XVII Annual Meeting of the Chilean Society for Neuroscience

NOVEMBER 2-4, 2021

Timetable

	Tuesday 2th		**Wednesday 3th**		**Thursday 4th**
09:45	Opening Ceremony				
10:00 - 12:00	Symposium 1 Symposium 2	**09.00 - 11:00**	Symposium 3 Symposium 4	**09:00 - 11:00**	Symposium 6
		11:15 – 13:30	Symposium 5 (YNS)	**11:15 – 13:00**	Oral Communications 1, 2
13:30-14:30	SPONSOR EXHIBITION	**13:30-14:30**	SPONSOR EXHIBITION	**13:30-14:30**	SPONSOR EXHIBITION
14:30 - 16:30	Poster Session 1	**15:00 – 17:00**	Poster Session 2	**15:00 – 17:00**	Symposium 7
17:00 - 18:00	Conference 1	**18:00 – 19:00**	Roundtable	**18:00-19:00**	Conference 2

Tuesday, November 2th

09:45 Opening Ceremony
Christian Gonzalez-Billault, President Chilean Society for Neuroscience

10:00-12:00 **SYMPOSIUM 1: Rare genetic diseases and their impact on neurodevelopment and CNS function.**
Chair: Maria Paz Marzolo

10:00-10:30 **Systems Biology of Rare Neurological Disorder**

Victor Faundez[1]
(1) Emory University, Cell Biology, School of Medicine, Atlanta, USA

10:30-11:00 **Environmental enrichment as a bypass to attenuate the progression of Rett syndrome-like phenotype in a mouse model of the disease.**

Camila Navia[2], Rodrigo F Torres[2], Sharin Valdivia[2], Nuria Llontop[1], Bastián Rivera-Puebla[1], Verónica Valladares-Castillo[1], **Bredford Kerr**[1]
(1) Universidad San Sebastián, Laboratory of Neuroendocrinology and Metabolism, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Centro de Estudios Científicos, Av. Arturo Prat 514, 5110466 Valdivia, Chile

11:00-11:30 **The AP-4 adaptor complex, mutated in Hereditary Spastic Paraplegia, has ApoER2 as a new cargo with relevant neuronal functions**

Maria-Paz Marzolo[1]
(1) Pontificia Universidad Católica de Chile, Departamento de Biología Celular y Molecular, Facultad Ciencias Biológicas, Av. Libertador Bernardo O´Higgins # 340, Santiago, Chile

11:30-12:00 **Shingolipids and Ceramides in the pathogenesis of Lysosomal Storage Diseases and Parkinson's disease**

Hugo Bellen[1], Liping Wang[1], Guang Lin[1]
(1) Departments of Molecular and Human Genetics and Neuroscience, Texas Children Hospital. Baylor College of Medicine, USA.

10:00-12:00 **SYMPOSIUM 2: Ecological Cognitive Neuroscience: moving towards real-life Science.**
Chairs: Rodrigo Montefusco/ María de los Ángeles Juricic

10:00-10:30 **Ecological Cognitive Neuroscience Group an invitation towards real-life neuroscience.**

Rodrigo Montefusco-Siegmund[1,2,3]
(1) Universidad Austral de Chile, Instituto de Aparato Locomotor y Rehabilitación, Facultad de Medicina, Rudloff 1650, Valdivia, Chile
(2) Centro Interdisciplinario de Estudio del Sistema Nervioso, Valdivia, Chile
(3) Ecological Cognitive Neuroscience Group, Chile

10:30-11:00 **Bridging past and future in education: Integrating multisensory models of brain and cognition with naturalistic laboratory resea**rch

Pawel J. Matusz[1,2,3]
(1) HES-SO University of Applied Sciences & Arts Western Switzerland, Institute of Information Systems, Techno-Pôle 3, Sierre, Switzerland
(2) University Hospital Center (CHUV) - University of Lausanne, Radiology, Rue du Bugnon 46, Lausanne, Switzerland
(3) Vanderbilt University, Hearing & Speech, Nashville, TN, USA

11:00-11:30 **Studying how realism influences brain and behavior: a brief history, current challenges, and new horizons**

Jacqueline Snow[1]
(1) University of Nevada, Reno, Psychology, College of Science, Reno, Nevada, United States

11:30-12:00 **MoBI meets 4E cognition: getting ready for real-world neuroscience**
Francisco J. Parada Flores[1]

(1) Universidad Diego Portales, Centro de Estudios en Neurociencia Humana y Neuropsicología, Facultad de Psicología, Vergara 275, Santiago, Chile

12:00-13:30 Break

13:30-14:30 Sponsor exhibition

14:30-16:30 **Poster Session 1**

1. Association between pupillary reactivity and the perception of eye movements

Alberto Cuevas[1,3], Samuel Madariaga[1,3], Héctor Román[1,3], Karla Padilla[1,3], Pedro Maldonado[1,3], María de los Ángeles Juricic[1,2,3]
(1) Neurosystems Laboratory, Neuroscience, Faculty of Medicine, Av. Independencia 1027, Santiago, Chile.
(2) Ophthalmology Department, Faculty of Medicine, Avenida Santos Dumont 999, Santiago, Chile.
(3) Biomedical Neuroscience Institute, Faculty of Medicine, Av. Independencia 1027, Santiago, Chile.

2. Vocal behavior of two chilean suboscine birds in relation to the innervation of their syrinx

Tomás Salas Orchard[1], Macarena Faunes Carvallo[1,2], Jorge Mpodozis Marín[1], Máximo Fernández Villafaña[1]

(1) Universidad de Chile, Departamento de Biología, Facultad de Ciencias, Las Palmeras 3425, Santiago, Chile.
(2) Universidad Católica, Departamento de Anatomía Normal, Facultad de Medicina, Avda. Libertador Bernando O'Higgins 340, Santiago, Chile

3. Senescent astrocytes get cytoskeleton changes likely directed to the establishment of the Senescence-Associated Secretory Phenotype (SASP)

Cristopher Villablanca[1,3], Rene Vidal Gomez[2,3], Christian Gonzalez-Billault[1,3]
(1) Institute for Cell Dynamics and Biotechnology (ICDB), Universidad de Chile, Departamento de biología, Facultad de Ciencias, Santiago, Chile
(2) Center for Integrative Biology, Universidad Mayor, Santiago, Chile
(3) Geroscience Center for Brain Health and Metabolism (GERO), Santiago, Chile

4. Transcriptional regulation of Lonp-1 by Mecp2 and their contribution to the hippocampal accumulation of tau PHF-1 inside mitochondria in aging

Jesús Llanquinao[1,2], Daniela Cortes[1], Claudia Jara[1], Andreas Schüller[3,4], Bredford Kerr[2], Cheril Tapia-Rojas[1]

(1) Universidad San Sebastián, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Universidad San Sebastián, Laboratory of Neuroendocrinology and Metabolism, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(3) Pontificia Universidad Católica de Chile, Institute for Biological and Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Santiago, Chile
(4) Pontificia Universidad Católica de Chile, Department of Molecular Genetics and Microbiology, School of Biological Sciences, Santiago, Chile

5. Early exposure to a hypercaloric diet alters mitochondrial function by a mechanism associated with Mecp2-related epigenetic changes.

Nuria Llontop[1,2], Bredford Kerr[1], Cheril Tapia-Rojas[2]
(1) Universidad San Sebastian, Laboratory of Neuroendocrinology and Metabolism, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Universidad San Sebastian, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile

6. The KDEL receptor-dependent signaling at de Golgi complex promotes the mitochondrial function in a hippocampal derived cell line HT-22

Diego Tapia[1,2], Eloisa Arias[1], Cheril Tapia-Rojas[2], Jorge Cancino[1]
(1) Universidad San Sebastían, Laboratory of Cell Biology of Inter-Organelle Signaling (CeBIOS), Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Universidad San Sebastián, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile

7. The uncoupling protein UCP5 regulates mitochondrial function and proteasome activity in neuronal cells: Impact on the synapses and aging

Adely De la Peña[1,2], Andrea Soza[2], Cheril Tapia-Rojas[1]

(1) Universidad San Sebastian, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile.
(2) Universidad San Sebastian, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Facultad de Medicina y Ciencia, Santiago, Chile

8. Effects of mitophagy stimulation with Urolithin A on the age-related mitochondrial function and cognitive impairment in aged SAMP8 and C57 mice

Han S Park-Kang[1], **Catalina M. Polanco**[1], Claudia Jara[1], Cheril Tapia-Rojas[1]
(1) Universidad San Sebastián, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile

9. Multi-Scale Entropy Analysis of Retinal Signals in an Animal Model of Alzheimer's Disease.

Sebastian Garay Pérez[1], Joaquín Araya-Arriagada[2], Cristobal Rojas González[3], Adrian Palacios Vargas[4], Max Chacón Pacheco[1], Leonel Medina Daza[1,5]
(1) Universidad de Santiago de Chile, Departamento de Informática, Facultad de Ingeniería
(2) Universidad Santo Tomás, Escuela de Tecnología Médica, Facultad de Salud
(3) Pontificia Universidad Católica de Chile, Instituto de Ingeniería Matemática y Computacional
(4) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencia de Valparaíso
(5) Núcleo Milenio para Aplicaciones de Control y Problemas Inversos

10. Optimization of the neuroprotective effect of eudesmin on amyloid beta peptide in different states of aggregation using in silico simulations

Camila Millar Obreque[1,3], Carlos F. Burgos Arias[2], Jaime Cabrera-Pardo[3,4]
(1) Universidad de La Frontera, Department of Agronomic Sciences and Natural Resources, Faculty of Agricultural and Forestry Sciences, Temuco, Chile
(2) Universidad de Concepción, Department of Physiology, Laboratory of Neurophisiology, Concepción, Chile
(3) Universidad del Bio-Bío, Department of Chemistry, Faculty of Sciences, Laboratory of Applied and Sustainable Chemistry, Concepción, Chile
(4) University of Utah, Department of Biochemistry, Salt Lake City, Utah, United States

11. Subcortical gates to auditory phantom perception? A volumetric subcortical study of Tinnitus in a Chilean MRI cohort

Vicente Medel[1], Simon San Martin[1], Chama Belkhiria[1], Alexis Leiva[1], Rodrigo Vergara[4], Mauricio Cerda[1], Gonzalo Farías[1,3], Carolina Delgado[1,3], Paul Delano[2]
(1) Universidad de Chile, Neurociencia, Medicina, Santiago, Chile
(2) Hospital Clínico de la Universidad de Chile, Otorrinolaringología, Santiago, Chile
(3) Hospital Clínico de la Universidad de Chile, Neurología y Neurocirugía, Santiago, Chile
(4) Universidad Metropolitana de Ciencias de la Educación, Kinesiología, Facultad de Artes y Educación Física, Santiago, Chile

12. Exploring data bases for the study of aminergic systems in Drosophila gut

Simón Guerra Ayala[1], Jorge M. Campusano[1]

(1) Pontificia Universidad Católica de Chile, Laboratorio Neurogenética de la Conducta, Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Av. Libertador Bernardo O'Higgins 340, Santiago, Chile

13. Role of the somatostatin-expressing inhibitory interneurons on cognitive decline during aging.

Estibaliz M. Ampuero Llanos[1,2], **Catalina Bravo-Marambio**[1,2], Sebastián Perez-Gonzalez[1,2]

(1) Departamento de Biología. Facultad de Química y Biología. Universidad de Santiago de Chile
(2) Instituto de Ciencias Biomédicas. Universidad Autónoma de Chile

14. A centronuclear myopathy-causing mutation in dynamin-2 reduces dendritic spine density and perturbs AMPAR trafficking in hippocampal neurons of a murine model of the disease

Lorena Prado-Vega[1], Marjorie Labraña Allende[2], Michelle Mattar Araos[2], Marc Bitoun[3], Alvaro O. Ardiles[4,5], Arlek Gonzalez-Jamett[4,6]
(1) Programa de Magister en Ciencias, Mención Neurociencia, Universidad de Valparaíso, Valparaíso, Chile
(2) Universidad de Valparaíso, Escuela de Tecnología Médica, Facultad de Medicina, Angamos 655, Viña del Mar, Chile
(3) Institut de Myologie, Paris, France
(4) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencias de Valparaíso, Ciencias, Avenida Gran Bretaña 1111, Valparaíso, Chile
(5) Universidad de Valparaíso, Centro de Neurología Traslacional, Medicina, Hontaneda 2664, Valparaiso, Chile
(6) Universidad de Valparaíso, Escuela de Química y Farmacia, Farmacia, Avenida Gran Bretaña 1093, Valparaiso, Chile

15.a. Characterizing white matter hyperintensities with manual segmentation and automatic tools in a Chilean MRI cohort: A comparative study

Víctor Vidal Cuevas[1], Vicente Medel[1], Ana Patricia Orellana Pineda[4], Carolina Delgado Derio[1,2], Paul Délano Reyes[1,3], Gonzalo Farías Gontupil[1,2]

(1) Universidad de Chile, Departamento de Neurociencias, Facultad de Medicina, Santiago, Chile
(2) Universidad de Chile, Departamento de Neurología y Neurocirugía Norte, Facultad de Medicina, Santiago, Chile
(3) Hospital Clínico de la Universidad de Chile, Departamento de Otorrinolaringología, Santiago, Chile
(4) Hospital Clínico Universidad de Chile, Servicios de Apoyo, Santiago, Chile

16:30-17:00 Break

17:00-18:00 **Conference 1**

Stress hormone effects on different aspects of memory quality.
Benno Roozendaal[1]
(1) Donders Institute. Radboud University Medical Center. Nijmegen. The Netherlands

Chair: Jimmy Stehberg

Wednesday, November 3th

09:00-11:00 **SYMPOSIUM 3: Microexons and Central Nervous System Development.**
Chairs: María Estela Andres / Paola Haeger

09:00-09:30 **Parallel evolution of neural microexons in insects and vertebrates**

Manuel Irimia[1,2,3]
(1) Centre for Genomic Regulation, Barcelona Institute of Science and Technology, Dr. Aiguader, 88, 08003, Barcelona, España
(2) Universitat Pompeu Fabra
(3) Institució Catalana de Recerca i Estudis Avançats (ICREA)

9:30-10:00 **Cognitive impairment induced by prenatal ethanol exposition: New insights into gene expression dysregulation.**

Paola Andrea Haeger Soto[1]
(1) Universidad Católica del Norte, Departamento Ciencias Biomédicas, Facultad de Medicina, Larrondo 1281, Coquimbo, Chile

10:00-10:30 **Microexon contribution to environmental-stress adaptation: the interesting case of LSD1.**

Elena Battaglioli[1], Francesco Rusconi[1], Chiara Forastieri[1], Elena Romito[1], Emanuela Toffolo[1]
(1) Università degli Studi di Milano, Dept. Medical Biotechnology and Translational Medicine, Milan, Italy

09:00-11:00 **SYMPOSIUM 4: Mind, Brain and Education.**
Chair: Paulo Barraza

09:00-9:30 **Use of interactive technologies to promote language and communication**

Marcela Peña[1]
(1) Pontificia Universidad Católica de Chile, Chile

09:30-10:00 **Brain networks after simple arithmetic: evidence from magnetoencephalography**

Elena Salillas[1]
(1) Universidad de Zaragoza, España

10:00-10:30 **Teach ... How and for what?**

Cecilia Calero[1]
(1) Universidad Torcuato Di Tella, Argentina

10:30-11:00 **The Teacher's Brain: neurocognitive bases of expert teaching**

Paulo Barraza[1], Eugenio Rodríguez[2]
(1) Universidad de Chile, Laboratorio de Neurociencia, Cognición y Educación (NCElab), Instituto de Estudios Avanzados en Educación (IE), Periodista José Carrasco Tapia Nº 75, Santiago, Chile
(2) Pontificia Universidad Católica de Chile, Chile

11:00-11:15 Break

11:15-13:30 **SYMPOSIUM 5: Young Neuroscientists**
Chair: Alexies Dagnino

11:15-11:40 **Identification of neurotransmission and brain aging energy metabolism hub genes using a novel approach that combines network analyses and multi-omics data**

Dasfne Lee-Liu[1,2,4,8,9], Alejandro Acevedo[3,8], Felipe Torres[4,5], Miguel Kiwi[4,5], Felipe Baeza-Lehnert[6], L. Felipe Barros[6], Christian Gonzalez-Billault[1,2,7,9]
(1) Laboratory of Cellular and Neuronal Dynamics, Faculty of Sciences, Universidad de Chile.
(2) Geroscience Center for Brain Health and Metabolism (GERO), Santiago.
(3) Instituto de Nutrición y Tecnología de Alimentos (INTA), Universidad de Chile.
(4) Department of Physics, Universidad de Chile.
(5) Center for the Development of Nanoscience and Nanotechnology, CEDENNA.
(6) Centro de Estudios Científicos (CECs), Valdivia.
(7) The Buck Institute for Research on Aging, Novato, USA.
(8) These authors contributed equally to this work.
(9) These authors share correspondence (dnlee@uc.cl, chrgonza@uchile.cl).

11:40-12:05 **Using Drosophila melanogaster to understand complex disorders: insights on the pathophysiology of schizophrenia**

Sergio Hidalgo Sotelo[1,2,3], Jorge Campusano[2], James Hodge[1]

(1) University of Bristol, School of Physiology and Pharmacology, Faculty of Life sciences, Bristol, United Kingdom
(2) Pontificia Universidad Católica de Chile, Depto. Biología
Celular y Molecular, Facultad de Ciencias Biológicas, Santiago, Chile
(3) University of California, Entomology and Nematology, Agricultural and Environmental Sciences, Davis, United States

12:05-12:30 **Uncovering alternative splicing patterns of microexons across mouse development and neuronal cell types**

Guillermo Parada[1,2,7], Roberto Munita[3], Ilias Georgakopoulos-Soares[2,4], Hugo Fernandes[5], Veronika Kedlian[2], Emmanouil Metzakopian[5], Maria Estela Andres[3], Eric Miska[2,6,7], Martin Hemberg[2,7]
(1) University of Toronto, Donelly Centre, Department of Molecular Genetics, Toronto, Canada
(2) Wellcome Sanger Institute, Cellular Genetics, Hinxton, United Kindgom
(3) Pontificia Universidad Católica de Chile, Departamento de Biología Celular y Molecular, Ciencias Biológicas, Santiago, Chile
(4) University of California San Francisco, Department of Bioengineering and Therapeutic Sciences, San Francisco, United Estates of America
(5) University of Cambridge, Department of Clinical Neurosciences, UK Dementia Research Institute, Cambridge, United Kingdom
(6) University of Cambridge, Department of Genetics, Cambridge, United Kingdom
(7) University of Cambridge, Wellcome Trust Cancer Research UK Gurdon Institute, Cambridge, United Kingdom

12:30-12:55 **Whole-brain modelling suggests mechanisms behind the pro-segregation effect of cholinergic system**

Carlos Coronel[1], Rodrigo Cofré[2,3], Carsten Carsten Gießing[4], Patricio Orio[1]
(1) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencia de Valparaíso, Facultad de Ciencias, Harrington 287, Valparaíso, Chile
(2) Paris-Saclay University, Institute of Neuroscience (NeuroPSI), Centre National de la Recherche Scientifique (CNRS), 3 Rue Michel Ange, Gif-sur-Yvette, Francia
(3) Universidad de Valparaíso, CIMFAV-Ingemat, Facultad de Ingeniería, Brasil 1762, Valparaíso, Chile

12:55-13:20 **Turbulence impact on EEG, EOG and touchscreen vigilance.**

Chama Belkhiria[1],
(1) Institut Supérieur de l'Aéronautique et de l'Espace, Université Federale Toulouse, France.

13:30-14:30 Sponsor exhibition

15:00-17:00 **Poster Session 2**

15. Detecting changes in locomotion and social interactions in Drosophila melanogaster mated females.

Ivana Gajardo[1,2], Jimena Sierralta[2], Jorge M Campusano[1]
(1) Pontificia Universidad Católica de Chile, Biología Celular y Molecular, Ciencias Biológicas, Chile
(2) Universidad de Chile, Neurociencia, Medicina, Chile

16. Vestibular Evoked Myogenic Potentials in Children with Attention Deficit and Hyperactivity Disorder

Valeria Isaac[1], Alexis Leiva[1], Hayo Breinbauer[1], Paul Delano[1]
(1) Universidad de Chile, Neurociencias

17. Glucagon as a neuromodulator of retinal inhibitory activity, possible implications in myopia pathogenesis

Felipe Tapia[1,2], Oliver Schmachtenberg[1], Alex Vielma[1]
(1) Centro Interdisciplinario de Neurociencia de Valparaíso, Facultad de Ciencias, Valparaíso, Chile
(2) Doctorado en Ciencias, Mención Neurociencia, Universidad de Valparaíso, Facultad de Ciencias, Valparaíso, Chile

18. Directly induced neurons starting from dermal fibroblasts to study neuronal aging

Camila Gudenschwager-Ruiz[1,2], Felipe Bodaleo[1,2], Dasfne Lee-Liu[1,2], Ricardo Delgado[2], Christian González-Billault[1,2,3]
(1) Geroscience Center for Brain Health and Metabolism (GERO)
(2) Biology Department, Faculty of Sciences, Universidad de Chile
(3) The Buck Institute for Research on Aging

19. Phosphorylated tau PHF-1 (Ser396 and Ser404) inside of mitochondria: mechanism of a possible proteostasis response in the aged hippocampus.

Bastián I. Rivera[1], Angie K. Torres[1], Claudia Jara[1], Cheril Tapia-Rojas[1]
(1) Universidad San Sebastián, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile

20. Characterization of the senescent-like phenotype in culture-aged neurons and its impact on the establishment of synaptic contacts

Isadora Chávez-Rivera[1], Cristina Olmos Tapia[1], Christian Gonzalez-Billault[1,2,3]
(1) Universidad de Chile, Departamento de Biología, Facultad de Ciencias, Las Palmeras 3425, Santiago, Chile
(2) Geroscience Center for Brain Health and Metabolism (GERO), Santiago, Chile
(3) The Buck Institute for Research on Aging, 8001 Redwood Blvd, Novato, CA, USA

21. Red630-Light-Transcranial LED Therapy improves mitochondrial function in the hippocampus, reducing the age-related hippocampal memory loss in SAMP8 mice.

Claudia Jara[1], Débora Buendía[2,3], Cheril Tapia-Rojas[1]
(1) Universidad San Sebastián, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Universidad de Valparaíso, Escuela de Ingeniería Civil Biomédica, Valparaiso, Chile
(3) Universidade Anhembi Morumbi, Sao Paulo, Brasil

22. Functional Connectivity Alterations in the Neural Network of Retinal Ganglion Cells in an Alzheimer's Disease Model.

Joaquin Araya-Arriagada[1,4], Rubén Herzog[1], Cristobal Ibaceta[1], Adrian Palacios Vargas[1,3], Rodrigo Cofré[2,5]
(1) Universidad de Valparaíso, Instituto de Neurociencias, Centro Interdisciplinario de Neurociencia de Valparaíso, Facultad de Ciencias, Valparaíso, Chile
(2) Universidad de Valparaíso, CIMFAV-Ingemat, Facultad de Ingeniería, Valparaíso, Chile
(3) Instituto de Sistemas Complejos de Valparaíso, Valparaíso, Chile
(4) Universidad Santo Tomás, Chile, Centro de Investigación e Innovación en Gerontología, Facultad de Salud,, Chile
(5) Paris-Saclay Institute of Neuroscience, Department of Integrative and Computational Neuroscience, CNRS, Gif-sur-Yvette, France

23. Analysis of transcriptional changes associated with CRE elements in a murine model of Huntington's disease due to the interaction of CBP with the mutant Huntingtin protein

Sandra Arancibia Opazo[1,2,3], Alberto J.M Martin[2], Mauricio Sáez[3]
(1) Universidad Mayor, Programa de Doctorado en Genómica Integrativa, Facultad de ciencias, Chile
(2) Universidad Mayor, Laboratorio de Biología de Redes, Centro de Genómica y Bioinformática, Facultad de Ciencias, Chile
(3) Universidad Mayor, CENLab, Centro de Genómica y Bioinformática, Facultad de Ciencias, Chile

24. A Hippocampal network model to estimate Excitation/Inhibition balance from empirical data of Octodon degus

Cristobal Ibaceta[1], David Neira[1], Frederic Alexandre[2], Adrian Palacios Vargas[1,3]
(1) Instituto de Neurociencia, Centro Interdisciplinario de Neurociencia Valparaíso, Facultad de Ciencias, Universidad de Valparaíso, Chile
(2) MNEMOSYNE-INRIA, Institut des Maladies Neurodegeneratives, CNRS UMR 5293, Bordeaux, France
(3) Instituto de Sistemas Complejos de Valparaíso, Valparaíso, Chile

25. Mice null for the neuronal variant of LSD1 release less dopamine in the nucleus accumbens in response to amphetamine

Jorge Castillo Ariste[1], Gianluca Merello[1], Montserrat Olivares Costa[1], Marcela González[1], Elena Battaglioli[2], Francesco Rusconi[2], María-Estela Andrés[1]
(1) Department of Cellular and Molecular Biology. Pontificia Universidad Católica de Chile.
(2) Department of Medical Biotechnologies and Translational Medicine, University of Milan.

26. Altered excitability in the olfactory cortex of Fmr1 KO mice

Felipe Arancibia[1], Alexia Nuñez-Parra[1], Magdalena Sanhueza Tohá[1]
(1) Universidad de Chile, Departament of biology, Faculty of science, Las Palmeras 3425, Santiago, Chile

27. Canonical Wnt signaling regulates the expression of proteins of the mitochondrial unfolded protein response (mtUPR) in neuronal cells.

Angie K. Torres[1,2], Nibaldo C. Inestrosa[2,3], Cheril Tapia-Rojas[1]
(1) Universidad San Sebastian, Laboratory of Neurobiology of Aging, Centro de Biología Celular y Biomedicina (CEBICEM), Facultad de Medicina y Ciencia, Santiago, Chile
(2) Pontificia Universidad Católica de Chile, Center of Aging and Regeneration UC (CARE-UC), Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Santiago, Chile
(3) Universidad de Magallanes, Centro de Excelencia en Biomedicina de Magallanes (CEBIMA), Punta Arenas, Chile

28. Impact of pharmacological inhibition of PANX1 with probenecid on the synaptic and spatial memory defects in a mouse model of Alzheimer´s disease

Paula Fernanda Mujica Covarrubias[1,2], Carolina Flores-Muñoz[1,2], Elena Mery[1,2], Barbara Gómez Soto[1,2], Javiera Illanes[1,2], Arlek González-Jamett[2,3], Alvaro O. Ardiles[1,2,4]
(1) Universidad de Valparaíso, Centro de Neurología Traslacional, Medicina, Hontaneda 2664, Valparaiso, Chile
(2) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencias de Valparaíso, Ciencias, Avenida Gran Bretaña 1111, Valparaiso, Chile
(3) Universidad de Valparaíso, Escuela de Química y Farmacia, Farmacia, Avenida Gran Bretaña 1093, Valparaiso, Chile
(4) Universidad de Valparaiso, Centro Interdisciplinario de Estudios en Salud, Medicina, Angamos 655, Viña del Mar, Chile

29. A centronuclear myopathy-causing mutation in dynamin-2 impairs excitatory synaptic transmission leading to cognitive dysfunction in a murine model of the disease

Jorge Arriagada[1], Barbara Gómez Soto[2], Marc Bitoun[3], Alvaro O. Ardiles[4,5], Arlek González-Jamett[4,6]
(1) Programa de Magister en Ciencias, Mención Neurociencia, Universidad de Valparaíso, Valparaíso, Chile
(2) Programa de Magister en Ciencias Médicas, Mención Biología Celular y Molecular, Universidad de Valparaíso, Valparaíso, Chile.
(3) Institut de Myologie, Paris, France
(4) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencias de Valparaíso, Ciencias, Avenida Gran Bretaña 1111, Valparaiso, Chile
(5) Universidad de Valparaíso, Centro de Neurología Traslacional, Medicina, Hontaneda 2664, Valparaiso, Chile
(6) Universidad de Valparaíso, Escuela de Química y Farmacia, Farmacia, Avenida Gran Bretaña 1093, Valparaiso, Chile

30. Evaluation of type-1 corticotropin releasing factor receptor (CRF-R1) expression in nucleus accumbens nerve terminals of juvenile rats exposed to social isolation stress.

Florencia Calderón- Ventura[1], Juan Zegers-Delgado[1], Javier Novoa[1], Camila Blanlot[1], Hector E. Yarur[1], Cristian P. Bastias[1], Katia Gysling[1]

(1) Department of Cellular and Molecular Biology, Faculty of Biological Sciences, Pontificia Universidad Católica de Chile, Santiago, Chile.

17:00-18:00 Break

18:00-19:00 **Roundtable**
Chair: Christian González-Billault

"Humberto Maturana (1928-2021): Una visión sistémica de los seres vivos"

Jorge Mpodozis, "Evolución a través de la deriva del Nicho Ontológico".
Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

Juan-Carlos Letelier[1], "Algo Necesario para entender la génesis del concepto de Autopoiesis: Las interacciones entre Humberto Maturana y Heinz von-Foerster (1963-2002)".
Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

Maria de la Luz Cardenas: "Autopoiesis y Metabolismo".
Bioénergétique et Ingénierie des Protéines, Centre National de la Recherche Scientifique (CNRS), Marseilles, France.

Thursday, November 4th

09:00-11:00 **SYMPOSIUM 6: Molecular basis of memory and depression**
Chair: Jimmy Stehberg

9:00-9:30 **Role of astrocytes in memory and depression**
Jimmy Stehberg, Instituto de Ciencias Biomédicas, Universidad Andrés Bello, Santiago. Chile.

09:30-10:00 **A hippocampal molecular switch in the transition from normal to PTSD-like fear memory**
Aline Desmedt[1]
(1) Neurocentre Magendie, INSERM U1215, Université de Bordeaux

10:00-10:30 Targeting the endocannabinoid system in stress-related disorders
Irit Akirav[1]
(1) School of Psychological Sciences, University of Haifa, Israel

10:30-11:00 **New inhibitors for QR2 to fight neurodegeneration and AD**
Kobi Rosemblum[1]
(1) Sagol Dept Neurobiology, University of Haifa. Israel.

11:00-11:15 Break

11:15-13:00 Oral Communications I
Chair: Patricio Orio

11:15-11:30 **Curiosity and Learning: from the laboratory to the classroom.**

Ricardo Illesca[1]

(1) Pontificia Universidad Católica de Chile, Psicología, Ciencias Sociales, Vicuña Mackenna 4860, Macul, Chile

11:30-11:45 **Interpreting arousal-related neuromodulation of 1/f aperiodic activity through the switch of adaptation currents**

Vicente Medel[1,2], Martín Irani[1], Brandon Munn[2], Gonzalo Boncompte[1], Felipe González[1], Gabriel Wainstein[2], James Shine[2], Nicolás Crossley[1], Tomás Ossandón[1]
(1) Pontificia Universidad Católica de Chile, Medicina, Santiago, Chile
(2) University of Sydney, Brain and Mind Centre, Sydney, Australia

11:45-12:00 **Relationship between structural connectivity and multivariate statistics in neural network models**.

Sebastian Orellana[1,2], Patricio Orio[1,2]

(1) Universidad de Valparaíso, Facultad de Ciencias, Av. Gran Bretaña 1111, Playa Ancha. Valparaíso, Valparaíso, Chile
(2) Centro Interdisciplinario de Neurociencias de Valparaíso, Harrington 287, Valparaíso, Valparaíso, Chile

12:00-12:15 **Altered resting-state functional connectivity in hiPSC-derived neuronal networks from schizophrenia patients.**

Kris Blanchard Tapia[1,2], Sofia Puvogel[1,2,6], Veronica Palma[1], Bárbara S. Casas[1], Delia Garrido[1], Robyn Miller[3,4], Stevens Rehen[5], Magdalena Sanhueza[2](1) Laboratory of Stem Cells and Developmental Biology, Department of Biology, Faculty of Sciences. Universidad de Chile. Santiago, Chile.
(2) Cell Physiology Laboratory, Department of Biology, Faculty of Sciences, Universidad de Chile, Santiago, Chile.
(3) Georgia State University, Dept of Computer Science, Atlanta GA, USA.
(4) Tri-institutional Center for Translational Research in Neuroimaging and Data Science (TReNDS Center), Atlanta, GA, USA.
(5) D'Or Institute for Research and Education (IDOR), Rio de Janeiro, Brazil
(6) Department of Biomedical Sciences of Cells and Systems, University Medical Center Groningen, Groningen, The Netherlands.

12:15-12:30 **Aging of the retinal ganglion cells: loss of PANX1 modulation?**

Paloma Harcha Soazo[1], Joaquín Araya[2], David Neira[1], Cristóbal Ibaceta[1], Pablo Gabriel Reyes Robles[3], Jean-Gabriel Minonzio[4,5], Maria José Escobar[3], Adrián Palacios Vargas[1,6]
(1) Instituto de Neurociencias y Centro Interdisciplinario de Neurociencia de Valparaíso, Universidad de Valparaíso, Ciencias, Valparaíso, Chile
(2) Escuela de Tecnología Médica, Universidad de Santo Tomás, Salud, Chile
(3) Universidad Técnica Federico Santa María, Ingeniería Electrónica, Valparaíso, Chile
(4) Escuela de Ingeniería Informática, Universidad de Valparaíso, Valparaíso, Chile
(5) Centro de Investigación y Desarrollo en Ingeniería en Salud, Universidad de Valparaíso, Valparaíso, Chile
(6) Instituto de Sistemas Complejos de Valparaíso, Valparaíso, Chile

12:30- 12:45 **Postnatal onset of hippocampal-dependent memory and its relationship with oscillatory patterns during sleep.**

María Alexandra García Pérez[1,2,5], Irani M[3], V Tiznado[4], T Bustamante[1,5], P Maldonado[2,5], JL Valdés[1,5]
(1) Laboratorio de Aprendizaje Memoria y Neuromodulación, Departamento de Neurociencia, Facultad de Medicina, Universidad de Chile.
(2) Laboratorio de Neurosistemas, Departamento de Neurociencia, Facultad de Medicina, Universidad de Chile.
(3) Laboratorio de Neurodinámica de la Cognición, Departamento de Psiquiatría, Centro Interdisciplinario de Neurociencias UC, Pontificia Universidad Católica de Chile.
(4) Laboratory for Brain Machine Interfaces, Departamento de Psiquiatría, Centro Interdisciplinario de Neurociencias UC, Pontificia Universidad Católica de Chile.
(5) Biomedical Neuroscience Institute (BNI), Facultad de Medicina, Universidad de Chile.

11:15-13:00 Oral Communications II

Chair: Patricio Rojas

11:15-11:30 **Functional regeneration of the neuromuscular synapse relies on long-lasting morphological adaptations.**

Francisca Bermedo García[1], Diego Zelada[1], María Esperanza Martínez[1], Lucía Tabares[2], Juan Pablo Henríquez[1]
(1) Laboratory of Neuromuscular Studies (NeSt Lab), Department of Cell Biology, Faculty of Biological Sciences, Center for Advanced Microscopy (CMA BioBio), Universidad de Concepción, Concepción Chile.
(2) Department of Medical Physiology and Biophysics, School of Medicine, Universidad de Sevilla, Sevilla, Spain.

11:30-11:45 **From synapse-to-nucleus: c-Abl kinase signaling during early synaptic activation**

Daniela A Gutierrez[1], Diego Guzmán[1], Adrián González-Martín[1], Pol Picón-Pagès[2], Francisco Muñoz[2], Alejandra Álvarez Rojas[1]
(1) Pontificia Universidad Católica de Chile, Biologia Celular y Molecular, de Ciencias, Portugal 49, Santiago, Chile
(2) Universidad Pompeu Fabra, Molecular Physiology and Channelopaties Laboratory, PRBB, Doctor Aiguader 88, Barcelona, España

11:45-12:00 **Corticosterone blocks the response of astroglial connexin 43 (Cx43) hemichannels to norepinephrine (NE) and its reduction increases their response to NE.**

Ivanka Jiménez[1], Jimmy Stehberg[1]
(1) Universidad Andrés Bello, Laboratorio de Neurobiología, Instituto de Ciencias Biomédicas, Facultad de Medicina, República 330, Santiago, Chile

12:00-12:15 **A possible role for Cdk5 in murine vagus nodose ganglion (NG)**

Pedro Piquer[1,2], Camila Duran[1,2], Julio Alcayaga[3], Elías Utreras[1,2]
(1) Millennium Nucleus for the Study of Pain (MiNuSPain), Santiago 8320000, Chile
(2) Laboratory of Cellular and Molecular Mechanisms of Pain, Department of Biology, Faculty of Sciences, Universidad de Chile, Santiago, Chile
(3) Laboratory of Cellular Physiology, Department of Biology, Faculty of Sciences, Universidad de Chile, Santiago, Chile

12:15-12:30 **Pannexin 1 ablation promotes dendritic branching and spines formation in hippocampal neurons by modulating actin polymerization through Rac1 small-Rho GTPase**.

Carolina Flores-Muñoz[1,2], Elena Mery[1,2], Paula Mujica[1,2], Javiera Illanes[1,2], Stefany Ordenes[1,2], Arlek González-Jamett[2,3], Agustín Martínez[2], Álvaro O. Ardiles[1,2,4]
(1) Universidad de Valparaíso, Centro de Neurología Traslacional, Medicina, Hontaneda 2664, Valparaíso, Chile
(2) Universidad de Valparaíso, Centro Interdisciplinario de Neurociencias de Valparaíso, Ciencias, Avenida Gran Bretaña 1111, Valparaíso, Chile
(3) Universidad de Valparaíso, Escuela de Química y Farmacia, Farmacia, Avenida Gran Bretaña 1093, Valparaíso, Chile
(4) Universidad de Valparaíso, Centro Interdisciplinario de Estudios en Salud, Medicina, Angamos 655, Viña del Mar, Chile

12:30-12:45 **Opposing effects of glucocorticoids and adrenaline in anxiety at the rat insular cortex**

Catalina Ponce[1], Jimmy Stehberg[1]
(1) Universidad Andrés Bello, Laboratorio de Neurobiología, Instituto de Ciencias Biomédicas, República 330, Santiago, Chile

12:45-13:30 Break

13:30 -14:30 Sponsor exhibition

14:30-15:00 Break

15:00-17:00 **SYMPOSIUM 7: Brain aging and glial cells – When neuroinflammation shapes brain function.**
Chairs: Maite A. Castro / Francisco J. Rivera

15:00-15:40 **Microglia in the context of aging and Alzheimer's disease**
Flavia E. Saravia[1],
(1) Faculty of Exact & Natural Sciences, University of Buenos Aires. Argentina

15:40-16:20 **Targeting Brain Rejuvenation for the Treatment of Dementia,**
Ludwig Aigner[1,2]
(1) Institute of Molecular Regenerative Medicine, Paracelsus Medical University Salzburg, Austria.
(2) Spinal Cord Injury and Tissue Regeneration Center Salzburg (SCI-TReCS), Austria.

16:20-17:00 **Systemic mechanisms of brain rejuvenation.**
Saul Villeda[1,2]
(1) School of Medicine, University of California, San Francisco. USA.
(2) Endowed Chair in Biomedical Sciences.

17:00-18:00 Break

18:00-19:00 **Conference 2**

Building a neuron: cytoskeleton organization and transport mechanisms
Casper C. Hoogenraad, Department of Neuroscience, Genentech, Inc., South San Francisco, CA 94080, USA

Chair: Christian Gonzalez-Billault