gene targeting therapies for LBSL Christina Nemet
- B 04-06 Molecular and cellular responses to neurotoxic stimuli by human brain slice cultures Giovanna Nogueir
- B 04-07 Nitric oxide as a novel therapeutic target for autism spectrum disorder (ASD): Focus on Cntnap2 (Caspr-2) mouse model Shashank Kumar Ojha
- B 04-08 High-fat diet and its effects on altered S1P signaling after stroke Lisa Porschen
- B 04-09 Increasing the Vitamin C transporter SVCT2 in microglia suppresses pathology and cognitive impairment in Alzheimer's Disease Camila Cabral Portugal
- B 04-10 The role of H3K9 and H3K27 trimethylations in animals susceptible to Major Depression Luana Possa
- B 04-11 STUB1 mutants effect on TBP behaviour in digenic spinocerebellar ataxia type 17 Paola Pramaggiore
- B 04-12 Mutation of key residues in the human serotonin receptor 5HT1A modifies ligand-mediated conformational patterns. Agustin I. Robles
- B 04-13 Antibody assisted biochemical isolation and conformational analysis of native Alzheimer's relevant Aβ oligomers Adriano Sebollela







- B 04-14 Development of An In Vitro Model of Depression Using Three-Dimensional Neural Culture Mi Kyoung Seo
- B 04-15 The circadian clock of glioblastoma and the role of its microenvironment in tumor progression Laura Trebucq
- B 04-16 Prenatal programming of autism spectrum disorder: bisphenol A and aromatase-directed male brain development. Kristina Vacy
- B 04-17 Loss of FMRP delays Perineuronal Net formation through the regulation of aggrecan mRNA poly(A) tail length Heleen van 't Spijker,
- B 04-18 CD44 Exon Variants Dysregulation in Brodmann Area 9 of Patients with Bipolar Disorder Marin Veldic
- B 04-19 Senescent astrocytes show cytoskeleton remodeling directed to the production of the Senescence-Associated Secretory Phenotype Cristopher Andres Villablanca
- B 04-20 Testing a new strategy to treat acute ischaemic stroke Ashfaqul Hoque

#### B05 - Brain development & cell differentiation

- B 05-01 Cortical neurogenesis and maturation of the prenatal brain in the Greater Cane Rat (Thryonomys swinderianus). Oluwaseun Mustapha
- B 05-02 Floor plate derived netrin-1 is an instructive long-range guidance cue for commissural axons in the embryonic spinal cord Melissa Pestemalciyan
- B 05-03 Effects of Bisphenol-A (BPA) on Mitochondrial Trafficking in Rat Brain Hippocampus Phoolmala
- B 05-04 Microglia and behavior ontogeny:sex-specific effects of infant stress in physiological developmental patterns of prepubescent mice Bruna Resende
- B 05-05 Adult neural stem cells migration, astrogenesis and neuronal differentiation are regulated by RXR activation in vitro Carolina Saibro-Girardi
- B 05-06 Mechanosensor TRPV2 channel promotes remodeling of actin cytoskeleton in developing neurons Koji Shibasaki
- B 05-07 Effects of Bisphenol-A(BPA) on proteasome system in the rat brain hippocampus Sangh Jyoti Singh







B 05-09Uncovering Mitochondrial properties as novel targets for neural stem cell differentiation in the Subventricular Zone Rita SoaresB 05-10Tension-driven axon elongation triggers cytoskeleton and membrane remodelling Sara SousaB 05-11Impact of modulation of adenosine A2A receptor and BDNF signaling on neuronal development in a cellular model of Rett Syndrome Ana Laura Duarte <b>B06-11</b> Matered brain energy metabolism related to astrocytes in Alzheimer's disease Kosei HirataB 06-01Altered brain energy metabolism related to astrocytes in Alzheimer's disease Kosei HirataB 06-02Modulation of ATP and creatine phosphate levels in cultured primary astrocytes Gabriele KargerB 06-03Association of the FNDCS rs1746661 single nucleotide polymorphism with brain glucose hypometabolism in elderly humans Ricardo Lima-FilhoB 06-04Involvement of brain glucose machinery in the [18F]FDG-PET signal Christian LimbergerB 06-05Astrocytes clear mutant huntingtin aggregates through cannabinoid-activated autophagy Israel Manjarrés-RazaB 06-06Enantiomer selective actions of the ketone body, beta-hydroxybutyrate, on autophagy and proteostasis during ischemic stroke Lourdes Massieu,B 06-07Attered matabolism in tha aged corpus callosum could be related to the loss of myelin and axons Gonzalo Mayorga-WeberB 06-08Ompetent astrocytic mitochondria are necessary for whole-body energy metabolism regulation in high- fat diet fed mice Zeinab RafeeB 06-09Competent astrocytic mitochondria pathways associated with distinct behavioral phenotypes and addolescent stress Thamyris Santos-Silva	B 05-08	Changes in NMDAR subunit concentration in the hippocampus upon chemically induced LTP and LTD during developmental growth spurts Torstein Landaas Skjervold,
Sara Sousa         B 05-11       Impact of modulation of adenosine A2A receptor and BDNF signaling on neuronal development in a cellular model of Rett Syndrome Ana Laura Duarte         B06-Bioenergetics & metabolism         B 06-01       Altered brain energy metabolism related to astrocytes in Alzheimer's disease Kosei Hirata         B 06-02       Modulation of ATP and creatine phosphate levels in cultured primary astrocytes Gabriele Karger         B 06-03       Association of the FNDC5 rs1746661 single nucleotide polymorphism with brain glucose hypometabolism in elderly humans Ricardo Lima-Filho         B 06-04       Involvement of brain glucose machinery in the [18F]FDG-PET signal Christian Limberger         B 06-05       Astrocytes clear mutant huntingtin aggregates through cannabinoid-activated autophagy Israel Manjarés-Raza         B 06-06       Enantiomer selective actions of the ketone body, beta-hydroxybutyrate, on autophagy and proteostasis during ischemic stroke Lourdes Massieu,         B 06-07       Altered metabolism in tha aged corpus callosum could be related to the loss of myelin and axons Gonzalo Mayorga-Weber         B 06-08       Metabolic profiling of fibroblasts derived from healthy donors and ALS patients bearing the p.G376D mutation in the TARDBP gene Elisa Perciballi         B 06-09       Competent astrocytic mitochondria are necessary for whole-body energy metabolism regulation in high-fat diet-fed mice Zeinab Rafiee         B 06-10       Transcriptomic analysis reveals mitochondrial pathways associated with distinct behavioral phenotypes and adolescent	B 05-09	Subventricular Zone
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and adolescent stress	B 06-09	fat diet-fed mice
	B 06-10	and adolescent stress







B 06-11 Inhibition of G6PDH and pentose phosphate pathway-dependent processes by G6PDi-1 in cultured primary astrocytes Patrick Watermann

#### B07 - Neuronal plasticity & behaviour

- B 07-01 What is the relationship between ibogaine and NMDAR/GABAAR expression in male and female rats after cocaine-CPP exposure? Nubia Heidrich
- B 07-02 Role of Amyloid Beta in Memory Consolidation Utilizing Behavioral Tagging Model Medha Kaushik
- B 07-03 The Sound of Silence How Hibernation affects the Auditory Pathway Jonas Lohmann
- B 07-04 ROLE OF ADENOSINE A2A RECEPTORS IN THE CONTROL OF SYNAPTIC SENESCENCE UPON AGEING Cátia R. Lopes
- B 07-05 Renin-Angiotensin System plays a role in motor coordination and learning impairment after experimental mild traumatic brain injury Caroline Machado
- B 07-06 Neurotrophin-3/TrkC contribution to fear extinction and regulation of glutamatergic synapses Gianluca Masella
- B 07-07 Caffeine as a driver of plasticity: impact on adult neurogenesis and synaptogenesis João B. Moreira
- B 07-08 Psychobiotics ameliorates trauma-related behaviors in a model of comorbid post-traumatic stress disorder and alcohol use disorder Kate Nebo
- B 07-10 Glutamine transporter SAT1 deficiency promotes anxiety-like behavior in mice: element in neurotransmitter imbalance hypothesis? Mariusz Popek
- B 07-11 Countering chronic stress with cannabinoid type 2 receptors and physical exercise: a neurogenic focus Rui S Rodrigues
- B 07-12 Genetic inhibition of NF-kB in Nucleus Accumbens core prevents chronic stress-induced facilitation of cocaine self-administration. Marianela Sanchez
- B 07-14 Whole-brain c-Fos mapping in appetitive learning Magdalena Sobień
- B 07-15 A Behavioral-Tagging account of spaced learning: contribution of ERK1/2 kinases to memory formation upon spaced spatial training. Ramiro Tintorelli1
- B 07-16 Heterogeneity of cholinergic activities during multi-modal learning Yang Yang







B 07-17 Serotonin receptors 2A activity in the rat mPFC promotes Retrieval-Induced Forgetting in rats by modulating dCA1 Maria Belen Zanoni Saad

#### B08 - Clinical studies, biomarkers & imaging

- B 08-01 Connectomics on the cellular level: Informing DWI through 3D EM and Light Microscopy Philip Ruthig
- B 08-02 Heterogeneous microglial response to cancer cells visualized by in vivo imaging model. Takahiro Tsuji
- B 08-03 Integrated spatial transcriptome and metabolism study reveals immunol and metabolic heterogeneity of human injured brain Ping Zheng

#### B09 - Glia and neuron-glia interactions

- B 09-01 Age-related functional changes in the glutamate-glutamine cycle and synaptogenic capacity of astrocytes Isadora Matias
- B 09-02 Transferrin-loaded EVs enter OPCs by the intranasal route accelerating the remyelination process in a mouse model of demyelination Vanesa Soledad Mattera
- B 09-03 Expression and malignant role of an extracellular matrix integrin a8b1 POEM/NPNT in glioblastoma Naoko Morimura
- B 09-04 Mixed ginger and garlic juice attenuates astrocytic response and other markers of hippocampal function in lead-induced rats KENNETH OPARAJI
- B 09-05 A2Areceptor expression in different cell types provides information on the central role of the neuronal receptor in synaptogenesis Solen Rimbert
- B 09-06 Astrocyte-origin ¬¬TIMP-1 corrects cognitive deficits by restoring synaptic plasticity in 5xFAD mouse model of Alzheimer's disease SUKANYA SARKAR
- B 09-07 Manipulating astrocyte cholinergic signaling to improve cognition in an Alzheimer's disease mouse model Scheila Schmidt
- B 09-08 Glutathione modulates the release of gliotransmitters from primary cortical astrocytes Mateus Silva
- B 09-09 Ethanol gestational exposure impairs blood-brain barrier development and alters DNA methylation on brain endothelial cells Michele Siqueira







- B 09-10 Glial neurotransmitter transporters in retinal Müller cells: Role in excitotoxicity Temitayo Subair
- B 09-11 The role of astrocytes in V2L neuronal remodeling following vision loss Ikuko Takeda
- B 09-12 Investigating the Role of ATF4 in Astrocyte Reactivity and Neurodegeneration Elizabeth Tennyson
- B 09-13 Oligodendroglial UNC5B regulates the organization of paranodal junctions and modification of myelin during aging Nonthué Uccelli
- B 09-14 Alterations in astrocytic K+ clearance during neurodegeneration Yossi Buskila

#### B10 - Neurodegeneration and neuropsychiatric disorders

- B 10-01 Molecular mechanism of novel anti-phospho-tau serine 396/404 scFv antibody on reversal of Tau pathology in Alzheimer's disease Pei Ying Ng
- B 10-02 Defects in mitochondrial plasticity of directly reprogrammed human neurons to APOE4 and Alzheimer's disease Sandra A Niño
- B 10-03 Targeting Stress Inducible Phosphoprotein 1 can reduce α-Syn and TDP-43 mixed pathologies in synucleinopathy and ALS mouse models. Vladislav Novikov
- B 10-05 Co-Exposure To Chronic Stress And Metals In Rats: Impact on Memory Functions, Neurochemical and Immunohistochemical Alterations Oritoke Okeowo
- B 10-06 Fluoranthene exposure altered behavior, suppressed neuronal antioxidant defense system and induced neurodegeneration in C. elegans Tosin Olasehinde
- B 10-07 Nickel-induced neurodegeneration in the hippocampus, striatum and cortex; an ultrastructural insight, and the role of caspase-3 Sunday Yinka Olatunji
- B 10-08 Serotonergic signaling modulation as a therapeutic approach for spinocerebellar ataxia type 3: unveiling the molecular pathways Stéphanie Oliveira
- B 10-10 Curcumin abrogates cobalt-induced memory impairment by modulating neuroinflammation, Microgliosis, and Bcl2 expressions RADEMENE ORIA
- B 10-11 S100B and endothelin-1: peripheral markers of social stress-induced blood-brain barrier dysfunction? Karolina Orzeł- Gajowik,







B 10-12	Polyaromatic hydrocarbons (PAHs) in PM2.5 contributes to olfactory-brain-induced glial cells activation and neurodegeneration Samir Ranjan Panda,
B 10-13	Recovered astrocyte-vascular communication in the hippocampus of AD-mice after glycan-binding protein Galectin-1 treatment Jessica Presa
B 10-15	Regulating epilepsy by manipulation of hippocampal VIP-expressing interneurons Sadegh Rahimi
B 10-16	AAV-mediated overexpression of miR-146a in primary cortical neurons promotes neurite outgrowth and regeneration Vinicius Toledo Ribas
B 10-17	THE B2-ADRENERGIC AGONIST FORMOTEROL IS CAPABLE OF INCREASING THE NEUROMUSCULAR JUNCTION AREA OF A NEW MURINE MYASTHENIA MODEL Leonardo Rossi
B 10-18	Biological and computational evaluations of novel aminochalcones as neurodegenerative therapeutics Waralee Ruankham
B 10-19	Targeting abnormal chaperone activity in a mouse model of synucleinopathy to mitigate cognitive deficits Rodrigo Sandoval
B 10-20	Beneficial effects of targetting IL10 signalling in diabetes induced capillary stalling and cognitive deficits in mice Sorabh Sharma
B 10-21	Could the Combination of Two Non-Psychotropic Cannabinoids Counteract Haloperidol Catalepsy? Núbia Silva
B 10-22	The role of tau protein in the regulation of translational stress response Joana Margarida Silva
B 10-23	Deciphering the neurodegeneration and disease mechanisms caused by impaired choline transport Tiago Silva
B 10-24	Pharmacological effect of Carvacrol against poly (I: C) induced neuropsychiatric disorder in mice. Ramu Singh
B 10-25	Glucosylceramide dysfunction and glucosylated sterols unbalance are associated to gut damage in mice models for neurodegeneration Chiara Sinisgalli
B 10-26	Pias4 regulates the homeostasis of the tau protein María Clara Sokn
B 10-27	Proteomic investigation on unmasking of neurotoxicity in rechallenged adult rats prenatally exposed to lindane Ankita Srivastava







- B 10-28 Hunger-promoting hypothalamic AgRP neurons control structure and function of the medial prefrontal cortex **Bernardo Stutz** B 10-29 Intra-axonal autophagosome biogenesis impairment in Alzheimer's disease **Emanuel Tahiri** B 10-30 Disruption of dystonin gene in the sensory circuit is responsible for movement disorders in dystonia musculorum mice Hirohide Takebayashi B 10-32 Consistent circulating microRNA signatures of childhood trauma in humans: Implications for long-term sequelae and propagation Weronika Tomaszewska B 10-33 INPP5D modulates TREM2 loss-of-function phenotypes in a β-amyloidosis mouse model **Taisuke Tomita** B 10-34 Altered SOD1 maturation and post-translational modification in familial and sporadic ALS spinal cord motor neurons **Benjamin Trist** B 10-35 Latex of Calotropis procera ameliorates muscle function restoration after sciatic nerve lesion induction in mice. Shamaila Zafar
- B 10-36 Intermittent theta burst stimulation improves motor and non-motor symptoms in the 6-hydroxydopamine model of Parkinson's disease Milica Zeljkovic Jovanovic

#### B11 - Intracellular organelles and trafficking

- B 11-01 Age-dependent Changes of Cerebral Copper Trafficking in a Mouse Model of Tauopathy assessed by 64CuCl2 PET/CT Fang Xie
- B 11-02 Tau a master regulator of recycling synaptic vesicle clustering at the presynapse Shanley F. Sanders

#### B12 - Stem Cells and regeneration

B 12-01 Exploring the intersection between the light/dark cycle, circadian timing and neural stem cell regulation Pedro Ozorio Brum

#### B14 - Neurochemical technologies and resources

B 14-02 Carbon Fiber Multielectrode Array Biosensor for Multiplexed Measurements of Neurochemicals Alexander Zestos,







#### B15 - Pain / Addiction

- B 15-01 PARTICIPATION OF NITRIC OXIDE SIGNALING WITHIN THE MEDIAL PREFRONTAL CORTEX IN THE EXPRESSION OF COCAINE SENSITIZATION María Fernanda Ponce Beti
- B 15-02 SGIP-1 protein deletion enhances WIN 55,212-2 inhibitory effect on nociceptive transmission Monica Pontearso
- B 15-03 Different effects of anandamide (AEA) and AEA precursor 20:4-NAPE administration on nociceptive synaptic transmission Diana Spicarova
- B 15-04 ROLE OF THE KCTD16 PROTEIN IN MODULATION OF NOCICEPTION AND NEUROPATHIC PAIN Daniel Vasconcelos

#### B16 - Other topics

- B 16-01 Investigating orexin involvement in stress-induced binge eating in female mice Muthmainah Muthmainah
- B 16-02 Remodulating effect of Elateriospermum tapos yoghurt in mitigating anxiety like behavior and recognition index in F1 generation Ruth Naomi
- B 16-03 Persistent binding at dopamine transporters determines sustained psychostimulant effects Marco Niello
- B 16-04 Role of vitamin C in primary brain tumors Eder Ramírez
- B 16-05 Investigating the properties and behavioural roles of RXFP3+ zona incerta/lateral hypothalamus neurons Brandon Richards
- B 16-06 Vanadium Administration Ameliorates Cortical Structural and Functional Changes in Juvenile Hydrocephalic Mice Funmilayo Olopade

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PORTO, PORTUGAL AUGUST 08-11, 2023



### **OPTIONAL NETWORKING EVENTS PROGRAM**

#### **WELCOME RECEPTION**

#### TUESDAY, AUGUST 8, 19:00 – 20:00 ALFANDEGA DO PORTO / QUAY & NOBLE HALL

Please join us for the official ISN-ESN 2023 Welcome Reception at Alfandega Da Porto. All participants and social guests are welcome to join this networking event.

#### **RECEPTION AT POSTER AREA**

#### TUESDAY, AUGUST 8, 17:00 – 19:00 |Poster Area WEDNESDAY, AUGUST 9, 16:30 – 18:30 | Poster Area

Don't miss these great opportunities to view the poster presentations, chat with the exhibitors and mix and connect with your colleagues from all around the World. All participants are welcome to join these special events.

#### **FAREWELL CELEBRATION**

#### FRIDAY, AUGUST 11, 19:30 – 22:30 | PORTO LEIXÕES CRUISE TERMINAL\*

Meet colleagues and international experts outside the session halls, at Porto Leixões Cruise Terminal. Don't miss this great opportunity to mix, mingle and build connections that will last you a lifetime!

All participants and social guests are welcome to join this networking event.

\*There will be shuttle buses from / to meeting venue, Alfandega do Porto.



### **ISN-ESN** MEETING

PORTO, PORTUGAL AUGUST 08-11, 2023

Brazil



### TRAVEL AWARDEES

#### Congratulations to the following young investigators for the ISN-ESN 2023 Meeting travel awards:

Leonardo Rossi

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### **ISN-ESN** MEETING



### MARK A SMITH PRIZE WINNERS

#### 2023: João Victor Cabral-Costa

for the paper "Mitochondrial sodium/calcium exchanger NCLX modulates astrocytic glycolysis in astrocytes and impacts cognitive performance"

### YOUNG SCIENTIST LECTURESHIP AWARDS

YSLA01 **A next-generation optical toolkit to study neuromodulatory signaling** <u>Tommaso Patriarchi</u> University of Zurich, Institute of Pharmacology and Toxicology, Zurich, Switzerland

YSLA02

Fractalkine signalling is a critical regulator of oligodendrocyte genesis and myelination in the developing and demyelinated brain Anastassia Voronova

University of Alberta, Medical Genetics, Edmonton, Canada

### YOUNG MEMBERS' SYMPOSIA AWARDS

- YMS01-01 Live imaging of microglia behaviour across the life stages of the brain: From neonatal to aging Vanessa Coelho-Santos Seattle Children's Research Institute, Center for Developmental Biology and Regenerative Medicine, Seattle, United States
- YMS01-02 Donepezil's Therapeutic Effects Are Influenced by Curcumin: A Food-Drug Interaction Approach to Alzheimer's Disease Management
   Opeyemi Ogunsuyi,
   The Federal University of Technology Akure, Biomedical Technology, Akure, Nigeria
- YMS01-03 The role of tRNA-derived fragments in tau aggregation and propagation in Alzheimer's disease Ami Kobayashi Brigham and Women's Hospital, Neurology, Boston, USA
- YMS01-04 Astrocytic Ensembles in Nucleus Accumbens: What Role do they Play in THC-Related Impairments? Cristina Martín-Monteagudo, Cajal Institute - CSIC, Functional and Systems Neurobiology, Madrid, Spain
- YMS02-01 Role of a thalamo-cortical glutamatergic projection in stress-induced binge eating in female mice Roberta Anversa, The University of Melbourne, Pharmacology and Biochemistry, Melbourne, Australia
- YMS02-02 Cognitive and motor phenotypes induced by injection of different strains of human alpha-synuclein preformed fibrils in mice Oren Princz-Lebel







### YOUNG MEMBERS' SYMPOSIA AWARDS

YM502-03	Therapeutical potential of 5HT1AR agonism on behavioural and neuropathology in a clinically relevant mouse model of Rett Syndrome Daniela Monteiro-Fernandes, Life and Health Sciences Research Institute (ICVS), School of Health Sciences, University of Minho, Braga, Portugal, ICVS, Braga, Portugal
YMS02-04	Synaptic proteasome is inhibited in Alzheimer's disease models and is associated with memory impairment in mice Felipe Ribeiro
	Federal University of Rio de Janeiro, Institute of Medical Biochemistry, Rio de Janeiro, Brazil
YMS03-01	Variability in Lipid Composition in the Virally Suppressed SIV-infected Macaque Brain Cory White
	Johns Hopkins University School of Medicine, Department of Molecular and Comparative Pathobiology, Baltimore, Maryland, USA
YMS03-02	Molecular mechanisms in KIF5A-related neurodegeneration Marta Cozzi
	Università degli Studi di Milano, Dipartimento di Scienze Farmacologiche e Biomolecolari "Rodolfo Paoletti" (Dipartimento di Eccellenza 2023-2027), Milan, Italy
YMS03-03	Targeting TRPA1/TRPV1 with Bergenin: Mitigating Chemotherapy-Induced Neuropathy and Neuroinflammation Akhilesh
	Akhilesh Akhilesh , Department of Pharmaceutical Engineering and Technology, Indian Institute of Technology (Banaras Hindu University) , Varanasi, 221005 (U.P.) , India
YMS03-04	Induced pluripotent stem cell derived neurons from Alzheimer's disease patients show elevated Ca2+ responses to AMPA
	Helena Anastacio, University of Wollongong, School of Chemistry and Molecular Bioscience, Wollongong, Australia
YMS04-01	The TNF-a signalling in the rapid plasticity of visual system following monocular enucleation. Luana Chagas
	Federal Fluminense University, Department of Neurobiology and Program of Neurosciences, Niterói, Brazil
YMS04-02	R- and S-Ketamine modulate microglia reactivity and gene expression in lipopolysaccharide (LPS)- induced depression model Adriano Chaves-Filho <sup>1, 2</sup>
	<sup>1</sup> Federal University of Ceará, Physiology and Pharmacology, Fortaleza, Brazil <sup>2</sup> University of Victoria, Division of Medical Sciences, Victoria, Canada
YMS04-03	Fractalkine enhances oligodendrogenesis and remyelination from central nervous system precursor cells Adrianne ES Watson <sup>1, 2</sup>
	<sup>1</sup> University of Alberta, Medical Genetics, Edmonton, Canada <sup>2</sup> University of Alberta, Women & Children's Health Research Institute, Edmonton, Canada
YMS04-04	Microglia in brain organoids exhibit different immune responses if developed innately versus microglia integrated by co-culture Tyler J Wenzel,

University of Saskatchewan, Psychiatry, College of Medicine, Saskatoon, Canada







### ISN EMERGING GROUP LEADER AWARD

- EGLS01-01 Apolipoprotein E signaling in Alzheimer's disease: mechanisms and novel drug targets Abdel Ali Belaidi
- EGLS01-02 Energy Matters: Resetting synaptoenergetics is a new mechanistic target for the anti-bipolar actions of lithium Sunan Li
- EGLS01-03 Photopharmacological control of inhibitory brain receptors Galyna Maleeva
- EGLS01-04 Neuroligins induce dendritic outgrowth in an ICAM5-dependent manner Luís F Ribeiro
- EGLS02-01 Identification of a novel protein-degradation pathway by lysosomes required for neuromuscular homeostasis Yuuki Fujiwara
- EGLS02-02 Genetic and functional maps of neuronal ensembles encoding associative learning Carina Soares-Cunha
- EGLS02-03 Selective endocytosis of Ca2+-permeable AMPARs by the Alzheimer's disease risk factor CALM controls synaptic plasticity Domenico Azarnia Tehran
- EGLS02-04 Nerve injury induced deregulation of microRNAs differentially involved in neuropathic pain vs. peripheral nerve neuroregeneration Theodora Kalpachidou
- EGLS03-01 Unraveling the link between microglia metabolic reprograming, neuroinflammation and neurotransmission Blanca Aldana
- EGLS03-02 A lactate-dependent shift of glycolysis mediates synaptic and cognitive processes Ignacio Fernández-Moncada
- EGLS03-03 Epigenome reprogramming underlies cell-type specific priming of striatal gene responses in cocaine relapse Philipp Mews
- EGLS03-04 Exploring the role of α7 nicotinic acetylcholine receptors in the medial prefrontal cortex on memory processing VERONICA PASTOR
- EGLS04-01 Using animal models in stuttering research Shahriar SheikhBahaei
- EGLS04-02 Axonal neurotransmitter release regulates myelination in vivo insights from zebrafish Rafael Almeida







### ISN EMERGING GROUP LEADER AWARD

- EGLS04-03 SHANK3: an autism spectrum disorder associated gene Patricia Monteiro
- EGLS04-04 Uncovering the genome-wide effects of intermittent fasting on chromatin modulation and transcription to improve brain health Asaf Marco



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