



PRELIMINARY SCIENTIFIC PROGRAM



IV FALAN CONGRESS, August 31 to September 3, 2026 Santiago, Chile

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The IV FALAN CONGRESS 2026 will take place from August 31 to September 3, in Santiago, Chile, at the **Centro de Extensión Alameda of the Pontificia Universidad Católica de Chile.**

This event will bring together neuroscientists from across Latin America, the Caribbean, and other countries, providing a unique platform to foster scientific exchange, promote collaborations, and support the professional development of our young researchers.

PLENARY LECTURES



Shubha Tole

Tata Institute of Fundamental Research, India

How to make a hippocampus



Francisco Aboitiz

Centro de Neurociencia, Pontificia Universidad Católica de Chile, Chile

The Thread of Mind and the Internal Voice: an exploration of human consciousness



Grace Schenatto Pereira

Physiology and Biophysics Department, Universidad Federal de Minas Gerais, Brazil

Have we met? Acquisition, retrieval, and updating of social memory



Mu-ming Poo

Institute of Neuroscience, Center for Excellence in Brain Science and Intelligence Technology, Chinese Academy of Science, China

Brain Science and Brain-Inspired AI

SPECIAL LECTURES



Noelia Weisstaub



Instituto de Neurociencia Cognitiva y Traslacional (INCYT). CONICET, Fundación INECO, Universidad Favaloro, Argentina. Instituto Tecnológico de Buenos Aires (ITBA), Argentina.

Prefrontal control of competing memories: from neuromodulatory circuits to adaptive behavior



Brigitte van Zundert



Institute of Biomedical Sciences (ICB), Faculty of Medicine, Universidad Andres Bello & Millennium Nucleus of Neuroepigenetics and Plasticity (EpiNeuro), Chile.

Neuroepigenetics at the Crossroads of Cognition and Neurodegeneration



Gloria Patricia Cardona



Facultad de Medicina, Grupo de Neurociencias de Antioquia, Sede de Investigación Universitaria, Universidad de Antioquia, Colombia.

Neurobiological basis of lipid metabolism as an early indicator of brain degeneration susceptibility



José Alonso Fernández Guasti



Departamento de Farmacobiología, Centro de Investigación y de Estudios Avanzados, México.

Sex differences in depression and its treatments



Ana Celia Silva Barbato



Laboratorio de Neurociencias, Facultad de Ciencias, Universidad de la República, Uruguay.

What time is it in the brain? Bridging the gap between Chronobiology and Circadian Health



SPECIAL LECTURES



Sebastián Curti



Laboratorio de Neurofisiología Celular, Unidad Académica de Fisiología, Facultad de Medicina, Universidad de la República, Uruguay.

Electrical Synapses in Neural Circuit Dynamics

Grace E. Pardo



Morphodynamic Neuroscience and Behavior e-Laboratory UNESCO UniTwin Complex Systems Digital Campus (CS-DC), Peru.

Psychobiology of the mother-infant relationship: An experimental and computational approach

Lionel Muller Igaz



Instituto de Fisiología y Biofísica Bernardo Houssay (IFIBIO Houssay) CONICET-Universidad de Buenos Aires, Argentina.

Using TDP-43 Animal Models to Understand Neurodegenerative Diseases of the ALS/FTD Spectrum

Fábio Cardoso Cruz



Department of Pharmacology, Escola Paulista de Medicina, Universidade Federal de São Paulo (UNIFESP), Brazil.

Neuronal Ensembles and Alcohol: Unlocking the Circuits of Seeking Behavior.

Yang Dan



Institute of Neuromodulation and Cognition Shenzhen Medical Academy of Research and Translation, China.

The How and Why of Sleep



Frontiers in Advanced Intravital Microscopy for Neuroscience

Chair:

Víctor Hugo Cornejo - Pontificia Universidad Católica de Chile, Chile.

Speakers:

Cristina Rodriguez - Yale University, USA.

Shaping light to unravel the nervous system

Luis Carrillo - Universidad Nacional Autónoma de México, México.

Optogenetic manipulation of visual perception

Vicente Parot - Pontificia Universidad Católica de Chile, Chile.

All-optical neurophysiology using high-speed optical sectioning

Stress across the lifespan: sex, genes, and brain systems shaping mental health susceptibility

Chair:

Marisol R. Lamprea - Psychology Department, Universidad Nacional de Colombia, Colombia.

Speakers:

Caroline Menard - CERVO Brain Research Center and Department of Neurosciences, Faculty of Medicine, Université Laval, Canada.

Pericytes modulate brain vascular integrity in social stress and depression

Diana Milena Cortes Patino - Universidade Federal do Pará, Brazil.

Effects of Early Isolation Stress on Incentive Value of Drug and Non-Drug Rewards

Carlos Eduardo Novoa Paloma - Department of Biobehavioral Health, College of Health and Human Development, The Pennsylvania State University, USA.

Genetic Background Modulates the Impact of Adolescent Social Stress on Affective Behaviors in BXD Mice

Jose Luis Solano Lopez - CERVO Brain Research Center and Department of Neurosciences, Faculty of Medicine, Université Laval, Canada.

Early-life stress effects on the development of the brain barrier

How do we learn a new skill? From Prediction to Memory Consolidation

Chair:

Claudia Vargas - Institute of Biophysics Carlos Chagas Filho of the Federal University of Rio de Janeiro, Brazil.

Speakers:

Leonardo G. Cohen - Human Cortical Physiology and Neurorehabilitation Section, NINDS, USA.

Contribution of wakeful neural replay to consolidation of skill

Valeria Della-Maggiore - National University of San Martin (UNSAM), Argentina.

Mapping critical windows of neuroplasticity governing motor memory consolidation across timescales

Agustín Solano - Physiology of Action Lab, ICIFI, School of Science and Technology, University of San Martin, Argentina.

Role of hippocampal replay in human motor memory consolidation.

Paulo R. Cabral-Passos - Institute of Mathematics and Statistics FAPESP NeuroMat-Research, Innovation and Dissemination Center for Neuromathematics, University of São Paulo, Brazil.

Recovering the structure of probabilistic sequences from EEG signals

Astrocytes do remember: Epigenetic memory drives glial responses in development and disease

Chair:

Alberto Javier Ramos - IBCN UBA-CONICET, Argentina.

Alejandro Villarreal - IBCN UBA-CONICET & ITBA, Argentina.

Speakers:

Francisco Javier Quintana - Ann Romney Center for Neurologic Diseases Brigham and Women's Hospital Harvard Medical School, USA.

Epigenetic control of astrocyte pro-inflammatory responses

Tanja Vogel - Dept. for Molecular Embryology, Institute for Anatomy and Cell Biology University of Freiburg, Germany.

Epigenetics in the developing brain: Neuronal and astrocytic heterogeneity revisited

Alejandro Villarreal - IBCN UBA-CONICET & ITBA, Argentina.

Histone modifications in reactive astrocytes as a mechanism underlying cellular adaptation to pathological microenvironment

Alberto Javier Ramos - IBCN UBA-CONICET, Argentina.

Astrocytes changing their mood: Epigenetic basis of the pro-epileptogenic glia in epilepsy

Non-invasive neuromodulation to promote rehabilitation in central nervous system injuries

Chair:

Gonzalo Rivera Lillo - Departamento de Neurociencia, Departamento de Kinesiología, Facultad de Medicina, Universidad de Chile, Chile.

Speakers:

Cristian Cuadra - Department of Rehabilitation Science, School of Public Health and Health Professions, University at Buffalo, State University of NY, USA.

Non-invasive peripheral vestibular stimulation modulates motoneuron activation and spinal circuitry in upper and lower limb muscles in central nervous system disorders

Edith Elgueta - Universidad Andrés Bello, Exercise and Rehabilitation Sciences Institute, School of Physical Therapy, Faculty of Rehabilitation Sciences, Chile.

Transcranial magnetic stimulation for the study of chronic pain

Juan José Marimán - Departamento de Kinesiología. Universidad Metropolitana de Ciencias de la Educación, Chile.

Enhancement of motor learning through noninvasive electrical neuromodulation: neural correlates and implications for the rehabilitation of neurological injuries

Gonzalo Rivera Lillo - Departamento de Neurociencia, Departamento de Kinesiología, Facultad de Medicina, Universidad de Chile, Chile.

Electrophysiological Markers to Personalize Non-invasive Brain Stimulation in Acquired Brain Injury

Memory consolidation across brain states

Chair:

Jan Born - University of Tübingen, Germany.

Speakers:

Julia Carbone - University of Tübingen, Germany.

Memory Reactivation During Sleep in Humans: Mechanisms and Interventions

Pablo Fuentealba - Pontificia Universidad Católica de Chile, Chile.

Reinforcement learning and spatial memory map onto sleep-dependent hippocampal-cortical coupling

Marion Inostroza - University of Tübingen, Germany.

Sleep-dependent memory formation during early development

Adrián Ocampo - Universidad de Chile, Chile.

Starvation-mediated memory consolidation

Retinal development in vertebrates: from morphogenesis to neurogenesis

Chairs:

Flavio R. Zolessi - Facultad de Ciencias, Universidad de la República, Uruguay.

Leonardo E. Valdivia - Center for Integrative Biology, Universidad Mayor, Chile.

Speakers:

Mariana S. Silveira - Universidade Federal do Rio de Janeiro, Brazil.

Remodelling retinal development

Evelyn Avilés - Faculty of Biological Sciences, Pontificia Universidad Católica de Chile.

Layer up! Fat3 and PTPsigma regulate retinal lamination

Camila Davison - Facultad de Ciencias, Universidad de la República, Uruguay.

Polarized signals in the establishment of retinal neural layers: role of Laminin1

Leonardo E. Valdivia - Center for Integrative Biology, Universidad Mayor, Chile.

Eyes in the making

Neuropeptides in Action: From synaptic nano-architecture to circuit and behavior

Chair:

Limei Zhang - National Autonomous University of Mexico, Mexico.

Speakers:

Limei Zhang - National Autonomous University of Mexico, Mexico.

Neuropeptide in fast and slow synaptic transmission: a discovery of a calyx of Held-like synapse in the rodent forebrain and its physiological implications

Andrea Godino - National University of Cordoba, Argentina.

Early life programming of osmoregulatory responses with an emphasis on vasopressin-angiotensin system

Mario A. Zetter - Universidad La Salle, México.

Vasopressin as a master orchestrator: bridging homeostasis, neural plasticity, and behavior

Lee E. Eiden - National Institute of Mental Health, NIH, USA.

PACAP Across Evolution: A Master Modulator of Endocrine Stress and Adaptive Behavior

Mechanisms underlying deficits in the balance between excitation and inhibition in psychopathologies

Chair:

Felipe Villela Gomes - University of São Paulo, Brazil.

Speakers:

Beatriz Luna - University of Pittsburgh, USA.

Neurocognitive Plasticity and Specialization through Adolescence Establishing Adult Trajectories

Juan E. Belforte - University of Buenos Aires & National Research Council (CONICET), Argentina.

NMDA Receptor Hypofunction in Cortical Interneurons: Impact on E/I Balance and Schizophrenia-Related Phenotypes

Marco Fuenzalida - University of Valparaíso, Chile.

Adolescent Ketamine Exposure Impairs Inhibitory Synaptic Function and Dendritic Integration in the Adult Brain

Felipe V. Gomes - University of Sao Paulo, Brazil.

Molecular mechanisms underlying the impact of adolescent stress on parvalbumin interneurons

Chronic Pain and Neuroplasticity: Metabolic, Molecular and Circuit Mechanisms of Modulation

Chair:

Javier Nogueira Borde - Facultad de Medicina, Universidad de la República, Uruguay.

Speakers:

Fernando Kasanetz - Grupo de Neurociencia de Sistemas, Departamento de Ciencias Fisiológicas, Facultad de Ciencias Médicas, Universidad de Buenos Aires & Instituto de Fisiología y Biofísica Bernardo Houssay (IFIBIO Houssay), CONICET - Universidad de Buenos Aires, Buenos Aires, Argentina.

Neuroplasticity of Pain Representations in the Anterior Cingulate Cortex: From Sensory Encoding to Behavioral Adaptation

Spring Valdivia - Instituto de Fisiología y Biofísica Bernardo Houssay, Argentina
Affective and Motivational Neuroplasticity in Chronic Pain: Insights from Eating Behavior

Valentina Lagos - Facultad de Medicina, Universidad de la República, Uruguay.
Metabolic Regulation as a Modulatory Mechanism in Chronic Pain

Javier Nogueira - Facultad de Medicina, Universidad de la República, Uruguay.
Interplay Between Estrogen Receptors and Perineuronal Nets in Somatosensory Circuits and Pain Modulation

Good news fly! Novel findings in brain development and behavior from *Drosophila*

Chair:

Jorge Campusano - Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Chile.

María Paz Marzolo - Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Chile.

Speakers:

Jorge Campusano - Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Chile.

Transglutaminases in brain development and function. Is it time for us to fly?

María Paz Marzolo - Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Chile.

The evolutionary cousins of Reelin and its receptors in flies; new roles and new actors in brain development and functions

Nara Muraro - Instituto de Investigación en Biomedicina de Buenos Aires (IBioBA)-CONICET, Argentina.

*Why do we sleep? Insights from *Drosophila**

Sergio Hidalgo - Dept. of Integrative Physiology and Neuroscience Washington State University, USA.

Insights into neuropeptidergic modulation of seasonal physiology

From bench to bedside; novel pharmacological tools for the treatment of psychostimulants and opioid use disorders

Chair:

Cecilia Scorza - Instituto de Investigaciones Biológicas Clemente Estable (IIBCE) Uruguay.

Speakers:

Georgina Renard - Universidad de Santiago de Chile, Chile.

The Role of Vasopressin in Amphetamine-Conditioned Behaviors: Involvement of the Lateral Septum.

Rafael Gatica - Pontificia Universidad Católica de Chile, Chile.

Role of G Protein-Coupled Receptor Kinases in Amphetamine Sensitization and Drug Addiction Vulnerability

Cecilia Scorza - Instituto de Investigaciones Biológicas Clemente Estable (IIBCE), Uruguay.

Cannabidiol as a potential therapeutic strategy in cocaine-use disorder

Neuromodulatory correlates of continual learning: bridging biological and artificial neural networks

Chair:

Srikanth Ramaswamy - Newcastle University, United Kingdom

Speakers:

Giulia D'Angelo - Czech Technical University in Prague, Czech Republic.
Neuromorphic active vision for embodied object perception

Peter Murphy - Maynooth University, Ireland.
Phasic pupil-linked neuromodulation as a source of contextual flexibility in neural circuits for working memory and decision-making

Gabriel Wainstein Bezamat - Harvard Medical School, USA.
Integrating Adaptive Gain and Network Reset: A Unified Framework for Locus Coeruleus-Mediated Learning in Attentional Set Shifting

Srikanth Ramaswamy - Newcastle University, United Kingdom.
Neuromodulation-aware cortical neural networks for continual learning

Neuro-glio-vascular interactions in health and disease

Chairs:

Silvia Olivera Bravo - Neurobiology and Neuropathology Department, IIBCE, Uruguay.

Eugenia Isasi - Facultad de Medicina, Universidad de la República, Uruguay.

Speakers:

Nils Korte - William Randolph Hearst Fellow Department of Neurology, Boston Children's Hospital, Harvard Medical School, USA.
Reversing the pericyte-mediated fall of cerebral blood flow and capillary stalling that occurs in Alzheimer's disease

Sandra Mai - Laboratory of Neuro-glia-vascular signaling, Unidad Académica de Fisiología, Facultad de Medicina, Universidad de la República, Uruguay.
Role of pericyte Panx1 in the regulation of capillary diameter and memory

Juan Beauquis - Laboratory of Neurobiology of Aging, CONICET (Consejo Nacional de Investigaciones Científicas), Argentina.
Glial metabolism in Alzheimer's disease

Eugenia Isasi - Facultad de Medicina, Universidad de la República, Uruguay.
Phenotypic alterations in pericytes induced by ALS-linked SOD1G93A mutation: implications for neurovascular unit function