



20th Meeting of the Spanish Society for Neuroscience

3-5 september 2025

Las Palmas de Gran Canaria

PROGRAM



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**se
nc** SOCIEDAD
ESPAÑOLA DE
NEUROCIENCIA



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COMMITTEES

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are members:**

President

Manuel Sánchez Malmierca

Secretary

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GENERAL INFORMATION

VENUE

Palacio de Congresos de Canarias / Auditorio
Alfredo Kraus
Avda. Príncipe de Asturias, s/n,
35010 Las Palmas de Gran Canaria, Las Palmas



TECHNICAL SECRETARIAT

AM Conferences
C\ Espronceda 27, 28003 Madrid
34 91 833 74 33
info@amconferences.es



LANGUAGE

The official language of the congress is English, unless otherwise specified. No simultaneous translation will be provided.

SCHEDULE

	TECHNICAL SECRETARIAT	EXHIBITION
September 3 ^d	08:00-19:30	09:00-19:00
September 4 th	08:30-19:30	09:00-18:30
September 5 th	08:30-18:00	09:00-18:30

POSTER SESSIONS

All posters will be presented in paper format.

Posters should be 90 cm in length and 120 cm in height, and they should be displayed by the authors in the poster area in the slot corresponding to the code number provided in the confirmation letter.

Authors presenting their paper are expected to be in front of their posters on the day and session assigned to them.





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Poster Session 1: September 3rd, from 15:30 to 19:00.

Authors with poster numbers **S01-01 to S01-110**

Poster Session 2: September 4th, from 09:00 to 12:30.

Authors with poster numbers **S02-01 to S02-110**

Poster Session 3: September 4th, from 15:00 to 18:30.

Authors with poster numbers **S03-01 to S03-110**

Poster Session 4: September 5th, from 09:00 to 12:30.

Authors with poster numbers **S04-01 to S04-110**

Poster Session 5: September 5th, from 15:00 to 18:30.

Authors with poster numbers **S05-01 to S05-110**

Setting-up and taking down times:

- The posters should be fixed on the corresponding board half an hour before their poster session begins and must be removed on at latest, half an hour later of the end of their corresponding poster session.
- Fixing tape to set up the posters will be provided by the organization.
- The Technical Secretariat is not responsible for those posters that will not be removed at the end of the Congress.

CONGRESS BADGES

All participants, and exhibitors must wear the Congress identification badges.

Entrance to meeting rooms, posters and exhibition area will not be allowed to any person without badge.

CERTIFICATE OF ATTENDANCE

A certificate of attendance will be sent by email to each delegate at the end of the congress. For special requirements, please ask to the Technical Secretariat.

LIABILITY

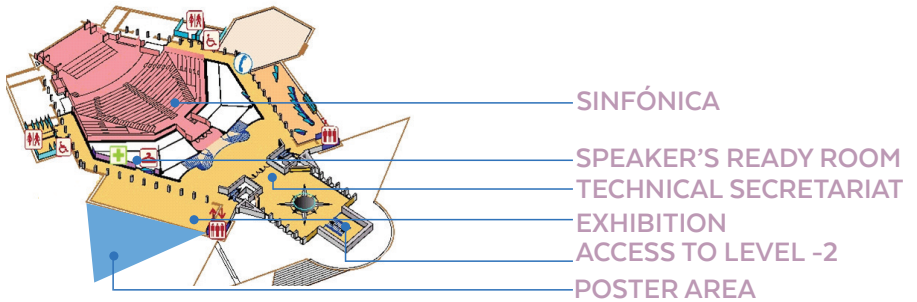
Upon registration, participants agree that neither the Organizing Committee nor the Technical Secretariat assume any liability. Participants should, therefore, organize their own health and travel insurance.

CODE OF CONDUCT

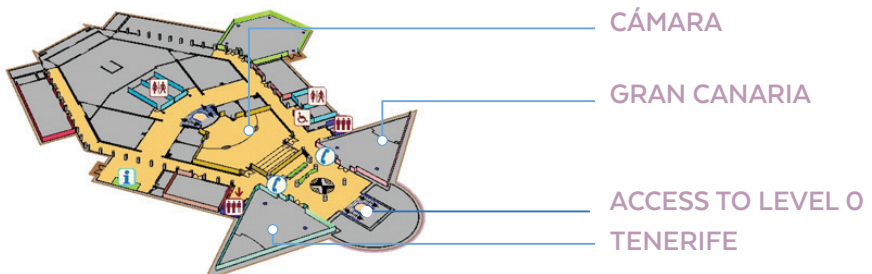
The development of all congress activities will be guided by the principles set forth in the SENC Code of Conduct.

FLOORPLANS

NIVEL 0



NIVEL -2



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PROGRAM AT A GLANCE

3 SEPTEMBER

	SINFÓNICA	CÁMARA	GRAN CANARIA	TENERIFE	EXHIBITION HALL
8:30	SAT3 NeuroEvoDevo - Pedro Ramón y Cajal Network: The CNS through the lens of a comparative neuroembryologist: From knowing to understanding	SAT2 Young investigators building Neuroscience and Rita Levi- Montalcini Award Symposium	SAT1 XIII Reunión de la Red Glial Española	SAT4 5th Symposium of the Spanish Network for the Interaction between Computational and Cognitive Neuroscience (SINC2)	NeuroART Exhibition
9:00					
9:30					
10:00					
10:30					
11:00	Coffee break				
11:30	NeuroEvoDevo - Pedro Ramón y Cajal Network: The CNS through the lens of a comparative neuroembryologist: From knowing to understanding	Young investigators building Neuroscience and Rita Levi- Montalcini Award Symposium	XIII Reunión de la Red Glial Española	5th Symposium of the Spanish Network for the Interaction between Computational and Cognitive Neuroscience (SINC2)	
12:00					
12:30					
13:00	Welcome cocktail				
13:30					
14:00	Opening ceremony & Lecture: Isabel Fariñas				
14:30					
15:00	S03 Neuron-Glia Metabolic Cooperation: Vital for Organismal Homeostasis and Health	S01 Exploring the neural substrates of number sense: a perspective on genetics, behaviour and neural circuitry	S02 New approaches to understanding and restoring impaired sensory and motor functions caused by spinal cord injuries: the need for multidisciplinary therapies to combat highly complex diseases	Poster Session 1	
15:30					
16:00					
16:30					
17:00					
17:30	Coffee break				
18:00		Automated image- based neurite outgrowth analysis Commercial Session by <i>Agilent Technologies</i>	SAT5 MENTORING SYMPOSIUM: Pathways in Science		
18:30					
19:00					
19:30					

4 SEPTEMBER

	SINFÓNICA	CÁMARA	GRAN CANARIA	EXHIBITION HALL			
9:00	S05 Excitatory and inhibitory mechanisms mediating dysfunction of neural circuits in neurodegeneration	S06 Cell fate in human neurodevelopment and disease	S04 Understanding Habenulae function in Emotional Behavior	Poster Session 2	NeuroART Exhibition		
9:30							
10:00							
10:30							
11:00	Coffee break						
11:30	Tatiana Foundation Young Investigator Award Talk						
12:00							
12:30	Presidential Lecture: Alfonso Araque						
13:00							
13:30							
14:00	SAT7 The Cerebellum: Neural Circuits, Pathology, and Emerging Therapeutic Pathways	Exploring Sensory and Computational Frontiers in Neuroscience: A Joint Symposium of the Spanish and Portuguese Societies	ERC program: Elena Solesio-Jofre	Poster Session 3			
14:30							
15:00							
15:30	S09 Decoding Astrocyte-Neuron dynamics in brain function	S07 Inhibitory circuits supporting network function	S08 Multiscale approximations to understand microglia dysfunction in Alzheimer's disease: from genes to cells, looking for new therapeutic targets				
16:00							
16:30							
17:00							
17:30	Coffee break						
18:00				SAT9 Extracellular vesicles in neuroscience: a focus on methodology and their applications in neurodegenerative disorders			
18:30							
19:00							
19:30							
20:00	SAT6 Animal Research and Welfare: A Commitment to Animals (The CARE Committee; Located outside the Auditorium Alfredo Kraus, in the pub "The Captain 13", C/Fernando Guanarteme 63)						
20:30							





5 SEPTEMBER

	SINFÓNICA	CÁMARA	GRAN CANARIA	EXHIBITION HALL	
9:00	S10 Unraveling Neurodevelopmental Disorders: from mouse models to human brain organoids	S11 Neural Mechanisms for Internal State- Dependent Animal Behavior	S12 Antibody-mediated mechanisms in autoimmune neurological disorders	Poster Session 4	NeuroART Exhibition
9:30					
10:00					
10:30					
11:00	Coffee break				
11:30	Iberian Neuroscience Lecture: Klaus-Armin Nave				
12:00					
12:30	Honorary Lecture “María Teresa Miras Portugal”: Carmen Guaza				
13:00					
13:30					
13:45		SAT8 The Gender Gap in Neuroscience: Exploring Solutions	RAICEX		
14:00					
14:30					
15:00					
15:30	S14 Gliotransmission and Metabolic Interplay	S13 Beyond Shaping Vision: Advances in Circuit Assembly and Plasticity	S15 Structuring the world: noise, probabilities, chunks and contexts	Poster Session 5	
16:00					
16:30					
17:00					
17:30	Coffee break				
18:00		Neuropharmacology Awards by Elsevier			
18:30					
19:00		SENC Assembly			
19:30					
20:00					
20:30	Congress dinner				



SEPTEMBER 3RD WEDNESDAY

08:30-11:00

Sinfónica

SAT3 - NeuroEvoDevo – Pedro Ramón y Cajal Network: The CNS through the lens of a comparative neuroembryologist: From knowing to understanding

Chairs: **Loreta Medina**, *University Lleida*
Nerea Moreno, *University Complutense of Madrid*

Speakers: **Introduction on the legacy of Prof. Nieuwenhuys**

Loreta Medina
University Lleida

Evolutionary origin of the neural plate in invertebrates: the beginning of the vertebrate brain Bauplan

Luis Puellas
University of Murcia

09:00-11:00

Cámara

SAT2 - Young investigators building Neuroscience and Rita Levi-Montalcini Award Symposium

Chairs: **Lydia Jiménez**, *University of Castilla-La Mancha* & **Paula Rodriguez**, *Columbia University* & **Carlos Matute**, *Basque Country University*
Hosted by **CJIF SENC**

Opening remarks for the Excellent Student Rita Levi Montalcini Award by Lydia Jiménez & Carlos Matute

First Session

Chairs: **Paula Rodriguez**, *Columbia University* & **Sara Mederos**, *Sainsbury Wellcome Centre*

Speakers: **In vivo reprogramming to regenerate aged tissues induced by chronic stress**

Sara Borrás-Perna
Barcelona University

Selective GIRK1 deletion in Lhx6 interneurons restores network function and memory deficits in a mouse model of Alzheimer's disease

Jaime Mulero Franco
Castilla La Mancha University



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Activation of notch pathway in brain endothelial cells ameliorates vascular abnormalities in alzheimer's disease mouse models

Silvia Quiñones Cañete

IBIS, Sevilla

08:30-11:00

Gran Canaria

SAT 1 - XIII Reunión de la Red Glial Española

Organized by Red Glial Española

Welcome and Inauguration

Arantxa Tabernero

Chair of the Spanish Glial Network

SHORT TALKS

Maite Solas, José Gómez-Sánchez

OPCs' inflammatory memory as a key factor in remyelination
Sonia Cabeza Fernández (Institute of Neuroscience UMH-CSIC)

Accumulation of PFAS in myelin sheaths: Long-term consequences on myelination and myelin stability.

Victor Valcárcel Hernández. (Muséum National d'Histoire Naturelle (CNRS). France)

Unveiling the dynamic link between proliferation and phagocytic efficiency in brain development: the role of IKAROS

Marco González Domínguez. (Achucarro Basque Center for Neuroscience)

Beneficial effects of astrocytic GLUT1 ablation in Alzheimer's disease.
Paula Escalada Matute. (University of Navarra)

Decoding THC-related impairments: the role of astrocytic ensembles in the nucleus accumbens.

Cristina Martín Monteagudo. (Cajal Institute. CSIC)

Neuronal ensembles encoding sensory behavior are defined by astrocyte excitability.

Andrea Misol Ortiz. (Hospital Nacional de Paraplégicos)

LAIA ACARIN AWARD LECTURE

Juliana M. Rosa

Microglia mitochondrial complex I deficiency during development induces glial dysfunction and early lethality

Nicolás Capelo-Carrasco (University of Seville) y Bella Mora Romero. (Biomedicine Institute of Seville)

08:30-11:00

Tenerife

SAT4 - 5th Symposium of the Spanish Network for the Interaction between Computational and Cognitive Neuroscience (SINC2)

Organized by Spanish Network for the Interaction between Computational and Cognitive Neuroscience (SINC2)

Chair: **M^a Victoria Puig**, *Barcelona Institute for Biomedical Research, CSIC*
Miguel Valencia, *Cima*

A Theoretical Framework for Criticality and a Hierarchy of Timescales in the Brain

Leonardo Gollo

IFISC (UIB-CSIC)

EEG Biomarkers for A/T/N Distinction in Prodroma Alzheimer's Disease: The COGBAT Study

Claire Braboszcz

Starlab

Multiparametric Integration of Behavioral and Electrophysiological Metrics in a model of Dravet Syndrome

Alberto Villagrana

CIMA-University of Navarra

Short Talks-I

In vivo photopharmacological neuroinhibition of brain hyperactivity involved in focal seizures with PhotoTheraPorts

Cristina López. (IIBB-CSIC)

Hydroelectrolytic equilibrium modulation in management of temperature-induced seizures in a Dravet syndrome mice model.

Ferran Capell. (CIMA-University of Navarra)



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Plenary lecture

Evolution of Functional Networks Across the Continuum of Alzheimer's Disease: The E/I Imbalance

Fernando Maestú

Complutense University of Madrid

11:00–11:30

Coffee break

11:30–13:00

Sinfónica

SAT3 - NeuroEvoDevo - Pedro Ramón y Cajal Network: The CNS through the lens of a comparative neuroembryologist: From knowing to understanding

Speakers: **Molecular characterization of progenitor cells and their fate potency in the postnatal shark retina**

Nicolás Vidal-Vázquez

University of Santiago de Compostela

Deciphering the evolution of the pallium in ray-finned fish: from ancestral to complex

Adrián Chinarro

Complutense University of Madrid

Mapping the reptilian pallium: cellular and structural differences between turtles and geckos

Sara Jiménez

Achucarro Basque Center for Neuroscience

Comparing the amygdala of swine, mouse and chicken, based on transcription factor expression during development

Júlia Freixes

University of Lleida

Assessing the neuroendocrine system of cetaceans: a first structural and ultrastructural look into the hypophysis

Paula Alonso-Almorox

University of Las Palmas de Gran Canaria

11:30–13:00

Cámara

SAT2 - Young investigators building Neuroscience and Rita Levi-Montalcini Award Symposium

Second Session

Chairs: **Manuel Valero**, Hospital del Mar Research Institute, Institut Hospital del Mar d'Investigacions Mèdiques (IMIM) & **Soraya Martín**, Achucarro Basque Center for Neuroscience

Decoding THC-related impairments: the role of astrocytic ensembles in the Nucleus Accumbens

Cristina Martín Monteagudo

Institute Cajal

Neuronal ensembles encoding sensory behavior are defined by astrocyte excitability

Andrea Misol Ortiz

Toledo Paraplegic Hospital

Deliberation

Award Ceremony presented by Paula Rodriguez & Manuel Valero

Closing remarks by Lydia Jiménez & Carlos Matute

11:30–13:00

Gran Canaria

SAT1 - XIII Reunión de la Red Glial Española

Plenary lecture

Chair: **Federico N. Soria**
Achucarro Basque Center For Neuroscience

Microglia modulate neurovascular responses in health and disease

Ádám Dénes

Institute of Experimental Medicine. Hungary

ASSEMBLY OF THE SPANISH GLIAL NETWORK

11:30-13:00

Tenerife

SAT4 - 5th Symposium of the Spanish Network for the Interaction between Computational and Cognitive Neuroscience (SINC2)

High-resolution bidirectional neural interfaces in Parkinson's disease

Nicola Ria

Catalan Institute of Nanoscience and Nanotechnology (ICN2)

Emergent stability in random networks: Computational principles of representational similarity

Jens-Bastian Eppler

Centre de Recerca Matemàtica. Spain

Dynamic Mode Decomposition for discovering biomechanical biomarkers in Parkinsonian mice with gait alterations

Jaime Ulayar Arroyo

CIMA-University of Navarra

Modular analysis of avalanche dynamics and dynamic range in a modular hierarchical network with Griffiths phases

Filipe Torres

Universidade Federal de Pernambuco. Brazil

Short Talk-II

Atypical Intrinsic Neural Timescales as a Basis for Differences in Predictive Coding Between Neurotypical and Neurodivergent Individuals
Sergio Zucchi. (IFISC (UIB-CSIC). Spain)



13:00-14:00

Exhibition hall

Welcome cocktail

14:00-15:30

Sinfónica

Opening ceremony & Lecture: Isabel Fariñas

The regulation of neural stem cell quiescence by a physical niche

Isabel Fariñas

Center for Biomedical Research Network on Neurodegenerative Diseases(CIBERNED), Department of Cell Biology, Functional Biology, and Physical Anthropology, Institute of Biotechnology and Biomedicine (BioTecMed), University of Valencia

15:30-17:30

Sinfónica

Symposium 3

Neuron-Glia Metabolic Cooperation: Vital for Organismal Homeostasis and Health

Chairs: Juan P. Bolaños

University of Salamanca

Ángeles Almeida

CSIC Salamanca

Speakers: Metabolic flexibility of astrocytes in signaling and behavior

Juan Pedro Bolaños

University of Salamanca

Metabolic flexibility of the Drosophila nervous system

Stefanie Schirmeier

Technische Universität Dresden, Department of Biology, Dresden, Germany

The astrocyte-to-neuron L-serine shuttle contributes to hippocampal plasticity

Gilles Bonvento

Institut des Neurosciences Paris-Saclay, Paris, France

Metabolic Support for Myelin Maintenance and Repair: The Role of Monocarboxylates and Their Transporters

Vanja Tepavcevic

Laboratory of Comparative and Regenerative Neurobiology, Cavanilles Institute of Biodiversity and Evolutionary Biology, University of Valencia, Department of Cell Biology, Valencia



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Short Oral Teaser Presentations

S01-73

Metabolic control of adult neural stem cell quiescence

Dra. Irene López-Fabuel (UV)

S04-20

Addressing mitochondrial dynamics in intercellular transfer to glioblastoma

Andrea Valiño (Cajal Institute)

15:30-17:30

Cámara

Symposium 1

Exploring the neural substrates of number sense: a perspective on genetics, behaviour and neural circuitry

Chair: **José Vicente Torres Pérez**

Department of Cellular Biology, Functional Biology and Physical Anthropology, University of Valencia

Speakers: **Impact of cerebral asymmetry on quantitative abilities in zebrafish**

Maria Elena Miletto-Petrazzini

Department of Biomedical Sciences, University of Padova, Italy

Exploring number sense deficit in Williams syndrome using zebrafish

José Vicente Torres Pérez

Department of Cellular Biology, Functional Biology and Physical Anthropology, University of Valencia

Genetic variance in numerosity and its association with working memory

Caroline H Brennan

School of Biological and Behavioural Sciences, Queen Mary University of London, United Kingdom

Single neuron coding of numerosity in chicks and zebrafish developmental insights

Mirko Zanon

Centre for Mind/Brain Sciences, University of Trento, Italy; and Translational Imaging Center, Michelson Center for Convergent Bioscience, University of Southern California, Los Angeles, USA

Short Oral Teaser Presentations

S04-107

A Theoretical Framework for Criticality and a Hierarchy of Timescales in the Brain

Leonardo Gollo (UIB-CSIC)

15:30-17:30

Gran Canaria

Symposium 2

New approaches to understanding and restoring impaired sensory and motor functions caused by spinal cord injuries: the need for multidisciplinary therapies to combat highly complex diseases

Chair: **Juan Aguilar**

National Hospital for Paraplegics. SESCAM, Health Research Institute of Castilla-La Mancha. IDISCAM

Speakers: **Nanomaterials for the design of novel therapeutics in spinal cord injury**

María Concepción Serrano López-Terradas

Madrid Institute of Materials Science, CSIC

Neural reprogramming for sensory-motor integration after spinal cord injury

Carmelo Bellardita

Neural Circuitries and Motor Repair Laboratory, Department of Neuroscience. Copenhagen University, Denmark

Harnessing sensory cortex modulation to restore function after spinal cord injury

Kajana Satkunendrarah

Department of Neurosurgery, Associate Director of Neuroscience Research Center, Medical College of Wisconsin



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Deciphering role of inhibition in cortical reorganization after spinal cord injury

Juan Aguilar

National Hospital for Paraplegics. SESCAM, Health Research Institute of Castilla-La Mancha. IDISCAM

Short Oral Teaser Presentations

S02-46

The cross-communication of neuromuscular junctions: not just a motor nerve-skeletal muscle talk

Dra. Sandra Fuertes-Alvarez (Biodonostia Research Institute)

S03-96

Nerve regeneration within a chitosan conduit after immediate and delayed nerve repair

Marina García Bejarano (Univeristy of Turin)

15:30-19:00

Exhibition hall

Poster Session I

17:30-18:00

Exhibition hall

Coffee break

18:00-18:30

Cámara

Automated image-based neurite outgrowth analysis

Commercial Session

by Agilent Technologies

17:30-19:00

Tenerife

SAT 5

Mentoring Symposium: Pathways in Science

Organized by SENC Young Researchers' and Education

Committee (CJIF SENC). (Session given in spanish language)

Chairs: **Lydia Jiménez, Carlos Matute, Sara Mederos, Soraya Martín**



Session 1: Navigating Diverse Pathways in Science

Senior PI speaker:

Isabel Fariñas

Full Professor. Dpt. Celular Biology, University of Valencia

Junior PI speaker II from SENC Women in Neurosciences Committee (WINS)

Soledad Barez

Talento CAM Fellow, Biomedical Research Institute Sols-Morreale (IIBM)

Editorial speaker

Elisa Floriddia

Senior Editor Nature Neuroscience Journal

Session 2: Rotating Mentor-Mentee Tables + snacks/drinks

Experience personalized conversations with scientists and experts in your field. Engage in 1:1 discussion for 10 minutes, followed by a rotation to meet your next mentor or mentee partner. Please follow the schedule to make the most of this unique networking opportunity. This session is designed to foster meaningful connections and insightful discussions



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Las Palmas de Gran Canaria

SEPTEMBER 4th THURSDAY

09:00-11:00

Sinfónica

Symposium 5

Excitatory and inhibitory mechanisms mediating dysfunction of neural circuits in neurodegeneration

Chairs: **Arnaldo Parra-Damas**
University Autonomous of Barcelona

Carlos Saura
University Autonomous of Barcelona

Speakers: **Impact of A β and tau pathologies on the transcriptomes of excitatory and inhibitory hippocampal neurons**

Arnaldo Parra-Damas
University Autonomous of Barcelona

The role of hippocampal inhibition in memory deficits and functional recovery in Alzheimer's disease mice

Laure Verret
Université de Toulouse, Research Center on Animal Cognition, CNRS, Toulouse, France

Interneuron hyperexcitability is an early driver of hippocampal network imbalance in AD mice

Ronald E. Van Kesteren
Vrije Universiteit Amsterdam, Netherlands

Gene regulatory network alterations in Alzheimer's disease at single-cell resolution

Mireya Plass
University of Barcelona



Short Oral Teaser Presentations

S02-19

Cortico-Hippocampal Assembloids: A Novel Tool for Studying Alzheimer's Disease

Alba Ortega (Clinic Barcelona)

S03-42

Activation of NOTCH pathway in brain endothelial cells ameliorates vascular abnormalities in Alzheimer's disease mouse models

Silvia Quiñones (IBiS)

S02-37

Functional genetic analysis of SGT-B in synaptic maintenance in the mouse brain

Carmen Paradela Leal (IBiS)

09:00-11:00

Cámara

Symposium 6

Cell fate in human neurodevelopment and disease

Chairs: **Ana Uzquiano**

Harvard University, Cambridge MA, USA

Sara Bizzotto

Imagine Institute, Inserm, Paris, France

Speakers: **Profiling and programming human in vitro neuronal diversity at single-cell resolution**

Hsiu-Chuan Lin

Centre for Genomic Regulation (CRG)

Unlocking human cortical development through brain organoids

Ana Uzquiano

Harvard University, Cambridge MA (USA)

Identifying the first emergence of cortical disorder risks

Gabriel Santpere

Hospital del Mar Research Institute





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Somatic mosaicism and cell lineages in human neurodevelopment and disease

Sara Bizzotto

Imagine Institute, Inserm, Paris, France

Short Oral Teaser Presentations

S01-34

Rptor/mTORC1 Function in Radial Glia Progenitor Cell Lineage Progression

Ana Villalba (ISTA)

S02-57

Understanding human brain function: light-controlled communication in human brain connectoids

Rafael Romero (CBMSO-UAM)

S01-17

Early parvalbumin inhibition orchestrates long-range excitatory connectivity

Alfonso Aguilera (CNB)

09:00-11:00

Gran Canaria

Symposium 4

Understanding Habenulae function in Emotional Behavior

Chairs: **Joaquín Piriz**

Achucarro Basque Center for Neuroscience

Edgar Soria-Gómez

Achucarro Basque Center for Neuroscience

Speakers: **Habenular astrocytes control emotional behavior**

Edgar Soria-Gómez

Achucarro Basque Center for Neuroscience

Interpeduncular Circuits in Innate Threat Processing and Adaptive Learning

Susanna Molas

University of Colorado Boulder, USA



Molecular Modulators of the Habenula: Known and Novel Receptors Controlling Synaptic Release and Addiction Circuitry

Inés Ibañez-Tallón

The Rockefeller University, USA

How the lateral habenula shapes aversive learning and maladaptive behavior

Christophe Proulx

CERVO, Université Laval, Canada

Short Oral Teaser Presentations

S02-24

A Neural Circuit Integrating Cortical and Hypothalamic input to Drive Courage in Aversive Environments (Recent Science paper as first author)
Sara Mederos (UCL)

S05-05

Differential Impacts of Acute, Chronic, and Social Defeat Stress on Microglial Morphology in the Amygdala and Habenula
Alejandro Zea Doña (UMA)

09:00-12:30

Exhibition hall

Poster Session II

11:00-11:30

Exhibition hall

Coffee break

11:30-12:30

Sinfónica

Tatiana Foundation Young Investigator Award Talk

FUNDACION TATIANA

12:30-13:30

Sinfónica

Presidential Lecture

Tripartite Synapses: Astrocyte regulation of synaptic function, network activity and animal behavior

Alfonso Araque

Dept. of Neuroscience, University of Minnesota, USA

13:30 a 15:00

Gran Canaria

ERC Program

Elena Solesio-Jofre





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14:00-15:30

Sinfónica

SAT7 - The Cerebellum: Neural Circuits, Pathology, and Emerging Therapeutic Pathways

Organized by Spanish Network for Research on the Cerebellum and its Disorders (REICYT)

Chairs: **Juan Antonio Moreno Bravo**, *Institute of Neuroscience, CSIC-UMH*
Marta Miquel, *IIBB-CSIC*

Speakers: **Neural Circuit Mechanisms of Emotional Processing: Cerebellar Contributions to Fear Memory**

Jimena Frontera

Faculty of Medicine and Health Sciences, Institute of Neurosciences, University of Barcelona

Unraveling Cerebellar GABAergic Alterations in Mitochondrial Disease

Laura Cutando

Institute of Neurosciences, Autonomous University of Barcelona

Neuroprotective Effects of VEGF-B in a Murine Model of Cerebellar Aggressive Neuronal Loss with Childhood Onset

David Díaz López

Institute for Neuroscience of Castilla y León, University of Salamanca

14:00-15:30

Cámara

Portuguese-Spanish Symposium

Exploring Sensory and Computational Frontiers in Neuroscience: A Joint Symposium of the Spanish and Portuguese Societies

Chair: **Manuel Sánchez Malmierca**
The Medical School & Institute of Neuroscience of Castilla y León (INCYL)

Speakers: **Dopamine dynamics in the ventral striatum during flavor nutrient conditioning encode the learned energetic value of food**

Joaquim Alves da Silva

Champalimaud Foundation

Temporal rules of memory association

Rosalina Fonseca

Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Portugal

Temporal neuromodulation of cortical rhythmic activity

Mavi Sánchez-Vives

August Pi i Sunyer Biomedical Research Institute, Barcelona

State-dependent mechanisms of memory consolidation

Azahara Oliva

Department of Neurobiology and Behavior, Cornell University, USA

15:30-17:30

Sinfónica

Symposium 09

Decoding Astrocyte-Neuron dynamics in brain function

Chair: **Gertrudis Perea**
Cajal Institute, CSIC

Speakers: **Astrocyte Kir4.1 expression level territorially controls excitatory transmission**
Dmitri Rusakov
UCL Queen Square Institute of Neurology, University College London, UK

Astrocytes in higher brain function

Inbal Goshen

The Edmond & Lily Safre Center for Brain Sciences, Jerusalem, Israel

Control of dendritic computation by astrocytic D-serine and glycine signalling

Christian Henneberger

University of Bonn, Bonn, Germany

Astrocyte tuning of social behaviors

Gertrudis Perea

Cajal Institute, CSIC



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Short Oral Teaser Presentations

S01-91

The neuroprotective effect of DdPAC light-stimulation on hippocampal astrocytes compared to neurons in Alzheimer's disease

Valentina Bova (UB)

S05-53

Direct lineage reprogramming of human astrocytes into induced neurons

Jeronimo Jurado Arjona (Kings College London)

15:30-17:30

Cámara

Symposium 07

Inhibitory circuits supporting network function

Chairs: Manuel Valero

Hospital del Mar Research Institute

Speakers: Inhibitory circuits supporting developmental network dynamics

Laura Modol

Hospital del Mar Research Institute

Cooperative action of interneuron classes supports the hippocampal function

Manuel Valero

Hospital del Mar Research Institute

Role of interneurons in hippocampal network dynamics for learning and memory

Antonio Fernández-Ruiz

Department of Neurobiology and Behavior. Cornell University, Ithaca (NY), US

Avalanche dynamics and interneurons in the hippocampus during sleep following spatial learning

Jozsef Csicsvari

Institute of Science and Technology Austria (ISTA), Klosterneuburg, Austria



Short Oral Teaser Presentations

S01-57

Theoretical constraints on memory storage in models of hippocampal CA3

Andrea Navas-Olive

S01-59

Cooperative action of interneuron classes supports the hippocampal spatial code

Pablo Abad Perez

S01-99

Balanced inhibition allows for robust learning of input-output associations in feedforward networks with Hebbian plasticity

Gloria Cecchini

15:30–17:30

Gran Canaria

Symposium 08

Multiscale approximations to understand microglia dysfunction in Alzheimer's disease: from genes to cells, looking for new therapeutic targets

Chair: **Silvia De Santis**

Institute of Neuroscience of Alicante, CSIC-UMH

Speakers: **Neuroinflammation in the pathogenesis of Alzheimer's Disease**

Jose P. López-Atalaya

Institute of Neuroscience of Alicante, CSIC-UMH

Probing microglial contributions up- and down-stream of amyloid plaque deposition

Giles E. Hardingham

University of Edinburgh, Scotland

Microglial dysfunction and senescence in Alzheimer's disease brains

Antonia Gutierrez

University of Malaga, IBIMA-Plataforma Bionand and CIBERNED

Using diffusion-weighted magnetic resonance imaging to assess microstructural trajectories in a mouse model of Alzheimer's disease

Silvia De Santis

Institute of Neuroscience of Alicante, CSIC-UMH





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Short Oral Teaser Presentations

S04-39

Pre-amyloid cognitive stimulation protects TgF344-AD rats against Alzheimer's disease pathological offenses on a multilevel scale

Clara García González (UAB)

S04-23

Impact of environmental enrichment on adult CA3 cytoarchitecture: new mossy fibers and microglia

Sara Sanchez Monreal

S01-74

Microglial ahr drives alzheimer's disease progression

Carmen Nieto Vaquero (CNIC)

15:00-18:30

Exhibition hall

Poster Session III

17:30-18:00

Exhibition hall

Coffee break

18:00-19:30

Cámara

SAT 09 - Extracellular vesicles in neuroscience: a focus on methodology and their applications in neurodegenerative disorders

Organized by EXO-NED

Chairs: **Jimena Baleriola**
Abraham Acevedo
Silvia Corrochano

Speakers: **Neuron-derived extracellular vesicles: from synaptic modulation to transneuronal toxicity transneuronal toxicity**

Cristina Malagelada Grau

University of Barcelona-CIBERNED

Regulation of local neuronal translation and synapses by astroglial EVs

Jimena Baleriola Gómez de Pablos

Achucarro Basque Center for Neuroscience, Cajal Institute-CSIC

Skeletal muscle EVs analysis in amyotrophic lateral sclerosis (ALS)

Sonia Alonso Martín

Biogipuzkoa Health Research Institute-CIBERNED

Characterization of brain-tissue-derived extracellular vesicle metabolome in Alzheimer's disease

Juan Manuel Falcón Pérez

CIC bioGUNE-BRTA, CIBEREHD

Extracellular Vesicles in Alzheimer's Disease Pathology: Prion Protein and Amyloid Plaque Formation

Andreu Matamoros Angles

University Medical Center Hamburg-Eppendorf. Germany

Sponsored by



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20:00-21:00

SAT 06 - Animal Research and Welfare: A Commitment to Animals

(The CARE Committee; Located outside the Auditorium Alfredo Kraus, in the pub "The Captain 13", C/Fernando Guanarteme 63)

Speakers: **Emilio Sanz Álvarez**

University of La Laguna

Silvia Corrochano

San Carlos Clinical Hospital Foundation for Biomedical Research



3-5 september 2025

Las Palmas de Gran Canaria

SEPTEMBER 5th FRIDAY

09:00–11:00

Sinfonica

Symposium 10

Unraveling Neurodevelopmental Disorders: from mouse models to human brain organoids

Chairs: **Aixa V. Morales**
Cajal Institute, CSIC, Madrid

Antonella Consiglio

Bellvitge Biomedical Research Institute (IDIBELL) University of Barcelona

Speakers: **Cellular crosstalk in brain development**

Silvia Capello

Developmental Neurobiology Research Group, Max Planck Institute of Psychiatry, Munich, Germany

Enhancing neurogenesis and behavioral performance through partial reprogramming during development

Daniel del Toro Ruiz

Dept. of Biomedical Sciences, Faculty of Medicine and Health Sciences, University of Barcelona

Establishing human iPSC-derived brain organoids to model Tyrosine Hydroxylase Deficiency (THD) disease

Antonella Consiglio

Bellvitge Biomedical Research Institute (IDIBELL) University of Barcelona

Animal models for understanding neurodevelopmental disorders in Lamb-Shaffer syndrome

Aixa V. Morales

Cajal Institute, CSIC



Short Oral Teaser Presentations

S01-96

Pax6 isoforms label distinct stages of neuronal differentiation in the mouse brain

Inés Gonzalez Aspe (Cajal Institute)

S04-25

Implications of Afadin in the Organization and Functionality of the Ventricular-Subventricular Zone

Isabel Mateos White (UV)

S05-104

Unraveling the sex-specific function of Dmrt5 in the developing midbrain using multi-omics

Rafael Casado Navarro (CBMSO)

09:00-11:00

Cámara

Symposium 11

Neural Mechanisms for Internal State-Dependent Animal Behavior

Chairs: **Nicolás Gutiérrez-Castellanos**

University of Valencia

Speakers: **The circadian control of hunger**

Amelia Douglas

Institute of Science and Technology Austria, Austria

TBD

Andrew MacAskill.

University College of London, UK

Hypothalamic mechanisms for the regulation of innate behavior in health and disease

Anne Petzold

European Neuroscience Institute Göttingen, Germany

A hypothalamic node for the cyclical control of female sexual rejection

Nicolás Gutiérrez-Castellanos

University of Valencia





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Short Oral Teaser Presentations

S05-97

Novel Dysfunctional Connectivity in the Prefrontal Cortex of a Mouse Model of Compulsive Behavior
Santiago Reyes (IBIS)

S03-49

Neural Mechanisms Underlying Visually-Evoked Aggression in Male and Female Siamese Fighting Fish
Paula Rodriguez Villamayor (Columbia University)

S04-83

Elucidating an anterior cingulate circuit for self-initiated actions and rescue of Parkinsonian akinesia
Francesco Paolo Ulloa (Duke University)

09:00-11:00

Gran Canaria

Symposium 12

Antibody-mediated mechanisms in autoimmune neurological disorders

Chairs: **Estibaliz Maudes**

ECTRIMS Postdoctoral fellow, Translational Neuroinflammation Group. Institut for Neuropathology, Neurology Clinic, Fraunhofer Institute, Göttingen Medical University, Göttingen, Germany

Josep Dalmau

Leader of the Pathogenesis of Autoimmune Neuronal Disorders Group. Fundació Clínic per la Recerca Biomèdica – Institut d'Investigacions Biomèdiques August Pi i Sunyer (FCRB-IDIBAPS), CaixaResearch Institute, University of Barcelona, Spain. Adjunct Professor of Neurology at the University of Pennsylvania, USA

Speakers: **From patients' symptoms to the discovery of antibody-mediated synaptic disorders**

Josep Dalmau

Leader of the Pathogenesis of Autoimmune Neuronal Disorders Group. Fundació Clínic per la Recerca Biomèdica – Institut d'Investigacions Biomèdiques August Pi i Sunyer (FCRB-IDIBAPS), CaixaResearch Institute, University of Barcelona, Spain. Adjunct Professor of Neurology at the University of Pennsylvania, USA



Animal models of autoimmune encephalitis and what we can learn for clinical management

Estibaliz Maudes

ECTRIMS Postdoctoral fellow, Translational Neuroinflammation Group. Institut for Neuropathology, Neurology Clinic, Fraunhofer Institute, Göttingen Medical University, Göttingen, Germany

Cross-talk between antibodies and innate immunity in encephalitis

Marianna Spatola

Junior leader by La Caixa Foundation. Fundació Clínic per la Recerca Biomèdica – Institut d'Investigacions Biomèdiques August Pi i Sunyer (FCRB-IDIBAPS), CaixaResearch Institute, University of Barcelona

Antibody-mediated changes in neuronal circuits and memory

Albert Compte

Leader of the Theoretical Neurobiology of Cortical Circuits Group. Fundació Clínic per la Recerca Biomèdica – Institut d'Investigacions Biomèdiques August Pi i Sunyer (FCRB-IDIBAPS)

Short Oral Teaser Presentations

S01-90

Distinct antibody glycosylation profiles reflect immune response compartmentalization and disease triggers in anti-NMDAR encephalitis

Laura Marmolejo

S01-89

Antibodies against ZSCAN1 in Pediatric and Adult Patients with Non-Paraneoplastic ROHHAD Syndrome
Ana Beatriz Serafim (IDIBAPS)

09:00-12:30

Exhibition hall

Poster Session IV

11:00-11:30

Exhibition hall

Coffee break





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11:30-12:30

Sinfonica

Iberian Neuroscience Lecture

Speaker: **Oligodendrocytes in brain energy metabolism and Alzheimer's disease**

Klaus-Armin Nave

Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany

12:30-13:30

Sinfonica

Honorary Lecture "María Teresa Miras Portugal"

Speaker: **Beyond Neuroimmune Communication: Messengers and Cellular Targets**

Carmen Guaza (Talk given in spanish language)

Cajal Institute CSIC

13:45-15:30

Cámara

SAT8 - The Gender Gap in Neuroscience: Exploring Solutions

(Session given in spanish language)

Chairs: **Ana Guadaño Ferraz**, *Csic*

Rocío Leal Campanario, *Pablo de Olavide University*

Speakers: **Data and Current Diagnosis on the Gender Gap**
Round table: Perspectives and Solutions

Ana Bribián Arruego

SANOFI

Cristina Nombela Otero

Autonomous University of Madrid

Eva Ortega Paíno

Spanish Ministry of Science, Innovation and Universities

Sarai Rodríguez González

University of La Laguna

Carmen Guaza Rodríguez

Cajal Institute CSIC

Ceremony for the first «WiNS Award» for Inclusive Leadership

14:00-15:00

Gran Canaria

RAICEX

Doing Neuroscience at Home and Abroad: The Role of RAICEX in Supporting Spanish Researchers

Carlos Pascual Caro

Network of Associations of Spanish Researchers and Scientists Abroad (RAICEX)

15:30-17:30

Sinfonica

Symposium 14

Glutotransmission and Metabolic Interplay

Chair: **Ana Covelo**

University of Vigo

Speakers: **Ana Covelo**

University of Vigo

mGluR5 signaling and mitochondrial metabolism in astrocytes: a key regulator of neuronal circuit development and its relevance to neurodevelopmental disorders

Paola Bezzi

Université de Lausanne, Switzerland

Hypothalamic astrocytes encode feeding time to regulate hunger

Cristina García-Cáceres

Institute for Diabetes and Obesity, Helmholtz Diabetes Center at Helmholtz Munich, Munich, Germany

Giovanni Marsicano

CB1 receptors link metabolic and synaptic functions of astrocytes

Bordeaux Neurocampus, France





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Short Oral Teaser Presentations

S01-14

Hierarchy and Destiny of Mitochondrial Transfer Between Neurons and Glial Cells

Regina Mengual (Cajal Institute)

S01-88

Unraveling Neuron-Glia Interactions Using Proximity Ligation Assay: A Novel Approach to Investigate Cellular Responses through Protein Interactions

Jon Olano (Achucarro)

15:30-17:30

Cámara

Symposium 13

Beyond Shaping Vision: Advances in Circuit Assembly and Plasticity

Chairs: **Eloisa Herrera**

Institute of Neurosciences, CSIC

Robert Hindges

King's College London, UK

Speakers: **Rewiring Axonal Laterality of Retinothalamic Projections in Mice Enhances Binocular Vision and Predatory Behaviour**

Eloisa Herrera

Institute of Neurosciences, CSIC

Early Visual Experience Elicits Cellular and Functional Plasticity in the Retina and Alters Behaviour

Robert Hindges

King's College London, UK

Development and Plasticity of Crossmodal Visual-Auditory Circuits for Adaptive Behaviors

Marta Nieto

National Centre of Biotechnology, CSIC

Plasticity and stability: lessons from the visual cortex

Tommaso Pizzorusso

Scuola Normale Superiore, Italy

Short Oral Teaser Presentations

S03-62

Modeling V1-LM Cortical Interactions: A Data-Driven Approach to Visual Processing in the Mouse Brain

Javier Galvan (Allen Institute)

S01-104

How Do We Define Dynamic Range of Complex Neuronal Response Functions?

Leonardo Gollo (CSIC-UIB)

15:30-17:30

Gran Canaria

Symposium 15

Structuring the world: noise, probabilities, chunks and context

Chair: **Livia de Hoz**

Charité-Universitätsmedizin Berlin Neuroscience, Germany

Alejandro Tabas

Basque Center on Cognition, Brain and Language

Speakers: **Adaptive sound representation along the subcortico-cortical hierarchy depending on stimulus statistics**

Livia de Hoz

Charité-Universitätsmedizin Berlin Neuroscience, Germany

Perceptual inference in the human subcortical auditory pathway

Alejandro Tabas

Basque Center on Cognition, Brain and Language

Statistics, rules and probabilities: Different representational learning mechanisms across species

József Fiser

Central European University, Budapest, Hungary

Statistical learning and the learning curve: contextual inference and continual learning

Máté Lengyel

University of Cambridge, UK



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Short Oral Teaser Presentations

S02-98

Emergent Representational Stability from Unstable Neuronal Activity: Modeling Representational Drift
Jens Bastian Eppler (CRM.CAT)

S02-59

Aging and Brain Criticality: Diverging Pathways of Neural Dynamics
Kaichao Wu / Leonardo Gollo lab (UIB-CSIC)

S05-03

Customizable computational model of rat brain functional connectivity
Alejandro Aguado (Santiago Canals Lab IN)

15:00-18:30

Exhibition hall

Poster Session V

17:30-18:00

Exhibition hall

Coffee break

18:00-18:30

Cámara

Neuropharmacology Awards by Elsevier

18:30-20:00

Cámara

SENC Assembly

20:30

Congress dinner

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