



# XLIV ANNUAL MEETING

## Chilean Society for Biochemistry and Molecular Biology





## XLIV ANNUAL MEETING

**CHILEAN SOCIETY FOR BIOCHEMISTRY  
AND MOLECULAR BIOLOGY**

**SBBMCh Week**  
**October 26<sup>th</sup>-28<sup>th</sup>, 2021**

# **XLIV ANNUAL MEETING OF THE CHILEAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY**

## **DIRECTORY**

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## SCHEDULE

SBBMCH Week		
Tuesday 26	Wednesday 27	Thursday 28
	<p>09:00-10:00 Osvaldo Cori Lecture Dr Sergio Lavandero Atacama Conference room: ESP</p> <p>10:00-10:30 Virtual Coffee Networking room</p> <p>10:30-12:30 Symposium 1: Young scientists in molecular cancer research Atacama Conference room</p> <p>Symposium 2: Emerging viruses Patagonia Conference room</p>	<p>09:00-10:00 Severo Ochoa Lecture Dr Nuria Casals Atacama Conference room: ESP</p> <p>10:00-10:30 Virtual Coffee Networking room</p> <p>10:30-12:30 Symposium 3: Non-Coding Gets Louder: Essential role of ncRNAs in diverse cellular processes Atacama Conference room</p> <p>Symposium 4: Emerging roles of the cytoskeleton in cellular functions Patagonia Conference room</p>
<p>11:30-11:45 Welcome to SBBMCH Week Atacama Conference room</p> <p>11:45-12:00 Conference Center Tour</p> <p>12:00-13:00 IUBMB Virtual Jubilee Lecture Dr Hailing Jin Atacama Conference room: ENG Patagonia Conference room: ESP</p>		

	<p>14:00-15:30 Oral session 3: Gene Expression &amp; Synthetic Biology Atacama Conference room</p> <p>15:30-16:00 Oral session 4: Molecular Cell Biology Patagonia Conference room</p> <p>16:00-18:00 Poster session Networking &amp; Exhibition rooms</p>	<p>14:00-15:30 New members session 1 Atacama Conference room</p> <p>15:30-16:00 Virtual Coffee Networking room</p> <p>16:00-16:30 New members session 2 Patagonia Conference room</p> <p>16:30-16:45 Closing words Atacama Conference room</p>
<p>14:30-15:00 Technical Talk ThermoFisher Atacama Conference room</p> <p>15:00-15:30 Virtual Coffee Networking room</p> <p>15:30-17:00 Oral session 1: Biomedicine &amp; Cell Signaling Atacama Conference room</p> <p>Oral session 2: Computational Biology &amp; Bioinformatics/ Protein Structure &amp; Function Patagonia Conference room</p>		

## **PROGRAM**

**Tuesday, October 26<sup>th</sup>**

**☒ 11:30 – 11:45**

Welcome to the SBBMCh Week SBBMCh Directory  
**Atacama Conference Room**

**☒ 11:45 – 12:00**

Conference Center Tour

**☒ 12:00 – 13:00**

**IUBMB VIRTUAL JUBILEE LECTURE**

**WORDS FROM IUBMB**

Ilona Concha G. IUBMB Executive Committee

**DR HAILING JIN**

“Cross-Kingdom RNAi and extracellular vesicle-mediated small RNA trafficking between plants and fungal pathogens”

Chairs: Luis Larrondo and Elena Vidal

**Atacama Conference Room (ENGLISH)**

**Patagonia Conference Room (SPANISH)**

**☒ 14:30 – 15:00**

**Technical Talk ThermoFisher**

Chairs: Luis Morales

**“Cellular screening, immunotherapies and cell culture characterization: new frontiers”**

Speaker: Úrsula León. Cellular and protein analysis specialist.

**Atacama Conference Room**

**☒ 15:00 – 15:30**

Virtual Coffee. Networking room.

**☒ 15:30 – 17:00**

**ORAL SESSION 1: Biomedicine & Cell Signaling**

Chairs: Mauricio Budini and Alfredo Criollo

**Atacama Conference Room**

☒ **15:30 – 15:45**

"CaMKIV/CREB/BDNF signaling pathway in the Central Nervous System of diabetic mice"

**Camila Espasandin** <sup>1</sup>, Karina Cal <sup>2,3</sup>, Gerardo Romanelli <sup>4</sup>, Juan Claudio Benech <sup>4</sup>, Juan Pablo Damián <sup>1</sup>

(1) Unidad Académica de Bioquímica, Departamento de Biociencias Veterinarias, Facultad de Veterinaria, Universidad de la República, Montevideo, Uruguay (2) Unidad Académica de Biofísica, Departamento de Biociencias Veterinarias, Facultad de Veterinaria, Universidad de la República, Montevideo, Uruguay (3) Laboratorio de Patologías del Metabolismo y el Envejecimiento, Institut Pasteur Montevideo, Montevideo, Uruguay (4) Laboratorio de Señalización Celular y Nanobiología, Instituto de Investigaciones Biológicas Clemente Estable, Montevideo, Uruguay.

☒ **15:45 – 16:00**

"Role of soluble Interleukin-6 receptor in vascular smooth muscle cell phenotype"

**Paulina Villar** <sup>1</sup>, Tomás Hernández-Díaz <sup>1</sup>, Ignacio Norambuena <sup>1</sup>, Nicole Cancino-Arenas <sup>1</sup>, Fernanda Sanhueza-Olivares <sup>1</sup>, Felipe Contreras-Briceño <sup>1</sup>, Jorge Mandiola <sup>1</sup>, Rodrigo Troncoso <sup>1</sup>, Luigi Gabrielli <sup>1</sup>, Mario Chiong <sup>1</sup>

(1) Centro de Estudios Avanzado de Enfermedades Crónicas, ACCDiS. Facultad de Ciencias Químicas y Farmacéuticas. Universidad de Chile.

☒ **16:00 – 16:15**

"Identifying cytokine signaling regulators of tumor dormancy and recurrence in breast cancer using CRISPR/Cas9 screen"

**Matías Escobar-Aguirre** <sup>1,2</sup>, Takashi Nakamura <sup>1</sup>, Tien-Chi Pan <sup>1</sup>, Amulya Sreekumar <sup>1</sup>, Lewis Chodosh <sup>1</sup>

(1) Cancer Biology Department, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, United States (2) Laboratorio de Medicina Traslacional. Departamento de Investigación del Cáncer. Instituto Oncológico Fundación Arturo López Pérez.

Sponsor: Franz Villarroel

☒ **16:15 – 16:30**

"DNA damage genes dysregulated by RBBP5 protein is associated with poor survival in breast invasive carcinoma"

**Rodrigo Andaur** <sup>1,2</sup>, Leopoldo Soto <sup>1</sup>, Katherine Marcelain <sup>2</sup>

(1) Research Center on the Intersection in Plasma Physics, Matter and Complexity, P<sup>2</sup>mc, Comisión Chilena de Energía Nuclear, Casilla 188-D, Santiago, Chile (2) Departamento de Oncología Básico Clínica, Facultad de Medicina, Universidad de Chile.

Sponsor: Julio C. Tapia

☒ **16:30 – 16:45**

"Basal MTOR activation by CK2 phosphorylation in colorectal cancer cells"

**César Trigo-Hidalgo** <sup>1</sup>, Eduardo Silva-Pavez <sup>1</sup>, Julio C. Tapia <sup>1</sup>

(1) Laboratorio de Transformación Celular, Programa de Biología Celular y Molecular, ICBM, Facultad de Medicina, Universidad de Chile, Santiago, Chile.

☒ **16:45 – 17:00**

"Cardiovascular effects of extracts and bioactive molecules isolated from medicinal plants from Northern Chile"

**Javier Palacios** <sup>1</sup>, Adrián Paredes <sup>2</sup>, Marcelo A. Catalán <sup>3</sup>, Fredi Cifuentes <sup>4</sup>

(1) Laboratorio de Bioquímica Aplicada, Departamento Química y Farmacia, Facultad de Ciencias de la Salud, Universidad Arturo Prat, Iquique, Chile (2) Departamento de Química, Facultad de Ciencias Básicas, Universidad de Antofagasta, Antofagasta, Chile (3) Instituto de Fisiología, Facultad de Medicina, Universidad Austral de Chile, Valdivia, Chile (4) Laboratorio de Fisiología Experimental (EPhyL), Instituto Antofagasta (IA), Universidad de Antofagasta, Antofagasta, Chile.

☒ **15:30 – 17:00**

**ORAL SESSION 2: COMPUTATIONAL BIOLOGY/BIOINFORMATICS & PROTEIN STRUCTURE/FUNCTION**

Chairs: Luis Morales and Patricio Ramos

**Patagonia Conference Room**

☒ **15:30 – 15:45**

"Discovery of novel potential PET hydrolases from polar marine environments"

**Aransa Griñen** <sup>1,2</sup>, Jerónimo Cifuentes-Anticevic <sup>3</sup>, Amparo Núñez <sup>1,2</sup>, Felipe Engelberger <sup>1,2</sup>, Paula Blázquez-Sánchez <sup>1,2</sup>, Beatriz Díez <sup>3,4,5</sup>, César A. Ramírez-Sarmiento <sup>1,2</sup>

(1) Institute for Biological and Medical Engineering, Pontificia Universidad Católica de Chile, Santiago, Chile (2) ANID – Millennium Science Initiative Program – Millennium Institute for Integrative Biology (iBio), Santiago, Chile (3) Department of Molecular Genetics and Microbiology, School of Biological Sciences, Pontificia Universidad Católica de Chile, Santiago, Chile (4) Center for Climate and Resilience Research (CR)<sup>2</sup>, Santiago, Chile (5) FONDAP Center for Genome Regulation (CGR), Santiago, Chile.

☒ **15:45 – 16:00**

"Analysis of transcriptional expression changes during Atlantic Salmon (*Salmo salar*) smoltification through bioinformatics tools"

**Rodrigo Morán** <sup>1</sup>, Luis Vargas-Chacoff <sup>2</sup>, Juan P. Pontigo <sup>3</sup>, Waldo Acevedo <sup>4</sup>, Francisco J. Morera <sup>1</sup>

(1) Applied Biochemistry Lab, Instituto de Farmacología, Facultad de Ciencias Veterinarias Universidad Austral de Chile, Valdivia, Chile (2) Instituto de Ciencias Marinas y Limnológicas, Facultad de Ciencias, Universidad Austral de Chile, y FONDAP-IDEAL, Valdivia, Chile (3) Laboratorio de Biotecnología Aplicada, Facultad de Ciencias Veterinarias, Universidad San Sebastián, Lago Panguipulli 1390, Puerto Montt, Chile (4) Laboratorio de Química Biológica, Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile.

☒ **16:00 – 16:15**

"Structural changes correlate with unusual transition state  $\Delta C_p$  values in archaeal kinases from the ADP-dependent family"

**Pablo Maturana** <sup>1</sup>, Felipe González <sup>1</sup>, Gabriel Vallejos <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>, Victoria Guixé <sup>1</sup>

(1) Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

☒ **16:15 – 16:30**

"The effect of NusG and RfaH binding on local and non-local structural dynamics of the bacterial transcription elongation complex"

**José Alejandro Molina** <sup>1,2</sup>, Pablo Galaz-Davison <sup>1,2</sup>, Elizabeth A. Komives <sup>3</sup>, Irina Artsimovitch <sup>4</sup>, César A. Ramírez-Sarmiento <sup>1,2</sup>

(1) Institute for Biological and Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile, Santiago, Chile (2) ANID – Millennium Science Initiative Program – Millennium Institute for Integrative Biology (iBio), Santiago, Chile (3) Department of Chemistry and Biochemistry, University of California San Diego, California, USA (4) Department of Microbiology, The Ohio State University, Ohio, USA.

☒ **16:30 – 16:45**

"Biophysical characterization of the FtsZ-ZipA complex of *E. coli*, using *in multiplo* and *in singulo* approaches"

**Valentina Carrasco** <sup>1,2</sup>, Camilo Berriós-Pastén <sup>1</sup>, Christian A.M. Wilson <sup>2</sup>, Octavio Monasterio <sup>1</sup>

(1) Laboratorio de Biología Estructural y Molecular, Facultad de Ciencias, Universidad de Chile (2) Laboratorio de Bioquímica de Moléculas Individuales y Mecanobiología, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.



**16:45 – 17:00**

"Localization y functional characterization of GLUT8 from mammary gland"

**Lorena Mardones<sup>1</sup>**, Marcelo Villagrán<sup>1</sup>

(1) Biomedical Science Research Laboratory, Department of Basic Science,  
Faculty of Medicine, Universidad Católica de la Santísima Concepción,  
Concepción, Chile.

Sponsor: Matias Hepp

## **PROGRAM**

**Wednesday, October 27<sup>th</sup>**

⌚ **09:00 – 10:00**

### **OSVALDO CORI LECTURE**

**"Cell signaling mechanisms in the development of cardiovascular diseases"**

Speaker: Sergio Lavandero

Chairs: Clara Quiroga and Valentina Parra

**Atacama Conference Room (SPANISH)**

⌚ **10:00 – 10:30**

Virtual Coffee. Networking room.

⌚ **10:30 – 12:30**

### **SYMPOSIUM 1: YOUNG SCIENTISTS IN MOLECULAR CANCER RESEARCH**

Chairs: Ariel F. Castro, Universidad de Concepción; Julio C. Tapia, Universidad de Chile.

**Atacama Conference Room**

⌚ **10:30 – 11:00**

"Zooming into myc biology to battle pancreatic cancer"

**Tania Campos**, University of Cambridge, UK.

⌚ **11:00 – 11:30**

"Targeting MYC through its interaction with NSD3S"

**Valentina González**, Universidad Católica de la Santísima Concepción, Chile.

⌚ **11:30 – 12:00**

"Polyamines metabolism as target for lung cancer therapy"

**Rodrigo López**, Universidad Austral de Chile, Chile.

⌚ **12:00 – 12:30**

"A novel panoramic glance of the endothelin axis in cancer"

**Ignacio Niechi**, Universidad Austral de Chile.

☒ **10:30 – 12:30**

**SYMPORIUM 2: EMERGING VIRAL INFECTIONS: INSIGHTS ON MECHANISM,  
VACCINES, AND THERAPEUTIC APPROACHES**

Chair: Alejandro Rojas-Fernández. Universidad Austral de Chile.

**Patagonia Conference Room**

☒ **10:30 – 11:00**

"B cell and antibodies in antiviral immunity: from basic immunology to universal vaccine"

**Davide Angeletti**, University of Gothenburg, Sweden.

☒ **11:00 – 11:30**

"Radiolabeled Nanomedicines – A short overview about existing labeling methods and their applications"

**Matthias Hert**, University of Copenhagen, Denmark.

☒ **11:30 – 12:00**

"Generation of potent Nanobodies for the neutralization of emergent virus"

**Alejandro Rojas-Fernández**, Universidad Austral de Chile.

☒ **12:00 – 12:30**

"Regulating immune responses in emerging viral infections"

**Kellie Ann Jurado**, University of Pennsylvania, USA.

☒ **14:00 – 15:30**

**ORAL SESSION 3: GENE EXPRESSION & SYNTHETIC BIOLOGY**

Chairs: Francisco Salinas and Victoria Guixé

**Atacama Conference Room**

☒ **14:00 – 14:15**

"*In silico* and *in vivo* evaluation of transcriptionally rewiring the *Neurospora crassa* circadian clock core-elements"

**Valeria Eltit**<sup>1</sup>, Verónica del Río<sup>1</sup>, Luis F. Larrondo<sup>1</sup>

(1) Fungal Genetics and Synthetic Biology Lab, Departamento de Biología Molecular y Microbiología, IBio, Facultad de Ciencias Biológicas, Universidad Católica de Chile, Santiago, Chile.

☒ **14:15 – 14:30**

"Engineering a tunable semi-synthetic circadian oscillator through the integration of transcriptional *cis*-modules and environmental inputs"

**Verónica del Río** <sup>1</sup>, Cyndi Tabilo <sup>1</sup>, Luis F. Larrondo <sup>1</sup>

(1) Millennium Institute for Integrative Biology (iBio), Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile.

☒ **14:30 – 14:45**

"Generating an accurate map of temperature responses mediated by *hsp* promoter elements"

**Cyndi Tabilo** <sup>1,2</sup>, Verónica Del Río <sup>1,2</sup>, Luis F. Larrondo <sup>1,2</sup>

(1) Fungal genetics and synthetic biology laboratory, Departamento de Genética Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile (2) Millennium Institute for Integrative Biology (iBio), Santiago, Chile

☒ **14:45 – 15:00**

"A synthetic biology approach for studying tomato lipoyl synthase genes and their potential applications"

**Pamela Cabedo** <sup>1</sup>, Francisca Parada <sup>1</sup>, Michael Handford <sup>1</sup>

(1) Centro de Biología Molecular Vegetal, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

☒ **15:00 – 15:15**

"Unveiling RCOR1 as a transcriptional rheostat at active regions on chromatin"

**Carlos Rivera** <sup>1,2,3</sup>, Hun-Goo Lee <sup>2,3</sup>, Anna Lappala <sup>2,3</sup>, Verónica Noches <sup>1</sup>, Montserrat Olivares-Costa, Marcela Sjöberg Herrera <sup>1</sup>, Jeannie T. Lee <sup>2,3</sup>, María Estela Andrés <sup>1</sup>

(1) Department of Cellular and Molecular Biology, Faculty of Biological Sciences, Pontificia Universidad Católica de Chile. Santiago, 8330025, Chile (2) Department of Molecular Biology, Massachusetts General Hospital. Boston, MA 02114, USA (3) Department of Genetics. The Blavatnik Institute, Harvard Medical School. Boston, MA 02114, USA.

☒ **15:15 – 15:30**

"Contribution of Sirtuins in transcriptional control of CDKN1A gene in lung tumor cells"

**Berta Henríquez** <sup>1</sup>, Camila Torrejón <sup>2</sup>, Adriana Rojas <sup>3</sup>

(1) Departamento de Ciencias Biológicas y Químicas, Facultad de Medicina y Ciencia, Universidad San Sebastián, General Lagos 1193, Valdivia 5110693, Chile (2) Facultad de Medicina y Ciencia, Universidad San Sebastián, Lota 2465, Santiago 7510157, Chile (3) Instituto de Genética Humana, Facultad de Medicina, Pontificia Universidad Javeriana, Bogotá-Colombia 110231.

☒ **14:00 – 15:30**

**ORAL SESSION 4: MOLECULAR CELL BIOLOGY**

Chairs: Ricardo Tejos and Lorena Pizarro

**Patagonia Conference Room**

☒ **14:00 – 14:15**

"Sucrose promotes Clathrin-Mediated Endocytosis in *Arabidopsis thaliana*"

**Claudio Osorio-Navarro** <sup>1</sup>, Violeta Sotomayor <sup>1</sup>, Jorge Toledo <sup>2</sup>, Lorena Norambuena <sup>1</sup>

(1) Centro de Biología Molecular Vegetal, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile (2) Red de Equipamiento Avanzado, ICBM, Facultad de Medicina, Universidad de Chile, Santiago, Chile.

☒ **14:15 – 14:30**

"The endoplasmic reticulum master regulator protein BiP acts as a ratchet molecular motor in translocation"

**Hilda M. Alfaro-Valdés** <sup>1</sup>, Karina New <sup>1</sup>, Robert Lesch <sup>2</sup>, Christian A.M. Wilson <sup>1</sup>

(1) Single molecule, Biochemistry and Mechanobiology Lab/Department Molecular Biology and Biochemistry, Faculty of Chemistry and Pharmaceutical Sciences, Universidad de Chile, Santiago, Chile (2) Schekman Lab/ Department of Molecular and Cellular Biology, Howard Hughes Medical Institute, University of California. City Berkeley, EEUU.

☒ **14:30 – 14:45**

"Crosstalk between adipose and liver cells: role of the calcium sensing receptor in cell senescence"

**Lautaro Briones** <sup>1,2</sup>, Roberto Bravo-Sagua <sup>1,3,4</sup>, Mariana Cifuentes <sup>1,3</sup>

(1) Obesidad y Metabolismo Energético en Geriatría y Adultos (OMEGA)/Instituto de Nutrición y Tecnología de los Alimentos, Universidad de Chile, Santiago, Chile

(2) Departamento de Nutrición y Salud Pública, Facultad de Ciencias de la Salud y de los Alimentos, Universidad del Bío-Bío, Chillán, Chile (3) Centro Avanzado de Enfermedades Crónicas (ACCDis), Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile, Santiago, Chile (4) Centro Interuniversitario de Envejecimiento Saludable (CIES), Consejo de Universidades del Estado de Chile (CUECH), Santiago, Chile.

☒ **14:45 – 15:00**

"Inhibition of PDEδ reduce Rheb-dependent mTORC1 activation and survival of TSC2-null cells"

**Alejandro Farias** <sup>1</sup>, Marisol E. Armijo <sup>1</sup>, Emilia Escalona <sup>2</sup>, Violeta Morin <sup>3</sup>, Roxana Pincheira <sup>1</sup>, Bert Klebl <sup>4</sup>, Matthias Baumann <sup>4</sup>, Ariel F. Castro <sup>1</sup>

(1) Laboratorio de Transducción de señales y Cáncer, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile (2) Lymphatic Vasculature and Inflammation Research Laboratory, Instituto de Ciencias Biomédicas, Universidad Autónoma de Chile (3) Laboratorio de Proteasas y Cáncer. Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile (4) Lead Discovery Center GmbH, Dortmund, Alemania.

☒ **15:00 – 15:15**

"The use of lipoic acid and total carotenoids as biostimulants to improve tolerance to salinity and drought in tomato plants"

**Ninoska Delgado** <sup>1</sup>, Francisca Parada <sup>1</sup>, Efraín Hualpa <sup>1</sup>, Lorena Norambuena <sup>1</sup>, Claudia Stange <sup>1</sup>, Michael Handford <sup>1</sup>

(1) Centre of Molecular Biology in Plants, Department of Biology, Faculty of Science, University of Chile, Santiago, Chile.

☒ **15:15 – 15:30**

**Changes in Nuclear Morphology Coordinate B Lymphocyte Activation**

**Jheimmy Diaz Muñoz** <sup>1</sup>, Romina Ulloa <sup>1</sup>, Oreste Corrales <sup>1</sup>, Fernanda Cabrera <sup>1</sup>, Jorge Jara-Wilde <sup>2</sup>, Juan José Sáez <sup>1</sup>, Jonathan Lagos <sup>1</sup>, Clara Quiroga <sup>3</sup>, María Isabel Yuseff <sup>1</sup>

(1) Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile (2) Laboratorio de Análisis de Imágenes Científicas SCIAN-Lab, Programa de Biología Integrativa, Instituto de Ciencias Biomédicas ICBM, Facultad de Medicina, Universidad de Chile and Biomedical Neuroscience Institute BNI, Facultad de Medicina, Universidad de Chile, Santiago, Chile (3) División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile.

☒ **15:30 – 16:00**

Virtual Coffee. Networking room.

☒ **16:00 – 18:00**

**POSTER SESSION EXHIBITION AND NETWORKING ROOMS**

Chairs: Matías Hepp and Clara Quiroga

## **BIOMEDICINE 1**

- BM1.1** "Inhibition of MCT2 expression in hypothalamic neurons alters feeding behavior"

**Alanis Coca** <sup>1</sup>, Patricio Órdenes <sup>1</sup>, Roberto Elizondo-Vega <sup>1</sup>, María de los Angeles García-Robles <sup>1</sup>

(1) Laboratorio de Biología Celular, Departamento de Biología Celular, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile.

- BM1.2** "Standardization of a female murine model of heart failure with preserved ejection fraction"

**Anita Tapia** <sup>1</sup>, Claudia Muñoz <sup>1</sup>, María Paz Ocaranza <sup>1</sup>, Clara Quiroga <sup>1</sup>, Hugo E. Verdejo <sup>1</sup>, Sergio Lavandero <sup>1</sup>, Pablo F. Castro <sup>1</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile & Pontificia Universidad Católica de Chile, Santiago, Chile.

- BM1.3** "Angiotensin-(1-9) retroenantiomer prevents lipotoxic stress-induced cardiomyocyte hypertrophy"

**Carolina Hernández-Fuentes** <sup>1</sup>, Felipe Muñoz-Córdova <sup>1</sup>, Marcelo Kogan <sup>1</sup>, Valentina Parra <sup>1,2</sup>, Sergio Lavandero <sup>1,3</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago, Chile (2) Network for the study of high-lethality cardiopulmonary diseases (REECPAL) (3) Department of Internal Medicine / Cardiology Division, University of Texas Southwestern Medical Center, Dallas, Texas.

- BM1.4** "Hemichannel blockade as a new approach to prevent acute pentylenetetrazol-induced epilepsy"

**Claudia García-Rodríguez** <sup>1</sup>, Yorley Duarte <sup>2</sup>, Iván Bravo <sup>1</sup>, Paola Fernández <sup>1</sup>, Juan C. Sáez

(1) Departamento de Neurociencias, Centro Interdisciplinario de Neurociencias de Valparaíso, Valparaíso, Chile (2) Center for Bioinformatics and Integrative Biology, Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile.

Sponsor: Pilar Carvallo

- BM1.5** "H<sub>2</sub>O<sub>2</sub> production during wound healing in bovine corneal endothelial cells in culture does not affect migration"

**Cristian Justet** <sup>1</sup>, Mateo Schaffner <sup>1</sup>

(1) Departamento de Bioquímica, Facultad de Medicina, UdeLaR, Montevideo, Uruguay.

## **BIOMEDICINE 2**

- BM2.1** "Targeting of gold nanoparticles to the heart for the delivery of cardioprotective molecules"

**Danica Jiménez-Gallegos** <sup>1,2</sup>, Jafet Ortiz-Quintero <sup>1,2</sup>, Yáreni Ávalos-Guarjardo <sup>1,2</sup>, Pedro Jara-Guajardo <sup>1,3</sup>, Marcelo Kogan <sup>1,3</sup>, Sergio Lavandero <sup>1,2</sup>, Francisco Morales-Zavala <sup>1,4</sup>

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- BM2.2** "Analysis of protein-based adjuvants agonist of TLR4, Hemocyanin and SIP, in the MyD88 and TRIF signaling pathways leading to immunostimulation and proinflammatory responses"

**Diego A. Díaz-Dinamarca** <sup>1,2</sup>, Michelle L. Salazar <sup>2</sup>, Daniel F. Escobar <sup>1</sup>, Byron Castillo <sup>2</sup>, Ricardo A. Manzo <sup>1</sup>, Augusto Manubens <sup>3</sup>, Abel E. Vasquez <sup>1</sup>, María Inés Becker <sup>2,3</sup>

(1) Sección de Biotecnología, Subdepartamento, Innovación, Desarrollo, Transferencia Tecnológica (I+D+T) y Evaluación de Tecnologías Sanitarias (ETESA). Instituto de Salud Pública (2) Laboratorio de Inmunología, Fundación Ciencia y Tecnología para el Desarrollo (FUCITED) (3) Innovación y Desarrollo, Biosonda S.A.

- BM2.3** "Estrogens and 4-Methoxyestradiol effects on human pulmonary artery smooth muscle cells proliferation and mitochondrial activity"

**Emanuel Guajardo-Correa** <sup>1</sup>, Gerardo García-Rivas <sup>2</sup>, Mario Chiong <sup>1</sup>, Pablo Castro <sup>3</sup>, Valentina Parra <sup>1,4</sup>

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**BM2.4** "Ubiquitin ligase MUL1 as a pharmacological target in Heart Failure with Preserved Ejection Fraction?"

**Felipe Muñoz-Córdova** <sup>1</sup>, Ximena Calle <sup>1</sup>, Angélica Ortega-Muñoz <sup>1</sup>, Alejandra Guerrero-Moncayo <sup>1</sup>, Valentina Parra <sup>1,2</sup>, Sergio Lavandero <sup>1,3</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago, Chile (2) Network for the study of high-lethality cardiopulmonary diseases (REECPAL) (3) Department of Internal Medicine / Cardiology Division, University of Texas Southwestern Medical Center, Dallas, Texas.

**BM2.5** "FoxO1 and contractile protein expression in arteries of mice with heart failure with preserved ejection fraction"

**Fernanda Sanhueza-Olivares** <sup>1</sup>, Nicole Cancino-Arenas <sup>1</sup>, Felipe Muñoz-Córdova <sup>1</sup>, Mayarling Francisca Troncoso <sup>1</sup>, Ignacio Norambuena-Soto <sup>1</sup>, Mario Chiong <sup>1</sup>, Sergio Lavandero <sup>1</sup>

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### **BIOMEDICINE 3**

- BM3.1** "Effect of HDAC6 inhibition on the expression of genes involved in the immune response in colorectal cancer cells"

**Fernando Rivas-Valdés** <sup>1,2</sup>, Camila Navarrete-Muñoz <sup>1</sup>, Constanza Mardones-Molina <sup>1</sup>, Matías I. Hepp <sup>1</sup>

(1) Laboratorio de Investigación en Ciencias Biomédica, Departamento de Ciencias Básicas y Morfología, Facultad de Medicina, Universidad Católica de la Santísima Concepción, Concepción, Chile (2) Tecnología Médica, Facultad de Ciencias de la Salud, Universidad San Sebastián, Concepción, Chile.

- BM3.2** "Long non-coding RNAs involved in cardiac differentiation are differentially expressed in iPSCs from Down Syndrome patients"

**Francisco Sigcho** <sup>1,2,3</sup>, Vladimir Corrales <sup>1,2,3,4</sup>, Leslye Venegas <sup>1,2</sup>, Vinicius Maracaja-Coutinho <sup>1,2,3</sup>, Valentina Parra <sup>1,2</sup>

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- BM3.3** "Role of HERPUD1 protein as modulator of vascular calcification"

**Ingrid Oyarzun** <sup>1,2</sup>, Jheimmy Diaz <sup>3</sup>, Anita Tapia <sup>1,2</sup>, Georthan Mansilla <sup>1,2</sup>, Hugo E. Verdejo <sup>1,2</sup>, Clara Quiroga <sup>1,2</sup>

(1) Laboratorio de Señalización cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile (2) Advanced Center for Chronic Diseases (ACCDIS), Pontificia Universidad Católica de Chile, Santiago, Chile (3) Laboratorio de Biología de la Célula Inmune, Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile.

- BM3.4** "Simultaneous and spatially-resolved analysis of T-lymphocytes, macrophages and PD-L1 immune checkpoint in rare cancers"

**Karina Cereceda** <sup>1</sup>, Roddy Jorquera <sup>1</sup>, Roxana González-Stegmaier <sup>1</sup>, Franz Villarroel-Espíndola <sup>1</sup>

(1) Laboratorio de Medicina Traslacional. Departamento de Investigación del Cáncer. Instituto Oncológico Fundación Arturo López Pérez.

## **BIOMEDICINE 4**

- BM4.1** "Fenofibrate (a PPAR- $\alpha$  Agonist) administered during ethanol withdrawal reverts ethanol-induced astrogliosis and restores the levels of glutamate transporter in ethanol-administered rats"

**Lucas Marambio-Ruiz** <sup>1</sup>, Francisca Villavicencio-Tejo <sup>1</sup>, Osvaldo Flores-Bastias <sup>1</sup>, Eduardo Karahanian <sup>1</sup>

(1) Institute of Biomedical Sciences, Faculty of Health Sciences, Universidad Autónoma de Chile, Santiago, Chile.

- BM4.2** "Mechanisms underlying hemocyanin antigen processing and presentation through MHC-I and MHC-II dependent pathways"

**Michelle L. Salazar** <sup>1</sup>, Alejandra Alvarado <sup>1</sup>, Diego Díaz-Dinamarca <sup>1,2</sup>, Byron Castillo <sup>1</sup>, Daniel Navarro <sup>1</sup>, Augusto Manubens <sup>1,3</sup>, María Inés Becker <sup>1,3</sup>

(1) Fundación Ciencia y Tecnología para el Desarrollo (FUCITED). Santiago, Chile (2) Sección de Biotecnología, Subdepartamento, Innovación, Desarrollo, Transferencia Tecnológica (I+D+T) y Evaluación de Tecnologías Sanitarias (ETESA). Instituto de Salud Pública. Santiago, Chile (3) Biosonda SA. Santiago, Chile.

- BM4.3** "Meta-analysis of mitochondrial ubiquitin ligase-1 (MUL1) and its relationship with cardiac ischemia/reperfusion injury"

**Angelo Troncossi** <sup>1</sup>, Allan Peñaloza-Otarola <sup>1</sup>, Vinicius Maracaja-Coutinho <sup>1</sup>, Jaime Riquelme <sup>1</sup>, Sergio Lavandero <sup>1,2</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago, Chile (2) Cardiology Division, University of Texas Southwestern Medical Center, Dallas, Texas, USA.

- BM4.4** "Recombinant ND1 domain of flagellin from *Vibrio anguillarum* promotes *in vitro* overexpression of proinflammatory cytokines in human immune cells"

**Roxana González-Stegmaier** <sup>1</sup>, Adam Aguirre <sup>1</sup>, Constanza Cárdenas <sup>1</sup>, Franz Villarroel-Espíndola <sup>1</sup>

(1) Laboratorio de Medicina Traslacional. Departamento de Investigación del Cáncer. Instituto Oncológico Fundación Arturo López Pérez.

**BM4.5** "Increased cell proliferation in neurogenic niches involved in the regulation of food intake"

**Sergio López** <sup>1</sup>, Antonia Recabal <sup>1</sup>, María de los Ángeles García-Robles <sup>1</sup>

(1) Laboratorio de Biología Celular, Departamento de Biología Celular, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile.

## **CELL SIGNALING**

- CS.1** "VCAM-1 mediates the protective effect of TNF-α preconditioning against ischemia/reperfusion injury in cultured cardiomyocytes"

**Jafet Ortiz-Quintero** <sup>1,2</sup>, Mayarling Francisca Troncoso <sup>1</sup>, Ramón Corbalán <sup>3</sup>, Lorena García <sup>1</sup>, Sergio Lavandero <sup>1,4</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago, Chile (2) Department of Bioanalysis and Immunology, Faculty of Sciences, National Autonomous University of Honduras, Tegucigalpa, Honduras (3) Faculty of Medicine, Pontifical Catholic University of Chile, Santiago, Chile (4) Department of Internal Medicine, University of Texas Southwestern Medical Center, Dallas, Texas, USA.

- CS.2** "IRE1 endoribonuclease activity inhibits melanoma invasion and metastasis through the selected degradation of targets mRNAs"

**Karina Cordero** <sup>1,2</sup>, Celia María Limia <sup>1,2</sup>, Paloma Moraga <sup>1,2</sup>, Raúl Aravena <sup>1,2</sup>, Benjamín Suárez <sup>3</sup>, Raphael Pineau <sup>4</sup>, Tony Avril <sup>4</sup>, Eric Chevet <sup>4</sup>, Claudio Hetz <sup>1,2,5</sup>, Hery Urra <sup>1,5</sup>

(1) Biomedical Neuroscience Institute (BNI), University of Chile, Santiago, Chile (2) Fondap Geroscience Center for Brain Health and Metabolism (GERO), Santiago, Chile (3) Apoptosis Research Centre, NUI Galway, Galway, Ireland (4) INSERM U1242, Université de Rennes, Rennes, France (5) Buck Institute for Research on Aging, Novato, CA, USA.

- CS.3** "Studying the implication of the presence of the master waiver of the genome in extracellular vesicles secreted by the ovarian tumor cell line A2780 when received by normal epithelial ovarian cells"

**Matías del Campo -Smith** <sup>1,4,5</sup>, Eduardo Durán <sup>1,4</sup>, Sebastián Urrejola <sup>1,3</sup>, Carmen Romero Osset <sup>2</sup>, Lorena Lobos-González <sup>1,4</sup>

(1) Laboratorio de Medicina Regenerativa, Universidad del Desarrollo, Santiago, Chile (2) Laboratorio de Endocrinología y Biología de la Reproducción, Hospital clínico Universidad de Chile, Santiago, Chile (3) Magíster en Data Science, Facultad de Ingeniería, Universidad del Desarrollo (4) Centro Avanzado de Enfermedades Crónicas, ACCDIS (5) Magíster en Bioquímica, Universidad de Chile.

**CS.4** "Cooperative effects of IRE1 signaling promotes glioblastoma multiforme invasion"

**Paloma Moraga** <sup>1,2</sup>, Raúl Aravena <sup>1,2</sup>, Karina Cordero <sup>1,2</sup>, Rodrigo Fernandez <sup>1,2</sup>, Philippe Pihan <sup>1,2</sup>, Benjamín Suárez <sup>3</sup>, Eric Chevet <sup>4</sup>, Claudio Hetz <sup>1,2,5</sup>, Hery Urra <sup>1,5</sup>

(1) Biomedical Neuroscience Institute (BNI), University of Chile, Santiago, Chile (2) Fondap Geroscience Center for Brain Health and Metabolism (GERO), Santiago, Chile (3) Apoptosis Research Centre, NUI Galway, Galway, Ireland (4) INSERM U1242, Université de Rennes, Rennes, France (5) Buck Institute for Research on Aging, Novato, CA, USA.

## **COMPUTATIONAL BIOLOGY/BIOINFORMATICS 1**

- CB1.1** "Bioinformatic study of MUL1 in human heart failure"  
**Erik López** <sup>1</sup>, Allan Peñaloza-Otárola <sup>1</sup>, Vinicius Maracaja <sup>1,2</sup>, Sergio Lavandero <sup>1,3</sup>  
(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago, Chile (2) Programa de Pós-graduação em Bioinformática, BIOME, Universidade Federal do Rio Grande do Norte, Brasil (3) Cardiology Division, University of Texas Southwestern Medical Center, Dallas, Texas, USA.
- CB1.2** "Bioinformatic analysis of the binding of the long non-coding RNA MALAT1 and the PRC2 complex to genomic sites in cancer cells"  
**Felipe Arratia** <sup>1</sup>, Alejandro Blanco <sup>1</sup>, Christopher Fierro <sup>1</sup>, Martín Montecino <sup>1</sup>, Rodrigo Aguilar <sup>1</sup>  
(1) Instituto de Ciencias Biomédicas, Facultad de Medicina y Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile.  
Sponsor: Gloria Arriagada
- CB1.3** "Exploring the Protein-Ligand Dissociation Paths in Aurora A/B kinases with Enhanced Molecular Dynamics Simulations"  
**Felipe Bravo-Moraga** <sup>1,2</sup>, Mauricio Bedoya <sup>2</sup>, Ariela Vergara-Jaque <sup>2</sup>, Jans Alzate-Morales <sup>1</sup>  
(1) Doctorado en Ciencias Mención Modelado de Sistemas Químicos y Biológicos (DoMoSQB), Facultad de Ingeniería, Universidad de Talca, 1 Poniente 1141, Talca, Chile.  
(2) Centro de Bioinformática, Simulación y Modelado (CBSM), Facultad de Ingeniería, Universidad de Talca, 1 Poniente 1141, Talca, Chile.
- CB1.4** "A receptophore model for binding sites of local anesthetics in relevant atrial ion channels"  
**José Carlos Estanislao Márquez Montesinos** <sup>1</sup>, David Ramírez <sup>2</sup>, Gabriel Núñez-Vivanco <sup>1,3</sup>, Wendy González Díaz <sup>1,4</sup>  
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- CB1.5** "*In silico* analysis of thermal stability in hydroxymethyl pyrimidine kinases from bacteria"  
**Jose Coche-Miranda** <sup>1</sup>, Sixto M. Herrera <sup>1</sup>, Pablo Cea <sup>1</sup>, Victoria Guixé <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>  
(1) Laboratorio de Bioquímica y Biología Molecular, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

## **COMPUTATIONAL BIOLOGY/BIOINFORMATICS 2**

- CB2.1** "Bioinformatic study and selection of negative regulator genes to drought and salinity stress tolerance and their expression analysis in tomato (*Solanum lycopersicum*) var. Poncho Negro"  
**Maximiliano Díaz** <sup>1</sup>, Luis Quiroz <sup>1</sup>, Nicolás Navia <sup>1</sup>, Juan Pablo Martínez <sup>2</sup>, Michael Handford <sup>1</sup>, Claudia Stange <sup>1</sup>  
(1) Centro de Biología Molecular Vegetal, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile (2) Instituto de Investigaciones Agropecuarias, Ministerio de Agricultura, La Cruz, Chile.
- CB2.2** "Genome-wide identification of genes encoding for JAZ proteins in octoploid strawberry *Fragaria xananassa* (Duch.)"  
**Paz E. Zuñiga** <sup>1</sup>, Claudia Rivera-Mora <sup>1</sup>, Karla Jara-Cornejo <sup>1</sup>, Carlos R. Figueroa <sup>1</sup>  
(1) Laboratorio de Fisiología Molecular Vegetal, Instituto de Ciencias Biológicas, Universidad de Talca, Talca, Chile.
- CB2.3** "Identifying modified amino acids with potential inhibitory activity against human bitter taste receptors activated by steviol glycosides through structure-based virtual screening"  
**Waldo Acevedo** <sup>1</sup>, Franco Valdés <sup>1</sup>, Leda Guzmán <sup>1</sup>  
(1) Laboratorio de Química Biológica, Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile.  
Sponsor: Francisco Morera
- CB2.4** "A receptophore model for negatively charged activators in K+ channels"  
**Wendy González Díaz** <sup>1,2</sup>, Yuliet Mazola <sup>1</sup>, José Carlos Estanislao Márquez Montesinos <sup>1</sup>  
(1) Center for Bioinformatics, Simulation and Modeling (CBSM), Universidad de Talca, Chile (2) Millennium Nucleus of Ion Channels-Associated Diseases (MiNICAD), Chile.
- CB2.5** "Elucidating populations of marine phages carrying amgs involved in the antarctica biogeochemical cycles"  
**Wilson Castillo-Inaipil** <sup>1</sup>, Sergio Guajardo <sup>1,2</sup>, Marianne Buscaglia <sup>1,3</sup>, Jerónimo Cifuentes-Anticevic <sup>1</sup>, María Estrella Alcamán-Arias <sup>3,5</sup>, Beatriz Díez <sup>1,3,4</sup>  
(1) Departamento de Microbiología y Genética Molecular, Pontificia Universidad Católica de Chile, Chile (2) Universidad Andrés Bello, Center for Bioinformatics and Integrative Biology, Facultad de Ciencias de la Vida, Av. República 330, Santiago, Chile (3) Center for Climate and Resilience Research (CR2), Universidad de Chile, Chile (4) Center for Genome Regulation (CGR), Universidad de Chile, Chile (5) Departamento de Oceanografía, Universidad de Concepción, Chile.

## **ENZYMES/METABOLISM**

- EM1.1** "Overexpression of endogenous *lipoyl synthase (SLLIP1)* in *Solanum lycopersicum* fruits to increase their lipoic acid content"

**Juan Fuentes** <sup>1</sup>, María Paz Covarrubias <sup>1</sup>, Michael Handford <sup>1</sup>

(1) Centro de Biología Molecular Vegetal, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

- EM1.2** "Application of a new recombinant laccase in the biodegradation of antibiotics"

**Jorge Sánchez – San Martín** <sup>1,2</sup>, Giannina Espina <sup>1</sup>, Jenny M. Blamey <sup>1,3</sup>

(1) Fundación Biociencia, Santiago, Chile (2) Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile, Santiago, Chile (3) Facultad de Química y Biología, Universidad de Santiago de Chile, Santiago, Chile.

- EM1.3** "Computational study of first- and second-generation statins interacting with the human HMG-CoA reductase enzyme: Understanding the structural and energetic elements of their rational drug design"

**Mauricio González** <sup>1</sup>, Williams Herrera <sup>1</sup>, Mauricio Bedoya <sup>1</sup>, Jans Alzate-Morales <sup>1</sup>

(1) Centro de Bioinformática, Simulación y Modelado (CBSM), Facultad de Ingeniería, Universidad de Talca, 1 Poniente 1141, Talca, Chile.

- EM1.4** "Rewiring NADPH metabolism in *Escherichia coli*: Integrating protein and metabolic engineering to obtain an NADPH-dependent lactic fermentation"

**Pablo Maturana** <sup>1</sup>, Ricardo Cabrera <sup>1</sup>

(1) Laboratorio de Bioquímica y Biología Molecular, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

- EM1.5** "Computational study of CDK4/CyclinD/Rb complex: homology modeling, molecular docking and molecular dynamics for understanding its enzymatic activity"

**Poliana Povea Rojas** <sup>1</sup>, José Luis Velázquez-Libera <sup>1</sup>, Jans Alzate-Morales <sup>1</sup>

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## **EVOLUTION & PROTEIN STRUCTURE/FUNCTION**

**EP.1** "Ancestral Sequence Reconstruction reveals a phytase activity as an evolutionary novelty in the histidine acid phosphatases from *Enterobacteriales*"

**Claudia Mella-Hernández** <sup>1</sup>, Felipe Tapia <sup>1</sup>, Victoria Guixé <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>

(1) Laboratorio de Bioquímica, Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.

**EP.2** "The evolutionary trajectory of the activation by AMP in the family of ADP-dependent kinases from the archaeal phyla *Euryarchaeota*"

**Sixto M. Herrera** <sup>1</sup>, Gabriel Vallejos <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>, Victoria Guixé <sup>1</sup>

(1) Laboratorio de Bioquímica y Biología Molecular, Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**EP.3** "First body of evidence suggesting a role of a tankyrase-binding motif (TBM) of vinculin (VCL) in epithelial cells"

**Laura Lafon-Hughes** <sup>5,6</sup>, Salomé Vilchez Larrea <sup>1,2</sup>, Wanda Mariela Valsecchi <sup>3,4</sup>, Silvia H. Fernández Villamil <sup>1,4</sup>

(1) Instituto de Investigaciones en Ingeniería Genética y Biología Molecular "Dr Héctor N. Torres", Consejo Nacional de Investigaciones Científicas y Técnicas, Buenos Aires, Ciudad Autónoma de Buenos Aires, República Argentina (2) Departamento de Fisiología y Biología Celular y Molecular, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina (3) Instituto de Química y Fisicoquímica Biológicas, "Prof. Alejandro C. Paladini" (IQUIFIB) Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Ciudad Autónoma de Buenos Aires, República Argentina (4) Departamento de Química Biológica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina (5) Grupo de Biofisicoquímica, Departamento de Ciencias Biológicas, Centro Universitario Regional Litoral Norte (CENUR), Universidad de la República, Salto, Uruguay (6) Departamento de Genética, Instituto de Investigaciones Biológicas Clemente Estable, Ministerio de Educación y Cultura (IIBCE-MEC), Montevideo, Uruguay.

**EP.4** "Structural and functional analysis of AMP regulation in glycogen phosphorylase from the *Methanococcales* order of archaea"

**Felipe Gonzalez-Ordenes** <sup>1</sup>, Ernesto Uribe-Oporto <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>, Victoria Guixé <sup>1</sup>

(1) Universidad de Chile, Departamento de Biología, Facultad de Ciencias, Las Palmeras 3425, Ñuñoa, Chile.

## **PROTEIN STRUCTURE/FUNCTION**

- PS.1** "Identification and characterization of the regulatory iron binding site from the *Acidithiobacillus ferrooxidans* transcription factor FUR"  
**Yerko Argandoña** <sup>1</sup>, Francisco Imas <sup>1</sup>, Patricia Obando <sup>1</sup>, Andrea Olivos <sup>1</sup>, Mauricio Arenas-Salinas <sup>1</sup>  
(1) Centro de Bioinformática, Simulación y Modelado. Facultad de Ingeniería. Universidad de Talca. Talca. Chile.  
Sponsor: Wendy Gonzalez
- PS.2** "Bioinformatic analysis and characterization of the Superfamily Fur and Fur protein from *Acidithiobacillus ferrooxidans*"  
**Paulina Muñoz** <sup>1, 2</sup>, Mauricio Arenas-Salinas <sup>1</sup>  
(1) Centro de Bioinformática, Simulación y Modelado. Facultad de Ingeniería. Universidad de Talca. Talca, Chile (2) Escuela de Ingeniería en Biotecnología. Universidad Católica del Maule. Talca, Chile.  
Sponsor: Wendy Gonzalez
- PS.3** "Structural and evolutionary analysis of HMP-P phosphorylation in *ThiD* hidroxymethyl-pyrimidine-phosphate kinases"  
**Nicolás Fuentes-Ugarte** <sup>1</sup>, Pablo Maturana <sup>1</sup>, Victoria Guixé <sup>1</sup>, Víctor Castro-Fernandez <sup>1</sup>  
(1) Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias, Universidad de Chile, Santiago, Chile.
- PS.4** "The new emerging role of nuclear NUAK1 in RNA processing"  
**Sebastián Azócar** <sup>1</sup>, Mario Palma <sup>1</sup>, Elizabeth Riffó <sup>1</sup>, José L. Gutiérrez <sup>2</sup>, Roxana Pincheira <sup>1</sup>, Maximiliano Figueroa <sup>3</sup>, Ariel F. Castro <sup>1</sup>  
(1) Laboratorio de Transducción de Señales y Cáncer, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile (2) Laboratorio de Regulación Transcripcional (3) Laboratorio de Biofísica Molecular.
- PS.5** "Structural studies of *Concholepas concholepas* hemocyanin: A combined approach using X-ray crystallography and Cryo-EM"  
**Sebastián M. Muñoz** <sup>1</sup>, Michelle L. Salazar <sup>2</sup>, Gabriel Vallejos <sup>1</sup>, Pablo Maturana <sup>1</sup>, Augusto Manubens <sup>2,3</sup>, Mathias N. Ellena <sup>4</sup>, José Edwin N. Quesñay <sup>4</sup>, Andre LB. Ambrosio <sup>4</sup>, María Inés Becker <sup>2,3</sup>, Víctor Castro-Fernández <sup>1</sup>, Victoria Guixé <sup>1</sup>  
(1) Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias, Universidad de Chile. Santiago, Chile (2) Fundación Ciencia y Tecnología para el Desarrollo (FUCITED). Santiago, Chile (3) Laboratorio Investigación y Desarrollo, Biosonda S.A. Santiago, Chile (4) Instituto de Física de São Carlos, Universidade de São Paulo. São Paulo, Brasil.

## **GENE EXPRESSION 1**

- GE1.1** "SALL2 expression in colon cancer progression and its association with AXIN2"

**Aracelly Quiroz** <sup>1</sup>, Constanza Mardones <sup>1</sup>, José Miguel Navarrete <sup>1</sup>, Víctor Fica <sup>2</sup>, Alexis Salas <sup>2</sup>, Carolina Delgado <sup>3</sup>, Ariel F. Castro <sup>1</sup>, Roxana Pincheira <sup>1</sup>

(1) Laboratorio de Transducción de Señales y Cáncer, Departamento de Bioquímica y Biología Molecular, Universidad de Concepción, Chile

(2) Laboratorio de Diseño Racional de Fármacos, Departamento de Farmacología, Universidad de Concepción, Chile (3) Unidad de Anatomía Patológica, Hospital Guillermo Grant Benavente, Concepción, Chile.

- GE1.2** "Science and society: The role of professional Biochemistry in the Chilean science institutionalization between the years 1957 and 1980"

**Cristóbal Olivares** <sup>1</sup>, Christian A.M. Wilson <sup>1</sup>, Bárbara Silva Avaria <sup>2</sup>

(1) Single Molecule Biochemistry and Mechanobiology laboratory. Department of Biochemistry and Molecular Biology. Faculty of Chemist and Pharmaceuticals Sciences, Universidad de Chile (2) Department of History. Faculty of Philosophy and Humanities. Universidad Alberto Hurtado.

- GE1.3** "Identification of xyloglucan transglycosylase/hydrolase (*XTH*) genes in raspberry and characterization of *RiXTH9* at protein and transcriptional levels"

**Claudia Rivera-Mora** <sup>1</sup>, Paz E. Zúñiga <sup>1</sup>, Karla Jara-Cornejo <sup>1</sup>, Fernanda Álvarez <sup>2</sup>, Mario Moya <sup>1</sup>, Monika Valdenegro <sup>3</sup>, Juan E. Martínez <sup>3</sup>, Carlos R. Figueroa <sup>1</sup>, Lida Fuentes-Viveros <sup>2</sup>

(1) Instituto de Ciencias Biológicas , Universidad de Talca, Talca, Chile

(2) Centro Regional de Estudios en Alimentos Saludables (CREAS), CONICYT-Regional GORE Valparaíso Proyecto R17A10001, Valparaíso, Chile (3) Escuela de Agronomía, Facultad de Ciencias Agronómicas y de los Alimentos, Pontificia Universidad Católica de Valparaíso, Quillota, Chile.

**GE1.4** "The SALL2 transcription factor: A new regulator of cell migration through integrin  $\beta 1$  expression"

**Diego Benítez Riquelme** <sup>1</sup>, Elizabeth Riffó <sup>1</sup>, Mario Palma <sup>1,2</sup>, Matías I. Hepp <sup>3</sup>, Ariel F. Castro <sup>1</sup>, Vicente Torres <sup>4</sup>, Roxana Pincheira <sup>1</sup>

(1) Signal transduction and cancer Laboratory, Department of Biochemistry and Molecular Biology, Faculty of Biological Sciences, University of Concepcion, Concepcion, Chile (2) Laboratorio de Investigación en Ciencias Biomédicas, Departamento de Ciencias Básicas y Morfología, Facultad de Medicina, Universidad Católica de la Santísima Concepción, Concepción, Chile (3) Institute for Research in Dental Sciences, Faculty of Dentistry, Universidad de Chile, Santiago, Chile.

**GE1.5** "Transcriptional regulation of the TCF7L2/TCF4 gene in response to Wnt/ $\beta$ -catenin signaling activation"

**Francisca Espinoza-Cavieres** <sup>1</sup>, Giorgia Ugarte <sup>1</sup>, Mattias Lemus <sup>1</sup>, Giancarlo De Ferrari <sup>1</sup>

(1) Instituto de Ciencias Biomédicas, Facultad de Medicina y Facultad de Ciencias de la Vida, Universidad Andrés Bello.

## **GENE EXPRESSION 2**

- GE2.1** "Identification of novel transcription factors involved in cardiac hypertrophy through human transcription regulatory networks"

**Juan Francisco Silva-Agüero** <sup>1</sup>, Víctor Aliaga-Tobar <sup>2</sup>, Ximena Calle <sup>1</sup>, Mauricio Latorre <sup>2</sup>, Valentina Parra <sup>1,3</sup>

(1) Departamento de Bioquímica y Biología Molecular and Advanced Center for Chronic Diseases (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile, Santiago, Chile (2) Laboratorio de Bioingeniería; Instituto de Ciencias de la Ingeniería; Universidad de O'Higgins (3) Network for the Study of High-lethality Cardiopulmonary Diseases (REECPAL), Universidad de Chile, Santiago, Chile.

- GE2.2** "Potential involvement of abscisic acid (ABA) pathway-related genes during raspberry fruit ripening"

**Lida Fuentes-Viveros** <sup>2</sup>, Mario Moya <sup>1</sup>, Fernanda Álvarez <sup>2</sup>, Claudia Rivera-Mora <sup>1</sup>, Monika Valdenegro <sup>3</sup>, Juan E. Martínez <sup>3</sup>, Carlos R. Figueroa <sup>1</sup>

(1) Instituto de Ciencias Biológicas, Universidad de Talca, Talca, Chile (2) Centro Regional de Estudios en Alimentos Saludables (CREAS), CONICYT-Regional GORE Valparaíso Proyecto R17A10001, Valparaíso, Chile (3) Escuela de Agronomía, Facultad de Ciencias Agronómicas y de los Alimentos, Pontificia Universidad Católica de Valparaíso, Quillota, Chile.

- GE2.3** "Comparation of phenotypic and genotypic assays associated with the evaluation of the antibiotic resistance using *Helicobacter pylori* strains isolated from patients of the Biobio region-Chile"

**Luciano Arellano-Arriagada** <sup>1</sup>, Cristian Parra-Sepúlveda <sup>1</sup>, Apolinaria García-Cancino <sup>1</sup>

(1) Laboratorio de Patogenicidad Bacteriana, Departamento de Microbiología, Facultad de Ciencias Biológicas, Universidad de Concepción, Concepción, Chile.

- GE2.4** "Genome-wide transcription induced by Wnt/β-catenin signaling in Human Neural Stem Cells H9-derived (hNSC H9-d)"

**Mattias E. Lemus** <sup>1</sup>, Francisca A. Espinoza-Cavieres <sup>1</sup>, Camila Osegara-Ríos <sup>1</sup>, Kizzy Osorio <sup>1</sup>, Héctor López <sup>1</sup>, Giorgia Ugarte <sup>1</sup>, Giancarlo De Ferrari <sup>1</sup>

(1) Laboratorio de Genética y Transducción de Señales Giancarlo V. De Ferrari, Instituto de Ciencias Biomédicas, Facultad de Medicina y Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile.

**GE2.5** "Mitophagy as molecular crosstalk between Down Syndrome and Alzheimer's Disease"

**Wileidy Gomez** <sup>1,2</sup>, Vinicius Maracaja-Coutinho <sup>2</sup>, Melissa Nassif <sup>1</sup>, Valentina Parra <sup>2,3</sup>

(1) Laboratory of Neuroprotection and Autophagy, Center for Integrative Biology, Faculty of Science, Universidad Mayor, Santiago, Chile (2) Departamento de Bioquímica y Biología Molecular and Advanced Center for Chronic Diseases (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile, Santiago, Chile (3) Autophagy Research Center, Universidad de Chile, Santiago, Chile.

## **MOLECULAR CELL BIOLOGY 1**

- MC1.1** "Odegus4: an endogenous parvoviral element that reduces a parvovirus replication"

**Angélica Bravo** <sup>1</sup>, Leandro Fernández <sup>1</sup>, Luis Mercado <sup>2</sup>, Gonzalo Mardones <sup>3</sup>, Gloria Arriagada <sup>1</sup>

(1) Instituto Ciencias Biomédicas, Medicina, Universidad Andrés Bello, Santiago, Chile (2) Instituto de Biología, Ciencias, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile (3) Centro de biología celular y biomedicina, Universidad San Sebastián, Santiago, Chile.

- MC1.2** "Effect of cardiomyocyte-specific overexpression of MUL1 on myocardial function"

**Angélica Ortega-Muñoz** <sup>1</sup>, Ximena Calle <sup>1</sup>, Felipe Muñoz-Córdova <sup>1</sup>, Valeria Garrido-Moreno <sup>1</sup>, Allan Peñaloza-Otárola <sup>1</sup>, Erik Lopez <sup>1</sup>, Mayarling Francisca Troncoso <sup>1</sup>, Alejandra Guerrero-Moncayo <sup>1</sup>, Sergio Lavandero <sup>1,2</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty Chemical & Pharmaceutical Sciences & Faculty of Medicine, University of Chile, Santiago (2) Cardiology Division, University of Texas Southwestern Medical Center, Dallas, USA.

- MC1.3** "Effects of HDAC6 inhibition on the functionality of the transcription factor STAT3 on colorectal cancer cells"

**Constanza Mardones-Molina** <sup>1</sup>, Camila Navarrete-Muñoz <sup>1</sup>, Marisol E. Armijo <sup>1</sup>, Fernando Rivas-Valdés <sup>1,2</sup>, Matías I. Hepp <sup>1</sup>

(1) Laboratorio de Investigación en Ciencias Biomédica, Departamento de Ciencias Básicas y Morfología, Facultad de Medicina, Universidad Católica de la Santísima Concepción, Concepción, Chile (2) Tecnología Médica, Facultad de Ciencias de la Salud, Universidad San Sebastián, Concepción, Chile.

- MC1.4** "Role of adenosine receptor A<sub>2B</sub> in maintaining GSC stemness in hypoxic conditions"

**Damaris Barrientos-Morales** <sup>1</sup>, Ignacio Niechi <sup>1</sup>, Pamela Silva <sup>1</sup>, Daniel Uribe-Brange <sup>1</sup>, Claudia Quezada <sup>1</sup>

(1) Laboratorio de Biología Tumoral, Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile, Valdivia, Chile.

- MC1.5** "Exploring a functional relationship between Tet enzymes and the metabolic sensor Ogt in T cells"

**Esteban Jorquerá** <sup>1</sup>, Daniel Vásquez <sup>1</sup>, Victoria Ortega-Hernández <sup>1</sup>, Marcela Sjöberg <sup>1</sup>

(1) Laboratory of Epigenetic Regulation, Department of Cell and Molecular Biology, Faculty of Biological Sciences, Pontificia Universidad Católica de Chile, Santiago, Chile.

## **MOLECULAR CELL BIOLOGY 2**

- MC2.1** "The adenosine A3 receptor modulates autophagic flow in glioblastoma"  
**Karen Fabres** <sup>1</sup>, Carolina Villarreal <sup>1</sup>, Pamela Silva <sup>1</sup>, Daniel Uribe <sup>1</sup>,  
Claudia Quezada <sup>1</sup>  
(1) Laboratorio Biología Tumoral, Instituto de Bioquímica y  
Microbiología, Facultad de Ciencias, Universidad Austral de Chile,  
Valdivia, Chile.
- MC2.2** "Modification of transcriptional expression of Colorectal Cancer  
biomarkers after expose to Histone DeAcetylase inhibitors (HDACi)"  
**Katherine Salgado-Quintana** <sup>1,2</sup>, Fernando Rivas-Valdés <sup>1,2</sup>, Matías  
I. Hepp <sup>1</sup>  
(1) Laboratorio de Investigación en Ciencias Biomédica, Departamento  
de Ciencias Básicas y Morfología, Facultad de Medicina, Universidad  
Católica de la Santísima Concepción, Concepción, Chile (2) Tecnología  
Médica, Facultad de Ciencias de la Salud, Universidad San Sebastián,  
Concepción, Chile.
- MC2.3** "Potential influence of calcium dynamics in the reduced cell death of Down  
Syndrome iPSC-derived cardiomyocytes after ischemia/reperfusion  
injury"  
**Leslye Venegas-Zamora** <sup>1,2</sup>, Vladimir Corrales <sup>1,2,3</sup>, Sebastián Leiva-  
Navarrete <sup>1,2</sup>, Francisco Sigcho <sup>1,2</sup>, Francisco Bravo <sup>1,2</sup>, Zully Pedrozo  
<sup>1,4,5</sup>, Valentina Parra <sup>1,2,5</sup>  
(1) Advanced Center of Chronic Diseases (ACCDiS), Facultad de  
Ciencias Químicas y Farmacéuticas y Facultad de Medicina,  
Universidad de Chile, Santiago, Chile (2) Departamento de Bioquímica  
y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas,  
Universidad de Chile, Santiago, Chile (3) Centro de Modelamiento  
Molecular, Biofísica y Bioinformática (CM2B2), Facultad de Ciencias  
Químicas y Farmacéuticas, Universidad de Chile, Santiago, Chile (4)  
Programa de Fisiología y Biofísica, ICBM, Facultad de Medicina,  
Universidad de Chile, Santiago, Chile (5) Network for the Study of  
High-lethality Cardiopulmonary Diseases (REECPAL), Universidad de  
Chile, Santiago, Chile.
- MC2.4** "Differential expression of chemoresistance-related genes under the  
effect of Adenosine A3 Receptor antagonist in glioblastoma stem-like  
cells"  
**Liuba Peñate** <sup>1</sup>, Nicole Vanessa Alvarez <sup>1</sup>, Carlos Eugenio Spichiger <sup>1</sup>,  
Pamela Silva <sup>1</sup>, Claudia Quezada <sup>1</sup>  
(1) Laboratorio de Biología Tumoral, Instituto de Bioquímica y  
Microbiología, Facultad de Ciencias, Universidad Austral de Chile,  
Valdivia, Chile.

**MC2.5**

"Role of Phytocrome A (*DcPHYA*) in carotenoid synthesis in the carrot taproot of the orange Nantes variety"

**Rocío Quian-Ulloa** <sup>1</sup>, Claudia Stange <sup>1</sup>

(1) Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Las Palmeras 3425, Santiago, Chile.

## **MOLECULAR CELL BIOLOGY 3**

- MC3.1** "Saturated fatty acids inhibit Chaperon Mediated Autophagy (CMA) in hypothalamic POMC like neurons"

**Rodrigo Espinosa** <sup>1,2</sup>, Karla Gutiérrez <sup>1,2</sup>, Javiera Ríos <sup>1,2</sup>, Fernando Ormeño <sup>1,2</sup>, Liliana Yantén <sup>3</sup>, César Ramírez <sup>4</sup>, Iván E. Alfaro <sup>5</sup>, Eugenia Morselli <sup>2,6</sup>, Patricia Burgos <sup>2,7</sup>, Alfredo Criollo <sup>8,2</sup>, Mauricio Budini <sup>1,2</sup>

(1) Laboratorio de Patología Celular y Molecular, Facultad de Odontología, Universidad de Chile, Santiago, Chile (2) Autophagy Research Center, Santiago, Chile (3) Fundación Ciencia & Vida, Santiago, Chile (4) Instituto de Ingeniería Biológica y Médica, Pontificia Universidad Católica de Chile, Santiago, Chile (5) Universidad del Desarrollo, Santiago, Chile (6) Departamento de Fisiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile, Santiago, Chile (7) Laboratorio de Autofagia de Organelos, Centro de Biología Celular y Biomedicina, Universidad San Sebastián, Santiago, Chile (8) Laboratorio de Biología Celular y Molecular, Facultad de Odontología, Universidad de Chile, Santiago, Chile.

- MC3.2** "The HIV-1 Rev protein: a new key element in the field of mitochondria and HIV-1"

**Vicente Saavedra** <sup>1,2</sup>, Valentina Parra <sup>2</sup>, Ricardo Soto-Rifo <sup>1</sup>

(1) Molecular and Cellular Virology Laboratory/Virology Program/Institute of Biomedical Sciences, Faculty of Medicine, University of Chile, Santiago, Chile (2) Departamento de Bioquímica y Biología Molecular and Advanced Center for Chronic Diseases (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas y Facultad de Medicina, Universidad de Chile, Santiago, Chile.

- MC3.3** "Estrogen regulates mitochondrial E3 ubiquitin ligase MUL1 in hypertrophied cardiomyocytes"

**Ximena Calle** <sup>1</sup>, Daniela Martínez <sup>1</sup>, Valentina Parra <sup>1,2</sup>, Sergio Lavandero <sup>1,3,4</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences & Faculty of Medicine, University of Chile (2) Network for the Study of High-lethality Cardiopulmonary Diseases (REECPAL) (3) Cardiology Division, University of Texas Southwestern Medical Center, Dallas, Texas, USA.

- MC3.4** "*In vitro* study of the cardiac anti-fibrogenic effect of angiotensin (1-9) and its synthetic analog"

**Yáreni Ávalos-Guajardo** <sup>1</sup>, Lorena García <sup>1</sup>, Marcelo Kogan <sup>1</sup>, Sergio Lavandero <sup>1,2</sup>

(1) Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, Universidad de Chile, Santiago, Chile (2) Cardiology Division, University of Texas Southwestern Medical Center, Dallas, TX, USA.

**MC3.5** "Small extracellular vesicles from hypoxic glioblastoma stem-like cells promote a highly chemoresistant phenotype in glioblastoma"

**Arnaldo Rosales** <sup>1</sup>, Pamela Silva <sup>1</sup>, Manuel Varas-Godoy <sup>2</sup>, Claudia Quezada <sup>1</sup>

(1) Laboratorio de Biología Tumoral, Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile. Valdivia, Chile (2) Laboratorio de Biología Celular del Cáncer. Centro de Biología Celular y Biomedicina. Facultad de Medicina y Ciencia. Universidad San Sebastián. Santiago, Chile.

#### **INTERNATIONAL COOPERATION**

**IC.1** "Fundación Alemana para la Investigación Científica. Oportunidades de apoyo para la colaboración internacional"

**Gudrun Kausel** <sup>1</sup>

(1) Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile, Valdivia, Chile.

## **PROGRAM**

**Thursday, October 28<sup>th</sup>**

**⌚ 09:00 – 10:00**

### **SEVERO OCHOA LECTURE**

**“Nutrient sensing by neurons and its impact on body weight control, cognition and motor function”**

Speaker: Nuria Casals

Chairs: Roxana Pincheira and Eugenia Morselli

**Atacama Conference Room (SPANISH)**

**⌚ 10:00 – 10:30**

Virtual Coffee. Networking room.

**⌚ 10:30 – 12:30**

### **SYMPOSIUM 3: NON-CODING GETS LOUDER: ESSENTIAL ROLE OF ncRNAs IN DIVERSE CELLULAR PROCESSES**

Chair: Verónica A. Burzio. Fundación Ciencia & Vida; Andes Biotechnologies SpA; Universidad Andrés Bello.

**Atacama Conference Room**

**⌚ 10:30 – 11:00**

“Role of mitochondrial translation and dynamics and their dysregulation by lncRNAs in melanoma therapy resistance”

**Eleonora Leucci**, LKI Leuven Cancer Institute, KU.

**⌚ 11:00 – 11:30**

“Pathogenic transfer of microRNA-15a from pancreas to heart during obesity”

**Fernanda Carrizo Velasquez**, Johns Hopkins School of Medicine, USA.

**⌚ 11:30 – 12:00**

“Role of mitochondrial microRNAs in the DNA damage response”

**Christopher Fitzpatrick**, Fundación Ciencia & Vida/Andes Biotechnologies; Université Paris-Saclay, INRAE, AgroParisTech, France; Universidad Andrés Bello, Santiago, Chile.

☒ **12:00 – 12:30**

"Differential mitochondrial RNA expression in equine melanoma versus skin cells analyzed by a new direct RNA long-read sequencing method"

**David Bars-Cortina**, Université Paris-Saclay, INRAE, AgroParisTech, France; Université Paris-Est, Maisons-Alfort, France

☒ **11:30 – 13:30**

**SYMPOSIUM 4: EMERGING ROLES OF THE CYTOSKELETON IN CELLULAR FUNCTIONS**

Chair: Christian González-Billault. Universidad de Chile.

**Patagonia Conference Room**

☒ **11:30 – 12:00**

"Microtubule Cartography: How Microtubule-Associated Proteins Define the Cellular Landscape"

**Kassandra Ori-McKenney**, University California Davis, USA.

☒ **12:00 – 12:30**

"Epigenetic regulation of neuronal polarization and axon growth by the histone methyltransferase G9a and the H3K9me2 label"

**Carlos Wilson**, Instituto de Ciencias Biomédicas, Córdoba, Argentina.

☒ **12:30 – 13:00**

"Dynamics of neurofilaments in axon"

**Anthony Brown**, Ohio State University, USA.

☒ **13:00 – 13:30**

"Neuronal soma morphology and neurite initiation are controlled by a novel wreath-like network of septin filaments"

**Elias Spiliotis**, Drexel College of Medicine, USA.

☒ **14:00 – 16:00**

**NEW MEMBERS SESSION 1**

Chairs: Julio C. Tapia and Verónica A. Burzio

**Atacama Conference Room**

- ☒ **14:00 – 14:30**  
"Emergent interdomain interactions control the refolding mechanism of the metamorphic protein RfaH"  
**Pablo Galaz-Davison**, Pontificia Universidad Católica de Chile, Santiago, Chile.
  - ☒ **14:30 – 15:00**  
"Mitochondrial Ca<sup>2+</sup> overload in the neurodegeneration associated with early-onset familial Alzheimer's disease"  
**Marioly Müller**, Universidad de Chile, Chile
  - ☒ **15:00 – 15:30**  
"Host-Pathogen interaction: The Herpes simplex virus type 2 glycoprotein D and host IRE-1alpha pathway modulate the functions of Dendritic cells after infection with this virus"  
**Angello Retamal**, Universidad de Antofagasta, Chile.
- 
- ☒ **14:00 – 16:00**  
**NEW MEMBERS SESSION 2**  
Chairs: Matias Hepp and Valentina Parra  
**Patagonia Conference Room**
  - ☒ **14:00 – 14:30**  
"Understanding the structure-function properties of expansin plant proteins during fruit ripening"  
**Felipe Valenzuela-Riffo**, Universidad de Talca, Talca, Chile.
  - ☒ **14:30 – 15:00**  
"Regulation of Pattern-Recognition Receptor activity by modulation of their availability at the plasma membrane in tomato"  
**Lorena Pizarro**, Universidad de O'Higgins, San Fernando, Chile.
  - ☒ **15:00 – 15:30**  
"By their unique permeation and regulation properties, the Plant Channels from the Glutamate receptor family are a keystone of cell environmental sensing"  
**Erwan Michard**, Universidad de Talca, Talca, Chile

- ☒ **15:30 – 16:00**  
“Dynamic Gene Regulatory Networks controlling environmental responses in plants”  
**José Miguel Álvarez**, Universidad Mayor, Santiago, Chile
- ☒ **16:00 – 16:30**  
Virtual Coffee. Networking room.
- ☒ **16:30 – 16:45**  
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IUBMB-SBBMCh Outstanding Oral presentation  
IUBMB-SBBMCh Outstanding Poster presentation  
**Atacama Conference Room**
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