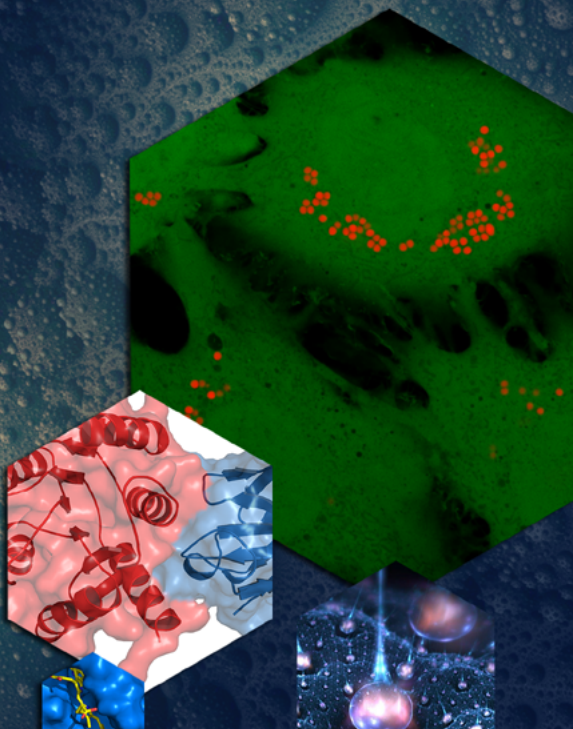




# XL Annual Meeting

Chilean Biochemistry and Molecular Biology Society  
September 26 to 29, 2017, Puerto Varas.

**40** Years Contributing to Research in Chile:  
Looking Back & Moving Forward





**XL Annual Meeting of the  
Chilean Biochemistry and  
Molecular Biology Society**  
September 26 to 29, 2017,  
Puerto Varas.



## **FALLING IN LOVE WITH SCIENCE ... A WAY OF LIFE**

The Chilean Society for Biochemistry and Molecular Biology promotes theoretical and experimental research, leading to the advancement and dissemination of Biochemistry and Molecular Biology in Chile. The Society also encourages and promotes initiatives aimed at maximizing the use of science for the benefit of the country and its citizens. This dream was founded in 1974, when Dr Hermann Niemeyer, Dr Marco Perreta, Dr Lylían Clark, Dr Enrique Beytia, Dr Arnaldo Foradori and Dr Arturo Yudelevich signed the document that gave legal status to the Chilean Society for Biochemistry and Molecular Biology. Subsequently, the first Annual Meeting was held in 1977.

This year, our society celebrates the XL version of its Annual Meeting. Despite the passage of time, the quality, excellence and love for science remain the central axis of each and every one of our Meetings. Currently, the Society has more than 150 members, including researchers from Chilean and foreign universities. The enthusiasm and dedication to scientific activities of all our members constitute the body and soul of this Society. Our Annual Meeting aims to be an open door to the scientific community, at national and international levels, and a showcase for scientific excellence. We hope that the colleagues who entrusted us with the dissemination of their work at our meeting, can appreciate our firm commitment to high-quality research, with the solid aim of pursuing the advancement of biochemistry and molecular biology. As the Directive of the Society, we wish to transmit a strong signal that each member is important to us. The previous Directive began the process of legalizing the Society, a process that is culminating with the update of our statutes in the current Directive. It has been an honor for us to serve you and the Society in this exciting and historical process. We also believe in decentralization, for which we have been holding regional meetings in different cities throughout the country represented by a local Director, in addition to supporting several initiatives proposed by members.

We wish to conclude this editorial letter by thanking all the people and institutions who, by placing their trust in this Directive, together with you, have made it possible to transform the dream of the founding colleagues of our beloved Society into a reality. To all our partners and friends of the Society, we say "WELCOME" and we hope you enjoy this excellent



Annual Meeting that gathers prestigious national and international researchers. We also invite you to help us in the continuous growth of your Society, the Chilean Society for Biochemistry and Molecular Biology.

Ilona I. Concha, President; Luis F. Larrondo, Vicepresident; Marcelo López-Lastra, Past-President; Christian A.M. Wilson, Secretary; Patricio Ramos, Treasurer; Claudia Stange, Director for Santiago; Lorena García, Director for Santiago; Luis Morales, Director for Talca; Maximiliano Figueroa, Director for Concepción; Claudia Quezada, Director for Valdivia.

## DIRECTORY

<b>President</b>	Ilona I. Concha
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<b>Valdivia</b>	Claudia Quezada

## PROGRAM

**Tuesday, September 26**

**🕒 10:30-13:00 Registration**

**🕒 13:00-14:30 Lunch Time**

**🕒 14:45-16:30 ORAL SESSIONS 1 and 2**

### ORAL SESSION 1

#### Biomedicine and Gene Expression

**Chair:** Alejandra Loyola

**Co-Chair:** Mario Chiong

**Room:** Rupanco

**🕒 14:45- Serum levels of Interleukin-6 are linked to the severity of the disease caused by Andes Virus.**

**Angulo J<sup>1</sup>**, Martínez-Valdebenito C<sup>1</sup>, Marco C<sup>1</sup>, Galeno H<sup>2</sup>, Villagra E<sup>2</sup>, Vera L<sup>2</sup>, Lagos N<sup>2</sup>, Becerra N<sup>2</sup>, Mora J<sup>2</sup>, Bermúdez A<sup>3</sup>, Díaz J<sup>3</sup>, Ferrés M<sup>1</sup>, López-Lastra M<sup>1</sup>, <sup>1</sup>Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Facultad de Medicina, Pontificia Universidad Católica de Chile. <sup>2</sup>Subdepartamento de Virología Clínica, Departamento Laboratorio Biomédico Nacional y de Referencia Instituto de Salud Pública de Chile. <sup>3</sup>Departamento de Asuntos Científicos Instituto de Salud Pública de Chile.

**X④ 14:56- Rational design and biological activity of synthetic compounds as blockers of potassium channels TASK.**

**Arévalo B<sup>1</sup>**, <sup>1</sup>Centro de Bioinformática y simulación molecular, Facultad de Ingeniería, Universidad de Talca.

**X④ 15:07- Activation of the Calcium-Sensing Receptor (CaSR) induces LS14 preadipocyte inflammation through mitochondrial dysfunction.**

**Bravo-Sagua R<sup>1,2</sup>**, Lavandero S<sup>2,3</sup>, Cifuentes M<sup>1</sup>, <sup>1</sup>Instituto de Nutrición y Tecnología de los Alimentos (INTA) Universidad de Chile.<sup>2</sup>Advanced Center for Chronic Diseases (ACCDiS) & Centro de Estudios Moleculares de la Célula (CEMC), Facultad de Ciencias Químicas y Farmacéuticas & Facultad de Medicina, Universidad de Chile.<sup>3</sup>Department of Internal Medicine University of Texas Southwestern Medical Center.

**X④ 15:18- Development and inhibitory mechanism of a neutralizing molecule against Andes virus (*Hantaviridae*)**

**Muena N1**, Tischler N<sup>1</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Fundación Ciencia & Vida. (Sponsored by Proyecto FONDECYT 1140050, Proyecto FONDEF CA12|10367, Proyecto Basal PFB-16, Beca De Doctorado Nacional CONICYT)

**X④ 15:29- The relation of RCAN1 overexpression and mitochondrial dynamics in induced pluripotent stem cells (iPSCs) of Down Syndrome.**

Hernández-Fuentes C<sup>1</sup>, Gomez-Contreras A<sup>1</sup>, Leiva-Navarrete S<sup>1</sup>, **Parra V<sup>1</sup>**, <sup>1</sup>Advanced Center for Chronic Diseases, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile

**X④ 15:40- Role of HERPUD1 and ERAD activation during maturation and mineralization of osteoblast in vitro.**

Americo Da Silva L<sup>1,2</sup>, Diaz J<sup>1,2</sup>, Bustamante M<sup>1,2</sup>, Mancilla G<sup>1,2</sup>, Oyarzún I<sup>1,2</sup>, Verdejo H<sup>1,2</sup>, **Quiroga C<sup>1,2</sup>**, <sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS) Universidad de Chile & Pontificia Universidad Católica de Chile.<sup>2</sup>Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile

**X④ 15:51- The small isoform of the HBx protein is sufficient to establish an active hepatitis B viral chromatin state.**

**Alvarez F<sup>1</sup>**, Hernandez S<sup>1</sup>, Garrido D<sup>1</sup>, Loyola A<sup>1</sup>,  
<sup>1</sup>Laboratorio de Epigenética y Cromatina Fundación  
Ciencia & Vida.

**X④ 16:02- CBP80/20-dependent translation initiation factor (CTIF) inhibits HIV-1 Gag synthesis by interfering with the Rev-CBP80 interaction.**

**García-De F<sup>1</sup>**, Rojas-Araya B<sup>1</sup>, Toro-Ascuy D<sup>1</sup>, Pereira-Montecinos C<sup>1</sup>, Gaete-Argel A<sup>1</sup>, Riquelme S<sup>1</sup>, Acevedo M<sup>1</sup>, Valiente-Echeverría F<sup>1</sup>, Soto-Rifo R<sup>1</sup>, <sup>1</sup>Programa de Virología, ICBM, Medicina, Universidad de Chile. (Sponsored by FONDECYT 1160176, Anillo ACT1408, ECOS/CONICYT C15B03 And DRI USA2013-0005, Beca De Doctorado Nacional CONICYT 21150480)

**ORAL SESSION 2**

**Animal and Plant Molecular Cell Biology**

**Chair:** María Josefina Poupin

**CoChair:** Rody San Martin

**Room:** Puerto Octay

**X④ 14:45- Coagulation Factor Xa promotes melanoma metastasis.**

**Arce M<sup>1,2</sup>**, Galleguillos M<sup>2</sup>, Erices R<sup>2</sup>, Lobos-Gonzalez L<sup>1,3</sup>, Ramos C<sup>2</sup>, Fuenzalida P<sup>2</sup>, Godoy A<sup>2</sup>, Leyton L<sup>1,4</sup>, Quest A<sup>1,4</sup>, Owen G<sup>1,2</sup>, <sup>1</sup>(ACCDiS) Advance Center of Chronic Diseases. <sup>2</sup>Fisiología, Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>3</sup>Andes Biotechnologies Fundación Ciencia y Vida. <sup>4</sup>Facultad de Medicina Universidad de Chile. (Sponsored by FONDECYT 3150028, 1140970 & 1120292. CORFO L2 13IDL2-18608, BMRC 13CTI 21526-P6, CONICYT-FONDAP # 15130011, IMII P09/016-F)

**X④ 14:56- Astrocytic Syndecan-4 binding to neuronal Thy-1 strengthens retraction and inhibition of neuronal processes triggered by Thy-1/ $\alpha v\beta 3$  integrin engagement.**

**Burgos-Bravo F<sup>2,3</sup>**, Wilson CAM<sup>1</sup>, Quest A<sup>2,3</sup>, Leyton L<sup>3</sup>, <sup>1</sup>Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. <sup>2</sup>Advanced Center for Chronic Diseases, Facultad de Medicina, Universidad de Chile. <sup>3</sup>Biología Celular y Molecular, Facultad de Medicina, Universidad De Chile. (Sponsored by FONDECYT 1150744 (LL), 1130250 (AFGQ); CONICYT-FONDAP 15130011 (AFGQ-LL); FONDECYT 11130263 (CAMW); CONICYT Student Fellowship 21130008(FB).)

**X④ 15:07- Characterization of Mitofusin-2 knock down in Sertoli cell line and its role in phagocytosis.**

**Cereceda K<sup>1</sup>**, Muñoz J P<sup>2</sup>, Slebe J C<sup>3</sup>, Zorzano A<sup>4</sup>, Concha I<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, de Ciencias, Universidad Austral de Chile.<sup>2</sup>Complex metabolic diseases and mitochondria Institute for Research in Biomedicine (IRB Barcelona).<sup>3</sup>Enzimología Molecular Universidad Austral de Chile.<sup>4</sup>Departament de Bioquímica i Biomedicina Molecular, Facultat de Biologia, Universitat de Barcelona.

**X④ 15:18- HPV-18 E2 protein induces partial immortalization of human keratinocytes followed by replicative senescence and modulation of the mitochondrial SncmtRNA. and the ASncmtRNAs.**

**Villota C<sup>1</sup>**, Varas-Godoy M<sup>2</sup>, Campos A<sup>3</sup>, Jeldes E<sup>1</sup>, Villegas J<sup>1,4</sup>, Burzio V<sup>1,4</sup>, Burzio L O<sup>1,4</sup>, <sup>1</sup>lab cancer Fundacion Ciencia para la Vida.<sup>2</sup>Center of Biomedical research, Faculty of medicine, Universidad de los Andes.<sup>3</sup>Laboratorio de Comunicaciones Celulares (CEMC), Facultad de Medicina, Universidad de Chile.<sup>4</sup>Ciencias Biologicas, Ciencias Biologicas, Universidad Andres Bello.

**X④ 15:29- Characterization of a Hexokinase-like gene induced by root hypoxia in Prunus rootstocks.**

**Pérez-Díaz J<sup>1</sup>**, Almada R<sup>2</sup>, Correa F<sup>1</sup>, Bastías A<sup>3</sup>, Rojas P<sup>1</sup>, Sagredo B<sup>1</sup>, <sup>1</sup>CRI Rayentué Instituto de Investigaciones Agropecuarias.<sup>2</sup>Genómica Centro de Estudios Avanzados en Fruticultura CEAFL.<sup>3</sup>Ciencias de la Salud Universidad Autónoma de Chile.

**X④ 15:40- Analysis of DcAlfin2 and DcAlfin3 transcription factors from D.carota as tools to increase tolerance to salinity in plants.**

**Quiroz L F<sup>1</sup>**, Simpson K<sup>1</sup>, Arias D<sup>1</sup>, Stange C<sup>1</sup>, <sup>1</sup>Plant molecular biology center, Faculty of Sciences, University of Chile. (Sponsored by Acknowledgements: PhD Scholarship CONICYT 21160890.)

**X④ 15:51- Structure-based Discovery of New Two-Pore-Domain Potassium Channels TASK blockers.**

**Ramirez D<sup>2</sup>**, Caballero J<sup>2</sup>, Arévalo B<sup>2</sup>, Concha G<sup>1,2</sup>, Zuñiga L<sup>1</sup>, Gonzalez W<sup>2</sup>, <sup>1</sup>Centro de Investigaciones Médicas University of Talca.<sup>2</sup>Center for Bioinformatics and Molecular Simulations University of Talca. (Sponsored by Fondecyt 1140624)



**X🕒 16:02 Increased ER-mitochondria coupling and energy metabolism during the early phase of mitochondrial stress response.**

**López-Crisosto C<sup>1</sup>**, Díaz-Vegas A<sup>2</sup>, Lavandero S<sup>1,3</sup>,  
<sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS) & Centro Estudios Moleculares de la Célula (CEMC), Facultad Ciencias Químicas y Farmacéuticas & Facultad de Medicina, Universidad de Chile.<sup>2</sup>Instituto de Ciencias Biomédicas (ICBM), Facultad de Medicina, Universidad de Chile.<sup>3</sup>Department of Internal Medicine (Cardiology) University of Texas Southwestern Medical Center.

**X🕒 16:30-17:00 Coffee Break**

**X🕒 17:00-19:00 Symposia 1 and 2**

**Symposium 1**

**Gene expression and Molecular Biosystems**

**Chair:** Luis F. Larrondo

**Room:** Rupanco

**X🕒 17:00-17:30 Mapping a genetic wiring diagram of a cell.**

**Andrews B<sup>1</sup>**, <sup>1</sup>The Donnelly Centre for Cellular and Biomolecular Research, Faculty of Medicine, University of Toronto. Toronto, Canada.

**X🕒 17:30-18:00 Sequence specificity of unconventional RNA binding proteins.**

**Hughes T<sup>1</sup>**, <sup>1</sup>Donnelly Centre, Medicine, University of Toronto.

**X🕒 18:00-18:30 Imagine the future: from aging yeast cells to multifunctional proteins.**

**De Luna A<sup>1</sup>**, <sup>1</sup>Unidad de Genómica Avanzada (Langebio) CINVESTAV Mexico.

**X🕒 18:30-19:00 Gene expression and circuitry in synthetic and natural network designs.**

Goity A<sup>1</sup>, Olivares-Yañez C<sup>2</sup>, **Larrondo L<sup>2</sup>**, <sup>1</sup>Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**Symposium 2**

**Molecular host-pathogen interactions**

**Chair:** Alexis Kalergis

**Room:** Puerto Octay

**X🕒 17:00-17:30 Novel Strategies for Enhancement of Human TB Immunity.**

**Hoft D<sup>1</sup>**, <sup>1</sup>Infectious Diseases, Allergy & Immunology St. Louis University.

**X🕒 17:30-18:00 Establishing Non-specific T cell Responses to Bacterial Infection using Pet Shop Mice.**

Labuda J<sup>1</sup>, Pham O<sup>1</sup>, Tsolis R<sup>1</sup>, **McSorley S<sup>1</sup>**, <sup>1</sup>Center for Comparative Medicine, Department of Anatomy, Physiology and Cell Biology, School of Veterinary Medicine, University of California Davis, Davis, CA 95616, USA.

**X🕒 18:00-18:30 Preventing RSV Vaccine-Enhanced Immunopathology.**

**Varga S<sup>1</sup>**, <sup>1</sup>Department of Microbiology The University of Iowa.

**18:30-19:00 Interference with immunological and neurological synapses as virulence mechanisms of RSV. Implications for vaccine design.**

**Kalergis A<sup>1</sup>**, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**X🕒 19:15-19:30 Opening Ceremony**

**X🕒 19:30-20:45 Opening Lecture**

Chair: Nicole Tischler

Room Plenario: Puerto Octay and Room Frutillar

**Rey F<sup>1</sup>**

Institut Pasteur, Unité de Virologie Structurale, Département de Virologie, Paris, France and CNRS UMR3569 Virologie, Paris, France.

***Entry of enveloped viruses into cells and eukaryotic cell-cell fusion processes: a common origin dating back to LECA?***

**X🕒 20:45-21:00 DataBlitz Session 1**

**X🕒 21:00-22:30 Welcome Cocktail**

**Room:** Calbuco and Room Rupanco

## **Wednesday September 27**

**X🕒 09:00-10:45 ORAL SESSIONS 3**

**Gene Expression**

**Chair:** Giancarlo De Ferrari

**CoChair:** Ricardo Soto Riffo

**Room:** Rupanco

**X④ 09:00- Membrane-initiated cortisol signaling modulates the early expression of metabolism-related genes in the skeletal muscle of rainbow trout (*Oncorhynchus mykiss*).**

**Aedo J**<sup>1,4</sup>, Zuloaga R<sup>2,4</sup>, Meneses C<sup>3</sup>, Boltaña S<sup>4</sup>, Molina A<sup>2,4</sup>, Valdés J<sup>1,4</sup>, <sup>1</sup>Laboratorio de Bioquímica Celular, Ciencias Biológicas, Universidad Andrés Bello.<sup>2</sup>Laboratorio de Biotecnología Molecular, Ciencias Biológicas, Universidad Andrés Bello.<sup>3</sup>Centro de Biotecnología Vegetal, Ciencias Biológicas, Universidad Andrés Bello.<sup>4</sup>Interdisciplinary Center for Aquaculture Research (INCAR) Universidad de Concepción. (Sponsored by Funded By CONICYT/FONDAP/15110027 And FONDECYT 1171318)

**X④ 09:11- Disseminated neoplasia and retrotransposons in *Mytilus chilensis*.**

Gomez J<sup>4</sup>, Curotto D<sup>4</sup>, Donoso B<sup>1</sup>, Martinez J<sup>4</sup>, Valdes J<sup>2,4</sup>, Alvarez M<sup>2,4</sup>, **Arriagada G**<sup>3,4</sup>, <sup>1</sup>Facultad de Medicina Universidad Andres Bello.<sup>2</sup>Interdisciplinary center for Aquaculture Research INCAR.<sup>3</sup>Nucleo Milenio Biología de Enfermedades Neuropsiquiátricas NuMIND.<sup>4</sup>Ciencias Biológicas, Universidad Andres Bello.

**X④ 09:22- Differential expression of the human T-cell leukemia virus type 1 (HTLV-1) basic leucine zipper (HBZ) isoforms is translationally controlled.**

**Cáceres C J**<sup>1</sup>, Olivares E<sup>1</sup>, Angulo J<sup>1</sup>, Contreras N<sup>1</sup>, Walters B<sup>2</sup>, Pino K<sup>1</sup>, Thompson S<sup>2</sup>, López-Lastra M<sup>1</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Instituto Milenio de Inmunología e Inmunoterapia, Centro de Investigaciones Médicas, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Escuela de Medicina, Pontificia Universidad Católica de Chile.<sup>2</sup>Department of Microbiology University of Alabama at Birmingham, Birmingham AL, USA.

**X④ 09:33- DISC1 regulates translation and Stress Granule dynamics in an Akt/mTORC1-independent manner.**

**Fuentes-Villalobos F**<sup>1</sup>, Farkas C<sup>1</sup>, Armijo M<sup>1</sup>, Pincheira R<sup>1</sup>, Castro A<sup>1</sup>, <sup>1</sup>Laboratorio de Transducción de Señales y Cáncer, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.

**X④ 09:44- Asociation of SetDB1 to ribosomes during the cell cycle and its impacts on the H3K9me1 mark.**

**Marty-Lombardi S**<sup>1</sup>, Loyola A<sup>1</sup>, <sup>1</sup>Laboratorio de Epigenética y Cromatina Fundación Ciencia & Vida. (Sponsored by FONDECYT 1160480 And Basal Project PFB-16.)

**XⓂ 09:55- The HIV-1 Rev protein substitutes the positive effects of splicing on nuclear export and translation to promote efficient Gag synthesis from the unspliced genomic mRNA.**

**Rojas B**<sup>1</sup>, Toro-Ascuy D<sup>2</sup>, García-De F<sup>3</sup>, Dellarossa A<sup>4</sup>, Gaete-Argel A<sup>4</sup>, Valiente-Echeverría F<sup>4</sup>, Ohlmann T<sup>5</sup>, Soto-Rifo R<sup>1</sup>, <sup>1</sup>Programa de Virología, ICBM, Facultad de Medicina, Universidad de Chile.<sup>2</sup>Programa Virología, ICMB, Facultad de Medicina, Universidad de Chile.<sup>3</sup>Programa Virología, ICBM, Facultad de Medicina, Universidad de Chile.<sup>4</sup>Programa Virología, ICBM, Facultad de Medicina, Universidad de Chile.<sup>5</sup>INSERM U1111 CIRI. (Sponsored by FONDECYT 1160176, ANILLO ACT1408, ECOS/CONICYT C15B03, DRI USA 2013-0005, Beca CONICYT 21170813)

**XⓂ 10:06- Molecular regulation of HIG2A, HIG-1 hypoxia inducible domain family member 2A, a protein mediator of the respiratory chain supercomplex assembly.**

**Ruiz L**<sup>1</sup>, Salazar C<sup>1</sup>, Elorza A<sup>2</sup>, <sup>1</sup>Instituto de Ciencias Biomédicas, Facultad Ciencias de la Salud, Universidad Autónoma de Chile.<sup>2</sup>Center for Biomedical Research, Faculty of Biological Sciences and Faculty of Medicine, Universidad Andrés Bello.

**XⓂ 10:17- MicroRNA-335-5p and extracellular vesicles in gastric cancer: from in vitro to in vivo functional studies.**

**Polakovicova I**<sup>1,5</sup>, Salas-Huenuleo E<sup>2,3</sup>, Lobos-González L<sup>2,4</sup>, Carrasco-Véliz N<sup>5,6</sup>, Varas-Godoy M<sup>7</sup>, Corvalan A<sup>1,5</sup>, <sup>1</sup>Department of Hematology and Oncology, Faculty of Medicine, Pontificia Universidad Católica De Chile.<sup>2</sup>Advanced Center for Chronic Diseases Universidad de Chile.<sup>3</sup>Laboratory of Nanobiotechnology and Nanotoxicology, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>4</sup>Fundación Ciencia y Vida Andes Biotechnologies.<sup>5</sup>Advanced Center for Chronic Diseases Pontificia Universidad Católica De Chile.<sup>6</sup>Institute of Chemistry, Faculty of Science, Pontificia Universidad Católica De Valparaíso.<sup>7</sup>Centro de Investigación Biomédica, Faculty of Medicine, Universidad de Los Andes. (Sponsored by Grants Issued By The Government Of Chile: CONICYT Fondap 1513001, Fondecyts 1151411, 11150624, 11140204, And Fondecyt Postdoctorado 3160592)

## 🕒 09:00-10:45 Symposia 3

### Symposium 3

#### Cono sur symposia: Plants and their environment

**Chair:** Claudia Stange-Patricio Ramos-Luis Morales

**Room:** Puerto Octay

## 🕒 09:00-09:25 Morpho-physiological and biochemical responses of *Colobanthus quitensis* populations to salinity (NaCl) and copper ions (II) under controlled culture conditions.

**Cuba-Díaz M<sup>1</sup>**, Klagges M<sup>1</sup>, Castel K<sup>1</sup>, Marín C<sup>1</sup>, Arriagada P<sup>1</sup>, Machuca Á<sup>1</sup>, Cabrera G<sup>2</sup>, <sup>1</sup>Ciencias y Tecnología Vegetal, Escuela de Ciencias y Tecnologías, Universidad de Concepción.<sup>2</sup>Grupo Hielos Centro de Investigación, Desarrollo e Innovación.

## 🕒 09:25-09:50 UV-B effects in plant development.

**Casati P<sup>1</sup>**, <sup>1</sup>CEFOBI Universidad Nacional de Rosario-CONICET

## 🕒 09:50-10:15 Cell membrane function and drought tolerance in plants.

**Borsani O<sup>1</sup>**, <sup>1</sup>Biología Vegetal, Facultad de Agronomía, Universidad de la República.

## 🕒 10:15-10:40 Across the ocean from Taiwan to Easter Island: tracking genetic diversity of extant and historic paper mulberry (*Broussonetia papyrifera*) to understand its dispersal history.

**Seelenfreund D<sup>1</sup>**, Peñailillo J<sup>1</sup>, Payacan C<sup>1</sup>, Olivares G<sup>1</sup>, Moncada X<sup>2</sup>, Seelenfreund A<sup>3</sup>, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Centro de Estudios Avanzados en Zonas Áridas CEAZA.<sup>3</sup>Departamento de Antropología Universidad Academia de Humanismo Cristiano.

## 🕒 10:45-11:15 Coffee Break

## 🕒 11:15-13:15 Symposia 4 and 5

### Symposium 4

#### Exploring the winding path of cancer

**Chair:** Claudia Quezada - Verónica Burzio

**Room:** Rupanco

## 🕒 11:15-11:45 Use of liquid biopsy for the detection of molecular alterations in patients with Gliomas.

**Ayuso-Sacido A<sup>1</sup>**, <sup>1</sup>Oncología, Medicina, Universidad San Pablo CEU-Fundación de Investigación HM Hospitales.

**X④ 11:45-12:15 An alternative model of tumor irrigation.**

Valdivia A<sup>1,7</sup>, Racordon D<sup>7</sup>, Mingo G<sup>1,7</sup>, Bravo M L<sup>2,7</sup>, Sandoval A<sup>1,7</sup>, González A<sup>3</sup>, Retamal C<sup>3</sup>, Cuello M<sup>7</sup>, Sanchez B<sup>4</sup>, Nualart F<sup>5</sup>, Corvalán A<sup>1,2,7</sup>, **Owen G<sup>1,2,6,7</sup>**,  
<sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS) Pontificia Universidad Católica de Chile.<sup>2</sup>Center UC Investigation in Oncology Pontificia Universidad Católica de Chile.<sup>3</sup>School of Medicine, Universidad San Sebastian, Santiago, Chile, & Center for Ageing and Regeneration (CARE) Pontificia Universidad Católica de Chile.<sup>4</sup>Institute of Physics Pontificia Universidad Católica de Chile, Santiago, Chile.<sup>5</sup>Faculty of Sciences Universidad de Concepcion, Chile.<sup>6</sup>Millennium Institute on Immunology and Immunotherapy Pontificia Universidad Católica de Chile.<sup>7</sup>Faculties of Biological Sciences & Medicine Pontificia Universidad Católica de Chile.

**X④ 12:15-12:45 Gallbladder cancer. Molecular pathology and preclinical studies with potential impact on patient management.**

**Roa J C<sup>1</sup>**, <sup>1</sup>Pathology, Faculty of Medicine, Pontificia Universidad Católica de Chile.

**X④ 12:45-13:15 A New Melanoma Vaccine Based on Conditioned Tumor Cell Lysates and Adjuvants Inhibits Tumor Growth.**

**Salazar F<sup>1</sup>**, <sup>1</sup>Inmunología, Facultad de Medicina, Universidad de Chile.

**Symposium 5**

**Structural Biology-Protein Homeostasis Sbbq Brazil.**

**Chair:** Maximiliano Figueroa- Christian A.M. Wilson

**Room:** Puerto Octay

**X④ 11:15-11:45 A comparative analysis of protein structures - studying how proteins structural differences influence on their function.**

**Neshich G<sup>1</sup>**, <sup>1</sup>Computational Biology Research Group - Embrapa Agricultural Informatics Embrapa.

**X④ 11:45-12:15 Understanding natural proteins through artificial proteins: the Octarellins as a model.**

**Figueroa M<sup>1</sup>**, <sup>1</sup>Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.

**X④ 12:15-12:45 Structural and functional analysis of the systems for sulfur uptake and assimilation in the phytopathogenic bacterium *Xanthomonas citri*.**

Pereira C<sup>1</sup>, Sampaio A<sup>2</sup>, Fessel M<sup>3</sup>, **Balan A<sup>4</sup>**,  
<sup>1</sup>Genetics and Molecular Biology, Institute of Biology, Universidade Estadual de Campinas.<sup>2</sup>Biotechnology, Institute of Biomedical Sciences, University of São Paulo.<sup>3</sup>Laboratório Nacional de Biociências Centro de Pesquisas em Energia e Materiais.<sup>4</sup>Microbiology, Institute of Biomedical Sciences, University of São Paulo.

**X④ 12:45-13:15 Dynamics of membrane localization of the protein translocation motor SecA in *E. coli*.**

**Driessen A<sup>1</sup>**, <sup>1</sup>University of Groningen, Netherlands.

**X④ 13:15-15:00 Lunch Time**

**X④ 15:30-17:15 New Members Session 1**

Chairs: Jorge Vera Otarola

CoChair: Verónica Burzio

Room: Rupanco

**X④ 15:30-15:55 Horacio Poblete.**

**CLK-peptides as superior surface stabilizers for silver nano structures: Role of peptide chain length and applications in nanomedicine.**

**Poblete H<sup>1</sup>**, Ahumada M<sup>2</sup>, Comer J<sup>3</sup>, Alarcon E<sup>4</sup>

<sup>1</sup>CBSM Universidad de Talca.<sup>2</sup>hearth institute Ottawa.<sup>3</sup>Anatomy and Physiology Kansas State University.<sup>4</sup>heart institute Ottawa.

**X④ 15:55-16:20 Ariela Vergara.**

**Structural similarities between SMCT1 and NIS: Clues to the origin of apical iodide transport in the thyroid.**

**Vergara-Jaque A<sup>1</sup>**, Fong P<sup>2</sup>, Comer J<sup>3</sup>,<sup>1</sup>Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad de Talca.<sup>2</sup>Department of Anatomy and Physiology, Kansas State University College of Veterinary Medicine Kansas State University.<sup>3</sup>Institute of Computational Comparative Medicine, Nanotechnology Innovation Center of Kansas State University.

**X④ 16:20-16:45 Maria Florencia Tevy.**

**The healthy aging transcriptome of *Drosophila melanogaster***

**Tevy M F<sup>1</sup>**, Caris C<sup>1</sup>, Capocefalo D<sup>2</sup>, Molina C<sup>2</sup>, Martinez P<sup>3</sup>, Slater A<sup>3</sup>, Maracaja-Coutinho V<sup>3</sup>, Mazza T<sup>2</sup>,<sup>1</sup>Centro de Genómica y Bioinformática, Ciencias, Universidad Mayor.<sup>2</sup>Bioinformatics Unit IRCCS Casa Sollievo della Sofferenza - Mendel.<sup>3</sup>Center for Biomedical Research , Ciencias , Universidad Andrés Bello.

**X④ 16:45-17:10 Alvaro Glavic.**

**Levels t6A modification modulate protein homeostasis, TOR kinase activity and cell growth.**

Eggers C<sup>2</sup>, Contreras E<sup>2</sup>, De Crécy-Lagard V<sup>1</sup>, **Glavic A<sup>2</sup>**,<sup>1</sup>Department of Microbiology and Cell Science University of Florida.<sup>2</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**X④ 15:30-17:15 New Members Session 2**

Chairs: Luis Larrondo

CoChair: Marcelo López-Lastra

Room: Puerto Octay

**X④ 15:30-15:50 Alejandro Rojas.**

**SENP6: The master SUMO chain breaker**

**Rojas-Fernandez A<sup>1,2</sup>**, Michael T<sup>2</sup>, Hay R<sup>3</sup>

<sup>1</sup>Institute of Medicine & Center for Interdisciplinary Studies on the Nervous System (CISNe), Medicine, Universidad Austral De Chile.<sup>2</sup>Centre for Gene Regulation and Expression (GRE), College of Life Sciences, University of Dundee.<sup>3</sup>Centre for Gene Regulation and Expression (GRE), College of Life Sciences, University of Dundee.

**X④ 15:50-16:10 Carolina Añazco.**

**Lysyl Oxidase Like-2 Crosslinks Collagen IV of Glomerular Basement Membrane.**

**Añazco C<sup>1</sup>**, Vanacore R<sup>2</sup>,<sup>1</sup>Department of Preclinical Science, Medicine, Universidad Católica Del Maule.<sup>2</sup>Department of Medicine. Division of Nephrology and Hypertension, Center for Matrix Biology Vanderbilt University Medical Center.

**X④ 16:10-16:30 Carolina Muñoz-Montesino.**

**Generating mammalian prions with internal deletions.**

**Munoz-Montesino C<sup>1</sup>**, Beringue V<sup>2</sup>, Rezaei H<sup>3</sup>, Dron M<sup>3</sup>,<sup>1</sup>Fisiología, Ciencias Biológicas, Univesidad de Concepcion.<sup>2</sup>Maladies a Prion. Unité de Virologie et Immunologie Moleculaire INRA.<sup>3</sup>Maladies a Prion, Unité de Virologie et Immunologie Moleculaire INRA.



**🕒 16:30-16:50 Valentina Zavala.**

**BRCA1 protein expression is downregulated by miR-185, miR-93 and miR-107 in breast cancer tumors.**

**Zavala V<sup>1</sup>**, Gajardo P<sup>1</sup>, Faúndez P<sup>1</sup>, Alvarez C<sup>1</sup>, Carvallo P<sup>1</sup>,<sup>1</sup>Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**🕒 16:50-17:10 Pablo Morales**

**Regulation of mitochondrial function in muscle cells: inter-organelle communication and organelle abundance.**

**Morales P<sup>1</sup>**, Espinosa A<sup>2</sup>, Chiong M<sup>1</sup>, Lavandero S<sup>1,3</sup>,<sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS) & Centro Estudios Moleculares de la Célula, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile.<sup>3</sup>Department of Internal Medicine (Cardiology) University of Texas Southwestern Medical Center.

**🕒 17:15-19:15 Poster Session and Coffee Break**

**Posters 1**

**🕒 19:15-20:45 Osvaldo Cori Lecture**

**Chair:** Christian A.M. Wilson

**Room:** Puerto Octay and Frutillar

**Octavio Monasterio**  
**Universidad de Chile**

**Bacterial division depends on FtsZ GTPase activity as a motor of filaments treadmilling, a conserved evolutionary tubulin family mechanism.**

**Monasterio O<sup>1</sup>**, Araya G<sup>1</sup>, Montecinos F<sup>2</sup>, Diaz C<sup>3</sup>, Lagos R<sup>1</sup>,<sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad De Chile.<sup>2</sup>Eunice Kennedy Shriver National Institute of Child Health and Human National Institute of Health.<sup>3</sup>Howard Hughes Medical Institute University of California.

**🕒 20:45-21:00 DataBlitz Session 2**

**Room:** Puerto Octay and Frutillar

## Thursday, September 28

### IX 9:00-10:45 ORAL SESSIONS 4

#### **Microbiology and Immunology**

**Chair:** Nicole Tischler

**CoChair:** Gloria Arriagada

**Room:** Rupanco

### IX 9:00- FUN-LOV: Fungal LOV domains for optogenetic control of heterologous protein expression and flocculation.

**Salinas F**<sup>1,2,3</sup>, **Rojas V**<sup>2,3</sup>, **Delgado V**<sup>2,3</sup>, **Agosin E**<sup>2,4</sup>, **Larrondo L**<sup>2,3</sup>, <sup>1</sup>Centro de Estudios en Ciencia y Tecnología de los Alimentos (CECTA) Universidad de Santiago de Chile. <sup>2</sup>Millennium Nucleus for Fungal Integrative and Synthetic Biology (MN-FISB), Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>3</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>4</sup>Departamento de Ingeniería Química y Bioprocenos, Facultad de Ingeniería, Pontificia Universidad Católica de Chile.

### IX 9:11- Genetic Polymorphisms of interferon lambda (IFN- $\lambda$ /IL28B) and tumor necrosis alpha (TNF- $\alpha$ ) modulate clinical severity of respiratory syncytial virus bronchiolitis in pediatric patients.

**Astudillo P**<sup>1</sup>, **Pino K**<sup>1</sup>, **Angulo J**<sup>1,2</sup>, **Perez S**<sup>3</sup>, **Viviani T**<sup>4</sup>, **Ferrés M**<sup>5</sup>, **López-Lastra M**<sup>1</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Instituto Milenio de Inmunología e Inmunoterapia, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Escuela de Medicina., Facultad de Medicina, Pontificia Universidad Católica de Chile. <sup>2</sup>Laboratorio de Infectología, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica., Facultad de Medicina, Pontificia Universidad Católica de Chile. <sup>3</sup>Escuela de Medicina, Facultad de Medicina, Pontificia Universidad Católica de Chile. <sup>4</sup>Unidad de Infectología Pediátrica, Centro Asistencial Doctor Sótero del Río, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Facultad de Medicina, Pontificia Universidad Católica de Chile. <sup>5</sup>Laboratorio de Infectología, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Facultad de Medicina, Pontificia Universidad Católica de Chile.

**X④ 9:22- Heme Oxygenase-1 reduces the viral replication and lung diseases after Human Respiratory Syncytial Virus infection.**

**Espinoza J<sup>1</sup>**, León M<sup>2</sup>, Céspedes P<sup>2</sup>, Gómez R<sup>2</sup>, Canedo-Marroquín G<sup>2</sup>, Riquelme S<sup>3</sup>, Salazar-Echegarai F<sup>2</sup>, Lay M<sup>4</sup>, González P<sup>2</sup>, Anegón I<sup>5</sup>, Riedel C<sup>6</sup>, Kalergis A<sup>7,8</sup>, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Ciencias Biológicas, Millennium Institute on Immunology and Immunotherapy, Pontificia Universidad Católica de Chile. <sup>2</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Millennium Institute on Immunology and Immunotherapy, Pontificia Universidad Católica de Chile. <sup>3</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Millennium Institute on Immunology and Immunotherapy, Pontificia Universidad Católica de Chile. <sup>4</sup>Departamento de Biotecnología, Facultad de Ciencias del Mar y Recursos Biológicos, Universidad de Antofagasta. <sup>5</sup>INSERM, UMR 1064, CHU Nantes, ITUN, Faculté de Médecine, Université de Nantes. <sup>6</sup>Departamento de Ciencias Biológicas, Facultad de Ciencias Biológicas y Facultad de Medicina, Millennium Institute on Immunology and Immunotherapy, Universidad Andrés Bello. <sup>7</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>8</sup>Departamento de Endocrinología, Facultad de Medicina, Millennium Institute on Immunology and Immunotherapy, Pontificia Universidad Católica de Chile. (Sponsored by CONICYT, Millennium Institute On Immunology And Immunotherapy)

**X④ 9:33- Transcriptional changes induced by Infectious Pancreatic Necrosis on the Salmon *Salar* head-kidney.**

**Tarifeno-Saldivia E<sup>1</sup>**, Boltaña S<sup>1</sup>, Gallardo-Escárate C<sup>1</sup>, <sup>1</sup>Interdisciplinary Center for Aquaculture Research (INCAR) Universidad de Concepción.

**X④ 9:44- The NSs protein from the Andes Virus inhibits the type I IFN response pathway.**

**Vera-Otarola J<sup>1</sup>**, López-Lastra M<sup>1</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Instituto Milenio de Inmunología e Inmunoterapia, Centro de Investigaciones Médicas, Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Escuela de Medicina Pontificia Universidad Católica de Chile.

**X④ 9:55- Hantavirus receptors expression in a lethal pulmonary syndrome animal model.**

**Albornoz A<sup>1</sup>**, Brocato R<sup>2</sup>, Otth C<sup>3</sup>, Hooper J<sup>2</sup>, Tischler N<sup>1</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Fundación Ciencia & Vida, Santiago, Chile. <sup>2</sup>Virology Division, United States Army Medical Research Institute for Infectious Diseases, Fort Detrick, USA. <sup>3</sup>Instituto de Microbiología Clínica, Facultad de Medicina, Universidad Austral de Chile, Valdivia, Chile.

**X④ 10:06- Proteomics characterization of *Piscirickettsia salmonis* LF89 strain, in liquid medium AUSTRAL Broth.**

**Hernández M<sup>1,2</sup>**, Oliver C<sup>1,2</sup>, Yañez A<sup>1,3</sup>, <sup>1</sup>AUSTRAL-omics, Ciencias, Universidad Austral De Chile. <sup>2</sup>Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile. <sup>3</sup>Interdisciplinary Center for Aquaculture Research (INCAR) Center FONDAF.

**X④ 10:17- Use of *Botrytis aclada laccase* for the inactivation of tetracycline antibiotics.**

**Cáceres J C<sup>1</sup>**, Gavilán N<sup>1</sup>, Cabrera R<sup>1</sup>, <sup>1</sup>Biología, Ciencias, Universidad de Chile.

**9:00-10:45 ORAL SESSION 5**

**Protein Structure and Function.**

**Chair:** Wendy González

**CoChair:** Víctor Castro

**Room:** Puerto Octay

**X④ 9:00- Critical residue interactions in the hantavirus Gc post-fusion trimer.**

**Bignon E<sup>1</sup>**, Guardado-Calvo P<sup>2</sup>, Rey F<sup>2</sup>, Tischler N<sup>2</sup>, <sup>1</sup>Laboratorio de Virología Molecular, Fundación Ciencia & Vida, Santiago, Chile. <sup>2</sup>Institut Pasteur, Unité de Virologie Structurale, Département de Virologie, Paris, France and CNRS UMR3569 Virologie, Paris, France.

**X④ 9:11- Understanding the Covalent binding of Clavulanate against  $\beta$ -lactamases (TEM-1 and KPC-2) with QM/MM methods.**

**Fritz R<sup>1</sup>**, Alzate-Morales J<sup>1</sup>, Van Der Kamp M<sup>2</sup>, Spencer J<sup>3</sup>, Mulholland A<sup>2</sup>, <sup>1</sup>Doctorado en Ciencias Aplicadas, Centro de Bioinformática y Simulación Molecular (CBSM), Facultad de Ingeniería, Universidad De Talca. <sup>2</sup>Centre for Computational Chemistry, School of Chemistry, University of Bristol. <sup>3</sup>Department of Molecular Bioscience, School of Cellular and Molecular Medicine, University of Bristol.

**IX④ 9:22- A combination of computational and experimental approaches reveals differential stability patterns within the fold-switching domain of RfaH.**

**Galaz-Davison P<sup>1,2</sup>**, Komives E<sup>3</sup>, Ramírez-Sarmiento C<sup>1</sup>, <sup>1</sup>Institute for Biological and Medical Engineering Pontificia Universidad Católica de Chile.<sup>2</sup>Facultad de Ciencias Químicas y Farmacéuticas Universidad de Chile.<sup>3</sup>Department of Chemistry & Biochemistry University of California San Diego.

**IX④ 9:33- Mechanism of adaptation to hypersaline environments and its evolutionary history in ADP-dependent phosphofructokinases from the order *Methanosarcinales*.**

**Gonzalez-Ordenes F<sup>1</sup>**, Cea P<sup>1</sup>, Zamora R<sup>1</sup>, Castro-Fernández V<sup>1</sup>, Guixé V<sup>1</sup>, <sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile. (Sponsored by Fondecyt 1150460)

**IX④ 9:44- Engineering the cofactor specificity from NADH to NADPH of the D-lactate dehydrogenase from *Escherichia coli*.**

**Maturana P<sup>1</sup>**, Cáceres P<sup>1</sup>, Cabrera R<sup>1</sup>, <sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**IX④ 9:55- Dynamics of the dimeric FoxP1 at single-molecule level.**

**Medina E<sup>1</sup>**, Sanabria H<sup>2</sup>, Ramírez-Sarmiento C<sup>3</sup>, Babul J<sup>1</sup>, <sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.<sup>2</sup>Physics and Astronomy, School of Health Research, Clemson University.<sup>3</sup>Institute for Biological and Medical Engineering Pontificia Universidad Católica de Chile.

**IX④ 10:06- Determining the knotting pathway of MJ0366 by using different pulling geometries in optical tweezers.**

**Rivera M<sup>1,2</sup>**, Bustamante A<sup>1</sup>, Hao Y<sup>2</sup>, Maillard R<sup>2</sup>, Baez M<sup>1</sup>, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Department of Chemistry Georgetown University. (Sponsored by FONDECYT 1151274, CONICYT N°2113025, CONICYT N°21150966.)

**IX④ 10:17- In silico and experimental structural data of  $\gamma$ 33 subunit associated to R-phycoerythrin from *Gracilaria chilensis* (Rhodophyta: Gracilariaceae).**

**Vásquez-Suárez A<sup>1</sup>**, Lobos F<sup>1</sup>, Martínez-Oyanedel J<sup>1</sup>, Bunster M<sup>1</sup>, <sup>1</sup>Bioquímica y Biología Molecular, Ciencias Biológicas, Universidad de Concepción. (Sponsored by To CONICYT For Funding)

- ☒ 10:45-11:15 **Coffee Break.**  
☒ 11:15-13:15 **Symposia 6 and 7**

### **Symposium 6**

#### **The role of DNA viruses and encoded oncoproteins in human carcinogenesis**

**Chair:** Francisco Aguayo

**Room:** Rupanco

- ☒ 11:15-11:45 **The hepatitis B viral protein HBx is required to establish an active hepatitis B viral chromatin state.**  
**Loyola A<sup>1</sup>**, Alvarez F<sup>1</sup>, Hernández S<sup>1</sup>, Garrido D<sup>1</sup>, Villanueva R<sup>1</sup>, <sup>1</sup>Laboratory of Epigenetics and Chromatin Fundación Ciencia & Vida.

- ☒ 11:45-12:15 **Epstein-Barr virus and gastric cancer.**  
**Corvalan A<sup>1</sup>**, <sup>1</sup>Advanced Center for Chronic Diseases, Medicine, Pontificia Universidad Católica de Chile.

- ☒ 12:15-12:45 **The role of high-risk human papillomavirus in carcinogenesis: Signaling pathways and interaction with environmental carcinogens.**  
Carrillo D, Muñoz J, Tapia J, Corvalán A<sup>1</sup>, Boccardo E<sup>2</sup>, **Aguayo F<sup>3</sup>**, <sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS), Medicina, Pontificia Universidad Católica de Chile.<sup>2</sup>Department of Microbiology, Medicine, Enrique Boccardo.<sup>3</sup>Departamento de Oncología Básico Clínica, Medicina, Universidad de Chile.

- ☒ 12:45-13:15 **Dna Repair Machinery Plays A Critical Role In The Survival Of Cells Transformed With Human Papillomavirus.**  
**Boccardo E<sup>1</sup>**, <sup>1</sup>Microbiologia, Instituto de Ciências Biomédicas, Universidade de São Paulo.

### **Symposium 7**

#### **Cellular Quality Control & Communication in Health & Disease**

**Chair:** Sergio Lavandero- Andrew Quest

**Room:** Puerto Octay

- ☒ 11:15-11:45 **ER-mitochondria communication in cardiac pathology.**  
**Lavandero S<sup>1,2</sup>**, <sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS), Ciencias Químicas y Farmaceuticas/ Medicina, Universidad de Chile.<sup>2</sup>Internal Medicine, Cardiology Division, UT Southwestern Medical Center.

**X🕒 11:45-12:15 Protein disulfide isomerases: new players in redox signaling and homeostasis.**

**Laurindo F<sup>1</sup>**, <sup>1</sup>Vascular Biology Laboratory, Heart Institute, University of São Paulo Medical School, University of São Paulo .

**X🕒 12:15-12:45 Cardio-protection through the Modulation of Histone acetylation: Impact on mTOR regulation in two models of cardiac disease.**

**Gillette T G<sup>1</sup>**,<sup>1</sup>Cardiology University of Texas-Southwestern Medical Center.

**X🕒 12:45-13:15 Genetic, biochemical, and physiological approach to understanding the function of Herp and Derlin family proteins in ER-associated degradation machinery.**

**Kokame K<sup>1</sup>**, Eura Y<sup>1</sup>, <sup>1</sup>Department of Molecular Pathogenesis National Cerebral and Cardiovascular Center.

**X🕒 13:15-15:00 Lunch**

**X🕒 15:00-16:00 SBBMCh Members Meeting  
Room: Rupanco**

**X🕒 16:00-17:15 Severo Ochoa Lecture  
Chair: Ilona I. Concha  
Room: Puerto Octay + Room  
Frutillar**

**Architecture of large macromolecular complexes in DNA Repair using cryo-electron microscopy (cryo-EM).**

**Llorca O<sup>1</sup>**, <sup>1</sup>Structural Biology Programme, Spanish National Cancer Research Centre (CNIO), C/ Melchor Fernández Almagro, 3. 28029 Madrid  
Tel: (34) 917 328 000 ext 3000 ollorca@cnio.es.

**X🕒 17:15-19:15 Poster Session II and Coffee Break**

**X🕒 19:30-20:45 PABMB Lecture  
Chair: Luis F. Larrondo  
Room: Puerto Octay and  
Frutillar**

## **RNA localization and translation in neuronal axons.**

**Sotelo-Silveira J<sup>1,2</sup>**, <sup>1</sup>Genomics, Full Professor, Instituto de Investigaciones Biológicas Clemente Estable.<sup>2</sup>Cell and Molecular Biology, Assistant Professor, Universidad de la Republica.

- X**🕒 **21:30-24:00 Gala Dinner**  
**Room:** Puerto Octay and Frutillar  
**Party**  
**Room:** Calbuco and Rupanco

## **FRIDAY, SEPTEMBER 29**

- X**🕒 **09:00-10:00 Awards**  
**Room: Puerto Octay + Room Frutillar**

- X**🕒 **10:00-12:00 Symposia 8 and 9**

### **Symposium 8**

#### **Capillary electrophoresis for Biochemical and Molecular Biological applications**

**Chairs:** Norberto Guzmán

**Room:** Puerto Octay + Room Frutillar

- X**🕒 **10:00-10:30 An Immuno-Analytical Separation Instrument for the Determination of Bioactive Peptides in Biosamples – Implication in Inflammation-Associated Diseases.**  
**Guzmán N<sup>1</sup>**, <sup>1</sup>Princeton Biochemicals Inc.

- X**🕒 **10:30-11:00 Comprehensive Characterization of N-Linked Carbohydrates by CE-LIF AND CESI-MS.**  
**Chapman, J.**, <sup>1</sup>SCIEX Brea, California 92822, U.S.A.

- X**🕒 **11:00-11:30 Advances in the Separation of Co- and Post-translational Modifications using Capillary Electrophoresis – Mass Spectrometry.**  
**Lindner H<sup>1</sup>**, Sarg B<sup>1</sup>, Faserl K<sup>1</sup>, <sup>1</sup>Division of Clinical Biochemistry Innsbruck Medical University.



**X🕒 11:30-12:00 A Miniaturized Solid-Phase Extraction Method Coupled On-Line to Capillary Electrophoresis and Mass Spectrometry for High-Sensitivity Analysis of Biomolecules.**

**Benavente F<sup>1</sup>**, Pont L<sup>1</sup>, Peró-Gascon, R<sup>1</sup>, Giménez E<sup>1</sup>, Barbosa J<sup>1</sup>, Sanz-Nebot V<sup>1</sup>, <sup>1</sup>Department of Chemical Engineering and Analytical Chemistry, Nutrition and Food Safety Research Institute, Faculty of Chemistry, University of Barcelona.

**Symposium 9**

**An approach to the Infectious Pancreatic Necrosis Virus: from the virus to the host.**

**Chairs:** Andrea Rivas

**Room:** Rupanco

**X🕒 10:00-10:30 Infectious Pancreatic Necrosis Virus Morphogenesis.**

**Sandino A<sup>1</sup>**, <sup>1</sup>Laboratorio de Virología, Centro de Biotecnología Acuícola, Universidad de Santiago de Chile.

**X🕒 10:30-11:00 Translation initiation of Infectious Pancreatic Necrosis Virus mRNAs .**

**Rivas-Aravena A<sup>1</sup>**, Gonzalez-Catrilelun S<sup>2</sup>, Carcamo F<sup>3</sup>, Aleite P<sup>4</sup>, <sup>1</sup>Departamento de Aplicaciones Nucleares Comisión Chilena de Energía Nuclear.<sup>2</sup>Biología, Química y Biología, Universidad de Santiago de Chile.<sup>3</sup>Facultad de Ciencia Universidad de Chile.<sup>4</sup>Facultad de Ciencia Universidad Santo Tomás.

**X🕒 11:00-11:30 Immune response of salmonids against Infectious Pancreatic Necrosis Virus.**

**Imarai M<sup>1</sup>**, <sup>1</sup>Departamento de Biología, Facultad de Química y Biología, Universidad de Santiago de Chile.

**X🕒 11:30-12.00 Deciphering of clonal complexity of b cell response in trout using deep sequencing.**

**Magadán S<sup>1</sup>**, Jouneau L<sup>2</sup>, Puelma-Touzel M<sup>3</sup>, Marillet S<sup>4</sup>, Chara W<sup>5</sup>, Six A<sup>5</sup>, Quillet E<sup>6</sup>, Mora T<sup>3</sup>, Walczak A<sup>7</sup>, Cazals F<sup>4</sup>, Fillatreau S<sup>8</sup>, Sunyer O<sup>9</sup>, Salinas I<sup>10</sup>, Boudinot P<sup>11</sup>, <sup>1</sup>Bioquímica, Genética e Inmunología University of Vigo.<sup>2</sup>Virologie et Immunologie Moléculaires Institut National de la Recherche Agronomique, Université Paris Saclay.<sup>3</sup>Laboratoire de Physique Statistique CNRS and Ecole Normale Supérieure.<sup>4</sup>Algorithms-Biology-Structure INRIA Sophia-Antipolis-Méditerranée.<sup>5</sup>Immunology-Immunopathology-Immunotherapy (I3) UPMC University Paris.<sup>6</sup>Génétique Animale et Biologie Intégrative Institut National de la Recherche Agronomique, Université Paris Saclay.<sup>7</sup>Laboratoire de Physique Théorique CNRS and Ecole Normale Supérieure.<sup>8</sup>Laboratory of Immune Regulation Deutsches Rheuma-Forschungszentrum am Leibniz Institute.<sup>9</sup>Department of Pathobiology, School of Veterinary Medicine University of Pennsylvania.<sup>10</sup>Department of Biology University of New Mexico.<sup>11</sup>Virologie et Immunologie Moléculaires Institut National de la Recherche Agronomique, Université Paris Saclay.

**X🕒 12:00-13:00 Closing Lecture**  
**Chair: Ilona I. Concha**  
**Room: Puerto Octay and Frutillar**

**Chromatin, transcriptional elongation and alternative splicing.**

**Kornblihtt A<sup>1</sup>**, <sup>1</sup>IFIBYNE-UBA-CONICET Universidad de Buenos Aires.

## Posters Wednesday, September 27

### 1) **Structural studies of Octarellin mutants: a Crystallographic approach.**

**Aedo F<sup>1</sup>**, Martínez-Oyanedel J<sup>1</sup>, Bunster M<sup>1</sup>, Figueroa M<sup>1</sup>, <sup>1</sup>Laboratorio de Biofísica Molecular, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.

### 3) **Characterization of the SUMO modification of the transcription factor TFEB.**

**Aguilar M<sup>1</sup>**, Mancilla H<sup>1</sup>, Gonzalez A<sup>2</sup>, Bandau S<sup>3</sup>, Tatham M<sup>3</sup>, Talamasu T<sup>3</sup>, Hay R<sup>3</sup>, Burgos P<sup>2</sup>, Rojas-Fernandez A<sup>1</sup>, <sup>1</sup>Center for Interdisciplinary Studies on the Nervous System (CISNe), Institute of Medicine, Universidad Austral de Chile. <sup>2</sup>Institute of Physiology Universidad Austral de Chile. <sup>3</sup>Centre for Gene Regulation and Expression, College of Life Sciences, University of Dundee. (Sponsored by Fondecyt 11150532; Ron Hay Lab)

### 5) **Reengineering of TLR2 modulating peptides from the human microbiota as new drugs for metabolic diseases.**

**Alegría-Arcos M<sup>1,2</sup>**, Márquez-Miranda V<sup>2</sup>, Araya Durán I<sup>2</sup>, González-Nilo F<sup>3,1</sup>, Richman J<sup>2</sup>, Apte Z<sup>2</sup>, Almonacid D<sup>2</sup>, <sup>1</sup>Centro Interdisciplinario de neurociencia de Valparaíso (CINV), Ciencias, Universidad de Valparaíso. <sup>2</sup>Bioinformatics uBiome, Inc. <sup>3</sup>Centro de Bioinformática y Biología Integrativa (CBIB), Ciencias Biológicas, Universidad Andrés Bello.

### 7) **New method for microsomes preparation from *Saccharomyces cerevisiae* for the study of the mechanochemical mechanism of BiP.**

**Alfaro-Valdés H M<sup>1</sup>**, Retamales E<sup>1</sup>, Lesch R<sup>2</sup>, Wilson C A M<sup>1</sup>, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. <sup>2</sup>Department of Molecular and Cellular Biology, Howard Hughes Medical Institute, University of California. (Sponsored by FONDECYT 11130263 PCI-PII20150073)

### 9) **Funcional relationship between NUAK1 and the SALL2 transcription factor under metabolic stress.**

**Álvarez C<sup>1</sup>**, Venturelli K<sup>1</sup>, Riffo E<sup>1</sup>, Palma M<sup>1</sup>, Hepp M<sup>1</sup>, Castro A<sup>1</sup>, Pincheira R<sup>1</sup>, <sup>1</sup>Laboratorio de Transducción de Señales y Cáncer, Ciencias Biológicas, Universidad de Concepción.

**11) Multidimensional free energy calculations of veratryl alcohol adsorption to P. chrysosporium lignin peroxidase.**

**Adasme-Carreño F<sup>1</sup>**, Poblete-Vilches H<sup>1</sup>, Alzate-Morales J<sup>1</sup>, <sup>1</sup>Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad de Talca.

**13) Identification and expression profiles of long non-coding rnas in the chilean sea urchin (Loxechinus albus).**

**Antiqueo P<sup>1</sup>**, Meneses C<sup>2</sup>, Estrada J<sup>3</sup>, Molina A<sup>1,3</sup>, Valdés J<sup>1,4</sup>, <sup>1</sup>Lab. de Biotecnología Molecular. Interdisciplinary Center for Aquaculture Research (INCAR), Ciencias Biológicas, Universidad Andrés Bello.<sup>2</sup>Centro de Biotecnología Vegetal, Ciencias Biológicas, Universidad Andrés Bello.<sup>3</sup>Centro de Investigación Marina Quintay (CIMARQ), Ecología y Recursos Naturales, Universidad Andrés Bello.<sup>4</sup>Centro de Investigación Marina Quintay (CIMARQ), Ciencias Biológicas, Universidad Andrés Bello.

**15) Study and characterization of novel anti-tumoral triterpenes extracted from Quillaja saponaria.**

**Aquea G<sup>1</sup>**, Cardenas P<sup>1</sup>, Padilla L<sup>2</sup>, Guzmán L<sup>1</sup>, <sup>1</sup>Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Investigación y Desarrollo Natural Response S.A.

**17) Cardiomyocyte-specific polycystin-1 deficiency contributes to myocardial ischemia/reperfusion injury: role in cell death and paracrine effects on fibroblast to myofibroblast differentiation.**

**Aránguiz P<sup>1,2</sup>**, Espinoza C<sup>1,2</sup>, Romero P<sup>1,2</sup>, DeGregorio N<sup>2</sup>, Pedrozo Z<sup>1,2</sup>, <sup>1</sup>Department of Physiology and Biophysics, Faculty of Medicine, Universidad de Chile.<sup>2</sup>Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences & Faculty of Medicine,, Universidad de Chile.

**19) Effect of drug-drug interaction on transcriptional expression of metabolizing enzymes and a drug resistance protein in diferent tissues of rainbow trout (Oncorhynchus mykiss).**

**Arias-Darraz L<sup>1,2,3</sup>**, Gallardo M<sup>2</sup>, Cárcamo J<sup>3</sup>, <sup>1</sup>Doctoral Program in Aquaculture Sciences, Sede Puerto Montt, Universidad Austral de Chile.<sup>2</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.<sup>3</sup>Interdisciplinary Center for Aquaculture Research (INCAR) Universidad Austral de Chile.

**21) Overexpression of trnaglyucc affects growth of schizosaccharomyces pombe.**

**Arias L<sup>1</sup>**, Moreira S<sup>1</sup>, Orellana O<sup>1</sup>, <sup>1</sup>Biología Molecular y Celular, ICBM, Facultad de Medicina, Universidad de Chile.

**23) Targeting the oligomerization of fructose-1,6-bisphosphatase as a potential therapeutic approach for treatment of type 2 diabetes mellitus.**

**Asenjo J<sup>1</sup>**, Coronado J<sup>1</sup>, Silva F<sup>1</sup>, Toledo J<sup>1</sup>, Slebe J<sup>1</sup>, <sup>1</sup>Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile.

**25) Characterization of Microsorium scolopendria obtained in Easter Island for a possible therapeutic use.**

Balada C, Fassio C, Castro M, Eltit P and Guzmán L . Laboratorio de Química Biológica, Instituto de Química, Pontificia Universidad Católica de Valparaíso, Chile. Laboratorio de Propagación, Escuela de Agronomía. Pontificia Universidad Católica de Valparaíso, Chile. [criss.tbc@gmail.com](mailto:criss.tbc@gmail.com).

**27) Characterization of T lymphocyte population in the thymus of the rainbow trout.**

**Barraza F<sup>1</sup>**, <sup>1</sup>Biología, Química y Biología, Universidad de Santiago de Chile.

**29) Pro-inflammatory response in skin and mucus of Atlantic salmon (Salmo salar) and Coho salmon (Oncorhynchus kisutch) during infestation with Caligus rogercresseyi.**

**Barrientos C<sup>1,2,3</sup>**, Mercado L<sup>4</sup>, Cárcamo J<sup>2,3</sup>, <sup>1</sup>Doctoral Program in Aquaculture Sciences, Sede Puerto Montt, Universidad Austral de Chile.<sup>2</sup>Interdisciplinary Center for Aquaculture Research (INCAR) Universidad Austral de Chile.<sup>3</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.<sup>4</sup>Instituto de Biología Pontificia Universidad Católica de Valparaíso.

**31) Bioinformatic tools for determination of high-affinity peptides as alternative to treatment of obesity.**

**Bartsch I<sup>1,2</sup>**, Marshall S<sup>2</sup>, Guzmán F<sup>1</sup>, Cárdenas C<sup>1</sup>, <sup>1</sup>Laboratorio de Péptidos Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Instituto de Biología, Facultad de Ciencias Pontificia Universidad Católica de Valparaíso.

**33) Effect of sodium tungstate on intracellular reactive oxygen species in hk2 cells.**

**Blaña C<sup>1</sup>**, Silva P<sup>1</sup>, Covarrubias A<sup>1</sup>, Yañez A<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.

**35) Computational assessment of key factors enabling the high plastic-degrading efficiency of the novel enzyme PETase.**

**Blazquez P<sup>1</sup>**, Fecker T<sup>1</sup>, Galaz-Davison P<sup>1</sup>, Parra L<sup>1,2</sup>, Ramírez-Sarmiento C A<sup>1</sup>, <sup>1</sup>Institute for Biological & Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile.<sup>2</sup>Departament of Chemical and Bioprocesses Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile.

**37) Characterization of the Domain Swapping dimer of the cold shock protein from Bacillus caldolyticus using Optical Tweezers.**

**Bustamante A<sup>1</sup>**, Rivera M<sup>1</sup>, Babul J<sup>2</sup>, Baez M<sup>1</sup>, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**39) Differential regulation of cardiomyocyte autophagy by angiotensin II and angiotensin-(1-9).**

**Bustamante M<sup>2</sup>**, Verdejo H<sup>1,2</sup>, Quiroga C<sup>1,2</sup>, Castro P<sup>1,2</sup>, Lavandero S<sup>2,3</sup>, <sup>1</sup>División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile.<sup>2</sup>Advanced Center for Chronic Diseases Universidad de Chile and Pontificia Universidad Católica de Chile.<sup>3</sup>Departamento de Bioquímica y Biología Celular Universidad de Chile.

**41) Herpud1 regulates insulin response in skeletal muscle cells.**

**Navarro-Marquez M<sup>1</sup>**, Bustos S<sup>1</sup>, Vásquez-Trincado C<sup>1</sup>, Rodriguez M<sup>1</sup>, Jaimovich E<sup>2</sup>, Lavandero S<sup>1,2,3</sup>, <sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences & Faculty of Medicine, University of Chile.<sup>2</sup>Center for Molecular Studies of the Cell, Faculty of Medicine, University of Chile.<sup>3</sup>Cardiology Division University of Texas Southwestern Medical Center. (Sponsored by FONDAF 15130011 (SL), Fondecyt 1161156 (SL), PhD Fellowship From CONICYT (MNM).)

43) **Exploring the intracellular pH-sensing mechanism of TASK-2 K2P channel**  
**Daniel, Sepúlveda Francisco, González Wendy.**  
**Bustos D<sup>1,3</sup>, Sepúlveda F<sup>2</sup>, González W<sup>3,1</sup>,**  
<sup>1</sup>Doctorado en Ciencias Aplicadas, Ingeniería,  
Universidad de Talca.<sup>2</sup>Biología Centro de Estudios  
Científicos.<sup>3</sup>Center for Bioinformatics and Molecular  
Simulations, Ingeniería, Universidad de Talca.

45) **Effect of viral proteins of Infectious Pancreatic Necrosis Virus (IPNV) on the cellular mRNAs translation.**  
**Cárcamo F<sup>1</sup>, González-Catrilebún S<sup>2,3</sup>, Rivas-Aravena A<sup>3</sup>,**  
<sup>1</sup>Escuela de Pregrado, Facultad de Ciencias,  
Universidad de Chile.<sup>2</sup>Departamento de Biología,  
Facultad de Química y Biología, Universidad de Santiago de Chile.<sup>3</sup>Laboratorio de Radiobiología Celular y Molecular Comisión Chilena de Energía Nuclear.

47) **Transcriptional and protein expression in tail fat from Chilota and Suffolk Down lambs grazing Calafatal.**  
Gallardo M<sup>1</sup>, Arias-Darraz L<sup>1</sup>, Geoffroy C<sup>1</sup>, Fuentes D<sup>1</sup>,  
Hernández S<sup>1</sup>, Mancilla A<sup>1</sup>, **Carcamo J<sup>1</sup>,** <sup>1</sup>Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile.

49) **Gastric cancer derived extracellular vesicles containing miR-335-5p inhibit cell invasion.**  
**Carrasco-Véliz N<sup>1,3</sup>, Polakovicova I<sup>2,3</sup>, Lobos-González L<sup>3,4</sup>,**  
**Varas-Godoy M<sup>3,5</sup>, Sandoval-Bórquez A<sup>2,3</sup>,**  
**Corvalán A<sup>2,3</sup>,** <sup>1</sup>Institute of Chemistry, Faculty of Science, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Laboratory of Oncology, Faculty of Medicine, Pontificia Universidad Católica de Chile.<sup>3</sup>Advanced Center for Chronic Diseases Pontificia Universidad Católica de Chile.<sup>4</sup>Fundación Ciencia y Vida Andes Biotecnologies.<sup>5</sup>Centro de Investigación Biomédica, Faculty of Medicine, Universidad de Los Andes.

51) **Biochemical characterization of 4-amino-5-hydroxymethyl-2-methylpyrimidine kinase (HMPK) from Thermus thermophilus and Salmonella Typhimurium.**  
**Cea P<sup>1</sup>, Vallejos G<sup>1</sup>, González-Órdenes F<sup>1</sup>,**  
**Padilla-Salinas F<sup>1</sup>, Guixé V<sup>1</sup>, Castro-Fernández V<sup>1</sup>,**  
<sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**53) Loop assembly: Open source tool for community-based plant engineering.**

**Cerda A<sup>1</sup>**, Pollak B<sup>2</sup>, Álamos S<sup>3</sup>, Moyano T<sup>4</sup>, Gutiérrez R<sup>4</sup>, Patron N<sup>5</sup>, Haseloff J<sup>2</sup>, Federici F<sup>4</sup>,  
<sup>1</sup>Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Department of Plant Sciences University of Cambridge.<sup>3</sup>Department of Plant and Microbial Biology University of California.<sup>4</sup>Facultad de Ciencias Biológicas Pontificia Universidad Católica de Chile.<sup>5</sup>Earlham Institute Earlham Institute. (Sponsored by Beca Conicyt Doctorado Nacional 2015).

**55) Role of ROS produced by mitochondria and NOX (NADPH-Oxidase) in apoptotic death of cerebellar granule neurons.**

**Cid C<sup>1</sup>**, Morán J<sup>1</sup>, <sup>1</sup>Neurodesarrollo y Fisiología Universidad Autónoma de México . (Sponsored by This Work Was Partially Supported By CONACYT Grant 179234 And DGAPA-PAPIIT, UNAM Grants IN206213 And IN210716.)

**57) Transcriptomic analysis by RNA-Seq in a cellular model of aggregation of TDP-43 protein.**

**Cordero K<sup>2</sup>**, Moya-Beltrán A<sup>1</sup>, Ormeño F<sup>2</sup>, Riquelme F<sup>2</sup>, Covarrubias P<sup>1</sup>, Quatrini R<sup>1</sup>, Budini M<sup>2</sup>, <sup>1</sup>Microbial Ecophysiology Lab Fundación Ciencia y Vida.<sup>2</sup>Research Institute in Dentistry Sciences Universidad de Chile.

**59) Pharmacogenomic biomarkers for adverse reactions to chemotherapeutics in cancer patients. A Pre-Therapeutic Approach.**

**Cordova-Delgado M<sup>1</sup>**, Bravo M L<sup>2,3</sup>, Arriagada I<sup>3</sup>, Cumsille E<sup>3</sup>, Quiñones L<sup>4</sup>, Bravo E<sup>5</sup>, Correa R<sup>6,7</sup>, Owen G<sup>2,3,8</sup>, Leiva J<sup>6,7</sup>, Paredes C<sup>6,7</sup>, Cuello M<sup>9</sup>, Ibañez C<sup>10</sup>,  
<sup>1</sup>Programa de Doctorado en Farmacología, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>PUC-CORFO Biomedical Research Consortium.<sup>3</sup>Departamento de Fisiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>4</sup>Departamento de Oncología Básico-Clínico , Facultad de Medicina, Universidad de Chile.<sup>5</sup>Servicio de Ginecología y Obstetricia Hospital Gustavo Fricke.<sup>6</sup>Facultad de Medicina Universidad Católica del Maule.<sup>7</sup>Unidad de Oncología Ginecológica, Servicio de Obstetricia y Ginecología Hospital Regional de Talca.<sup>8</sup>Departamento de Oncología y Hematología, Facultad de Medicina, Pontificia Universidad Católica de Chile.<sup>9</sup>Departamento de Obstetricia y Ginecología, Facultad de Medicina, Pontificia Universidad Católica de Chile.<sup>10</sup>Departamento de Hematología, Facultad de Medicina, Pontificia Universidad Católica de Chile.



**61) Changing provascular complexity may modulate iron content in Arabidopsis Seeds.**

**Coronas M<sup>1</sup>**, Grant-Grant S<sup>1</sup>, Ibeas M<sup>1</sup>, Vargas-Perez J<sup>1</sup>, Navarro N<sup>1</sup>, Roschztardt H<sup>1</sup>, <sup>1</sup>Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica de Chile.)

**63) Truncation and functional analysis of two RNA aptamers, G70 and G37, targeted to the main toxin of Loxosceles laeta spider venom.**

**Cueto M<sup>1</sup>**, Sapag A<sup>1</sup>, <sup>1</sup>Laboratorio de Farmacoterapia Génica, Departamento de Química Farmacológica y Toxicológica, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**65) The PI3K/ Akt pathway regulates the expression of MDR transporters in Glioblastoma Stem-like Cells.**

**Delgado J<sup>1</sup>**, Jaramillo C<sup>1</sup>, Rocha D<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Ciencias , Universidad Austral de Chile.

**67) Development of a novel catalytic amyloid displaying a metal- dependent ATPase-like activity.**

**Díaz-Espinoza R<sup>1,2</sup>**, Nova E<sup>2</sup>, Monasterio O<sup>2</sup>, <sup>1</sup>Departamento de Biología, Facultad de Química y Biología, Universidad de Santiago de Chile.<sup>2</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile. (Sponsored by FONDECYT 11160554)

**69) Role Of HERPUD1 In Osteoclast Differentiation in vitro.**

**Díaz Muñoz J<sup>1,2</sup>**, Americo Da Silva L<sup>1,2</sup>, Mancilla G<sup>1,2</sup>, Memmel M<sup>1,2</sup>, Quiroga C<sup>1,2</sup>, <sup>1</sup>Advances Center for Chronic Diseases (ACCDiS) Universidad de Chile y Pontificia Universidad Católica de Chile.<sup>2</sup>Laboratorio de Señalización Cardiovascular, división de Enfermedades Cardiovasculares, Medicina, Pontificia Universidad Católica de Chile.

**71) Incorporation of CPPs and their relationship to lipid composition in membrane models.**

**Echeverría-Bugueño M<sup>1</sup>**, Silva V<sup>1</sup>, Aguilar L F<sup>1</sup>, <sup>1</sup>Laboratorio de Fotofísica y Espectroscopía Molecular, Instituto de Química, Pontificia Universidad Católica de Valparaíso.

**73) The structural role of disulfide bridges of PETase, a Polyethylene terephthalate(PET) degrading enzyme.**

**Engelberger-Aliaga F<sup>1,3</sup>**, Parra L<sup>2,3</sup>, Ramírez-Sarmiento C<sup>3</sup>, <sup>1</sup>Department of Biochemistry and Molecular Biology, Chemical and Pharmaceutical Sciences, Universidad de Chile.<sup>2</sup>Department of Chemical and Bioprocesses Engineering, School of Engineering, Pontificia Universidad Católica de Chile.<sup>3</sup>Institute for Biological and Medical Engineering, Schools of engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile.

**75) A2BAR regulates the migratory/invasive capacity of Glioblastoma Stem-like Cells under hypoxia.**

**Erices J<sup>1</sup>**, Torres A<sup>1</sup>, Quezada C<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile.

**77) Interaction between cyclic peptides Smac/DIABLO analogues and BIRC5 protein.**

**Estay C<sup>1</sup>**, Guzmán L<sup>1</sup>, Guzmán F<sup>2</sup>, Aguilar L<sup>1</sup>, <sup>1</sup>Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Núcleo de Biotecnología Curauma Pontificia Universidad Católica de Valparaíso.

**79) Low cost and open source multi-fluorescence imaging system.**

Matute T<sup>1</sup>, **Nuñez I<sup>1</sup>**, Herrera R<sup>2</sup>, Keymer J<sup>3</sup>, Marzullo T<sup>2</sup>, Rudge T<sup>2</sup>, Federici F<sup>4</sup>, <sup>1</sup>Escuela de Ingeniería Pontificia Universidad Católica de Chile.<sup>2</sup>BackYardBrains BackYardBrains.<sup>3</sup>Departamento de Ecología, Facultad de Física Pontificia Universidad Católica de Chile.<sup>4</sup>Genética Molecular y Microbiología Universidad Católica de Chile. (Sponsored by OpenPlant Fund, Jim Haseloff, Tom Baden)

**81) Sequencing, de novo assembly and annotation of the transcriptome of the scallop *Argopecten purpuratus* with focus on immune related genes.**

**Flores-Herrera P<sup>1</sup>**, Farlora R<sup>2</sup>, Schmitt P<sup>1</sup>, <sup>1</sup>Grupo de Marcadores Inmunológicos, Laboratorio de Genética e Inmunología Molecular, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Laboratorio de Biotecnología Acuática y Genómica Reproductiva, Instituto de Biología, Facultad de Ciencias, Universidad de Valparaíso. (Sponsored by Dr. Luis Mercado Vianco)

**83) Effect of glucocorticoid-mediated stress on the expression of genes involved in teleost skeletal muscle lipid metabolism.**

**Pacheco B<sup>1</sup>**, Fuentes M<sup>1</sup>, Olivares G<sup>2</sup>, Molina A<sup>1,3</sup>, Valdés J<sup>1</sup>, <sup>1</sup>Lab. de Biotecnología Molecular. Interdisciplinary Center for Aquaculture Research (INCAR), Ciencias Biológicas, Universidad Andres Bello.<sup>2</sup>Piscicultura de Rio Blanco, Escuela de Ciencias del Mar Pontificia Universidad Católica de Valparaíso.<sup>3</sup>Centro de Investigación Marina Quintay (CIMARQ), Ecología y Recursos Naturales, Universidad Andres Bello.

**85) ChargaffCracker: a software for cracking the generalized version of Chargaff's 2nd rule.**

**Fuentes Beals C<sup>1</sup>**, Riadi G<sup>1</sup>, Alarcón E<sup>1</sup>, Oróstica K<sup>1</sup>, Vidal I<sup>1</sup>, <sup>1</sup>Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad de Talca.

**87) The role of the mitochondrial ubiquitin E3 ligase 1 (MUL1) in the Mitochondria-Endoplasmic Reticulum (ER) connection of skeletal muscle cells under lipotoxic stress.**

**García-Molina M<sup>1</sup>**, Vásquez-Trincado C<sup>1</sup>, Lavandero S<sup>1</sup>, Parra V<sup>1</sup>, <sup>1</sup>Advanced Center for Chronic Diseases, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**89) Anti-hypertrophic and metabolic effects of GDF11 on cultured cardiomyocytes.**

**Garrido V<sup>1</sup>**, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**91) Viral Genome-Linked Protein (VPg) Is Essential for Translation Initiation of Infectious Pancreatic Necrosis Virus (IPNV).**

**Gonzalez-Catrilelbun S<sup>1,2</sup>**, Aleite-González P<sup>2</sup>, Carcamo F<sup>2</sup>, Rivas-Aravena A<sup>2</sup>, <sup>1</sup>Biología, Química y Biología, Universidad De Santiago De Chile. <sup>2</sup>Laboratorio de Radiobiología Molecular y Celular, Departamento de Aplicaciones Nucleares, Comisión Chilena de Energía Nuclear.

**93) Changes in synonymous codons usage alter the function of the RNA chaperone Hfq from E. coli.**

**Gonzalez D<sup>1</sup>**, Orellana O<sup>1</sup>, <sup>1</sup>Biología Molecular y Celular, ICBM, Medicina, Universidad de Chile.

**95) B3 transcription factors are involved in iron loading in Arabidopsis embryos.**

**Grant-Grant S<sup>1</sup>**, Medina J<sup>2</sup>, Vicente-Carbajosa J<sup>3</sup>, Curie C<sup>4</sup>, Roschztardt H<sup>1</sup>, <sup>1</sup>Genética Molecular y Microbiología Pontificia Universidad Católica de Chile.<sup>2</sup>Centro de Biotecnología y Genómica de Plantas INIA.<sup>3</sup>Centro de Biotecnología y Genómica de Plantas Universidad Politecnica de Madrid.<sup>4</sup>Developmental Biology CNRS Montpellier. (Sponsored by This Work Was Funded By FONDECYT 1160334 From The Chilean Government, INTER 6809 VRI PUC-Chile and PhD CONICYT-Grant 21170951.)

**97) Evaluation of the efficacy of antisense therapy in a patient derived xenograft model (PDX) of advanced cervical cancer.**

**Guevara F<sup>1,2</sup>**, Silva V<sup>2</sup>, Lobos-Gonzalez L<sup>2</sup>, Villota C<sup>2,3</sup>, Carrasco M<sup>2</sup>, Sanhueza N<sup>1,2</sup>, Reyes C<sup>1,2</sup>, Castillo J<sup>4</sup>, Bustamante E<sup>5</sup>, Burzio L<sup>1,2</sup>, Villegas J<sup>1,2</sup>, <sup>1</sup>Facultad de Ciencias Biológicas Universidad Andrés Bello.<sup>2</sup>Fundación Ciencia & Vida Andes Biotechnologies SpA.<sup>3</sup>Departamento de Ciencias Químicas y Biológicas, Facultad de Salud, Universidad Bernardo O`Higgins.<sup>4</sup>Unidad de Anatomía Patológica Hospital Barros Luco-Trudeau.<sup>5</sup>Instituto Oncológico Fundación Arturo López Pérez. Email- [franciisca.g@gmail.com](mailto:franciisca.g@gmail.com))

**99) Deriving evolutionary relationships between the membrane coat proteins based on structural comparisons.**

**Gutierrez F<sup>1</sup>**, Devos D<sup>2</sup>, Melo F<sup>1</sup>, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Centro Andaluz de Biología del Desarrollo CABD Universidad Pablo de Olavide-CSIC)

**101) Inhibition of DRP1-dependent mitochondrial fission prevents hypoxia-induced metabolic shift and cellular proliferation of pulmonary arterial smooth muscle cells (PASM).**

**Hernández-Fuentes C<sup>1</sup>**, Bravo-Sagua R<sup>1</sup>, Norambuena-Soto I<sup>1</sup>, Gomez-Contreras A<sup>1</sup>, Mellado R<sup>2</sup>, Lavandero S<sup>1</sup>, Castro P<sup>2</sup>, Parra V<sup>1</sup>, <sup>1</sup>Advanced Center for Chronic Diseases, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Advanced Center for Chronic Diseases, Facultad de Medicina, Pontificia Universidad Católica de Chile.)

**103) A three-dimensional structural model of resveratrol O-methyltransferase (VvROMT) of Vitis vinifera.**

**Herrera D<sup>1</sup>**, Parra L<sup>2</sup>, Schüller A<sup>3</sup>, <sup>1</sup>Departamento de Ingeniería Química y Bioprocesos, Facultad de Ingeniería, Pontificia Universidad Católica de Chile.<sup>2</sup>Chemical and Bioprocesses Engineering, Institute for Biological and Medical Engineering,, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile.<sup>3</sup>Department of Molecular Genetics and Microbiology, Schools of Biological Sciences, Pontificia Universidad Católica de Chile. (Sponsored by Proyecto INTERDISCIPLINA-VRI-UC-II160020 Beca Conicyt Doctorado 2016)

**105) What is killing the bees? A transcriptomic and proteomic approaches.**

**Himmelreichs J<sup>1,3</sup>**, Haro R<sup>3</sup>, Molina C<sup>2,3</sup>, Manzi C<sup>3</sup>, Vergara J<sup>3</sup>, Tatham M<sup>4</sup>, Hay R<sup>4</sup>, Rojas-Fernandez A<sup>1,4,5</sup>, Silva A<sup>2,3</sup>, <sup>1</sup>Center for Interdisciplinary Studies on the Nervous System (CISNe) Universidad Austral de Chile.<sup>2</sup>Institute of Biochemistry and Microbiology Universidad Austral de Chile.<sup>3</sup>AUSTRAL-omics Universidad Austral de Chile.<sup>4</sup>Center for Gene Regulation and Expression, College of Life Sciences, University of Dundee.<sup>5</sup>Institute of Medicine Universidad Austral de Chile. (Sponsored by Proyecto Fondecyt de Iniciación (#1114068-AXS); Beca Conicyt de Magister Nacional Año 2015 (#22150155-JH, #22151110-RH) y Año 2017 (#22171413-CM))

**107) Iron distribution during seed development in arabidopsis thaliana and brassica napus.**

**Ibeas M<sup>1</sup>**, Grant-Grant S<sup>1</sup>, Roschztardt H<sup>1</sup>, <sup>1</sup>Genética Molecular y Microbiología Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**109) Structural characterization of FcEG1; an endoglucanase enzyme involved in fruit softening of *Fragaria chiloensis*.**

**Jara K<sup>1</sup>**, Valenzuela-Riffo F<sup>1</sup>, Morales-Quintana L<sup>1</sup>,  
<sup>1</sup>Instituto de Ciencias Biológicas. Universidad de Talca.

**111) Generation of Nanobodies: A local weapon against local diseases.**

**Jara R<sup>1,2</sup>**, Pinto T<sup>2</sup>, Cuevas A<sup>2</sup>, Otth C<sup>3</sup>, Müller A<sup>4</sup>, Rojas A<sup>2,5</sup>, <sup>1</sup>Institute of Biochemistry and Microbiology, Science, University Austral of Chile.<sup>2</sup>Center for Interdisciplinary Studies on the Nervous System (CISNe), Medicine, University Austral of Chile.<sup>3</sup>Institute of Clinical Microbiology, Medicine, University Austral of Chile.<sup>4</sup>Institute of Clinical Veterinary Science, Veterinary Science, University Austral of Chile.<sup>5</sup>Institute of Medicine, Medicine, University Austral of Chile. (Sponsored by FIC 16-19 BIP 30470186-0)

**113) Structure-based discovery of novel adamantane-based selective 11beta-HSD1 reductase inhibitors.**

**Lagos C<sup>1,2</sup>**, Vecchiola A<sup>2,3</sup>, Allende F<sup>4</sup>, Fuentes C<sup>2</sup>, Cifuentes M<sup>5</sup>, Fardella C<sup>2,6</sup>, <sup>1</sup>Escuela de Química y Farmacia, Facultad de Ciencia, Universidad San Sebastián.<sup>2</sup>Department of Endocrinology, School of Medicine, Pontificia Universidad Católica de Chile.<sup>3</sup>Millennium Institute on Immunology and Immunotherapy IMII.<sup>4</sup>Department of Clinical Laboratories, School of Medicine, Pontificia Universidad Católica de Chile.<sup>5</sup>Institute of Nutrition and Food Technology (INTA) Universidad de Chile.<sup>6</sup>Millennium Institute on Immunology and Immunotherapy. IMII.

**115) Hsp70 Immunoglobulin binding Protein (BiP) viscoelastic properties determined by nanorheology and its functional characterization.**

**Lagos-Espinoza M I**, Quiroga-Roger D<sup>1</sup>, Casanova-Morales N<sup>1</sup>, Alfaro-Valdés H M<sup>1</sup>, Wilson C A M<sup>1</sup>,  
<sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**117) Participation of Polycomb group proteins and JMJD3 demethylase on the transcriptional regulation of the INK4A/ARF locus and CDKN1A gene in hippocampal culture neurons.**

**Leal S<sup>1</sup>**, Morales M<sup>1</sup>, Vázquez M C<sup>1</sup>, Reyes L<sup>1</sup>, Montecino M<sup>2</sup>, Henríquez B<sup>1</sup>, <sup>1</sup>Facultad de Ciencia Universidad San Sebastián. <sup>2</sup>Centro de Investigaciones Biomédicas Universidad Andrés Bello.

**119) Synergistic effects of Paraburkholderia phytofirmans and Azospirillum brasilense on growth and stress tolerance of Arabidopsis thaliana plants.**

Siebert A<sup>1</sup>, Poupin M J<sup>1</sup>, **Ledger T<sup>1</sup>**, <sup>1</sup>Laboratorio de Bioingeniería, Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez.

**121) Physiological consequences of changes in tRNAGly activity during oxidative stress.**

**Leiva L<sup>1,2</sup>**, Pincheira A<sup>2,3</sup>, Elgamal S<sup>4</sup>, Ibba M<sup>4</sup>, Katz A<sup>2</sup>, <sup>1</sup>Facultad de Ciencias Universidad de Chile. <sup>2</sup>Programa de Biología Celular y Molecular, ICBM, Facultad de Medicina, Universidad De Chile. <sup>3</sup>Facultad de Ciencias Biológicas Universidad de Concepción. <sup>4</sup>Department of Microbiology and The Center for RNA Biology Ohio State University.

**123) Study of the effect of vitamin k analogues on cell viability.**

**Lozada J<sup>1</sup>**, Faúndez M<sup>2</sup>, Zacconi F<sup>1,3,4,5</sup>, Fierro A<sup>1</sup>, Campusano J<sup>6</sup>, <sup>1</sup>Química orgánica, Química, Pontificia Universidad Católica de Chile. <sup>2</sup>Farmacia, Química, Pontificia Universidad Católica de Chile. <sup>3</sup>Centro de Investigación en Nanotecnología y Materiales Avanzados Pontificia Universidad Católica de Chile. <sup>4</sup>Instituto de Ingeniería Biológica y Medicina, Escuela de Ingeniería, Medicina y Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>5</sup>Química Orgánica Pontificia Universidad Católica de Chile. <sup>6</sup>Biología Celular y Molecular, Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by Fondecyt 1150822 - 1150822)

**125) Quantitative proteomic analysis of SUMO modification rearrangements upon starvation: An new role for SUMO.**

Mancilla H<sup>1</sup>, Aguilar M<sup>1</sup>, Tatham M<sup>2</sup>, Tammsalu T<sup>3</sup>, Hay R<sup>2</sup>, Rojas-Fernandez A<sup>1</sup>, <sup>1</sup>Institute of Medicine & Center for Interdisciplinary Studies on the Nervous System (CISNe) Universidad Austral De Chile.<sup>2</sup>Centre for Gene Regulation and Expression, College of Life Sciences University of Dundee.<sup>3</sup>Centre for Gene Regulation and Expression, College of Life Sciences University of Dundee. (Sponsored by Fondecyt Postdoctorado 3170159; Fondecyt 11150532; Ron Hay Lab)

**127) New system of PCR primer design allows identifying circulating microRNA-15b as a Potencial Bio-Marker in Non-Ischemic Heart Failure.**

**Mancilla G**<sup>1,2</sup>, Oyarzún I<sup>1,2</sup>, Artigas R<sup>3</sup>, Wichmann I<sup>3</sup>, Quiroga C<sup>1,2</sup>, Corvalan A<sup>3</sup>, Verdejo H<sup>1,2</sup>, Castro P<sup>1,2</sup>, <sup>1</sup>Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Medicina, Pontificia Universidad Católica de Chile.<sup>2</sup>Biomarcadores Emergentes en Insuficiencia Cardíaca Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile y Pontificia Universidad Católica de Chile..<sup>3</sup>Biomarcadores para la detección temprana del Cancer Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile y Pontificia Universidad Católica de Chile.

**129) Distinguishing coding and non-coding sequences and RNA families assignation through machine learning approaches.**

**Ramos T**<sup>1</sup>, Arias-Carrasco R<sup>3</sup>, Brito D<sup>1</sup>, Batista L<sup>1</sup>, Farias S<sup>2</sup>, Rêgo T<sup>1</sup>, Maracaja-Coutinho V<sup>3</sup>, <sup>1</sup>Centro de Informática Universidade Federal da Paraíba.<sup>2</sup>Departamento de Biología Molecular Universidade Federal da Paraíba.<sup>3</sup>Centro de Genómica y Bioinformática, Facultad de Ciencias, Universidad Mayor. (Sponsored by Fondecyt Iniciación 11161020)

**131) Rlf protein as a epigenetic regulator in the adaptative mechanism of Orestias ascotanensis.**

**Marina R**<sup>1,2</sup>, Nardocci G<sup>1,2</sup>, Gutiérrez R<sup>1</sup>, Orellana A<sup>1</sup>, González M<sup>1</sup>, Maass A<sup>1</sup>, Allende M<sup>1</sup>, Montecino M<sup>1,2</sup>, <sup>1</sup>Center for Genome Regulation FONDAPE.<sup>2</sup>Center for Biomedical Research, Ciencias Biológicas, Universidad Andrés Bello.



**133) Activation of the AT2 receptor blocks Caveolin-1 enhanced melanoma migration and metastasis.**

**Martinez S<sup>1</sup>**, Chiong M<sup>3</sup>, Ocaranza M<sup>2</sup>, Lavandero S<sup>3</sup>, Quest A<sup>3</sup>, <sup>1</sup>Laboratory of Cellular Communications, Faculty of Medicine, Universidad De Chile. <sup>2</sup>Department of Cardiovascular Diseases, Faculty of Medicine, Pontificia Universidad Católica De Chile. <sup>3</sup>Molecular Signal Transduction Laboratory, Faculty of Chemical and Pharmaceutical Sciences, Universidad de Chile. (Sponsored by Acknowledgements: FONDEF D111122 (MPO, MC, SL), FONDAP 15130011 (AFGQ, SL, MPO, MC), Fondecyt 1130250 (AFGQ))

**135) Phycobiliprotein extracted from Gracilaria chilensis as photosensitizers in DSSC.**

**Aballay A<sup>2</sup>**, Cerda B<sup>1</sup>, Sekar R<sup>1</sup>, Manidurai P<sup>1</sup>, Bunster M<sup>2</sup>, Martínez-Oyanedel J<sup>2</sup>, <sup>1</sup>Departamento de Física, Facultad de Ciencias Físicas y Matemáticas, Universidad de Concepción. <sup>2</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.

**137) Study of the subcelular localization of herpud1 during osteoblastogenesis.**

**Memmel M<sup>1,2</sup>**, Díaz J<sup>1,2</sup>, Americo Da Silva L<sup>1,2</sup>, Quiroga C<sup>1,2</sup>, <sup>1</sup>Laboratorio de Señalización Cardiovascular, división de Enfermedades Cardiovasculares, Medicina, Pontificia Universidad Católica de Chile. <sup>2</sup>Advanced Center for Chronic Diseases (ACCDiS) Pontificia Universidad Católica de Chile & Universidad de Chile.

**139) Comparative study of the metabolic activity of the gibberellin oxidases in rhizobacterias isolated from phaseolus vulgaris nodules.**

**Méndez C<sup>1</sup>**, <sup>1</sup>Química, Ciencias, Universidad de Chile.

**Posters Thursday, September 28**

**02) In silico analysis of transcriptional regulation in arabidopsis thaliana over-expressing a pinus radiata d. Don mads10.**

**Méndez T<sup>1</sup>**, Vega A<sup>2</sup>, Gutiérrez R<sup>2</sup>, Herrera R<sup>1</sup>, <sup>1</sup>Instituto Ciencias Biológicas, de Ciencias, Universidad de Talca. <sup>2</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by Thanks To FONDECYT 1150964 For Financial Support. TM Thanks Universidad de Talca For The Ph.D. Studentship)

**04) Angiotensin-(1-9) attenuates ischemia/reperfusion damage in isolated adult rat heart.**

**Mendoza E**<sup>1,2</sup>, Sánchez G<sup>2</sup>, Riquelme J<sup>2</sup>, Vielma A<sup>2</sup>, Ocaranza M<sup>2,3</sup>, Lavandero S<sup>2,4</sup>, <sup>1</sup>Medicina, Facultad de Ciencias de la Salud, Universidad Libre. <sup>2</sup>Advanced Center for Chronic Diseases (ACCDiS), Facultad Ciencias Químicas y Farmacéuticas & Facultad Medicina, Universidad de Chile. <sup>3</sup>División Enfermedades Cardiovasculares, Facultad Medicina, Pontificia Universidad Católica de Chile. <sup>4</sup>Cardiology Division University of Texas Southwestern Medical Center. (Sponsored by EM Hold PhD CONICYT And COLCIENCIAS Fellowship. FONDEF D11I1122 (MPO; SL), FONDAP1 5130011(MPO; SL))

**06) A sequence order-independent clique-matching approach for the comparison of protein binding sites.**

**Miño R**<sup>1</sup>, Ponce C<sup>1</sup>, Schüller A<sup>1</sup>, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**08) Surprising folding features of the metamorphic C-terminal domain of the bacterial virulence factor RfaH.**

**Molina J A**<sup>1</sup>, Medina E<sup>2</sup>, Reyes J<sup>1</sup>, Ramírez-Sarmiento C A<sup>1</sup>, <sup>1</sup>Institute for Biological & Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile. <sup>2</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.

**10) Angiotensin II increases total LC3 levels and induces autophagy in vascular smooth muscle cells.**

**Mondaca-Ruff D**<sup>1</sup>, Sanhueza-Olivares F<sup>1</sup>, Norambuena-Soto I<sup>1</sup>, Núñez-Soto C<sup>1</sup>, Cancino-Arenas N<sup>1</sup>, San Martín A<sup>2</sup>, Lavandero S<sup>1</sup>, Chiong M<sup>1</sup>, <sup>1</sup>ACCDiS, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. <sup>2</sup>Department of Medicine, Division of Cardiology, Emory University.

**12) Epigenetic modifications by Polycomb Group Proteins (PcG) on senescence-associated genes Ink4a/Arf/Ink4b and Cdkn1a in hippocampal neurons.**

**Morales M**<sup>1</sup>, Leal S<sup>1</sup>, Vázquez M C<sup>1</sup>, Reyes L<sup>1</sup>, Montecino M<sup>2</sup>, Henríquez B<sup>1</sup>, <sup>1</sup>Facultad de Ciencia Universidad San Sebastián. <sup>2</sup>Centro de Investigaciones Biomédicas Universidad Andrés Bello.

14) **Synonymous mutations in the 3-phosphoglycerate kinase gene in *Schizosaccharomyces pombe* alter protein expression and cell growth.**

**Moreira-Ramos S<sup>1</sup>**, Orellana O<sup>1</sup>, Arias L<sup>1</sup>,  
<sup>1</sup>Programa de Biología Celular y Molecular, ICBM,  
Facultad de Medicina Norte, Universidad de Chile.

16) **TDP-43 aggregation affects Chaperone Mediated Autophagy (CMA) pathway.**

**Moreno J<sup>1</sup>**, Ormeño F<sup>1</sup>, Riquelme F<sup>1</sup>, Corvalan D<sup>1</sup>,  
Budini M<sup>1</sup>, <sup>1</sup>Research Institute in Dentistry Sciences  
Universidad de Chile.

18) **Host - microbiota interactions: searching for immune response biomarkers in the scallop *Argopecten purpuratus*.**

**Muñoz K<sup>1</sup>**, Rojas C<sup>2</sup>, Yañez C<sup>2</sup>, Schmitt P<sup>1</sup>, <sup>1</sup>Grupo de marcadores inmunológicos, Laboratorio de Genética e Inmunología Molecular, Instituto de Biología, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Grupo de Microbiología Molecular de Suelos, Laboratorio de Microbiología, Instituto de Biología, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso. (Sponsored by Dr. Luis Mercado Vianco)

20) **Identifying miRNAs and their mRNA targets in the altiplano fish *Orestias ascotanensis*.**

**Nardocci G<sup>1,2</sup>**, Marina R<sup>1,2</sup>, Gutiérrez R<sup>2</sup>, Orellana A<sup>2</sup>, González M<sup>2</sup>, Maass A<sup>2</sup>, Allende M<sup>2</sup>, Montecino M<sup>1,2</sup>, <sup>1</sup>Center for Biomedical Research, Faculty of Biological Sciences, Universidad Andrés Bello.<sup>2</sup>Center for Genome Regulation FONDAF.

22) **Atorvastatin inhibits basal autophagy in skeletal muscle cells.**

**Norambuena-Soto I<sup>1</sup>**, Navarro-Márquez M<sup>1</sup>, Cartes-Saavedra B<sup>1</sup>, Sanhueza-Olivares F<sup>1</sup>, Núñez-Soto C<sup>1</sup>, Cancino-Arenas N<sup>1</sup>, Mondaca-Ruff D<sup>1</sup>, Mellado R<sup>2</sup>, Chiong M<sup>1</sup>, <sup>1</sup>ACCDiS, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Departamento de Farmacia, Facultad de Química, Pontificia Universidad Católica de Chile.

**24) Comparative Genomics of *Piscirickettsia salmonis* reveals structural genomic difference within genogroups.**

**Nourdin-Galindo G<sup>1</sup>**, Molina C<sup>1,2</sup>, Sanchez P<sup>1,3</sup>, Carcamo J<sup>1,3</sup>, Figueroa J<sup>1,3</sup>, Maracaja-Coutinho V<sup>4,5,6</sup>, Yañez A<sup>1,2,3</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile. <sup>2</sup>AUSTRAL-omics, Facultad de Ciencias, Universidad Austral de Chile. <sup>3</sup>Interdisciplinary Center for Aquaculture Research (INCAR). <sup>4</sup>Laboratory of Integrative Bioinformatics Instituto Vandique. <sup>5</sup>Research Department Beagle Bioinformatics. <sup>6</sup>Centro de Genómica y Bioinformática, Facultad de Ciencias, Universidad Mayor.

**26) Angiotensin-(1-9) prevents norepinephrine-induced cardiomyocyte hypertrophy by controlling mitochondrial dynamics.**

**Núñez A<sup>1</sup>**, Rivera-Mejias P<sup>1</sup>, Vasquez-Trincado C<sup>1</sup>, Parra V<sup>1,2</sup>, Garrido V<sup>1</sup>, Morales F<sup>1</sup>, Kogan M<sup>1</sup>, Lavandero S<sup>1,2</sup>. (agustin.nunez@ug.uchile.cl), <sup>1</sup>Advanced Center for Chronic Diseases (ACCDiS) & Center for Molecular Studies of the Cell (CEMC), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, University of Chile. <sup>2</sup> Department of Internal Medicine (Cardiology Division), University of Texas Southwestern, Medical Center, Dallas, TX.

**28) Glucagon-like peptide-I inhibits basal and induced autophagy via protein kinase A in vascular smooth muscle cells.**

**Núñez-Soto C<sup>1</sup>**, Norambuena-Soto I<sup>1</sup>, Sanhueza-Olivares F<sup>1</sup>, Mondaca-Ruff D<sup>1</sup>, Chiong M<sup>1</sup>, <sup>1</sup>ACCDiS, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**30) Heterogeneous Nuclear Ribonucleoprotein K (hnRNPK) acts as an IRES trans-acting factors (ITAF) for the HIV-1, HTLV-1 and MMTV IRESs.**

**Olgún V<sup>1</sup>**, Contreras N<sup>1</sup>, López-Lastra M<sup>1</sup>, <sup>1</sup>Departamento de Enfermedades Infecciosas e Inmunología Pediátrica, Ciencias Médicas, Pontificia Universidad Católica de Chile. (Sponsored by Work Supported By FONDECYT 1170590, P09/016-F de la Iniciativa Científica Milenio del Ministerio de Economía, Fomento y Turismo. VO Is A CONICYT Doctoral Fellow.)

**32) Computational study of the adsorption of some residues and small motifs from IgG on mica surface using molecular dynamics.**

**Olguín-Orellana**<sup>1,2</sup>, G.; Alzate-Morales J.<sup>2</sup>; Pantano<sup>3</sup>, S.; Mariscal<sup>4</sup>, M.; Barrera<sup>1</sup>, N. <sup>1</sup>Department of Physiology, Pontificia Universidad Católica de Chile. <sup>2</sup>Department of Bioinformatics, Universidad de Talca. <sup>3</sup>Instituto Pasteur de Montevideo. <sup>4</sup>Facultad de Ciencias Químicas, Universidad Nacional de Córdoba.

**34) Differential Expression of Transcription Factors involved in Epithelial to Mesenchymal Transition in Relation to Pathways Activated by TGF- $\beta$  in Breast Cancer Tumors.**

**Ortega-Hernandez V**<sup>1</sup>, Fernandez W<sup>2</sup>, Pilar C<sup>3</sup>, <sup>1</sup>Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. <sup>2</sup>Anatomía Patológica Hospital San Borja Arriarán. <sup>3</sup>Biología Celular y Molecular, Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by CONICYT 63140118)

**36) Galectin-3 promotes a paracrine communication between fibroblasts and cardiomyocytes.**

Bustamante M<sup>1,2,3</sup>, **Oyarzún I**<sup>2,3</sup>, Mancilla G<sup>2,3</sup>, Verdejo H E<sup>2,3</sup>, Quiroga C<sup>2,3</sup>, Castro P<sup>2,3</sup>, <sup>1</sup>Laboratorio de Transducción de Señales Moleculares, Facultad de Cs. Químicas y Farmacéuticas, Universidad de Chile. <sup>2</sup>Advanced Center for Chronic Diseases (ACCDiS) Pontificia Universidad Católica de Chile y Universidad de Chile. <sup>3</sup>Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile.

**38) Synthesis of Structured Triacylglycerides with Thermomyces lanuginosus lipase in hexane and supercritical carbon dioxide (SCCO<sub>2</sub>): comparison of both methods.**

**Pando M**<sup>1</sup>, Romero N<sup>2</sup>, Valenzuela M<sup>3</sup>, Rodriguez A<sup>2</sup>, <sup>1</sup>Departamento de Bioquímica y Biología Molecular, Ciencias Químicas y Farmacéuticas, Universidad de Chile. <sup>2</sup>Química de los Alimentos, Ciencias Químicas y Farmacéuticas, Universidad de Chile. <sup>3</sup>Bioquímica y Biología Molecular, Ciencias Químicas y farmacéuticas, Universidad de Chile. (Sponsored by FONDECYT 1120627.)

**40) Role of polycystin-1 in heart failure development and BIN1 regulation.**

Gálvez M D L Á<sup>1</sup>, Córdova-Casanova A<sup>1</sup>, Aránguiz P<sup>1,2</sup>, Pedrozo Z<sup>1,2</sup>, <sup>1</sup>Programa de Fisiología y Biofísica, Facultad de Medicina, Universidad de Chile.<sup>2</sup>Fondap ACCDiS, Facultad de Ciencias Químicas y Farmacéuticas y Facultad de Medicina, Universidad de Chile.

**42) microRNAs targeting EMT Transcription Factors in breast cancer.**

**Pérez-Moreno E<sup>1</sup>**, Valarezo G<sup>1</sup>, Fernández W<sup>2</sup>, Carvallo P<sup>1</sup>, <sup>1</sup>Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Departamento de Anatomía Patológica Hospital San Borja Arriarán. (Sponsored by CONICYT 21151345)

**44) Distribución de los polimorfismos RS1801131 Y RS1801133 del gen de metilentetrahidrofolato reductasa (mthrf) en individuos de ambos sexo de la región de Antofagasta.**

**Placencia P<sup>1</sup>**, Gálvez A<sup>1</sup>, Escobar J<sup>1</sup>, <sup>1</sup>Departamento Biomédico, Facultad de Ciencias de la Salud , Universidad de Antofagasta.

**46) Study of the forces involved in the conformational changes associated to the ligand binding and catalysis in Adenylate kinase.**

**Quiroga-Roger D<sup>1</sup>**, Vöhringer-Martinez E<sup>2</sup>, Wilson C A M<sup>1</sup>, <sup>1</sup>Bioquímica, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Departamento de Físico Química, Facultad de Ciencias Químicas, Universidad de Concepción.

**48) Copper complex induces apoptosis in gastric cancer ags cells.**

**Ramírez S<sup>1</sup>**, Pizarro S<sup>2</sup>, Wilson S<sup>2</sup>, Gallardo M<sup>2</sup>, Gajardo F<sup>2</sup>, Delgadillo A<sup>2</sup>, Bernal G<sup>2</sup>, <sup>1</sup>Departamento de Ciencias Biomédicas, Facultad de Medicina, Universidad Católica del Norte.<sup>2</sup>Departamento de Química, Facultad de Ciencias, Universidad de La Serena.

**50) Evaluation of the participation of Polycystin-1 in the effects of Angiotensin- (1-9) on the death of cardiomyocytes in ischemia / reperfusion in an in vitro mode.**

**Ramírez A<sup>1</sup>**, <sup>1</sup>Farmacología, Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**52) Linking the fold-switching behavior and the transcriptional activity of the metamorphic bacterial virulence factor RfaH.**

**Reyes J<sup>1</sup>**, Komives E<sup>2</sup>, Artsimovitch I<sup>3</sup>, Ramirez-Sarmiento C<sup>1</sup>, <sup>1</sup>Institute for Biological and Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile.<sup>2</sup>Department of Chemistry & Biochemistry University of California .<sup>3</sup>Department of Microbiology Ohio State University.

**54) Characterization of Mn<sup>2+</sup> binding site in agmatinase like protein (ALP)**

**Reyes M B<sup>1</sup>**, Navarrete C<sup>1</sup>, Mardones E<sup>1,2</sup>, García D<sup>1,2</sup>, Mella K<sup>1,2</sup>, Arriagada L<sup>1,2</sup>, Martínez J<sup>3,4</sup>, Carvajal N<sup>1,2</sup>, Uribe E A<sup>1,2</sup>, <sup>1</sup>Laboratorio Enzimología, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.<sup>2</sup>Laboratorio Enzimología, Departamento. Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.<sup>3</sup>Laboratorio Biofísica Molecular, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.<sup>4</sup>Laboratorio Biofísica Molecular, Departamento. Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción.

**56) Microsecond Molecular Dynamics Simulations of Bipartite HTH Transcription Factors and duplex DNA suggest that both helices are required for DNA binding.**

**Ribeiro J<sup>1</sup>**, Schüller A<sup>1</sup>, Melo F<sup>1</sup>, <sup>1</sup>Genética Molecular y Microbiología Pontificia Universidad Católica de Chile. (Sponsored by FONDECYT 1141172, CONICYT PIA ACT1408, "Powered@NLHPC: This Research Was Partially Supported By The Supercomputing Infrastructure Of The NLHPC (ECM-02)")

**58) Differential chromatin association of CoREST proteins.**

**Rivera C<sup>1</sup>**, Noches V<sup>2</sup>, Andrés M<sup>2</sup>, <sup>1</sup>Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by This Work Was Supported By Regular FONDECYT Grant Number 1150200 (to MEA), FONDECYT Postdoctoral Grant Number 3160308 (to VN), And CONICYT Fellowship For PhD. Students 21161044 (to CR).)

**60) Purification of recombinant amyloid- $\beta$  peptide and aggregation kinetic analysis by global fitting.**

**Rivera R<sup>1</sup>**, Tapia A<sup>1</sup>, Kogan M<sup>2</sup>, Baez M<sup>1</sup>,  
<sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Departamento de Nanotoxicología, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**62) LabNettings: scientific collaborative consumption network.**

**Rodríguez N<sup>1</sup>**, Salazar P<sup>1</sup>, <sup>1</sup>Bioquímica y Biología Celular, Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**64) Development and characterization of the first lithiasis-associated gallbladder cancer model in mice.**

**Rosa L<sup>1,4,6</sup>**, Lobos-González L<sup>2,3</sup>, Romero D<sup>4,5,6</sup>, Gómez N<sup>5</sup>, Muñoz-Durango N<sup>7,8</sup>, De La Jara N<sup>5</sup>, Carrasco M<sup>3</sup>, Guevara F<sup>3,9</sup>, García P<sup>4,5,6</sup>, Kalergis A<sup>7,8,10</sup>, Miquel J F<sup>11</sup>, Roa J C<sup>4,5,6</sup>, <sup>1</sup>Faculty of Agricultural Sciences and Forestry Universidad de La Frontera.<sup>2</sup>ICBM-School of Medicine Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile.<sup>3</sup>Fundación Ciencia & Vida Fundación Ciencia & Vida.<sup>4</sup>School of Medicine Advanced Center for Chronic Diseases (ACCDiS), Pontificia Universidad Católica de Chile.<sup>5</sup>Department of Pathology, School of Medicine, Pontificia Universidad Católica de Chile.<sup>6</sup>School of Medicine UC-Center for Investigational Oncology (CITO UC), Pontificia Universidad Católica de Chile.<sup>7</sup>Millennium Institute on Immunology and Immunotherapy Millennium Institute on Immunology and Immunotherapy, Pontificia Universidad Católica de Chile.<sup>8</sup>Department of Molecular Genetic and Microbiology, School of Biological Sciences, Pontificia Universidad Católica de Chile.<sup>9</sup>School of Biological Sciences Universidad Andrés Bello.<sup>10</sup>Department of Endocrinology, School of Medicine, Pontificia Universidad Católica de Chile.<sup>11</sup>Department of Gastroenterology, School of Medicine, Pontificia Universidad Católica de Chile.

**66) Limits of in silico target prediction of small molecules by chemical similarity.**

**Ruiz M<sup>1</sup>**, Cifuentes J<sup>1</sup>, Schüller A<sup>1</sup>, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.



**68) Physiological evidence that *Piscirickettsia salmonis* produce siderophore and use iron from different sources.**

**Ruiz P<sup>1,4</sup>**, Calquin P<sup>1,3</sup>, Oliver C<sup>1,2</sup>, Sanchéz P<sup>1,3</sup>, Haro R<sup>4</sup>, Oliva H<sup>5</sup>, Vargas-Chacoff L<sup>6,7</sup>, Avendaño-Herrera R<sup>1,2,8</sup>, Yáñez A<sup>1,3</sup>,<sup>1</sup>INCAR Interdisciplinary Center for Aquaculture Research .<sup>2</sup>Laboratorio de Patología de Organismos Acuáticos y Biotecnología Acuícola Universidad Andrés Bello.<sup>3</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.<sup>4</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.<sup>5</sup>Camino a Melipilla, Cerrillos Veterquímica S.A..<sup>6</sup>Centro Fondap de Investigación de Altas Latitudes (IDEAL) Universidad Austral de Chile.<sup>7</sup>Instituto de Ciencias Marinas y Limnológicas Universidad Austral de Chile.<sup>8</sup>Centro de Investigación Marina Quintay (CIMARQ) Universidad Andrés Bello.

**70) Fast and easy labeling of extracellular vesicles with a lipophilic fluorophore for visualization and in vivo tracking.**

**Salas-Huenuleo E<sup>1,4</sup>**, Polakovicova I<sup>2,3</sup>, Lobos-González L<sup>4,5</sup>, Carrasco-Véliz N<sup>2,6</sup>, Kogan M<sup>1,4</sup>,<sup>1</sup>Laboratory of Nanobiotechnology and Nanotoxicology, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Advanced Center for Chronic Diseases Pontificia Universidad Católica de Chile.<sup>3</sup>Laboratory of Oncology, Faculty of Medicine, Pontificia Universidad Católica De Chile.<sup>4</sup>Advanced Center for Chronic Disease Universidad de Chile.<sup>5</sup>Fundación Ciencia y Vida Andes Biotechnologies.<sup>6</sup>Insititute of Chemistry Pontificia Universidad Católica de Valparaíso.

**72) Effect of enzymatic elimination of n-glycosylations on the structure and immunogenic properties of mollusk hemocyanins.**

**Salazar M<sup>1</sup>**, Jiménez J<sup>1</sup>, Villar J<sup>1</sup>, Manubens A<sup>2</sup>, Becker M I<sup>1,2</sup>,<sup>1</sup>Laboratorio de Inmunología Fundación Ciencia y Tecnología para el Desarrollo (FUCITED).<sup>2</sup>Investigación y Desarrollo BIOSONDA S.A.)

**74) Adenosine deaminase decreases chemoresistance in glioblastoma.**

**Salazar F<sup>1</sup>**, Niechi I<sup>1</sup>, Rocha J D<sup>1</sup>, Delgado J<sup>1</sup>, Quezada C<sup>1</sup>, San Martín R<sup>1</sup>,<sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile. (Sponsored by Funded By Fondecyt 1160777)

**76) PDGF-BB decreases mitochondrial function and induces mitophagy during VSMC phenotypic switch.**

**Sanhueza-Olivares F<sup>1</sup>**, Norambuena-Soto I<sup>1</sup>, Núñez-Soto C<sup>1</sup>, Mondaca-Ruff D<sup>1</sup>, Cancino-Arenas N<sup>1</sup>, San Martín A<sup>2</sup>, Chiong M<sup>1</sup>, <sup>1</sup>ACCDiS. Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Department of Medicine, Division of Cardiology, Emory University.

**78) Separation and characterization of asparagine deamidation and aspartate isomerization using capillary electrophoresis-mass spectrometry (cesi-ms)**

**Sarg B<sup>1</sup>**, Lindner H<sup>1</sup>, <sup>1</sup>Biocenter, Division of Clinical Biochemistry, Medical University Innsbruck.

**80) Autoantibodies against fructose-1,6-bisphosphatase isolated from serum of autistic children increase intracellular ca<sup>2+</sup> and induce ca<sup>2+</sup> waves in primary cultures of astrocytes.**

**Schwarz K<sup>1</sup>**, Velásquez Z<sup>1</sup>, González-Aguilar A<sup>1</sup>, Asenjo J<sup>1</sup>, Francos R<sup>2</sup>, Cuchacovich M<sup>3</sup>, Concha I<sup>1</sup>, González-Gronow M<sup>4</sup>, Slebe J<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile.<sup>2</sup>Departamento de Psiquiatría Asociación Chilena de Padres de niños Autistas (AUSPUT).<sup>3</sup>Reumatología Clínica Meds.<sup>4</sup>Ciencias Biomédicas, Medicina, Universidad Católica del Norte.

**82) Ancient DNA extraction from herbarium and bark-cloth samples to understand human dispersal of *Broussonetia papyrifera* across the Pacific.**

Peña-Ahumada B<sup>3</sup>, Payacan C<sup>3</sup>, Matisoo-Smith E<sup>1</sup>, Moncada X<sup>2</sup>, **Seelenfreund D<sup>3</sup>**, Seelenfreund A<sup>4</sup>, <sup>1</sup>Department of Anatomy University of Otago.<sup>2</sup>Centro de Estudios Avanzados en Zonas Áridas EAZA.<sup>3</sup>Departamento de Bioquímica y Biología Molecular, Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>4</sup>Departamento de Antropología Universidad Academia de Humanismo Cristiano.

**84) Evaluation of potential biomarkers of diabetic nephropathy in healthy and diabetic patients.**

**Silva P<sup>1,2</sup>**, Llanquino J<sup>2</sup>, Mauricio H<sup>3</sup>, Montecinos M<sup>2</sup>, Yañez A<sup>2</sup>, <sup>1</sup>Escuela de Tecnología Médica Universidad Santo Tomás.<sup>2</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile. <sup>3</sup>AUSTRAL-Omics, Facultad de Ciencias, Universidad Austral de Chile.

**86) DNA damage and repair, DNA base excision repair gene variability and risk of recurrent depression disorder.**

**Sliwinski T<sup>1</sup>**, Czarny P<sup>2</sup>, Wigner P<sup>1</sup>, Sliwinska A<sup>3</sup>, Toma M<sup>1</sup>, Galecki P<sup>4</sup>, Szemraj J<sup>2</sup>, <sup>1</sup>Molecular Genetics University of Lodz.<sup>2</sup>Department of Medical Biochemistry Medical University of Lodz.<sup>3</sup>Department of Nucleic Acid Biochemistry Medical University of Lodz.<sup>4</sup>Department of Adult Psychiatry Medical University of Lodz. (Sponsored by This Work Was Supported By The Polish National Science Centre (grant No. UMO-2015/19/BN7/00410).)

**88) Allele diversity in anthocyanins synthesis genes in accessions of native Solanum tuberosum subsp. tuberosum of The Potato Genebank at the Universidad Austral de Chile.**

**Solís J L<sup>1</sup>**, Canales J<sup>2</sup>, Muth J<sup>3</sup>, Ricardo R<sup>1</sup>, Anita B<sup>1</sup>, <sup>1</sup>Instituto de Producción y Sanidad Vegetal, Facultad de Ciencias Agrarias, Universidad Austral de Chile.<sup>2</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile.<sup>3</sup>Institute for Molecular Biology and Applied Ecology IME Fraunhofer.

**90) Blockade of adenosine a2b receptor in a diabetic nephropathy animal model affects leukocyte transendothelial migration molecules.**

**Suárez R<sup>1</sup>**, García J<sup>1</sup>, Oyarzún C<sup>1</sup>, San Martín R<sup>1</sup>, <sup>1</sup>Biochemistry and Microbiology Institute, Science, Universidad Austral de Chile.

**92) Expression of Fructose-1,6-bisphosphatase in the differentiation process of spermatocytes into spermatids with different gluconeogenic substrates.**

**Tapia C<sup>1</sup>**, Velásquez G<sup>1</sup>, Asenjo J<sup>1</sup>, Concha I<sup>1</sup>, Slebe J<sup>1</sup>, <sup>1</sup>Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile.

**94) Study of circulating microRNAs in heart failure with preserved ejection fraction (HFpEF)**

**Tapia A<sup>1,2</sup>**, Mancilla G<sup>1,2</sup>, Quiroga C<sup>1,2</sup>, Verdejo H<sup>1,2</sup>, <sup>1</sup>Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Medicina, Pontificia Universidad Católica de Chile.<sup>2</sup>Advanced Center for Chronic Diseases Pontificia Universidad Católica de Chile & Universidad de Chile.)

**96) Effect of gold nanoparticles on amyloid- $\beta$  peptide aggregation.**

**Tapia A<sup>1</sup>**, Rivera R<sup>2</sup>, Gallardo-Toledo E<sup>3</sup>, Baez M<sup>2</sup>, Kogan M<sup>3</sup>, <sup>1</sup>Bioquímica y Biología Molecular, Química Farmacológica y Toxicológica, Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>2</sup>Bioquímica y Biología Molecular, Ciencias Químicas y Farmacéuticas, Universidad de Chile.<sup>3</sup>Química Farmacológica y Toxicológica, Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**98) Cholesterol effect on infection mechanism of Infectious Salmon Anaemia Virus.**

**Tarnok M<sup>1</sup>**, Marshall S<sup>2</sup>, Aguilar L<sup>1</sup>, <sup>1</sup>Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.<sup>2</sup>Instituto de Biología, Facultad de Ciencias, Pontificia Universidad Católica de Valparaíso.

**100) Dual-specificity Tyrosine Phosphorylation-regulated Kinase 1A (Dyrk1A) phosphorylates and inactivates Glycogen Synthase Muscular Isoform (MGS) in HeLa cells.**

**Torres D<sup>1</sup>**, Vander Stelt K<sup>1</sup>, Cereceda K<sup>1</sup>, Slebe J<sup>1</sup>, Concha I<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile. (Sponsored by FONDECYT 1141033)

**102) Blockage of A3 Adenosine Receptor decrease the expression of cell migration/ invasion-related genes in Glioblastoma Stem-like Cells under Hypoxia.**

**Torres Á<sup>1</sup>**, Erices J<sup>1</sup>, Ehrenfeld P<sup>2</sup>, Spichiger C<sup>2</sup>, Quezada C<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile.<sup>2</sup>Instituto de Anatomía, Histología y Patología Universidad Austral de Chile.

**104) Differential expresion of megalin receptor in breast cancer tumors according to the tumoral subtype.**

**Valarezo G<sup>1</sup>**, Ortega-Hernández V<sup>1</sup>, Escobar G<sup>1</sup>, Marzolo M<sup>1</sup>, Carvallo P<sup>1</sup>, <sup>1</sup>Biología Celular y Molecular, Ciencias Biológicas, Pontificia Universidad Católica de Chile.

**106) Expression analysis of parvovirus derived endogenous viral element in *Cavia porcellus*.**

**Valencia I<sup>1,3</sup>**, Gifford R<sup>2</sup>, Arriagada G<sup>1,3</sup>,  
<sup>1</sup>Departamento de Ciencias Biológicas Universidad Andrés Bello.<sup>2</sup>Centre for Virus Research Glasgow University.<sup>3</sup>Núcleo Milenio Biología de Enfermedades Neuropsiquiátricas NuMIND.

**108) Melatonin modulates the clock gene expression *bmal1*, *per1-2* and *wee-1* in culture of human placenta.**

Venegas C<sup>1</sup>, Muñoz K<sup>1</sup>, Muñoz S<sup>1</sup>, Lagunas C<sup>1</sup>,  
**Valenzuela F<sup>1</sup>**, <sup>1</sup>Ciencias Básicas, Ciencias, Universidad del Bío-Bío. (Sponsored by CONICYT-79112027 (Chile), Beca Investigación Postgrado UBB-2015 And Colegio Concepción de Chillán.)

**110) Capillary electrophoresis for determination of nucleotides.**

**Valenzuela M<sup>1</sup>**, Garcia L<sup>1</sup>, Wilson C A M<sup>1</sup>, Puente J<sup>1</sup>,  
<sup>1</sup>Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile.

**112) Neuroendocrine effects of endocrine disruptors on gene expression in *Cyprinus carpio*.**

**Valenzuela G<sup>1</sup>**, Henriquez N<sup>1</sup>, Vega M<sup>1</sup>, Mupparthi S<sup>1</sup>, Kausel G<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral de Chile.

**114) In silico analysis of two alpha expansin proteins involved in cell wall disassembly during ripening of two related fruit species.**

**Valenzuela-Riffo F<sup>1</sup>**, Ramos P<sup>1</sup>, Morales-Quintana L<sup>1</sup>, <sup>1</sup>Instituto de Ciencias Biológicas Universidad de Talca.

**116) Development of photolyase activity method based on ion pair reagent coupled to RP-UHPLC-MS/MS.**

**Vallejos A<sup>1,2</sup>**, Riquelme M<sup>1</sup>, Vergara C<sup>3</sup>, Rosas A<sup>1</sup>, <sup>1</sup>Department of Soil and Natural Resources, Agronomy Faculty, University of Concepcion.<sup>2</sup>Analisis Instrumental Department, Pharmacy Faculty, Universidad de Concepción.<sup>3</sup>Department of Instrumental Analysis, Pharmacy Faculty, University of Concepcion. (Sponsored by Bioprocess Laboratory (Agronomy Faculty, University Of Concepcion), Instrumental Analysis Laboratory (Pharmacy Faculty, University Of Concepcion) And Conicyt Scholarship (21161711))

118) **Steady-State kinetic study of substrate inhibition and product activation in the ADP-dependent phosphofructokinase/ glucokinase from *Methanococcus maripaludis*.**  
**Vallejos G<sup>1</sup>**, Kaufman S<sup>2</sup>, González-Lebrero R<sup>2</sup>, Castro-Fernandez V<sup>1</sup>, Guixé V<sup>1</sup>, <sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.<sup>2</sup>Departamento de Química Biológica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires.

120) **Role of DYRK1A and DYRK1B in the regulation of Muscle Glycogen Synthase in cell components of seminiferous epithelium.**  
**Vander Stelt K<sup>1</sup>**, Arató K<sup>2</sup>, Slebe J<sup>1</sup>, De La Luna S<sup>2</sup>, Concha I<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral de Chile.<sup>2</sup>Gene Regulation, Stem Cells and Cancer Programme Centre for Genomic Regulation. (Sponsored by FONDECYT 1141033 (JCS), DID UACH, Beca CONICYT KV, MECESUP AUS 1203 KV)

122) **Generation of DNA double strand breaks in hematopoietic cells: Role of  $\beta$ -catenin and Topoisomerase II $\alpha$**   
**Vargas M<sup>1</sup>**, Ugarte G<sup>1</sup>, Verdugo D<sup>1</sup>, Bustos B<sup>1</sup>, De Ferrari G<sup>1</sup>, <sup>1</sup>Centro de Investigaciones Biomédicas, Facultad de Ciencias Biológicas y Facultad de Medicina, Universidad Andrés Bello.

124) **Evaluation of the importance of putative mitochondrial iron transporters in reproductive development of *Arabidopsis thaliana*.**  
**Vargas-Pérez J<sup>1</sup>**, Gómez M I<sup>1</sup>, Jordana X<sup>1</sup>, Roschztardt H<sup>2</sup>, <sup>1</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile.<sup>2</sup>Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by FONDECYT 1160334 And 1141197 From The Chilean Government, Millennium Nucleus For Plant Synthetic Biology And Systems Biology NC130030 And INTER 6809 VRI PUC-Chile Funded This Work. J. Vargas-Pérez Was Supported By CONICYT Fellowship For National Doctorate)

126) **Expression and purification of glut1 for biophysical characterization.**  
**Vargas-Uribe M<sup>1</sup>**, Ojeda L<sup>1</sup>, Sepulveda F<sup>1</sup>, Reyes A<sup>1</sup>, <sup>1</sup>Instituto de Bioquímica y Microbiología Universidad Austral de Chile.

**128) Identification of tenascin C (TNC) as a target gene of Wnt/ $\beta$ -catenin signaling in hematopoietic cells.**

**Verdugo D<sup>1</sup>**, Bustos B<sup>1</sup>, Vargas M<sup>1</sup>, Ugarte G<sup>1</sup>, De Ferrari G<sup>1</sup>, <sup>1</sup>Centro de Investigaciones Biomédicas, Facultad de Ciencias Biológicas y Facultad de Medicina, Universidad Andrés Bello.

**130) Profibrotic response of the pathway oxldl/lox-1 in cardiac myofibroblast.**

**Villa M<sup>1</sup>**, Parra E<sup>1</sup>, Díaz G<sup>1</sup>, Quest A<sup>2</sup>, García N L<sup>1</sup>, <sup>1</sup>Biochemistry, Faculty of Chemical and Pharmaceutical Sciences, Advanced Center for Chronic Diseases (ACCDiS), University of Chile.<sup>2</sup>ICBM, Faculty of Medicine, Advanced Center for Chronic Diseases (ACCDiS), University of Chile.

**132) Evolutionary constraints determine three-dimensional domain swapping in the DNA-binding domain of FoxP transcription factors.**


**Villalobos P<sup>1</sup>**, Medina E<sup>1</sup>, Ramírez-Sarmiento C<sup>2</sup>, Babul J<sup>1</sup>, <sup>1</sup>Departamento de Biología, Facultad de Ciencias, Universidad de Chile.<sup>2</sup>Institute for Biological and Medical Engineering Pontificia Universidad Católica de Chile.

**134) Transcriptome analysis of coding- and noncoding RNAs from the Stomach Adenocarcinoma TCGA study reveals potential ethnogeographic component in tumor-adjacent tissues.**

**Wichmann I<sup>1,2</sup>**, Merino G<sup>3</sup>, Fernández E<sup>3,4</sup>, Corvalan A<sup>1,2,5</sup>, <sup>1</sup>Core BioData, FONDAP ACCDiS, Pontificia Universidad Católica de Chile.<sup>2</sup>Departamento de Hematología-Oncología, Facultad de Medicina, Pontificia Universidad Católica de Chile.<sup>3</sup>Facultad de Ingeniería Universidad Católica de Córdoba.<sup>4</sup>Facultad de Ciencias Exactas Universidad Católica de Córdoba.<sup>5</sup>Departamento de Hematología-Oncología, FONDAP ACCDiS, Pontificia Universidad Católica de Chile.

**136) Effect of IL-4/13A on the phagocytic capacity of salmonid leukocytes.**

**Wong V<sup>1</sup>**, <sup>1</sup>Biología, Química y Biología, Universidad de Santiago de Chile.



138) **Molecular Diagnostic for CagA in Stool Samples Positive for Helicobacter pylori.**  
**Wormwood T<sup>1</sup>**, Guajardo A<sup>1</sup>, Bresky G<sup>1</sup>, Madariaga J<sup>1,2</sup>, Haberle S<sup>3</sup>, Bernal G<sup>1</sup>, <sup>1</sup>Ciencias Biomédicas, Medicina, Universidad Católica del Norte.<sup>2</sup>Unidad de Anatomía Patológica Hospital San Pablo.<sup>3</sup>Clinica Universidad Católica del Norte. (Sponsored by Funded By CORFO 12IDL2-16202)

140) **Transcriptomic modulation of long non-coding RNAs associated with stress response and growth in the skeletal muscle of the fine flounder (Paralichthys adspersus)**  
**Farlora R<sup>1</sup>**, Zuloaga R<sup>2</sup>, Donoso J<sup>2</sup>, Nuñez-Acuña G<sup>3</sup>, Valenzuela-Miranda D<sup>3</sup>, Gallardo-Escarate C<sup>3</sup>, Aedo J<sup>2</sup>, Meneses C<sup>4</sup>, Valdés J<sup>2,5</sup>, Molina A<sup>2,5</sup>, <sup>1</sup>Laboratorio de Biotecnología Acuática y Genómica Reproductiva, Instituto de Biología, Facultad de Ciencias, Universidad de Valparaíso.<sup>2</sup>Lab. de Biotecnología Molecular. Interdisciplinary Center for Aquaculture Research (INCAR), Ciencias Biológicas, Universidad Andres Bello.<sup>3</sup>Laboratorio de Biotecnología y Genómica Acuícola, Interdisciplinary Center for Aquaculture Research (INCAR) Universidad de Concepción.<sup>4</sup>Centro de Biotecnología Vegetal, Ciencias Biológicas, Universidad Andrés Bello.<sup>5</sup>Centro de Investigación Marina Quintay (CIMARQ), Ecología y Recursos Naturales, Universidad Andres Bello.



Tuesday 26		Wednesday 27		Thursday 28		Friday 29	
10:30 - 13:00	Registration	09:00 - 10:45	Oral Session 3 Symposium 3	09:00 - 10:45	Oral Session 4 Oral Session 5	09:00 - 10:00	Awards
13:00 - 14:30	Lunch	10:45 - 11:15	Coffee - Break	10:45 - 11:15	Coffee - Break	10:00 - 12:00	Symposium 8 Symposium 9
14:45 - 16:30	Oral Session 1 Oral Session 2	11:15 - 13:15	Symposium 4 Symposium 5	11:15 - 13:15	Symposium 6 Symposium 7	12:00 - 13:00	Closing Lecture Alberto R. Kornblitt
16:30 - 17:00	Coffee - Break	13:15 - 15:00	Lunch	13:15 - 15:00	Lunch		
17:00 - 19:00	Symposium 1 Symposium 2	15:30 - 17:15	New Members Session 1 New Members Session 2	15:00 - 16:00	SBBM Members Meeting		
19:15 - 19:30	Opening Ceremony			16:00 - 17:15	Severo Ochoa Lecture: Oscar Llorca		
19:30 - 20:45	Opening Lecture Félix Rey	17:15 - 19:15	Poster Session I and Coffee Break	17:15 - 19:15	Poster Session II and Coffee Break		
20:45 - 21:00	DataBlitz Session 1	19:30 - 20:45	Oswaldo Cori Lecture: Octavio Monasterio	19:30 - 20:45	PABMB Lecture: José Sotelo		
21:00 - 22:30	Welcome Cocktail	20:45 - 21:00	DataBlitz Session 2	21:30 - 02:00	Gala Dinner and Party		



## NOTES

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