



XXXVIII Reunión Anual **Sociedad de Bioquímica y** **Biología Molecular de Chile**

22-25 DE SEPTIEMBRE DE 2015

HOTEL DREAMS, LOS VOLCANES * PUERTO VARAS

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**XXXVIII Reunión Anual de la
Sociedad de Bioquímica y
Biología Molecular de Chile**

September 22-25, 2015

Puerto Varas, Chile



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PROGRAM

Tuesday, September 22

X🕒 10:30-13:00 Registration

X🕒 13:00-14:30 Lunch Time

X🕒 14:45-16:30 Oral Sessions 1 and 2

Oral Session 1 - Molecular Cell Biology

Chair: Roxana Pincheira

Co-Chair: Clara Quiroga

X🕒 14:45-15:00 - Riquelme O.

Participation of cathepsin L in apoptosis of colorectal cancer cell lines subjected to metabolic stress.

Riquelme, Orlando¹., Bustamante, Sergio¹., Torrejón, Marcela¹., Gutiérrez, Soraya¹., Castro, Ariel¹., Morin, Violeta¹., ¹ Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. (Sponsored by VRID-Enlace 214.037.018-1.0, Fondecyt 1120923.)

X🕒 15:00-15:15 - Araya I.

RNP complexes regulating higher order structure of chromatin.

Araya, Ingrid¹., Schubert, Thomas¹., Laengst, Gernot¹., ¹ Biochemistry III, Biology and pre-clinical medicine, University of Regensburg. (Sponsored by SFB 960 / DFG (Deutsche Forschungsgemeinschaft).

X🕒 15:15-15:30 - Burgos F

Characterization of thermodynamic and kinetic parameters of $\alpha\beta 3$ integrin and Syndecan-4 interaction with Thy-1 using a single molecule approach.

Burgos-Bravo, F1,2., Wilson, C.A.M3., Figueroa, N4., Quest, A.F.G.1,5., Leyton, L1,2,5., 1Laboratory of Cellular Communication, Facultad de Medicina, Universidad De Chile. 2Biomedical Neuroscience Institute (BNI) Universidad De Chile. 3Biochemistry and Molecular Biology, Faculty of Chemistry and Pharmaceutical Sciences, Universidad De Chile. 4Department of Physics, Faculty of Physics, Pontificia Universidad Católica De Chile. 5Advanced Center for Chronic Diseases (ACCDiS) Universidad De Chile. (Sponsored by Acknowledgements: FONDECYT 1110149 And 1150744 (LL), 1130250 (AFGQ); BNI P09-015-F (LL); ACT1111 (AFGQ); FONDAF 15130011 (AFGQ); FONDECYT 11130263 (CAMW); CONICYT Student Fellowship (FB).)

X🕒 15:30-15:45 - Avalos Y

Inhibition of autophagy and mitochondrial dysfunction in cancer cells under starvation conditions are linked to the tumor suppressor role of Caveolin-1.

Ávalos, Yennifer1., Castillo, Jimena1., Bravo, Jimena1., Bravo-Sagua, Roberto2., Lavandero, Sergio2., Quest, Andrew1., 1Laboratory of Cellular Communication, Center for Molecular Studies of the Cell (CEMC), Advanced Center for Chronic Diseases (ACCDiS), Cell and Molecular Biology Program, Biomedical Sciences Institute (ICBM), Facultad de Medicina, Universidad De Chile. 2Laboratory of Molecular Signal Transduction, Center for Molecular Studies of the Cell (CEMC), Advanced Center for Chronic Diseases (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. (Sponsored by FONDECYT 1130250 (AFGQ); ACT1111 (AFGQ); FONDAF 15130011 (AFGQ, SL); CONICYT Post-doctoral (JC) And Student Fellowships (YA, RB).)

X🕒 15:45-16:00 - Campos T

Rheb promotes cancer cell survival through p27Kip1-dependent activation of autophagy. Campos, T1., Ziehe, J1., Escobar, D1., Tapia, J2., Pincheira, R1., Castro, A1., 1Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción. 2Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile. (Sponsored by Funded By FONDECYT 1120923 And CONICYT 21100494.)

X④ 16:00-16:15 - Escobar D

Sall2 is required for pro-apoptotic Noxa expression and genotoxic stress-induced apoptosis by doxorubicin.

Escobar, D1., Hepp, M1., Farkas, C1., Campos, T1., Álvarez, C1., Gutiérrez, J1., Castro, A1., Pincheira, R1., 1Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción. (Sponsored by Funded By FONDECYT 1110821 And CONICYT 21080369 - 24121096.)

X④ 16:15-16:30 General Discussion

ORAL SESSION 2 - BIOMEDICINA-SIGNALING

Chair: Veronica Burzio

CoChair. Rody San Martin

X④ 14:45-15:00 - Alarcon S

Impaired insulin regulation of adenosine transport occurs in diabetic glomeruli.

Alarcón, Sebastián1., Vega, Genesis1., Garrido, Wallys1., Catalán, José1., San Martín, Rody1., 1 Institute of Biochemistry and Microbiology, Science Faculty, Universidad Austral de Chile. (Sponsored by Supported By FONDECYT N°1130414)

X④ 15:00-15:15 - Fierro C

Similar Rho kinase activation in circulating leukocytes and cardiovascular tissue in rats with high angiotensin converting enzyme levels.

Fierro, Camila1., Novoa, Ulises1., Gonzalez, Verónica1., Ocaranza, Maria Paz1., Jalil, Jorge Emilio1., 1Division of Cardiovascular Diseases, Medicine, Pontificia Universidad Católica de Chile.

X④ 15:15-15:30 - Hermosilla V

The Sall2 tumor suppressor protein is regulated by Casein Kinase 2.

Hermosilla, Viviana1., Rabalski, Adam2., Gyenis, Laszlo2., Litchfield, David2., Pincheira, Roxana1., 1Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad de Concepción. 2Department of Biochemistry, Schulich School of Medicine & Dentistry, University of Western Ontario. (Sponsored by FUNDING: FONDECYT1151031, CIHR).

X④ 15:30-15:45 - Torres A

Adenosine receptors control the migration and invasion abilities of glioblastoma multiforme cells.

Torres, A1., Erices, Jose1., Jaramillo, Catherine1., Rocha, René1., Pérez, G1., San Martín, Rody1., Claudia, Quezada1., 1Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile. (Sponsored by FONDECYT N°1121121 And CONICYT N° 21131009).

X④ 15:45-16:00 - Diaz H

Role of TNF- α and oxLDL/LOX-1 pathway on cardiac myofibroblast phenotype.

Diaz, Hugo3., Reyes, Javiera1., Toledo, Jorge2., Garcia, Lorena3., 1Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile. 2Facultad de Ciencias Biológicas Universidad De Concepción. 3Centro Avanzado de Enfermedades Crónicas (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile. (Sponsored by FONDECYT 1140713 FONDAP 15130011)

X④ 16:00-16:15 - Guzman L

Triterpenic saponins from Quillaja extract: new therapeutic molecules to battle the cancer.

Guzmán, L1., Marchant, MJ1., González, C1., Tarnok, ME1., Cordova, C2., Olivero, P2., Corvalán, A3,4., Cortes, H5., 1Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica De Valparaíso. 2Laboratorio de Estructura y Función Celular, Escuela de Medicina, Universidad De Valparaíso. 3Centro de investigación en Oncología (CITO), Facultad de Medicina, Pontificia Universidad Católica De Chile. 4. Advanced Center for Chronic Diseases (ACCDiS). 5Desarrollo Desert King Chile S A. (Sponsored by This Work Was Supported By DIE-PUCV 037.728-11, 037.274/2015, And Quillaja Project)

X④ 16:15-16:30 General Discussion

X④ 16:30-17:00 Coffee Break

X④ 17:00-19:00 Symposia 1 and 2

Symposium 1

ACCDiS Symposium on Molecular Mechanisms of Chronic Diseases

Chair: Lorena García, Universidad de Chile



🕒 17:00-17:30 - Alejandra San Martín

Department of Medicine. Emory University. U.S.A
Cytoskeleton regulation and its role in vascular biology.

🕒 17:30-18:00 - Alejandro Yañez

Instituto de Bioquímica y Microbiología, Universidad Austral de Chile. Chile
Preclinical Studies for Sodium Tungstate and its effect in diabetic nephropathy.

🕒 18:00-18:30 - Mario Chiong

Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile. Chile.
Metabolic regulation of vascular smooth muscle cell dedifferentiation.

🕒 18:30-19:00 - Lorena García

Advanced Center for Chronic Diseases (ACCDiS), Universidad de Chile. Chile.
VCAM-1: a novel biomarker in cardiovascular diseases.

Symposium 2

Microbial Pathogenesis

Chair: Luis F. Larrondo, P. Universidad Católica de Chile

🕒 17:00-17:30 - Carlos Santiviago

Dpto de Bioquímica y Biología Molecular. Universidad de Chile. Chile
Genome-wide identification of genes required for Salmonella to survive within the host

🕒 17:30-18:00 - Marcio Rodrigues

Center for Technological Development in Health (CDTS) . Oswaldo Cruz Foundation, Brazil
Role of an autophagy regulator in the pathogenesis of Cryptococcus neoformans

🕒 18:00-18:30 - Chuck S. Farah.

Departamento de Bioquímica Universidad de Sao Paulo. Brazil
Bacterial Warfare: A new role for the Type IV Secretion System

🕒 18:30-19:00 - Paulo Canessa

Millennium Nucleus for Fungal Integrative and Synthetic Biology. P. Universidad Católica. Chile
Employing Botrytis cinerea, Arabidopsis thaliana and Solanum lycopersicum to understand environmental prompts as modifiers of the host-pathogen interaction

🕒 19:15-19:30 **Opening Ceremony**

🕒 19:30-20:45 **Opening Lecture**

Chair: Marcelo Lopez-Lastra

Paul Anderson

Brigham and Women's Hospital,
Harvard Medical School, U.S.A

***Neuroprotective effects of
angiogenin-induced tRNA
cleavage***

🕒 20:45-21:00 **DataBlitz Session 1**

🕒 21:00-22:30 **Welcome Cocktail**

Wednesday September 23

🕒 9:00-10:45 **Oral Sessions 3 and 4**

**Oral Session 3 - Computational Biology And
Bioinformatics**

Chair: José Martínez

CoChair: Julio Caballero

🕒 9:00-9:15 - **Schuller A**


**The dimerization interface of paramyxovirus
matrix proteins is structurally and evolutionary
conserved.**

Ríos-Vera, Carlos³, Gutiérrez, Fernando³,
Correa, Agustín¹, Oppezzo, Pablo¹, Kalergis,
Alexis², Schüller, Andreas³, ¹Recombinant
Protein Unit Institut Pasteur de Montevideo,
Uruguay. ²Millennium Institute on Immunology
and Immunotherapy, Depto. Genética Molecular
y Microbiología, Facultad de Ciencias Biológicas,
Pontificia Universidad Católica De Chile. ³Molecular
Design Laboratory, Depto. Genética Molecular y
Microbiología, Facultad de Ciencias Biológicas,
Pontificia Universidad Católica De Chile. (Sponsored
by Acknowledgements: This Research Was Funded
By CONICYT (FONDECYT No. 1131065) And ICM
P09-016-F Research Grants.)

🕒 9:15-9:30 - **Camus V**

**Comparative bioinformatic study of the
transcriptional regulation of the receptor for
oxidized low-density lipoprotein LOX-1 in rat,
mouse and human and its potential role in
heart diseases.**

Camus, Valentina¹, Lobos, Sergio², Garcia,
Lorena¹, ¹Centro Avanzado de Enfermedades



Crónicas (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile.2Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile. (Sponsored by FONDECYT 1140713, FONDAF 15130011).

X🕒 9:30-9:45 - Rivera M

Impact of the threading process on the folding mechanism determined by mechanical untie of a knotted protein.

Rivera, Maira¹., Bustamante, Andrés¹., Rivera, Rodrigo¹., Baez, Mauricio¹.,¹ Laboratorio de Bioquímica, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. (Sponsored by Fondecyt 1151274, Anillo ACT-1107, CONICYT 21130254).

X🕒 9:45-10:00 - Castro-Fernandez V

Folding topology determines substrate binding order in the ribokinase superfamily.

Castro-Fernandez, V¹., Herrera-Morandé, Alejandra¹., Merino, Felipe¹., Ramírez-Sarmiento, César¹., Fernández, Francisco²., Vega, Cristina²., Guixé, Victoria¹.,¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile.²Centro de Investigaciones Biológicas CIB-CSIC, Madrid, España. (Sponsored by Fondecyt 1150460).

X🕒 10:00-10:15 - Riadi G

The distance between exons and their nearest repeat plays a role in Repeat Fusion Transcript (RFT) formation in mouse genome.

Riadi, Gonzalo¹., Santos, Janine²., Woychick, Rick².,¹Departamento de Bioinformática, Facultad de Ingeniería, Universidad De Talca.²Epigenetics and Stem Cell Biology Laboratory, Mammalian Genome Group, National Institutes of Environmental Health Sciences, National Institutes of Health. (Sponsored by Fondecyt Grant 11140869).

X🕒 10:15-10:30 - Ramírez C

Interdomain contacts and RNA polymerase control native state interconversion of the transformer protein RfaH on a dual-funneled landscape.

Ramirez-Sarmiento, César A¹., Noel, Jeffrey², Valenzuela, Sandro¹., Artsimovitch, Irina³.,¹Departamento de Biología, Facultad de Ciencias, Universidad de Chile.²Center for Theoretical Biological Physics Rice University.³Department of Microbiology and The Center for RNA Biology Ohio State University.

(Sponsored by Funding: FONDECYT 11140601 (to C.A.R-S.), NIH GM67153 (to I.A.).

🕒 10:30-10:45 General Discussion

Oral Session 4 - Gene expression

Chair: Ariel Castro

CoChair: Julio Tapia

🕒 9:00-9:15 - Rojas B

The HIV-1 Rev protein substitutes the effects of splicing on nuclear export and translation to promote efficient Gag synthesis from the unspliced mRNA.

Rojas, B1,2., 1Virología, pabellón J, ICBM, Medicina, Universidad De Chile.2Virología, pabellón J, Facultad de Medicina, Universidad De Chile.

🕒 9:15-9:30 - Cáceres C

The HBZ protein in the human T-cell lymphotropic virus type 1 (HTLV-1) is regulated at translational level by different translation initiation mechanism.

Cáceres, Carlos1,2., Olivares, Eduardo1.,Angulo, Jenniffer1.,Pino, Karla1.,López-Lastra, Marcelo1.,1Escuela de medicina, Facultad de medicina, Pontificia Universidad Católica De Chile.2Programa de Doctorado en Ciencias mención Microbiología Universidad de Chile/Universidad de Santiago de Chile. (Sponsored by Work Supported By FONDECYT 1130270 And P09/016-F De La Iniciativa Científica Milenio Del Ministerio De Economía, Fomento Y Turismo. C. Joaquín Cáceres Is Supported By A Conicyt Doctoral Fellowship.)

🕒 9:30-9:45 - Olivares-Yáñez C

Decoupling circadian clock protein turnover from circadian period determination.

Olivares-Yanez, C1., Baker, Christopher 2.,Loros, Jennifer3.,Dunlap, Jay4.,Larrondo, Luis1.,1Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica De Chile.2Department of Genetics,, Geisel School of Medicine at Dartmouth, , Dartmouth.3Department of Biochemistry, Geisel School of Medicine at Dartmouth, Dartmouth.4Department of Genetics, Geisel School of Medicine at Dartmouth, Dartmouth. (Sponsored by MNNFISB NC120043, FONDECYT 1131030.)

X④ 9:45-10:00 - Farkas C

Identification of Sall2 transcriptional targets in response to genotoxic stress.

Farkas, Carlos¹, Fuentes, Francisco², Escobar, David², Rebolledo, Boris³, Makova, Kateryna⁴, Nekrutenko, Anton⁵, Castro, Ariel¹, **Pincheira, Roxana¹**, Bioquímica y Biología Molecular, Ciencias Biológicas, Universidad De Concepción. ²Biología Molecular, Ciencias Biológicas, Universidad De Concepción. ³Huck Institutes of the Life Sciences Penn State University. ⁴ Department of Biology, Center for Medical Genomics, Penn State University. ⁵PSU Center for Comparative Genomics & Bioinformatics, Biochemistry and Molecular Biology, Penn State University.

X④ 10:00-10:15 - Valiente-Echeverría, F
HIV-1 gene expression is modulated by anticancer drugs that promote the assembly of stress granules.

Prades, Y¹, Poblete, N¹, Mouland, A². and Valiente-Echeverría, F¹.
¹Programa de Virología, ICBM, Facultad de Medicina, Universidad De Chile. ²Department of Experimental Medicine, Faculty of Medicine, McGill University. (This work was supported by FONDECYT N11140502. YP is a doctoral fellow from Universidad De Chile, Postgraduate Program.)

X④ 10:15-10:30 - López C
Differential response of three putative Wnt/b-catenin target genes, cx43, c-myc and dax1 in 42GPA9 (mouse adult Sertoli) cell line.

LOPEZ, C¹, Cereceda, K¹, Montecino, M², Meisterernst, M³, Slebe, JC¹, Concha, II¹, ¹Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile. ²Centro de Investigaciones Biomédicas Universidad Andrés Bello. ³Institute for Molecular Tumor Biology University Muenster. (Sponsored by FONDECYT 1110508 (IC), 1141033 (JCS). CL: CONICYT And MECESUP AUS 1203 Fellowship.)

X④ 10:30-10:45 General Discussion

X④ 10:45-11:15 Coffee Break

X④ 11:15-13:15 Symposia 3 and 4

Symposium 3

Central dogma at the single molecule level

Chair: Christian A.M. Wilson, Universidad de Chile

⌘ 11:15-11:45 - Daniel Guerra

Universidad Peruana Cayetano Heredia, Perú

Transcription regulation through changes in the DNA
- RNA polymerase contacts.

⌘ 11:45-12:15 - Daniel Goldman

University of California, Berkeley. U.S.A

Mechanical force releases nascent chain-mediated
ribosome arrest.

⌘ 12:15-12:45 - Jaime Andrés Rivas-Pardo

Columbia University, New York, U.S.A

Mechano-Physiology of the giant muscle protein titin

⌘ 12:45-13:15 - Rodrigo Maillard

Georgetown University, U.S.A

The ClpXP protease unfolds substrates using a
constant rate of pulling but different gears.

Symposium 4

Epigenetics and Chromatin Structure: from Cell
Function to Biomarkers

Chair: Paola Casanello, P. Universidad Católica de
Chile

⌘ 11:15-11:45 - Gernot Längst

Lab of Chromatin Dynamics and Nuclear

Architecture. University of Regensburg. Germany.

TNF α signalling primes chromatin for NF- κ B binding
and induces rapid and widespread nucleosome
repositioning

⌘ 11:45-12:15 - Martín Montecino

Center for Biomedical Research and FONDAF Center
for Genome Regulation. UNAB. Chile

Epigenetic control of cell fate

⌘ 12:15-12:45 - Bernardo Krause

Facultad de Medicina. P. Universidad Católica de
Chile. Chile.

Fetal programming of endothelial function by
epigenetic mechanisms



X④ 12:45-13:15 - Alejandro Corvalán

Facultad de Medicina P. Universidad Católica de Chile. Chile.

Epigenetic alterations and potential biomarkers in digestive tumors

X④ 13:15-15:00 Lunch Time

X④ 15:30-17:15 New Members Session

Chairs: Sergio Lavandero

CoChair: Alfredo Criollo

List of Speakers To Be announced on Site

X④ 15:30-15:55 - Díaz-Espinoza, Rodrigo

Generating a non-toxic synthetic prion that can delay or prevent prion disease in vivo.

Diaz-Espinoza, Rodrigo 1., Morales, Rodrigo1.,Concha-Marambio, Luis1.,Moreno-Gonzalez, Ines1.,Moda, Fabio1.,Soto, Claudio1.,1Neurology, Medicine, University of Texas .

X④ 15:55-16:20 - Reyes, Ariel

Hypoxia-inducible factor-1, Epithelial-to-Mesenchymal-Transition and Chemotaxis.

Reyes, A1., 1Departamento de Ciencias Biológicas, Facultad de Ciencias Biológicas, Universidad Andrés Bello

X④ 16:20-16:45 - Budini, Mauricio

TDP-43 loss of cellular function through aggregation requires additional structural determinants beyond its C-terminal Q/N prion-like domain.

Budini, M1,2., Valentina, Romano2.,Quadri, Zain2.,Buratti, Emanuele2.,Baralle, Francisco2.,1Facultad de Odontología Universidad De Chile.2Molecular Pathology Lab International Centre For Genetic Engineering and Biotechnology.

X④ 16:45-17:10 - Rivas, Andrea

Influence of the infectious pancreatic necrosis disease virus in the synthesis of cellular proteins.

Rivas-Aravena, A1., Cartagena, Julio2.,Sandino, Ana 3.,Herrera , Carmen1.,1Laboratorio de Radiobiología Celular y Molecular, Departamento de Aplicaciones Nucleares, Comisión Chilena de Energía Nuclear.2Laboratorio de Virología, Facultad de Química y Biología, Universidad De Santiago De Chile.3Laboratorio de Virología, Facultad de Química y Biología, Universidad De Santiago De Chile.

X 17:15-19:15 **Poster Session and Coffee Break**
Posters 1 – 83

X 19:15-20:45 **Osvaldo Cori Lecture**
Chair: Luis F. Larrondo

Rafael Vicuña
Pontificia Universidad Católica
de Chile

The Origins of Bioenergetics

X 20:45-21:00 **DataBlitz Session 2**

Thursday, September 24

X 9:00-10:45 **Oral Sessions 5 and 6**

Oral Session 5 - Protein Structure-Funtion and
Microbiology

Chair: Amparo Uribe

CoChair: Alejandro Reyes

X 9:00-9:15 - **Yevenes A**


Theoretical study of the iron entry route into
Pyrococcus furiosus ferritin.

Marquez-Miranda, Valeria^{1, 2.}, González-Nilo,
Fernando^{1,2.},Maraboli, Vanessa^{2.},Yévenes,
A3., ¹Center for Bioinformatics and Integrative
Biology, Facultad de Biología, Universidad Andres
Bello.²Fundación Fraunhofer Chile Research M.
Sánchez Fontecilla 310 piso 14, Las Condes,
Chile.³Química Física, Facultad de Química, Pontificia
Universidad Católica De Chile. (Sponsored by This
Work Was Supported By Proyecto Anillo ACT 1107.
V.M.M. Thanks Conicyt For A PhD Scholarship
And CONICYT + PAI/ Concurso Nacional Tesis De
Doctorado En La Empresa 2014 (781413007).

X 9:15-9:30 - **Contreras N**

Polypyrimidine tract-binding protein binds
to the 5'untranslated region of the mouse
mammary tumor virus mRNA and stimulates
IRES-mediated translation initiation.

Contreras, Nataly^{1.}, Cáceres, Joaquín^{2.},Pino,
Constanza^{3.},Angulo, Jennifer^{3.},Vera,
Jorge^{4.},Lopez-Lastra, Marcelo^{4.},¹Departamento
de Infectología e Inmunología Pediatrica,
Facultad de Medicina, Pontificia Universidad
Católica De Chile.²Departamento de de
Infectología e inmunología pediatria, Facultad



de Medicina , Pontificia Universidad Católica De Chile.3Departamento de Infectología e Inmunología pediátrica, Facultad de Medicina, Pontificia Universidad Católica De Chile.4Departamento de Inmunología e Infectología pediátrica, Facultad de Medicina, Pontificia Universidad Católica De Chile.

🕒 9:30-9:45 - Melo F

Protein-DNA recognition: towards a new perspective in the definition, analysis and interpretation of protein-DNA binding specificity.

Gutiérrez, Fernando.,Ribeiro, Judemir.,Ríos-Vera, Carlos.,Ibarra, Ignacio.,Schüller, Andreas.,Cifuentes, Juan José.,Geoffroy, Consuelo.,Guerra, Constanza.,Henríquez, Marlene., Rodríguez, Natalia., Melo, Francisco¹., ¹Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT REGULAR 1141172).

🕒 9:45-10:00 - Hernandez M

Proteomic characterization of outer membrane vesicles (OMVs) purified from the fish pathogen *Piscirickettsia salmonis*.

Hernández, Mauricio^{1,2}., Oliver, Cristian^{1,2}., Valenzuela, Karla¹., Alvornoz, Romina¹., Yañez, Alejandro¹., ¹Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile.²AUSTRAL-omics, Ciencias, Universidad Austral De Chile. (Sponsored by FONDAP INCAR 15110027).

🕒 10:00-10:15 - Medina R

Identification of a novel swine H1N2 Influenza A Virus in Chile.

Neira, Victor¹., Brito, Barbara^{1,2}., Saavedra, Marco²., Tapia, Karla²., Barriga, Gonzalo²., Barrera, Aldo²., Medina, Rafael^{2,3,4}., ¹Veterinary and Livestock Sciences, Facultad de Veterinaria, Universidad de Chile. ²Enfermedades Infecciosas e Inmunología Pediátrica, Facultad de Medicina, Pontificia Universidad Católica De Chile. ³Millennium Institute on Immunology and Immunotherapy Pontificia Universidad Católica De Chile.⁴Department of Microbiology Icahn School of Medicine at Mount Sinai. (Sponsored by CRIP, A Center For Excellence On Influenza Research And Surveillance (CEIRS Program: HHSN266200700010C, HHSN272201400008C) NIH-NIAID; And Institute Millennium On Immunology And Immunotherapy).

X④ 10:15-10:30 - Lowy F

The NSs protein of Andes virus is expressed during viral infection and plays roles in eIF2 α phosphorylation and stress granules formation.

Lowy, Fernando¹., Vera-Otarola, Jorge¹., Solis, Loretto¹., Padula, Paula²., Soto-Rifo, Ricardo³., Otth, Carola⁴., Lopez-Lastra, Marcelo¹.,
¹Departamento de Infectología e Inmunología Pediátrica, Facultad de Medicina, Pontificia Universidad Católica De Chile. ²Instituto Nacional de Enfermedades Infecciosas Administración Nacional de Laboratorios e Institutos de Salud Dr C. G. Malbrán, Argentina. ³Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad De Chile. ⁴Instituto de Microbiología Clínica, Facultad de Medicina, Universidad Austral De Chile. (Sponsored by Work Supported By Grant P09/016-F De La Iniciativa Científica Milenio Del Ministerio De Economía, Fomento Y Turismo. Fernando Lowy Was Supported By A CONICYT Doctoral Fellowship).

X④ 10:30-10:45 General Discussion

Oral Session 6 - Plant Biology

Chair: María Josefina Poupin

CoChair: María Alejandra Moya-Leon

X④ 9:00-9:15 - Morales-Quintana L

Biochemical and structural characterization of FcXTH1, a xyloglucan endo-transglycosilase/hydrolase expressed during ripening of *Fragaria chiloensis* fruit.

Morales-Quintana, Luis¹., Mendez-Yañez, Ángela¹., Beltrán, Dina¹., Molinett, Sebastian¹., Campano, Constanza¹., Herrera, Raúl¹., Moya-León, María Alejandra¹., ¹Laboratorio de Fisiología Vegetal y Genética Molecular, Instituto de Ciencias Biológicas, Universidad De Talca.

X④ 9:15-9:30 - Stange C


The *Daucus carota* phytoene synthase 2 (PSY2) promoter: Functional analysis and identification of binding AREB/ABF transcription factors.

Simpson, Kevin¹., Fuentes, Paulina¹., Handford, Michael¹., Stange, Claudia¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by Acknowledgements: Fondecyt 1130245, Beca CONICYT 22130956).

X④ 9:30-9:45 - Parra S

Transcriptional control of pollen-specific genes in *Arabidopsis thaliana* by GT-4 and STEP1.

Parra, S¹., León, Gabriel²., ¹Centro de



Biotecnología vegetal, Ciencias Biológicas,
Universidad Andrés Bello. 2 Sexual Plant
Reproduction, Ciencias Biológicas, Universidad
Andrés Bello. (Sponsored by Founded By Fondecyt
1120766 UNAB DI-845-15/I).

X 9:45-10:00 - Roschttardt, H

**Iron localization in Arabidopsis seeds:
Connecting nutrition and provasculture
patterning.**

Roschttardt, Hannet1., Curie, Catherine2., Otegui,
Marisa3., 1Genética Molecular y Microbiología,
Ciencias Biológicas, Pontificia Universidad Católica
De Chile. 2BPMP CNRS-INRA .3Botany University of
Wisconsin-Madison.

X 10:00-10:15 - Ramos P

**FLAVONOLS AND AUXIN: A GRAVITROPIC
RELATIONSHIP.**

Ramos, Patricio1., Guajardo, Joselin1., Moya-León,
María1., Herrera, Raúl1., 1Laboratorio de Fisiología
Vegetal y Genética Molecular, Instituto de Ciencias
Biológicas, Universidad De Talca. (Sponsored by
This Work Was Supported By Fondecyt 11121170,
1120635 And Anillo ACT-1110).

X 10:15-10:30 General Discussion

X 10:45-11:15 Coffee Break

X 11:15-13:15 Symposia 5 and 6

Symposium 5

**Getting the Message: the Complex Life of
Eukaryotic mRNAs**

Chair: Ricardo Soto-Rifo, Universidad de Chile

X 11:15-11:45 - Andrew Mouland

McGill University. Canada

HIV-1-mediated endolysosome translocation: Impact
on viral RNA localization and host metabolism

X 11:45-12:15 - Emiliano Ricci

CIRI, ENS-Lyon. France

RIPiT-seq reveals the endogenous RNA-target sites
of DEAD-box protein 3 (DDX3)

X 12:15-12:45 - Alfredo Castello

Department of Biochemistry. University of Oxford.
UK

Proteome-wide determination of RNA-binding
domains by RBDmap

🕒 12:45-13:15 - Ricardo Soto-Rifo

Instituto de Ciencias Biomédicas. Universidad de Chile. Chile

From the nucleus to the ribosome: understanding the mechanisms controlling gene expression from the HIV-1 unspliced mRNA

Symposium 6

Green Biology: understanding molecular mechanisms in plant systems

Chair: Claudia Stange, Universidad de Chile

🕒 11:15-11:45 - María Josefina Poupin

Facultad de Ingeniería y Ciencias, Universidad Alfonso Ibáñez.

Bacteria can modulate a plant life cycle: beneficial interaction between *Arabidopsis thaliana* and the rhizobacteria *Burkholderia phytofirmans* PsJN

🕒 11:45-12:15 - Simón Ruiz

Instituto de Biotecnología y Biología Vegetal, Universidad de Talca.

Involvement of the intracellular vesicle trafficking in the plant tolerance to salt stress

🕒 12:15-12:45 - Ingo Dreyer

Centro de Bioinformática y Simulación Molecular (CBSM) Universidad de Talca

Long distance K⁺ transport in plants

🕒 12:45-13:15 - Andrea Vega

Depto. Ciencias Vegetales, Facultad de Agronomía e Ingeniería Forestal, P. Universidad Católica de Chile. Chile

Integration of nitrogen gene networks and plant defense responses

🕒 13:15-15:00 Lunch

🕒 15:00-16:00 SBBMCh Members Meeting

🕒 16:00-17:15 Severo Ochoa Lecture

Chair: Ilona Concha

Andrés Aguilera

CABIMER, Universidad de Sevilla, Spain

RNA as a modulator of genome dynamics and chromatin structure



**🕒 17:15-19:15 Poster Session II and Coffee Break
Posters 84-168**

**🕒 19:30-20:45 PABMB Lecture
Chair: Marcelo López-Lastra**

Melissa Moore
UMASS Medical School, U.S.A
***Spliceosome and mRNP
Structure, Function and
Dynamics***

🕒 21:30-24:00 Gala Dinner and Party

FRIDAY, SEPTEMBER 25

🕒 10:00-12:00 Symposia 7 and 8

Symposium 7

Key Roles of Autophagy in Chronic Diseases

Chairs: Eugenia Morselli,
P. Universidad Católica de Chile
Alfredo Criollo, Universidad de Chile

🕒 10:00-10:30 - Zhao Wang

Department of Internal Medicine. UT Southwestern
Medical Center, Dallas, TX-U.S.A
Pathological Cardiac Remodeling: Role of the
Unfolded Protein Response and Autophagy

🕒 10:30-11:00 - Eugenia Morselli

Dpto. Biología Celular y Molecular. Pontificia
Universidad Católica de Chile. Chile
Inhibition of hypothalamic autophagy and induction
of inflammation by long-term high fat diet exposure

🕒 11:00-11:30 - Alfredo Criollo

Universidad de Chile. Chile
Autophagy in cardiovascular diseases

🕒 11:30-12:00 - Patrice Codogno

Institut Necker Enfants-Malades. University of Paris.
France
Autophagy and plasma membrane domains.



Symposium 8

When Biology Meets Computers: Oncodomains, Microbiomes and Allosteric networks

Chairs: Daniel Almonacid, UNAB

Cesar Ramírez-Sarmiento, Universidad de Chile

🕒 10:00-10:30 - Daniel Almonacid

Universidad Andrés Bello, Chile

Sequence similarity networks: Phylogenomics tool for studying sequence relationships across large datasets

🕒 10:30-11:00 - Zac Apte

uBiome U.S.A

Your microbiome and citizen science, science at scale

🕒 11:00-11:30 - Ricardo Armisen

Pfizer Chile - Center of Excellence in Precision Medicine, Chile

Transcriptome editing promotes breast cancer progression through the regulation of cell cycle and DNA repair

🕒 11:30-12:00 - Elizabeth Komives

University of California San Diego, U.S.A

Allosteric Networks in Thrombin

🕒 12:00- 13:00 Awards

🕒 13:00-13:10 Closing

Posters Wednesday, September 23

1) RNA seq as a tool to study the effect of handling stress in the expression of genes associated with the immune response of red cusk-eel (*Genypterus chilensis*)

Aballai, V¹., Aedo, J^{1,2}., Maldonado, J³., Silva, H³., Reyes, A^{4,2}., Valdés, JA^{1,2}., ¹Laboratorio de Biotecnología Molecular, Facultad de Ciencias Biológicas, Universidad Andrés Bello. ²Interdisciplinary Center for Aquaculture Research (INCAR), Facultad de Ciencias Biológicas, Universidad de Concepción. ³Laboratorio de Genómica Funcional & Bioinformática, Facultad de Ciencias Agronómicas, Universidad de Chile. ⁴Laboratorio de Biología del Desarrollo, Facultad de Ciencias Biológicas, Universidad Andrés Bello.

2) Dissecting the functional roles of the conserved NXXE and HXE motifs in the ADP-dependent glucokinase from *Thermococcus litoralis*

Abarca, M. J¹., Ramírez-Sarmiento, César ¹., Guixé, Victoria¹., ¹Departamento de Biología, Ciencias, Universidad De Chile. (Sponsored by FUNDING: FONDECYT 1150460.)

3) Pipeline to identify the toxic factor(s) released by diverse ALS-astrocytes that induce pathogenesis and death of motoneurons.

Abarzúa, Sebastián¹., Rojas, Fabiola¹., Cortes, Nicole ¹., Martínez, Pablo ¹., Aguilar, Rodrigo ¹., Almeida, Sandra ²., Kähne, Thilo³., Wyneken, Ursula ⁴., Varela-Nallar, Lorena ¹., Gao, Fen-Biao⁵., Montecino, Martín ¹., Van Zundert, Brigitte ¹., ¹Center for Biomedical Research, Biological Sciences & Medicine, Universidad Andrés Bello. ²The J. David Gladstone Institutes, Buck Institute for Research on Aging University of Massachusetts Medical School. ³Institut für Experimentelle Innere Medizin Otto-von-Guericke-Universität Magdeburg. ⁴Laboratorio de Neurociencias Universidad De Los Andes. ⁵Department of Neurology University of Massachusetts Medical School.

4) Analysis of confinement-stress transcriptomic response on the skeletal muscle of the fine flounder (*Paralichthys adspersus*)

Aedo, J E¹., Mendez, K²., Vizoso, P³., Bastías, M³., Meneses, C³., Zuloaga, R²., Valenzuela, C²., Valdés, J A¹., Molina, A²., ¹Laboratorio de Bioquímica Celular, Facultad de Ciencias Biológicas - Interdisciplinary Center for Aquaculture Research (INCAR), Universidad Andrés Bello. ²Laboratorio de Biotecnología Molecular, Facultad de Ciencias Biológicas - Interdisciplinary Center for Aquaculture Research (INCAR), Universidad Andrés Bello. ³Centro de Biotecnología Vegetal, Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by Funded By CONICYT/FONDAP/15110027 And FONDECYT /1130545)

5) Reassessing cAMP-dependent Protein Kinase A and Phosphodiesterase inhibitors role in the *Neurospora crassa* circadian clock regulation

Alessandri, María¹., Olivares-Yáñez, Consuelo¹.,Larrondo, Luis¹.,¹Millennium Nucleus for Fungal Integrative and Synthetic Biology, Departamento de Genética Molecular y Microbiología., Ciencias Biológicas, Pontificia Universidad Católica De Chile.

6) The Sall2 transcription factor participates in the oxidative stress response.

Álvarez, C¹., Escobar, D¹.,Hepp, MI¹.,Castro, AF¹.,Pincheira, R¹.,¹Laboratorio de Transducción de Señales y Cáncer, Ciencias biológicas, Universidad De Concepción.

7) L-valine production: From a scientific discovery in Antarctica to a Biotech Start-UP company.

Álvarez, L¹., Sepulveda, Felipe².,Romero, Francisco².,Almonacid, Daniel².,Pérez-Donoso, José³.,¹Ciencias naturales, ciencias biologicas, UNAB.²Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello, UNAB.³Aminotec UNAB.

8) Expression of Herpud isoforms during osteoblast and osteoclast differentiation.

Americo-Da-Silva, Luan^{1,2}.,Mancilla, Georhan^{1,2}.,Bustamante, Mario^{1,3,2}.,Quiroga, Clara^{1,2}.,¹Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica De Chile.²Advanced Center for Chronic Diseases (ACCDIS) Universidad de Chile y Pontificia Universidad Católica De Chile.³Laboratorio de Transducción de Señales Moleculares, Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile. (Sponsored by Fondecyt 11140470 (CQ))

9) The C-terminal tail of yeast Hmo1 is essential for its interaction with ATP-dependent chromatin remodeling complexes

Amigo, Roberto¹., Hepp, Matías¹.,Gutiérrez, José¹.,¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas , Universidad De Concepción. (Sponsored by CONICYT, FONDECYT/ Regular 1130818)

10) CyDiv, a protein involved in divisome assembly in *Anabaena* sp. PCC7120.

Andrade, Derly¹., Cristi, Antonia¹.,Vásquez, Luz¹.,¹Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by Fondecyt Grant #1131037)

11) Genome-wide transcription induced by Wnt/ β -catenin signaling in neuronal cells as a model for prevalent neurological disorders.

Andrade, Víctor¹., Ugarte, Giorgia¹., Medina, Matías¹., De Ferrari, Giancarlo¹.,¹Centro de Investigaciones Biomedicas, República 239, Interior., Ciencias Biologicas, Universidad Nacional Andrés Bello.

12) A-to-I ADAR1 transcriptome editing in breast cancer disease.

Sagredo, Eduardo¹., Sagredo, Alfredo¹., Blanco, Alejandro¹., Morales, Fernanda¹., Verdugo, Ricardo¹., Olivier, Harismendy²., Marcelain, Katherine¹., Armisen, Ricardo³.,¹Centro de Investigación y Tratamiento del Cáncer, Facultad de Medicina, Universidad De Chile.²Moore's Cancer Center, Medical School, University of California San Diego.³Pfizer Chile Center of Excellence in Precision Medicine. (Sponsored by Supported By FONDECYT 1151446 And CORFO 13CEE2-21602.)

13) Identification and characterization of virulence effectors Dot/lcm-related in the fish bacterial pathogen *Piscirickettsia salmonis*

Arredondo-Zelada, O¹., Flores-Herrera, Patricio¹., Henríquez, Fabián¹., Marshall, Sergio¹., Gómez, Fernando¹.,¹Laboratorio de Genética e Inmunología Molecular, Ciencias, Pontificia Universidad Católica De Valparaíso. (Sponsored by This Study Was Supported By Comisión Nacional De Investigación Científica Y Tecnológica De Chile (CONICYT) Through The Grant FONDECYT 11130407)

14) STUDY OF TACROLIMUS ON CHEMOSENSITIZATION OF THE GLIOBLASTOMA STEM LIKE CELLS

Arriagada, Valentina¹., Jaramillo, Catherine¹., Perez, Gustavo¹., Torres, Angelo¹., Quezada, Claudia¹.,¹Laboratory of Molecular Pathology, Facultad de Ciencias, Universidad Austral de Chile. (Sponsored by FONDECYT N°1121121)

15) HMGA1a and HMGA1b proteins enhance the remodeling activity of the γ SWI/SNF complex

Arriagada, Axel¹., Hepp, Matías¹., Amigo, Roberto¹., Gutiérrez, José¹.,¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. (Sponsored by CONICYT, FONDECYT/Regular 1130818)

16) Filovirus-derived endogenous viral elements in the genome of a South American rodent

Barraza, Felipe¹., Angulo, Jenniffer²., Gifford, Robert³., Arriagada, Gloria¹.,¹Ciencias Biologicas Universidad Andres Bello.²Laboratorio de virologia molecular Pontificia Universidad Católica De Chile.³Centre for virus Research University of Glasgow, Scotland.

17) Improving the catalytic efficiency of H. rufescens's β -glucuronidase towards codeine-6-glucuronide.

Arriagada, N¹., ¹Centro de Bioinformática y Biología Integrativa, Facultad de Ciencias Biológicas, Universidad Andrés Bello.

18) FRUCTOSE-1,6-BISPHOSPHATASE (FBPase) BINDING TO THE VOLTAGE-DEPENDENT ANIONS CHANNEL (VDAC) IS NOT AFFECTED BY SPECIFIC ANTI-FBPase IgG ISOLATED FROM AUTISTIC CHILDREN.

Asenjo, Joel¹., Giacaman, Israel¹.,González, Andrea¹.,Vera, Carolina¹.,Francos, Rina².,Villarroel-Espindola, Franz¹.,Cuchacovich, Miguel³.,Concha, Ilona¹.,González-Gronow, Mario⁴.,Slebe, Juan¹.,¹Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile.²Psiquiatría Asociación Chilena de Padres de Niños Autistas (ASPAUT).³Medicina, Medicina, Universidad De Chile/Hospital Clínico J.J. Aguirre.⁴Ciencias Biomédicas, Medicina, Universidad Católica Del Norte. (Sponsored by FONDECYT 1141033 (JCS); 1130451 (MGG); 3130449 (FVE))

19) Respiratory virus profile in children in Porto Alegre-Brasil during the 2012 post-pandemic period.


Baccin, Tatiana¹., Silveira, Mara².,Lugoch, Rosemeri².,Vianna, Luciene².,Gregianini, Tatiana³.,Medina, Rafael¹.,Cauduro, Andrea⁴.,¹Centro de Investigaciones Médicas, Medicina, Pontificia Universidad Católica De Chile.²LAC-Imunologia Grupo Hospitalar Conceição (GHC).³IPB/LACEN FEPPS.⁴LAC-Coordenação Grupo Hospitalar Conceição (GHC). (Sponsored by Ministério Da Saúde, Fundação Estadual De Produção E Pesquisa Em Saúde And Centro Estadual De Vigilância Em Saúde)

20) Analysis of protein-protein interaction between the cytoplasmic dynein complex light chains and the Murine Leukemia Virus.

Barraza, F¹., Arriagada, G^{1,2}.,¹Ciencias Biológicas , Ciencias Biológicas, Universidad Andrés Bello.²Nucleo Milenio Biología de Enfermedades Neurosiquiátricas NuMind.

21) High level of genomic diversity of Influenza A viruses associated with severe human disease.

Barrera, A¹., Marco, C².,Tapia, K¹.,Budnik, I².,Halpin, R³.,Wentworth, DE³.,Garcia-Sastre, A^{4,3}.,Ferres, M².,Medina, R^{1,3,4,5}.,¹Laboratory of Molecular Virology Pontificia Universidad Católica de Chile.²Departamento de Enfermedades Infecciosas e Inmunología, Escuela de Medicina, Pontificia Universidad Católica de Chile.³Virology J. Craig Venter Institute.⁴Department of Microbiology, Global Health and Emerging Pathogens Institute, Department of Medicine, Icahn School of Medicine at



Mount Sinai.⁵Millennium Institute on Immunology and Immunotherapy Pontificia Universidad Católica De Chile. (Sponsored by CONICYT: Proyecto De Inserción Capital Humano En La Academia (79100014) Y FONDECYT (1121172), Instituto Milenio En Inmunología E Inmunoterapia; And Center For Research In Influenza Pathogenesis (CRIP) An NIAID-NIH Funded CEIRS Center (HHSN266200700010C).)

22) Wild Bird Influenza Virus Surveillance In Chile
Barriga, Gonzalo¹., Tapia, Karla¹., Zamorano, Francisco²., Sallaberry, Nicole³., Sallaberry, Michel²., Medina, Rafael^{4,1,5}., ¹Departamento de Enfermedades Infecciosas e Inmunología Pontificia Universidad Católica De Chile. ²Ciencias Ecológicas Universidad De Chile. ³Facultad de Veterinaria Universidad Andrés Bello. ⁴Microbiology School of Medicine at Mount Sinai. ⁵Millennium Institute on Immunology and Immunotherapy Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT Post Doctoral (3150564), Instituto Milenio En Inmunología E Inmunoterapia; And Center For Research In Influenza Pathogenesis (CRIP) An NIAID-NIH Funded CEIRS Center (HHSN266200700010C).)

23) Ligand specificity changes produced by cancer mutations
Juan P. Bascur¹, Melissa Alegría-Arcos¹, Ingrid Araya-Durán¹, Ezequiel I. Juritz¹, Fernando D. González-Nilo, Daniel E. Almonacid¹ juanpablobascurcifuentes@gmail.com
¹Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello, Santiago, 8370146, Chile **Bascur, J**¹., ¹Escuela de Bioquímica Universidad Andrés Bello.

24) Activation of human platelets by a TLR2 agonist induces aggregation, tissue factor dependent procoagulant activity, thrombin generation and increased adhesion to endothelial cells.
Becerra, Francisca¹., Valenzuela, Guillermo¹., Sáez, Claudia¹., Hidalgo, Patricia¹., Panes, Olga¹., Pereira, Jaime¹., Mezzano, Diego¹., Matus, Valeria¹., ¹Thrombosis and Hemostasis- Hematology-Oncology, Medicine, Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT 1130835)

25) HSFA2 transcription factor responds to cold acclimation and is a candidate regulator of the dehydrin gene expression in *Eucalytus nitens*.
Beltrán Guzmán, María¹., Maureira, Alejandro¹., Gidi, Cristián¹., Fernández, Marta^{2,3}., Gutiérrez, José¹., ¹Departamento de Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. ²Laboratorio de Biología Molecular, Centro de Biotecnología, Universidad De Concepción. ³Departamento

de Silvicultura, Facultad de Ciencias Forestales, Universidad De Concepción. (Sponsored by CONICYT, FONDECYT/Regular 1130818, FONDECYT/Initiation 11121559)

26) Zebrafish as an infection model of *Flavobacterium psychrophilum*.

Benavides, Isabella^{3,2}, Soto-Comte, Daniela^{3,2}, Poblete, Matías^{1,2}, Avendaño-Herrera, Rubén^{1,2}, Feijóo, Carmen², Reyes, Ariel^{3,2}, ¹Laboratorio de Patología de Organismos Acuáticos y Biotecnología Acuícola, Facultad de Ciencias Biológicas, Universidad Andrés Bello. ²Interdisciplinary Center for Aquaculture Research (INCAR) Universidad Andrés Bello. ³Laboratorio de Biología del Desarrollo, Departamento de Ciencias Biológicas, Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by FONDECYT 1150816, CONICYT/FONDAP 15110027, VRID-UNAB)

27) Anticancer effect of Ru(II) on gastric (AGS) cancer cell line

Bernal, Giuliano¹, Ramírez, Sebastian¹, Pizarro, Sebastian², Gajardo, Francisco², Delgadillo, Álvaro², ¹Ciencias Biomédicas, Medicina, Universidad Católica Del Norte. ²Química, Ciencias, Universidad De La Serena. (Sponsored by CORFO 14IDL2-30087)


28) Identification of an efficient molecular marker for diagnosis of causal agent of walnut blight by Loop-Mediated Isothermal Amplification (LAMP) Bravo, Francisca¹, Yañez, Romina², Nuñez, Pablo³, Alvarado, Romina³, Marshall, Sergio¹, Gómez, Fernando¹, ¹Laboratorio de Genética e Inmunología Molecular, Ciencias, Pontificia Universidad Católica De Valparaíso. ²Biología, ciencias, Pontificia Universidad Católica De Valparaíso. ³Investigación y Desarrollo Agroadvance Ltda.. (Sponsored by This Work Was Supported By The Dirección De Innovación Y Emprendimiento (DIE) De La Pontificia Universidad Católica De Valparaíso)

29) *Clostridium difficile* spores binds C1q and C3 complement proteins and contributes to entry into intestinal epithelial cells.

Brito-Silva, Christian¹, Paredes-Sabja, Daniel¹, ¹Ciencias Biológicas, Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by Fondecyt Regular 1151025)

30) Knockdown of the mitochondrial antisense ncRNAs abolishes murine melanoma tumor growth and metastasis

Burzio, Verónica^{1,2}, Lobos-Gonzalez, Lorena¹, Silva, Verónica¹, Araya, Mariela¹, Oliveira-Cruz, Luciana¹, Fitzpatrick, Christopher^{1,2}, Briones, Macarena¹, Villegas, Jaime^{1,2}, Villota, Claudio^{1,2}, Vidaurre,



Soledad^{1,3}, Borgna, Vincenzo¹, Lopez, Constanza¹, Teresa , Socías¹, Valenzuela, Sebastian⁴, Restovic, Franko¹, Echenique, Javiera¹, Burzio, Luis^{1,2}, ¹Cancer Lab Andes Biotechnologies/Fundacion Ciencia & Vida. ²Ciencias Biológicas Universidad Andrés Bello. ³Ciencias Químicas y Biológicas Universidad Bernardo O'higgins. ⁴Bioterio Fundacion Ciencia & Vida. (Sponsored by FONDECYT 1110835/1140345)

31) Angiotensin-(1-9) reverses stress-induced autophagy in cardiomyocytes

Bustamante, Mario^{1,2,3}, Vidal, Macarena^{1,3}, Ocaranza, María^{4,3}, Verdejo, Hugo^{2,3}, Quiroga, Clara^{2,3}, Castro, Pablo^{4,3}, Lavandero, Sergio^{1,3}, ¹Laboratorio de Transducción de Señales Moleculares, Facultad de Ciencias Químicas y Farmaceuticas, Universidad De Chile. ²Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica De Chile. ³Advanced Center for Chronic Diseases (ACCDiS) Universidad de Chile y Pontificia Universidad Católica De Chile. ⁴Laboratorio de Cardiología Molecular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica De Chile. (Sponsored by Supported By FONDAP 15130011 (PC, SL), FONDECYT 11140470 (CQ), FONDECYT 1150359 (HV), FONDECYT 1141198 (PC))

32) Study of the expression of Galectin-3 in an *in vitro* model of smooth muscle cells derived of pulmonary artery under hypoxia

Vidal, Macarena^{3,1}, Bustamante, Mario^{2,3,1}, Quiroga, Clara^{2,3}, Castro, Pablo^{2,3}, Lavandero, Sergio^{1,3}, ¹Laboratorio de Transducción de Señales Moleculares, Facultad de Ciencias Químicas y Farmaceuticas, Universidad de Chile. ²Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Facultad de Medicina, Pontificia Universidad Católica de Chile. ³Advanced Center for Chronic Diseases (ACCDiS) Universidad de Chile y Pontificia Universidad Católica de Chile. (Sponsored by Supported By FONDAP 15130011 (PC, SL), FONDECYT 11140470 (CQ), FONDECYT 1141198 (PC).)

33) The folding mechanism of an artificial knotted protein characterized by optical tweezers

Bustamante, Andrés¹, Rivera, Maira¹, Molina, José¹, Baez, Mauricio¹, ¹Laboratorio de Bioquímica, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. (Sponsored by Fondecyt 1151274, Anillo ACT-1107, CONICYT 21150966.)

34) In silico discovery of novel TRPV1 agonists
Cáceres-Molina, J¹, Sepúlveda, R^{1,2}, Díaz-Franulic, I^{1,3,4}, Latorre, R³, González-Nilo, F¹, ¹Center for Bioinformatics and Integrative Biology (CBIB),

Facultad de Ciencias Biológicas, Universidad Andrés Bello.²Programa de Doctorado en Biotecnología, Facultad de Ciencias Biológicas, Universidad Andrés Bello.³Centro Interdisciplinario de Neurociencias de Valparaíso (CNIV) Universidad de Valparaíso.⁴. Fraunhofer Chile Research FCR. (Sponsored by CINV Is A Millennium Institute Supported By The Millennium Scientific Initiative Of The Ministerio De Economía, Fomento Y Turismo (09-022-F). This Work Is Supported By FONDECYT 1131003. RV Sepúlveda Thanks CONICYT-Chile For A Doctoral Fellowship.)

35) Molecular Modeling, docking and MM-GBSA calculations in predicting the binding mode and binding free energies of dihydropyridazinones derivatives as PDE3A inhibitors

Cáceres, Daniela¹, Caballero, Jullio¹., Muñoz, Camila¹.,¹Centro de Bioinformática y Simulación Molecular Universidad De Talca.

36) Cloning, heterologous expression and purification of Laccase α from *Trametes versicolor*

Cáceres, Juan Carlos¹, Alcaíno, Jennifer²., Cabrera, Ricardo¹.,¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile.²Departamento de Ciencias Ecológicas, Facultad de Ciencias, Universidad De Chile. (Sponsored by Anillo Project ACT1107)

37) The exosporium morphogenetic proteins, CdeC and CdeM, are essential for the assembly and morphogenesis of the outermost exosporium-like layer of *Clostridium difficile* spores.

Calderón-Romero, Paulina¹, Milano-Céspedes, Mauro²., Plaza-Garrido, Angela²., Olgún, Valeria²., Pizarro-Cerda, Jaime²., Paredes-Sabja., Daniel².,¹Gut Microbiota and Clostridia Research Group, Ciencias Biológicas, Universidad Andrés Bello. ²Gut Microbiota and Clostridia Research Group, Ciencias Biológicas, Universidad Andrés Bello.

38) Proteomic characterization of Ferric Uptake Regulator (FUR) purified from *Piscirickettsia salmonis*.

Calquín, Paulina¹, Yáñez, Alejandro^{4,1}., Oliva, Harold²., Avendaño, Rubén³., Hernández, Mauricio^{4,1}.,¹Instituto de Bioquímica y Microbiología, Interdisciplinary Center for Aquaculture Research-INCAR, Universidad Austral De Chile.²Laboratorio de Investigación y Desarrollo Veterinaria S.A.³Laboratorio de Patología de Organismos Acuáticos y Biotecnología Acuicola, Interdisciplinary Center for Aquaculture Research-INCAR, Universidad Andrés Bello.⁴Austral-omics, Facultad de Ciencias, Universidad Austral De Chile. (Sponsored by FONDAPE-INCAR 15110027, MECESUP 1203, DID-UACH, CONICYT PAI/Concurso Nacional Tesis De Doctorado En La Empresa, Convocatoria 2014 Folio 781411001)

39) Caveolin-1 expression in metastatic breast cancer cells promotes exosome formation

Campos, América^{1,2}, Bustos, Rocío², Lobos González, Lorena^{1,2,3}, Quest, Andrew^{3,1}, ¹Laboratory of Cellular Communication, Center for Molecular Studies of the cell (CEMC), Program of Cell and Molecular Biology, Faculty of Medicine, Universidad de Chile.²Andes Biotechnologies SA Fundación Ciencia & Vida.³Laboratory of Cellular Communication Advanced Center for Chronic Diseases (ACCDiS). (Sponsored by FONDECYT 11140204 (LLG) And 1130250 (AFGQ); ACT1111 (AFGQ); FONDAP 15130011 (AFGQ); CONICYT Student Fellowship (AC).)

40) Mitotic Bookmarking of mmp genes by Ski co-repressor.

Cappelli, Claudio¹, Pola, Victor¹, Hugo, Sepulveda², Sagredo, Alfredo³, Urzua, Ulises⁴, Montecino, Martín², Armisen, Ricardo³, Marcelain, Katherine¹, ¹Programa de Genética Humana, Medicina, Universidad De Chile.²Laboratorio de Regulación Genica, Centro de Investigaciones Biomédicas, Universidad Andrés Bello.³Laboratorio de Fisiopatología molecular del Cancer, Medicina, Universidad De Chile.⁴Instituto de Ciencias Biomedicas, Medicina, Universidad Andrés Bello.

41) Ski protein localization in nucleolus and NOR regions in human cells

Carrero, David¹, Pola, Victor¹, Meruane, Manuel², Marcelain, Katherine^{1,3}, ¹Programa de Genética Humana, Facultad de Medicina, Universidad de Chile.²División de Cirugía Reconstructiva y Plástica Clínica Tabancura.³Centro de Investigación y Tratamiento del cáncer, Facultad de Medicina, Universidad De Chile.

42) GLP-1 prevents mitochondrial and phenotypic changes induced by PDGF-BB in VSMC through PKA-Drp1 pathway

Cartes-Saavedra, B¹, Norambuena-Soto, I¹, García-Miguel, M¹, Morales, P¹, Torres, G¹, Sanhueza-Olivares, F¹, Mondaca-Ruff, D¹, Chiong, M¹, ¹ACCDiS, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. (Sponsored by FONDECYT 1140329, FONDAP 15130011, Anillo ACT1111)

43) Glucagon-like peptide 1 (GLP-1) inhibits VSMC dedifferentiation through an autophagy-dependent mechanism

Norambuena-Soto, I¹, **Cartes-Saavedra, B**¹, Mondaca-Ruff, D¹, García-Miguel, M¹, Sanhueza-Olivares, F¹, Nuñez, C¹, Mellado, R², Chiong, M¹, ¹ACCDiS, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile.²Departamento de Farmacia, Facultad de Química,

Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT 1140329, FONDAF 15130011, Anillo ACT1111)

44) Deletion of hinge loop residues allows domain swapping of the cold shock protein from *Bacillus caldolyticus*.

Carvajal, Alonso I¹., Vallejos, Gabriel¹., Castro-Fernandez, Víctor¹., Ramírez-Sarmiento, César¹., Babul, Jorge¹.,¹Santiago, Facultad de Ciencias, Universidad De Chile. (Sponsored by FONDECYT 1130510)

45) SERINE 294 IN THE HUMAN GLUT1 TRANSPORTER IS CRITICAL FOR ACTIVITY

Castillo, Boris¹., Hidalgo, Sofia¹., Lagos, Ingrid¹., Perez, Alejandra¹., Ojeda, Lorena¹., Cuevas, Alexei¹., Salas, Monica¹., Reyes, Alejandro¹.,¹Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral De Chile. (Sponsored by Supported By FONDECYT 1130386, FONDEF D1111131)

46) Identification of the pathway of *Clostridium difficile* spore-entry into intestinal epithelial cells.

Castro-Córdova, Pablo¹., Guerrero-Araya, Enzo¹., Cofré-Araneda, Glenda¹., Paredes-Sabja, Daniel¹.,¹Gut Microbiota and Clostridia Research Group, Departamento de Ciencias Biológicas Universidad Andrés Bello. (Sponsored by Proyecto FONDECYT Regular 1151025)

47) Structural Determinants of Dinucleotide Specificity in Genetically Encoded Fluorescent Sensor *Peredox*

Cid-Hidalgo, Dixon¹., Fuentealba, Matías¹., Maturana, Pablo¹., Cabrera, Ricardo¹.,¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by FONDECYT 1121170)

48) Effect of copper on the interaction of *Arabidopsis thaliana* with the metal resistant bacterium *Cupriavidus metallidurans* CH34.

Clavero, Claudia¹., Ruiz, Daniela¹., González, Bernardo¹.,¹Laboratorio de Bioingeniería, Center for Applied Ecology and Sustainability, Universidad Adolfo Ibáñez. (Sponsored by FONDECYT 1151130 Y CAPES FB 0002-2014)

49) Expression of carotenogenic genes in mutant strains for two general transcriptional repressors in the yeast *Xanthophyllomyces dendrorhous*.

Córdova, P¹., Alcaíno, J¹., Baeza, M¹., Cifuentes, V¹.,¹Laboratoio de Genética, Ciencias Ecológicas, Facultad de Ciencias, Universidad De Chile. (Sponsored by Fondecyt 1140504. CONICYT Doctoral Fellowship)

50) CHEMICAL MODIFICATION REVEALS THAT THE HUMAN GLUT2 CARRIER HAS A EXOFACIALLY ACCESSIBLE THIOL GROUP IMPORTANT FOR ACTIVITY

Cuevas, Alexei¹., Lagos, Ingrid¹., Toledo, Matias¹., Arce, Robinson¹., Castillo, Boris¹., Ojeda, Lorena¹., Perez, Alejandra¹., Salas, Monica¹., Reyes, Alejandro¹., ¹Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral De Chile. (Sponsored by Supported By FONDECYT 1130386, FONDEF D111131)

51) Expression analysis of exogenous genes involved in plant growth promoting effects in neutral plant associated bacteria *Cupriavidus Pinatubonensis* JMP134

De La Fuente, Francisco¹., Zúñiga, Ana¹., Gonzalez, Bernardo¹., ¹Laboratorio de Bioingeniería, Facultad de Ingeniería y ciencias, Universidad Adolfo Ibáñez. (Sponsored by Acknowledgements: FONDECYT Grant 1151130, CAPES FD0002-2014)

52) Synthesis and in silico analysis of the quantitative structure–activity relationship of heteroaryl-acrylonitriles as AChE inhibitors

De La Torre, Pedro¹., Treuer, Adriana V.²., Gutierrez, Margarita²., Poblete, Horacio³., Alzate-Morales, Jans H.¹., Trilleras, Jorge⁴., Caballero, Julio⁵., ¹Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad De Talca. ²Instituto de Química de los Recursos Naturales Universidad De Talca. ³Institute of Computational Comparative Medicine, Department of Anatomy and Physiology, Universidad de Kansas. ⁴Departamento de Ciencias Básicas Universidad del Atlantico. ⁵Centro de Bioinformática y Simulación Molecular, Departamento de Ingeniería, Universidad De Talca. (Sponsored by PD Thanks The Doctoral Program Of Applied Sciences At Univer- Sidad De Talca, As Well As The Chilean International Cooperation Agency (AGCI) And CONICYT- Chile For A Doctoral Fellowship (Folio Beca 63130202). MG Thank FONDECYT Project 110048)

53) THOR-O: An Optogenetic-Oscillatory system in *Saccharomyces cerevisiae*

Larrondo Castro, Luis., **Delgado, V¹.**, ¹Genetica Molecular y Microbiologia, Ciencias Biologicas, Pontificia Universidad Católica De Chile. (Sponsored by CONICYT Chile)

54) Analysis of extracytoplasmic function sigma factors in the plant growth-promoting rhizobacteria *Burkholderia phytofirmans* PsJN

Donoso, Raul¹., Gonzalez, Bernardo¹., Ledger, Thomas¹., ¹Laboratorio de Bioingeniería, Ingeniería y Ciencias, Universidad Adolfo Ibáñez. (Sponsored by FONDECYT 3140033, 11121515, 1151130 Y Center For Applied Ecology And Sustainability (CAPES FB-0002).)

55) **Web platform of citizen science: experience with a collaborative project on image analysis for the evaluation of a novel treatment against tumor cell proliferation.**

ESCOBAR, SEBASTIAN^{1.}, ACEVEDO, DINKA^{1.}, PROVIDEL, JOHN^{1.}, BURZIO, VERONICA^{2.},¹Ciencia ciudadana Chilecientifico.²Ciencias Biológicas Universidad Andrés Bello. (Sponsored by Fundación Ciencia Ciudadana, Fondecyt 1140345)

56) ***twist* and *cxcr4* are regulated by Hif-1 α during the neural crest development**

Benavides, Isabella^{1,2.}, Espina, Jaime^{1,2.}, Marchant, Cristian^{1,2.}, Reyes, Ariel^{1,2.},¹Departamento de Ciencias Biológicas, Facultad de Ciencias, Universidad Andrés Bello.²Interdisciplinary Center for Aquaculture Research (INCAR) Universidad Andrés Bello. (Sponsored by FONDECYT 1150816, CONICYT/FONDAP 15110027)

57) **mRNA-seq analysis reveals liver fibrosis in response to handling stress in the red cusk-eel (*Gnyptherus chilensis*)**

Espinoza, M^{1.}, Naour, Sebastian^{2.}, Aedo, Jorge^{2.}, Molina, Alfredo^{3.}, Valdes, Juan^{2.},¹Laboratorio de Bioquímica celular, Facultad de Ciencias Biológicas, Universidad Nacional Andrés Bello.²Laboratorio de Bioquímica Celular, Ciencias Biológicas, Universidad Andrés Bello.³Laboratorio de Biotecnología Molecular, Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by CONICYT/FONDAP/15110027 And FONDECYT/1130545)

58) **Evaluation of inflammatory parameters of foliar extracts of two genotypes from murtilla (*Ugni molinae* Turcz.) in cardiac fibroblasts**

Figuerola, Diana^{1.}, Diaz, Hugo^{1.}, Peña, Marcelo^{2.}, Arancibia, Jorge^{2.}, Delporte, Carla^{2.}, Garcia, Lorena^{1.},¹Centro Avanzado de Enfermedades Crónicas (ACCDiS), Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile.²Facultad de Ciencias Químicas y Farmacéuticas Universidad De Chile. (Sponsored by FONDAP 15130011, FONDECYT 1130155)

59) **The Non-Coding mitochondrial RNAs are new players in the regulation of the Cell Cycle of human cells**

Fitzpatrick, Christopher^{1,2.}, Briones, Macarena^{2.}, Burzio, Veronica^{2,1.}, Burzio, Luis^{1,2.},¹Facultad de Ciencias Biológicas Universidad Andrés Bello.²Andes Biotechnologies S.A Fundación Ciencia & Vida. (Sponsored by Grants: PhD Scholarship, Conicyt; Fondecyt 1110835 And 1140345, Conicyt, Chile And INOVA-Corfo 12IEAT-16317)

60) **Computational flexible backbone design of peptide binding sequences for the TEV protease**
Floor, Martin^{1.}, Galaz, Pablo^{1.}, Baez, Mauricio^{1.}, Cabrera, Ricardo^{2.}, ¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. ²Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by Fondecyt: 1151274, Anillo ACT-1107, CONICYT Scholarship 221320692)

61) ***In silico* characterization of proteins implicated in the core of the exportation channel of the Dot/Icm secretion system in *Piscirickettsia salmonis***
Flores-Herrera, Patricio^{1.}, Arredondo-Zelada, Oscar^{1.}, Henríquez, Fabián^{1.}, Marshall, Sergio^{1.}, Gómez, Fernando^{1.}, ¹Laboratorio de Genética e Inmunología Molecular, Ciencias, Pontificia Universidad Católica De Valparaíso. (Sponsored by This Project Was Support By The Grant Fondecyt Number 11130407)

62) **Studying the Binding Affinity Determinants of a Derivative Series from Sulbactam and Clavulanate as β -Lactamase Inhibitors.**

Fritz, Rubén^{1.}, Alzate-Morales, Jans^{1.}, ¹Ciencias Aplicadas, Ingeniería, Universidad De Talca. (Sponsored by JAM And RF Thank Financial Support Through Project FONDECYT 1140618. RF Acknowledges Support From A Doctoral Fellowship From UTAL.)

63) **The RNA helicase DDX3 connects CRM1-dependent nuclear export and translation of the HIV-1 unspliced RNA**

Fröhlich, Álvaro^{1.}, García-de-Gracia, Francisco^{1.}, Garcés, Andrea^{1.}, Ohlmann, Théophile^{2.}, Valiente-Echeverría, Fernando^{1.}, Soto-Rifo, Ricardo^{1.}, ¹Programa de Virología, Instituto de Ciencias Biomedicas, Facultad de Medicina, Universidad De Chile. ²International Center for Infectology Research Université de Lyon. (Sponsored by Fondecyt 11121339)

64) **Reduced level of tetrahydrobiopterin and phosphorylation associates with lower nitric oxide synthase activity in HUVECs from maternal supraphysiological hypercholesterolemia**

Fuenzalida, Barbara^{1.}, Saez, Tamara^{1.}, Salsoso, Rocio^{1.}, Sanhueza, Carlos^{1.}, Pardo, Fabian^{1.}, Sobrevia, Luis^{1,2,3.}, Leiva, Andrea^{1.}, ¹Cellular and Molecular Physiology Laboratory (CMPL) Division of Obstetrics and Gynecology, Escuela de Medicina, Facultad de Medicina, Pontificia Universidad Católica De Chile. ²Fisiología Cardiovascular, Facultad de Farmacia, Universidad de Sevilla. ³Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland. (Sponsored by Support: FONDECYT (1150344, 1150377, 3130583, 3140516))

65) Targeted next-generation sequencing (NGS) of MICA gene in Gastric Cancer

Gárate, Valentina^{1,2}, Morales, Marcela^{1,2}, Toro, Jessica², Gonzalez, Patricio³, Ribeiro, Carolina¹, Armisen, Ricardo², Molina, María¹, ¹Laboratorio de Inmunovigilancia y Evasión Inmune, Departamento de Inmunología, Facultad de Medicina, Universidad De Chile. ²Laboratorio de Patología Molecular del Cancer, Centro de Investigación y Tratamiento del Cáncer, Facultad de Medicina, Universidad De Chile. ³Programa de Genética Humana, Facultad de Medicina, Universidad De Chile. (Sponsored by This Work Was Supported By Fondecyt No 1130330 (MM), FONDEF D1111029 (RA) And ANILLO ACT1115 (RA) Of The Chilean Government.)

66) IMPACT OF THE ADENOSINE METHYLATION MACHINERY ON HUMAN IMMUNODEFICIENCY VIRUS GENE EXPRESSION


Garcés, Andrea¹, Dellarossa, Alessandra¹, Pereira, Camila¹, Lara, Natalia¹, López, Arlette¹, Prades, Yara¹, Valiente-Echeverría, Fernando¹, Ricci, Emiliano², Soto-Rifo, Ricardo¹, ¹Programa de Virología, ICBM, Facultad de Medicina, Universidad De Chile. ²INSERM ENS-Lyon. (Sponsored by AG Is Doctoral Fellow From Universidad De Chile Post-graduate Program)

67) Innate immune responses associated with severe influenza A virus infection in humans.

García, Tamara^{1,2}, Nuñez, María José¹, Barrera, Aldo¹, Angulo, Jenniffer^{3,2}, Marco, Claudia⁴, Le Corre, Nicole⁴, Tapia, Karla^{4,1}, López-Lastra, Marcelo^{3,2}, Ferres, Marcela⁴, Medina, Rafael^{4,2,5,1}, ¹Laboratory of Molecular Virology PUC. ²Millennium Institute on Immunology and Immunotherapy PUC. ³Centro de Investigaciones Médicas, Escuela de Medicina, División de Pediatría Pontificia Universidad Católica De Chile. ⁴Departamento de Enfermedades Infecciosas e Inmunología, Facultad de Medicina, Pontificia Universidad Católica De Chile. ⁵Department of Microbiology Icahn School of Medicine at Mount Sinai. (Sponsored by CONICYT: Proyecto De Inserción Capital Humano En La Academia (79100014) Y FONDECYT (1121172), Instituto Milenio En Inmunología E Inmunoterapia; And Center For Research In Influenza Pathogenesis (CRIP) An NIAID-NIH Funded CEIRS Center (HHSN266200700010C).)

68) Growth/Differentiation Factor 11 (GDF-11) restores energy metabolism in hypertrophic cardiomyocytes

Garrido, V¹, Ibarra, C², Lavandero, S^{1,3}, ¹Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical and Pharmaceutical Sciences & Faculty of Medicine, University of Chile. ²Heart Failure Bioscience Department, Cardiovascular and Metabolic Diseases,



Innovative Medicines & Early Development Biotech Unit
AstraZeneca.³Department of Internal Medicine, Cardiology
Division University of Texas Southwestern Medical Center.

69) Polycystin-1 regulates IGF-1-induced cardiomyocyte hypertrophy and IGF-1 receptor signaling

Fernández, C¹., Cartes-Saavedra, B¹., **Garrido, V¹.,**
Torrealba, N¹., Pedrozo, Z¹., Lavandero, S^{1,2}., ¹Advanced
Center for Chronic Diseases (ACCDiS) and Center for
Molecular Studies of the Cell (CEMCS), Faculty of Chemical
and Pharmaceutical Sciences & Faculty of Medicine,
University of Chile.²Department of Internal Medicine
Southwestern Medical Center, University of Texas.

70) Effects of distance variations between a positioned nucleosome and a DNA regulatory element on nucleosome remodeling dynamics

Gidi, Cristián¹., Arriagada, Axel¹., Hepp, Matías¹., Gutiérrez,
José¹., ¹Departamento de Bioquímica y Biología Molecular,
Facultad de Ciencias Biológicas, Universidad De
Concepción. (Sponsored by CONICYT, FONDECYT/
Regular 1130818)

71) Development of a coupled Deacetylase-Demethylase enzymatic assay

Gomez, Andrea¹., Barrera, Nelson¹., ¹Department of
Physiology, Faculty of Biological Sciences, Pontificia
Universidad Católica De Chile.

72) MEF31 is a PPR protein necessary for editing of the *orfX* mitochondrial transcript in *Arabidopsis thaliana*

Gonzalez-D, E¹., Arenas-M, A¹., Takenaka, M²., Jordana,
X¹., ¹Departamento de Genética Molecular y Microbiología,
Facultad de Ciencias Biológicas, Pontificia Universidad
Católica De Chile.²Molekulare Botanik Universität Ulm,
Germany. (Sponsored by Fondecyt 1141197; Nucleo Milenio
NC130030)

73) Cloning of two LIMCH1 isoforms: characterization of their distribution in rat brain and their agmatinase activity.

Gonzalez, Arlette¹., García, David¹., Ordenes,
Patricio²., Benitez, José¹., Alarcón, Barbara¹., Rivas,
Benhur¹., García-Robles, Maria²., Carvajal, Nelson¹., Uribe,
Elena¹., ¹Bioquímica y Biología Molecular, Ciencias
Biológicas, Universidad De Concepción.²Biología
Celular, Ciencias biológicas, Universidad De Concepción.
(Sponsored by VRID-Enlace Universidad De Concepción
215.037.019-1.0.)

74) THERMODYNAMIC STUDY OF THE INTERACTION BETWEEN THE PROTEIN PKA AND MUTANTS OF KEMPTIDE CONTAINING HOMOARGININE

Gonzalez, F¹., Mena, Karel²., Vergara, Ariela Jaque³., Poblete, Horacio³., Caballero, Julio³.,¹Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad De Talca.²Facultad de Ciencias Exactas Universidad Andres Bello.³CBSM Universidad De Talca. (Sponsored by This Work Was Supported By FONDECYT Regular # 1130141)

75) Halophilic adaptation of proteins in the archaeal *Methanosarcinales* group

Gonzalez-Ordenes, Felipe¹., Castro-Fernandez, Victor¹., Zamora, Ricardo¹., Guixé, Victoria¹.,¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by Fondecyt 1150460)

76) IDENTIFICATION OF AUTOANTIBODIES AGAINST FRUCTOSE-1,6-BISPHOSPHATASE ISOLATED FROM SERUM OF AUTISTIC CHILDREN

González-Aguilar, Andrea¹., Villarroel-Espindola, Franz¹., Asenjo, Joel¹., Francos, Rina²., Cuchacovich, Miguel³., Concha, Ilona¹., González-Gronow, Mario⁴., Slebe, Juan¹.,¹Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile.²Departamento de Psiquiatría Asociación Chilena de Padres de Niños Autistas (ASPAUT).³Departamento de Medicina, Medicina, Universidad De Chile/Hospital Clínico J.J. Aguirre.⁴Departamento de Ciencias Biomédicas, Facultad de Medicina, Universidad Católica del Norte. (Sponsored by [FONDECYT: 1141033 (JCS); 1130451 (MGG); 1110508 (IIC); 3130449 (FVE)])

77) The Plant Growth-Promoting rhizobacteria *Burkholderia phytofirmans* PsJN regulates Arabidopsis growth through a mechanism dependent of gibberellin-related pathways

Greve, Macarena¹., Poupin, María^{1,2}.,¹Laboratorio de Bioingeniería, Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez.²Center for Applied Ecology and Sustainability CAPES. (Sponsored by Fondecyt 11121306; CAPES-FB-0002-2014; Millennium-Nucleus (NC130030))

78) Role of microRNAs during maturation of hippocampal neurons

Guajardo, L^{1,2}., Aguilar, R^{1,2}., Bustos, F¹., Gutierrez, R³., Van Zundert, B¹., Montecino, M^{1,2}.,¹Center for Biomedical Research, Faculty of Biological Sciences and Faculty of Medicine, Universidad Andrés Bello.²FONDAP Center for Genome Regulation Universidad Andrés Bello.³Department of Biochemistry and Molecular Genetics, Faculty of Biological Sciences, P. Universidad Católica de Chile. (Sponsored by FONDECYT 1130706; FONDAP 15090007; FONDECYT 3140418; FONDECYT 1140301.)

79) Towards a new representation of DNA chemical diversity to better understand its specificity of recognition by proteins

Gutiérrez, Fernando¹., Ribeiro, Judemir¹., Ríos, Carlos¹., Ibarra, Ignacio¹., Schüller, Andreas¹., Melo, Francisco¹.,¹Laboratorio de Bioinformática Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by This Research Was Funded By FONDECYT Regular N° 1141172)

80) The orientation of boxes A and B is critical for high affinity binding by MarA and Rob proteins of *mar* and *micF* duplex DNA.

Geoffroy, Consuelo¹., Guerra, Constanza¹., Henríquez, M¹., Melo, Francisco¹.,¹Departamento de Biología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by Proyecto FONDECYT 1141172.)

81) *The Piscirickettsia salmonis* LF-89 genome contain two variants of the *hfq* sRNA-chaperone gene

Henríquez, Fabián¹., Flores-Herrera, Patricio¹., Gómez, Fernando¹., Marshall, Sergio¹.,¹Laboratorio de Genética e Inmunología Molecular, Ciencias, Pontificia Universidad Católica De Valparaíso. (Sponsored by This Work Was Supported By The Grant FONDECYT 11130407)

82) Polycystin 2 is required for rapamycin-induced atrophy

Hernández, N¹., Ortega, A²., Hernando, C²., Villalobos, E²., Criollo, A³.,¹Institute for Research in Dental Sciens, Faculty of Dentistry, Universidad De Chile.²Research Institute of Dental Science (ICOD) and Advanced Center for Chronic Diseases (ACCDiS), Faculty of Dentistry, Universidad De Chile.³Research Institute of Dental Science (ICOD) and Advanced Center for Chronic Diseases (ACCDiS) Universidad De Chile. (Sponsored by This Work Was Supported By FONDECYT Grant 1140908)

83) Polycystin-2 regulates autophagy through the mTOR/AMPK pathway in skeletal muscle cells

Hernando, Cecilia¹., Ortega, Allison¹., Hernández, Nadia¹., Peña, Daniel¹., Criollo, Alfredo¹.,¹Institute for Research in Dental Sciences, Faculty of Dentistry, Universidad De Chile. (Sponsored by This Work Was Supported By FONDECYT Grant 1140908.)

Posters Thursday, September 24

84) Unveiling novel extra circadian functions for the oscillatory clock protein Frequency in *Botrytis cinerea*.

Hevia, Montserrat¹., Müller, Hanna¹., Canessa, Paulo¹., Larrondo, Luis¹., ¹Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica De Chile.

85) ENDOTHELIN-CONVERTING ENZYME-1C PROMOTES COLON CANCER AGGRESSIVENESS: NEW INSIGHTS FOR AN ET-1 INDEPENDENT EFFECT

Huerta, H¹., Silva, E¹., Niechi, I¹., Muñoz, J.P²., Aguayo, F²., Tapia, J.C¹., ¹Laboratorio de Transformación Celular, ICBM, Facultad de Medicina, Universidad de Chile. ²Laboratorio de Virología, Facultad de Medicina, Universidad de Chile.

86) Insights of cold adaptation mechanisms in proteins assessing the flexibility of the psychrophilic and mesophilic ADP-PFK/GK from *M. burtonii* and *M. maripaludis*

Kern-Mikkelsen, M¹., Castro-Fernandez, Victor¹., Zamora, Ricardo¹., Guixé, Victoria¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by Fondecyt 1150460.)

87) Intrinsical disorder and amyloid aggregation inhibition of the antimicrobial protein Microcin E492.


Lobos, Pablo ¹., Bignon, Eduardo¹., Villanelo, Felipe¹., Artsimovitch, Irina²., Monasterio, Octavio¹., Lagos, Rosalba¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. ²Department of Microbiology Ohio State University.

88) Cell metabolism increases in the early stage of mitochondrial unfolded protein response in HeLa cells

Lopez-Crisosto, C¹., Lavandero, S^{1,2}., ¹Advanced Center for Chronic Diseases (ACCDiS), Facultad Ciencias Químicas y Farmacéuticas & Facultad de Medicina, Universidad De Chile. ²Department of Internal Medicine (Cardiology) University of Texas Southwestern Medical Center. (Sponsored by FONDECYT 1120212; FONDAF 15130011; PhD CONICYT Fellowship To C.L.C)

89) Glutathione depletion induces UPR and autophagy in germ cells

Mancilla, H¹., Cereceda, K¹., Vander Stelt, K¹., Lavandero, S²., Slebe, J¹., Concha, I¹., ¹Instituto de Bioquímica y Microbiología, De Ciencias, Universidad Austral De Chile. ²Advanced Center for Chronic Diseases (ACCDiS), Ciencias Químicas y Farmacéuticas y Facultad Medicina,



Universidad De Chile. (Sponsored by FONDECYT 1110508 (IC), 1141033 (JCS), And FONDAP 15130011 (SL). HM: Becario Doctorado CONICYT, DID-UACH 1330-32-06 And Beca Estadía MECESUP AUS 1203)

90) A Method to Determinate Functional HREs on Genes Regulated by Hif-1.

Marchant, Cristian^{1,2}, Barriga, Elías³, Benavides, Isabella^{1,2}, Espina, Jaime^{1,2}, Reyes, Ariel^{1,2}, ¹Departamento de Ciencias Biológicas, Facultad de Ciencias Biológicas, Universidad Andrés Bello. ²Interdisciplinary Center of Aquaculture, (INCAR), Universidad Andrés Bello. ³Cell and Developmental Biology Department University College London. (Sponsored by FONDECYT 1150816, CONICYT/ FONDAP 15110027)

91) Developing Nanoparticles Towards the Ultrasensitive Detection of Cancer Biomarkers

Marchant, MJ¹, Guerrero, Ariel², Melo, Francisco³, Corvalán, Alejandro⁴, Guzmán, Leda¹, Kogan, Marcelo², ¹Instituto de Química, Facultad de Ciencias, Pontificia Universidad Católica De Valparaíso. ²Departamento de Química Farmacológica y Toxicológica, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. ³Laboratorio de Física No Lineal, Facultad de Ciencias, Universidad De Santiago De Chile. ⁴Centro de Investigación en Oncología (CITO) Pontificia Universidad Católica De Chile. (Sponsored by Patricio Ponce For TEM Micrographs. FONDECYT Postdoctoral N° 3150360, Stage 2015. DI 036.497/2015 And DI 037.274/2015 From VRIEA, PUCV. FONDECYT No. 1151411. FONDECYT No. 1130425. FONDAP Grant No. 15130011.)

92) Biomimetics: From Bioinformatics to Rational Design of Dendrimers as Gene Carriers

MARQUEZ-MIRANDA, VALERIA^{1,2}, CAMARADA, MARIA BELEN³, ARAYA-DURAN, INGRID^{1,2}, VARAS-CONCHA, IGNACIO¹, ALMONACID, DANIEL¹, GONZALEZ-NILO, FERNANDO DANILO^{1,2}, ¹CENTRO DE BIOINFORMATICA Y BIOLOGIA INTEGRATIVA, FACULTAD DE CIENCIAS BIOLOGICAS, Universidad Andrés Bello. ²FCR FRAUNHOFER CHILE RESEARCH. ³Laboratorio de Bionanotecnología Universidad Bernardo O`higgins. (Sponsored by M.B.C. Is Grateful To Fondecyt For Financial Support (Initiation Project N° 11140107). V.M.M. Thanks Conicyt For A PhD Scholarship And CONICYT + PAI/ Concurso Nacional Tesis De Doctorado En La Empresa 2014 (781413007). D.G.N., V.M. And I.A. Thank For Supp)

93) IDENTIFICATION AND TRANSCRIPTIONAL ANALYSIS OF EXPANSINS IN THE MOLECULAR RESPONSE TO INCLINATION OF RADIATA PINE

Mateluna, Patricio¹, Morales, Luis¹, Herrera, Raul¹, Ramos, Patricio¹, ¹Instituto de Ciencias Biológicas Universidad

De Talca. (Sponsored by This Work Was Supported By Fondecyt 11121170, 1120635)

94) Calcium sensing receptor activation increases FABP4/aP2 protein and autophagy gene expression in human LS14 adipocytes and adipose tissue

MATTAR, P^{1,2}, Fuentes, C¹, Lavandero, S², Cifuentes, M¹, ¹Instituto de Nutrición y Tecnología de los Alimentos (INTA) Universidad De Chile. ²ACCDIS, Facultad Ciencias Químicas y Farmacéuticas/Facultad Medicina, Universidad De Chile.

95) Domain swapping of the DNA-binding domain of human FoxP1 is facilitated by its low folding stability.

Medina, Exequiel¹, Valenzuela, Sandro¹, Córdova, Cristóbal¹, Ramírez-Sarmiento, César A¹, Babul, Jorge¹, ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by Funding: FONDECYT 1130510 And 11140601)

96) De novo assembly characterization and analysis of fine flounder (*Paralichthys adspersus*) skeletal muscle transcriptome under conditions of nutritional stress

Mendez, K¹, Bravo, S^{2,3}, Bastías, M², Valdes, JA⁴, Meneses, C², Vizoso, P^{3,2}, Molina, A⁴, ¹Laboratorio de Biotecnología Molecular, Facultad de Ciencias Biológicas, Universidad Andrés Bello. ²Centro de Biotecnología Vegetal, Facultad de Ciencias Biológicas, Universidad Andrés Bello. ³Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello. ⁴Interdisciplinary Center for Aquaculture Research (INCAR), Facultad de Ciencias Biológicas, Universidad Andrés Bello.

97) Angiotensin-(1-9) decreases cardiomyocyte death triggered by ischemia/ reperfusion.

Mendoza E¹, Ocaranza MP^{1,2}, Lavandero S¹. ¹Advanced Center for Chronic Diseases (ACCDIS), Facultad Ciencias Químicas y Farmacéuticas & Facultad Medicina, Universidad de Chile and ²División de Enfermedades Cardiovasculares, Facultad Medicina, Pontificia Universidad Católica de Chile. evelyn.mendoza@ug.uchile.cl (Sponsored by EM Hold A PhD CONICYT Fellowship. FONDEF D11I1122 (MPO;SL), FONDAP15130011 (MPO;SL).)

98) Angiotensin II induces autophagy in vascular smooth muscle cells

Mondaca-Ruff, D¹., Cartes-Saavedra, B¹., Norambuena-Soto, I¹., Garcia-Miguel, M¹., Sanhueza-Olivares, F¹., Lavandero, S^{1,2}., Chiong, M¹., ¹ACCDiS, Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. ²ACCDiS, Facultad de Medicina, Universidad De Chile. (Sponsored by FONDECYT 1140329, FONDAF 15130011, Anillo ACT1111)

99) Combining mass spectrometry, *in silico* collision-induced dissociation and molecular dynamics simulations to analyse intact membrane proteins under vacuum.

Montenegro, Felipe., Barrera, Mario¹., Torres, Soledad²., Barrera, Nelson ²., ¹Department of Physiology, Faculty of Biological Sciences, Pontificia Universidad Católica De Chile. ²Departamento de Ingeniería, Facultad de Ingeniería, Universidad de Valparaíso. (Sponsored by Funded By Fondecyt 1120169, Anillo ACT-1108, Conicyt DPI 20140080 And Millennium Science Initiative P10-035F Grants.)

100) Integrative inference of transcriptional regulatory networks in a model eukaryote

Montenegro-Montero, A¹., Siahpirani, Alireza²., Pujato, Mario³., Yang, Ally⁴., Hughes, Timothy⁴., Weirauch, Matthew³., Roy, Sushmita^{2,5}., Larrondo, Luis¹., ¹Millennium Nucleus for Fungal Integrative and Synthetic Biology and Departamento de Genética Molecular y Microbiología Pontificia Universidad Católica De Chile. ²Department of Computer Sciences University of Wisconsin-Madison and Wisconsin Institute for Discovery, USA. ³Center for Autoimmune Genomics and Etiology and Divisions of Biomedical Informatics and Developmental Biology Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA. ⁴Donnelly Centre for Cellular and Biomolecular Research University of Toronto, Canada. ⁵Department of Biostatistics and Medical Informatics University of Wisconsin-Madison, USA. (Sponsored by MN-FISB NC120043, FONDECYT 1131030)

101) 3D pharmacophore searching and selectivity analysis on a series of anti-tuberculosis compounds associated to the protein kinases B and G: *pharmacophore* based virtual screening.

Morales-Bayuelo, Alejandro¹., Caballero, Julio²., ¹Centro de Bioninformática y Simulación Molecular, Ingeniería en Bioninformática, Universidad De Talca. ²Centro de Bioninformática y Simulación Molecular, Ingeniería en Bioninformática, Universidad De Talca. (Sponsored by Thanks To The Universidad De Talca (CBSM)) For The Continuous Support To This Investigation And To The Postdoctoral Project 3150035 (FONDECYT 2015, CHILE))

102) Differential expression of lncRNAs during osteogenesis.

Nardocci, Gino^{1,2}., Carrasco, Margarita^{2,1}., Torres, Gustavo^{2,1}., Acevedo, Elvis^{2,1}., Meneses, Claudio³., Montecino, Martín^{2,1}., ¹Center for Genome Regulation FONDAP. ²Center for Biomedical Research, Faculty of Biological Sciences and Faculty of Medicine, Universidad Andrés Bello. ³Center of Plant Biotechnology, Faculty of Biological Sciences, Universidad Andrés Bello. (Sponsored by FONDAP-15090007; FONDECYT-1130706; FONDECYT-3140414.)

103) Molecular characterization of the interaction of a COld regulate (COR) protein and a series of thylakoid mixture membranes in response of cellular dehydration by Coarse Grained Molecular Dynamics (CGMD) simulations

Navarro, C¹., Alzate-Morales, Jans¹., Bremer, Anne²., Thalhammer, Anja³., Hinch, Dirk⁴., González, Wendy¹., ¹Centro de Bioinformática y Simulación Molecular, Facultad de Ingeniería, Universidad de Talca. ²Pflanzenphysiologie Max-Planck-Institut für Molekulare Pflanzenphysiologie. ³Physikalische Biochemie Universität Potsdam. ⁴Molekulare Pflanzenphysiologie Max-Planck-Institut für Molekulare Pflanzenphysiologie. (Sponsored by Carlos Navarro-Retamal Agradece A Conicyt Por Beca Doctoral N° 21120691)

104) ECE-1C UBIQUITINATION AND ITS ROLE IN COLON CANCER INVASION

Niechi, I¹., Villar, P¹., Silva, E¹., Huerta-Castro, H¹., García De Herreros, A²., Carrasco, V¹., Tapia, J.C¹., ¹Cell Transformation Laboratory, ICBM, Faculty of Medicine, University of Chile. ²Programa de Recerca en Càncer Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Barcelona, Spain. (Sponsored by CONICYT Ph.D. Fellowship #21120181 (I.N.G) And FONDECYT #1120132 Grants (J.C.T.))

105) Molecular detection and genotypification of *Helicobacter pylori* in stool samples from symptomatic adult patients in Coquimbo, Chile.

Nilo, Yenny¹., Madariaga, Juan¹., Zaffiri, Vittorio¹., Bresky, Gustavo¹., Häberle, Sergio²., Bernal, Giuliano¹., ¹Ciencias Biomédicas, Medicina, Universidad Católica Del Norte. ²Clínica, Medicina, Universidad Católica Del Norte. (Sponsored by Funded By FONIS SA10I20042 And CORFO 12IDL2-16202 Grants.)

106) ADENOSINE MEDIATES INDUCTION OF RENAL AMINOPEPTIDASE A IN EXPERIMENTAL DIABETES MELLITUS

Ojeda, Adriana^{1.}, Maldonado, Axel^{1.}, Jaramillo, Catherine^{1.}, Perez, Gustavo^{1.}, San Martín, Rody^{1.}, ¹Institute of Biochemistry and Microbiology, Science Faculty, Universidad Austral De Chile. (Sponsored by Supported By Fondecyt N° 1130414)

107) Dynactin complex and Dynein regulatory proteins are important for Murine Leukemia Virus (MLV) infection but not for Human immunodeficiency virus type-I (HIV-1) infection

Opazo, Tatiana^{1.}, Valle-Tenney, Roger^{1.}, Arriagada, Gloria^{1.2.}, ¹Ciencias Biológicas Universidad Andrés Bello. ²NuMind Núcleo Milenio Biología de Enfermedades Neuropsiquiátricas .

108) ALTERED SUBCELLULAR LOCALIZATION OF BRCA1 AND BARD1 IN BREAST CANCER TUMORS

Ortega-Hernández, Victoria^{1.}, Wiener, David^{1.}, Gajardo-Meneses, Patricia^{1.}, Herrera-Cares, Cristobal^{1.}, Carvalho, Pilar^{1.}, ¹Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. (Sponsored by Fondecyt 1120200)

109) Galectin-3 activates pro-survival signaling pathways in fibroblasts but presents no obvious effect over cardiomyocytes Bustamante, Mario^{1,3,2.}, Oyarzún, Ingrid^{2,3.}, Pavez, Mario^{3,2.}, Gómez , Teresa^{3,2.}, Vidal, Macarena^{1,3,2.}, Verdejo, Hugo E^{3,2.}, Quiroga, Clara^{3,2.}, Lavandero, Sergio^{1,3.}, Castro, Pablo^{3,2.}, ¹Laboratorio de Transducción de Señales Moleculares, Ciencias Químicas y Farmacéuticas, Universidad De Chile. ²Laboratorio de Señalización Cardiovascular, División de Enfermedades Cardiovasculares, Medicina, Pontificia Universidad Católica De Chile. ³Advanced Center for Chronic Diseases (ACCDiS) Universidad de Chile & Pontificia Universidad Católica de Chile. (Sponsored by Supported By FONDAPE 15130011 (PC, SL), FONDECYT 11140470 (CQ), FONDECYT 1150359 (HV), FONDECYT 1141198 (PC))

110) Development of a novel and simple visible staining method for inexpensive DNA detection and quantification.


Paredes, Aaron J.^{1.}, Contreras, Gabriela^{1.}, Babul, Jorge^{2.}, Wilson , Christian^{1.}, Christian A.M., ¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. ²Departamento de Biología, Facultad de Ciencias, Universidad De Chile. (Sponsored by FONDECYT 11130263 And U-inicia (U. Chile).)

111) Comparative analysis of flavonoids biosynthesis in three *Fragaria* species and their antioxidant and anti-platelet aggregation effects.
Parra-Palma, C^{1,2}., Ramos, P²., Fuentes, E³., Palomo, I³., Moya-León, M.A.²., ¹Doctorado en ciencias, mención Ingeniería genética vegetal, Instituto de Ciencias Biológicas, Universidad De Talca. ²Laboratorio de Fisiología Vegetal y Genética Molecular, Instituto de Ciencias Biológicas, Universidad De Talca. ³Department of Clinical Biochemistry and Immunohematology, Faculty of Health Sciences, Interdisciplinary Excellence Research Program on Healthy Aging (PIEI-ES), Universidad de Talca. (Sponsored by C.P.-P. Thanks To CONICYT For Her Doctoral Scholarship. Research Supported By Anillo ACT-1110 Project.)

112) Regulation of ARK5 by LKB1 kinase
Peña, D¹., Venturelli, Katherine¹., Palma, Mario¹., Castro, Ariel¹., ¹Transducción de Señales y Cáncer, Ciencias biológicas, Universidad De Concepción. (Sponsored by FONDECYT 1120923)

113) Differential expression of microRNAs in breast cancer tumors associated to lymph node metastasis
Pérez, Elisa¹., Zavala, Valentina¹., Cornejo, Valeria²., Fernandez, Wanda²., Gamboa, Jorge³., Carvallo, Pilar¹., ¹Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. ²Unidad de Anatomía Patológica Hospital San Borja Arriarán. ³Unidad de Patología Mamaria Hospital San Borja Arriarán. (Sponsored by FONDECYT1120200)

114) MATERNAL OBESITY INDUCES ENDOPLASMIC RETICULUM STRESS AND AMINO ACID RESPONSE IN HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS
Pizarro, Carolina^{1,2}., Villalobos-Labra, Roberto^{1,2}., Westermeier, Francisco^{1,2,3}., Sáez, Pablo^{1,2}., Kusanovic, J.P.¹., Poblete, J.¹., Mardones, F.⁴., Sobrevia, Luis^{1,2}., Farías-Jofré, Marcelo^{1,2}., ¹Division de Obstetricia y Ginecología, Facultad de Medicina, Pontificia Universidad Católica De Chile. ² Cellular and Molecular Physiology Laboratory (CMPL), Medical Research Centre (CIM), Facultad de Medicina, Pontificia Universidad Católica De Chile. ³Advanced Center for Chronic Diseases, Faculty of Chemical and Pharmaceutical sciences, Universidad De Chile. ⁴Division of Public Health, School of Medicine, Facultad de Medicina, Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT (1121145, 1110977, 1150377, 1150344).)



115) **DNA miss-recognition in mutated transcription factors across different cancer types**
Pizarro, D¹., Almonacid, Daniel¹.,¹centro de bioinformatica y biologia integrativa, facultad de ciencias biológicas, Universidad Andrés Bello. (Sponsored by Fondecyt 11130578 To DEA)

116) **LOCALIZATION OF TRANSCRIPTIONAL CO-REPRESSOR SKI ON SATELLITE DNA IN HUMAN MITOTIC CHROMOSOMES**
Pola, Victor^{2,1}., Sagredo, Eduardo¹.,Carrero, David^{2,1}.,Cappelli, Claudio^{2,1}.,Sagredo, Alfredo¹.,Armisen, Ricardo³.,Marcelain, Katherine^{1,2}.,¹Centro de Investigación y Tratamiento del Cáncer & ICBM, Facultad de Medicina Universidad De Chile.²Programa de Genética Humana, ICBM, Facultad de Medicina Universidad De Chile.³Centro de Excelencia en Medicina de Precisión Pfizer. (Sponsored by Supported By FONDECYT 1151435)

117) **CCT type II chaperonin promotes *in vitro* γ -tubulin self-aggregation. An interesting new function related to the protein misfolding cell response.**
Pouchucq, Luis^{1,2}., Escalona, Yerko¹.,Araya, Gissela¹.,Valpuesta, José³.,Monasterio, Octavio¹.,¹Laboratorio de Biología Estructural y Molecular, Facultad de Ciencias, Universidad De Chile.²Departamento de Biotecnología Universidad Tecnológica Metropolitana.³Structural Biology Laboratory National Center of Biotechnology . (Sponsored by FONDECIT 1130711)

118) **Effects of handling stress on the expression of genes involved in energetic metabolism in red-cusk eel (*Genypterus chilensis*).**
Pozo, F¹., Zuloaga, Rodrigo¹.,Boltaña, Sebastian².,Molina, Alfredo³.,Valdes, Juan³.,¹Laboratorio de Bioquímica celular, Ciencias Biológicas, Universidad Andrés Bello.²Biotecnología Marina y Acuicultura, Facultad de Ciencias Naturales y Oceanográficas, Universidad De Concepción.³Laboratorio de Biotecnología Molecular, Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by CONICYT/FONDAP/15110027 And FONDECYT/1130545)

119) **Role of anticancer drugs that promote SG assembly on HIV-1 replication**
Prades, Y¹., Poblete, N¹.,Cáceres, M¹.,Lu Lay, N¹.,Mouland, A².,Valiente-Echeverría, F¹.,¹Programa de Virología, ICBM, Facultad de Medicina, Universidad De Chile.²Department of Experimental Medicine, Faculty of Medicine, Mcgill University. (Sponsored by This Work Is Supported By FONDECYT N11140502. YP Is A Doctoral Fellow From Universidad De Chile, Postgraduate Program.)

120) Peptide extracts present in sea cucumber, *Athyonidium chilensis* (Semper, 1868), with potential anticancer activity

Ramírez, Sebastián¹., Chandía, Nancy²., Bernal, Giuliano¹., ¹Ciencias Biomédicas, Medicina, Universidad Católica Del Norte. ²Biología Marina, Ciencias del Mar, Universidad Católica Del Norte.

121) Transcriptomic analysis of common carp (*Cyprinus carpio*) in seasonal acclimatization process.

Ramos, I.¹., Carrasco, T.¹., Salazar, M.¹., Sepulveda, J.P.¹., Meneses, C.¹., Alvarez, M.¹., ¹Departamento de Biología, Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by (Sponsored By CONICYT/ FONDAP/15110027))

122) Virulence and Pathogenic Effect of Influenza A(H1N1)pdm09 Genetic Variants with Different Plaque Phenotypes


Rathnasinghe, R¹., Barrera, A¹., Tapia, K^{1,2}., Medina, R^{1,2,3,4}., ¹Laboratory of Molecular Virology PUC. ²Departamento de Enfermedades Infecciosas e Inmunología, Escuela de Medicina, PUC. ³Department of Microbiology, Global Health and Emerging Pathogens Institute, Department of Medicine, Icahn School of Medicine at Mount Sinai. ⁴Millennium Institute on Immunology and Immunotherapy PUC. (Sponsored by CONICYT: Proyecto De Inserción Capital Humano En La Academia (79100014) Y FONDECYT (1121172), Instituto Milenio En Inmunología E Inmunoterapia; And Center For Research In Influenza Pathogenesis (CRIP) An NIAID-NIH Funded CEIRS Center (HHSN266200700010C).)

123) Accuracy assessment of an automated MMGBSA-based protocol to estimate binding free energies on the PDBbind data set

Reyes-Silva, Luis¹., Adasme-Carreño, Francisco¹., Alzate-Morales, Jans¹., ¹Centro de Bioinformática y Simulación Molecular, Ingeniería en Bioinformática, Universidad De Talca. (Sponsored by Acknowledgments. L.R. And J.A-M. Thank To The Project FONDECYT No. 1140618 And The School Of Bioinformatics Engineering, Universidad De Talca For The Granted Financial Support. F.A-C. Acknowledges Support From The Doctoral Fellowship CONICYT-PCHA/ Folio 21)

124) SR-SASA: a new tool for indentifying and quantifying interaction surfaces in biological molecules based on the buried solvent accessible surface area

Ribeiro, Judemir¹., Schüller, Andreas¹., Ríos-Vera, Carlos¹., Melo, Francisco¹., ¹Genética Molecular y Microbiología Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT 1131065 And 1141172)



125) Standardization of Comet Assay for the Evaluation of Genotoxic Damage caused to COLO320 Carcinoma Cell Line Rivas, Brian¹., Ide, Walther²., Riquelme, Orlando¹., Bustamante, Sergio¹., Reyes, Camila¹., Inzunza, Bárbara³., Gavilan, Juan³., Torrejón, Marcela¹., Morin, Violeta¹., ¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. ²Carrera de Bioquímica, Facultad de Farmacia, Universidad De Concepción. ³Departamento de Biología Celular, Facultad de Ciencias Biológicas, Universidad De Concepción. (Sponsored by VRID-Enlace: 214.037.018-1.0)

126) Development of a new model for predicting DNA flexibility from sequence
Rodríguez Muxica, Natalia¹., Cares, Jorge¹., Rodríguez, Felipe¹., Ibarra, Ignacio¹., Melo, Francisco¹., ¹Genética Molecular, Laboratorio de Bioinformática Molecular., Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by This Work Was Funded By A Grant From FONDECYT REGULAR (#1141172).)

127) *Arabidopsis thaliana* growth and salinity tolerance are induced by *Burkholderia phytofirmans* PsJN through bacterial emission of a blend of volatile signals
Rojas, Sandy¹., Ledger, Thomas¹., ¹Laboratorio de Bioingeniería, Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez. (Sponsored by CAPES FB-0002-2014, Fondecyt 11121515, Millenium Nucleus (NC130030).)

128) Gemcitabine-resistant gallbladder cancer cells have epithelial-to-mesenchymal features and overexpression of ABCC2 transporter
Espinoza, Jaime¹., Bizama, Carolina¹., Espinoza, Karena²., Apud, María¹., Weber, Helga³., Leal, Pamela³., Nervi, Bruno⁴., Repetto, Gabriela²., Juan, Roa¹., García, Patricia¹., ¹Department of Pathology-CITO and Advanced Center for Chronic Diseases (ACCDiS), School of Medicine Pontificia Universidad Católica De Chile. ²Genetic and Genomic Center, Faculty of Medicine Clínica Alemana-Universidad del Desarrollo. ³Department of Pathology, CEGIN-BIOREN, Medicine, Universidad De La Frontera. ⁴Hematology and Oncology Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT: JCR-1130204, PG-11130515, JAE-3140308, CA-3140426; FONDEF: JCR-15130011)

129) A-to-I transcriptome editing mediated by ADAR1 in breast cancer.
Sagredo, Eduardo A¹., Sagredo, Alfredo¹., Blanco, Alejandro¹., Morales, Fernanda¹., Verdugo, Ricardo¹., Marcelain, Katherine¹., Harismendy, Olivier²., Armisen, Ricardo^{3,1}., ¹Centro de Investigación y

Tratamiento del Cáncer & ICBM, Facultad de Medicina Universidad De Chile.²Moore's Cancer Center, School of Medicine, University of California, San Diego.³Centro de Excelencia en Medicina de Precisión Pfizer, Chile. (Sponsored by Supported By FONDECYT 1151446, CORFO 13CEE2-21602 And PhD CONICYT Fellowship 21130361)

130) EFFECT OF NORDIHYDROGUAIARETIC ACID ON GLUCOSE TRANSPORT AND ACCUMULATION IN HUMAN LEUKEMIC CELL LINES

León, David¹., Antillanca, Janira¹., Inalef, Jennifer¹., Ojeda, Lorena¹., Perez, Alejandra¹., Zambrano, Ángara¹., Reyes, Alejandro¹., **Salas, Monica**¹., ¹Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral De Chile. (Sponsored by FONDECYT 1130386, FONDEF D1111131, DID-UACH S-2013-22)

131) Regulation of gene expression of the nuclear-encoded mitochondrial protein HIG2A by hypoxia and cellular metabolism


Salazar, Celia¹., Elorza, Alvaro A. ^{2,3}., Ruiz, Lina M.¹., ¹Centro de Investigación Biomédica, Facultad Ciencias de la Salud, Universidad Autónoma De Chile. ²Center for Biomedical Research, Faculty of Biological Sciences and Faculty of Medicine, Universidad Andres Bello. ³(MIII) Millennium Institute of Immunology and Immunotherapy. (Sponsored by Acknowledgements: This Work Was Supported By FONDECYT 11130192 And 1100995. IMII P09-016-F.)

132) A synthetic red-light toggle switch to control gene expression in *Neurospora crassa*.

Salinas, Francisco¹., Rojas, Vicente¹., Larrondo, Luis¹., ¹Millennium Nucleus for Fungal Integrative and Synthetic Biology (MN-FISB), Departamento de Genética Molecular y Microbiología, Facultad de Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by Work Supported By FONDECYT Postdoctoral 3150156 And MN-FISB NC120043.)

133) Insulin requires A_{2B} adenosine receptors activation to restore fetoplacental human endothelial function in late-onset preeclampsia.

Salsoso, Rocío¹., Sáez, Tamara¹., Silva, Luis¹., Villalobos, Roberto¹., Farías, Marcelo¹., Sanhueza, Carlos¹., Pardo, Fabián¹., Leiva, Andrea¹., Sobrevia, Luis^{1,2,3}., ¹Cellular and Molecular Physiology Laboratory (CMPL) Division of Obstetrics and Gynaecology, Escuela de Medicina. Facultad de Medicina, Pontificia Universidad Católica De Chile. ²Fisiopatología Cardiovascular, Facultad de Farmacia, Universidad de Sevilla. ³Centre for Clinical Research (UQCCR), Faculty of Medicine and Biomedical Sciences, University of Queensland. (Sponsored by Support: FONDECYT 1150377, 1150344, CONICYT 3140516,



3130583, Chile. RS, TS, And LS Hold CONICYT-PhD Fellowships. RS And LS Hold Faculty Of Medicine PUC-fellowships.)

134) Degradation of a knotted protein by the ATP dependent protease ClpXP of Escherichia coli.
San Martín, Alvaro^{1.}, Molina, José^{1.}, Baez, Mauricio^{1.}, ¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. (Sponsored by Proyecto Fondecyt Chile, Código: 1151274: Folding And Degradation Of Proteins With Knotted Topologies: Implications For Folding Of Proteins And Unfolding And Translocation Mechanism Of ATP-dependent Proteases (ClpXP).)

135) miR-335-5p is a potential suppressor of metastasis and invasion in gastric cancer
Sandoval, Alejandra^{1.}, Polakovicova, Iva^{1,2.}, Riquelme, Ismael^{3.}, Bizama, Carolina^{1.}, Roa, Juan Carlos^{1.}, Corvalán, Alejandro^{1.}, ¹UC - Center for Investigational Oncology (CITO), Faculty of Medicine, Pontificia Universidad Católica De Chile. ²Advanced Center for Chronic Diseases (ACCDiS) Pontificia Universidad Católica De Chile. ³Scientific and Technological Bioresource Nucleus (BIOREN) Universidad De La Frontera.

136) PDGF-BB induces mitochondrial fragmentation and degradation during VSMC dedifferentiation
Sanhueza-Olivares, F^{1.}, Cartes-Saavedra, B^{1.}, Norambuena-Soto, I^{1.}, Mondaca-Ruff, D^{1.}, Pino-Espinoza, G^{1.}, Garcia-Miguel, M^{1.}, Morales, P^{1.}, Chiong, M^{1.}, ¹ACCDiS. Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad De Chile. (Sponsored by FONDECYT 1140329, FONDAPE 15130011, Anillo ACT1111)

137) THE HYDROPHOBIC INTERACTIONS STABILIZE THE BINDING OF DKTX TOXIN AND THE PAIN RECEPTOR TRPV1.
Sepúlveda, Romina^{2.}, Diaz-Franulic, I^{1,2.}, Gonzalez-Nilo, Fernando^{2.}, ¹Nanomedicine, M. Sánchez Fontecilla 310 piso 14, Las Condes, Chile., Fundación Fraunhofer Chile Research. ²Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by This Work Is Supported By FONDECYT Grant 1131003. RVS Thanks To CONICYT-PCHA/Doctorado Nacional 2013-21130631 Fellowship. The Centro Interdisciplinario De Neurociencia De Valparaíso Is A Millennium Institute Supported By The Millennium Scientific Initiati)

138) **Analysis of the transcriptional expression in response to an abiotic natural stress (salinity) in a freshwater fish (*Cyprinus carpio*).** **Sepúlveda, Juan**¹, Ramos, Ignacio¹, Salazar, Marcelo¹, Zuloaga, Rodrigo¹, Molina, Alfredo¹, Alvarez, Marco¹,¹Departamento de Ciencias Biológicas, Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by (Sponsored By CONICYT/FONDAP/15110027))

139) **Functional inference of proteins involved in valine biosynthesis and their use to define bacterial species: Insight from a novel Antarctic bacteria** **Sepúlveda, Felipe**^{1,2}, Álvarez, Leonardo^{1,2}, Almonacid, Daniel^{1,2},¹Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello.²Santiago Aminotec. (Sponsored by Supported By: Grant Regular UNAB DI-476-14/R To DEA, CORFO Grant 15SUP-39021 To Aminotec.)

140) **Role of glucose during fruit ripening of *Vitis vinifera*.** **Serrano, Alejandra**¹, Arce-Johnson, Patricio¹, Gutierrez, Rodrigo¹,¹Genética Molecular y Microbiología, Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by Postdoctoral Project FONDECYT 3150608; FONDECYT 1150220; Millennium Nucleus NC130030.)

141) **Study of STIM1-Orai1 in cardiomyocyte autophagy** **Shaikh, S**¹, Mondaca-Ruff, David¹, Troncoso, Rodrigo^{1,2}, Chiong, Mario¹, Lavandero, Sergio^{1,3},¹ACCDiS, Ciencias Químicas y Farmacéuticas, Universidad De Chile.²ECRAN, Instituto de Nutrición y Tecnología de los Alimentos (INTA), Universidad De Chile.³Internal Medicine (Cardiology Division) University of Texas Southwestern. (Sponsored by FONDECYT 3150545 (SS), FONDAP ACCDIS)

142) **Up-regulation of Akt/mTORC1 signaling by CK2 and its consequences in clonogenic potential of human colon cancer cells** **Silva-Pavez, E**¹, Huerta-Castro, H¹, Villar, P¹, Muñoz, J.P², Aguayo, F², Tapia, J.C¹,¹Cell Transformation Laboratory, Program of Cellular and Molecular Biology; ICBM, Faculty of Medicine, Universidad De Chile.²Virology Program; ICBM, Faculty of Medicine, Universidad De Chile. (Sponsored by FONDECYT Grant 1120132, CONICYT Ph.D. Fellowship 21120176.)

143) **Urinary exosome: Searching of novel potential markers for diabetic nephropathy** **Silva, Pamela**¹, Llanquino, Jesús¹, Hernández, Mauricio², López, Bernardo³, Carpio, Juan Daniel⁴, Yáñez, Alejandro^{1,2},¹Instituto de Bioquímica y Microbiología,

Facultad de Ciencias, Universidad Austral De Chile.²Austral-Omics, Facultad de Ciencias, Universidad Austral De Chile.³Instituto de Medicina, Facultad de Medicina, Universidad Austral De Chile.⁴Instituto de Anatomía, Histología y Patología, Facultad de Medicina, Universidad Austral De Chile. (Sponsored by Proyecto 13IDL2-23502)

144) Determination of the physical interaction and stoichiometry of 5-HT_{3A/B} and P2X₂ receptors complex.

Soto, Paola^{1.}, Barrera, Nelson^{1.},¹Ciencias Fisiológicas, Ciencias Biológicas, Pontificia Universidad Católica De Chile. (Sponsored by Funded By Fondecyt 1120169, Anillo ACT 1108, Millennium Science Initiative P10-035F And Conicyt DPI 20140080 Grants.)

145) Increased tolerance to drought in *Arabidopsis thaliana* inoculated with *Burkholderia phytofirmans* PsJN: bacterial emission of volatile compounds and modulation of plant stress signaling

Tamayo, Javier^{1.}, Rojas, Sandy^{1.}, Ledger, Thomas^{1.},¹Laboratorio de Bioingeniería, Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibañez. (Sponsored by CAPES FB-0002-2014, Fondecyt 11121515, Millenium Nucleus (NC130030))

146) Rational design and Directed Evolution of 6-phosphogluconate dehydrogenase of *Escherichia coli* Tobar-Calfucoy, Eduardo^{1.}, Maturana, Pablo^{1.}, Cid-Hidalgo, Dixon^{1.}, Novoa-Henriquez, Catalina^{2.}, Jakob, Felix^{2.}, Martinez, Ronny^{3.}, Schwaneberg, Ulrich^{4,2.}, Santiviago, Carlos^{5.}, Cabrera, Ricardo^{1.},¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile.²Biointerface and Biohybrid Systems DWI-Leibniz Institute for Interactive Materials.³Enzyme Technology EW-Nutrition GmbH.⁴Lehrstuhl für Biotechnologie RWTH Aachen University.⁵Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. (Sponsored by This Work Was Supported By FONDECYT 1121170, CONICYT Master Scholarship And Universidad De Chile - Departamento De Postgrado Y Postítulo De La Vicerrectoría De Asuntos Académicos.)

147) Differential interaction of CCAAT/ enhancer-binding protein beta (C/EBPβ) isoforms with the nuclear proteins XPC, HLTF and NF1C.

TURNER, AILEEN^{1.}, AMIGO, ROBERTO^{1.}, VALENZUELA, NICOLE^{1.}, GUTIERREZ, JOSE^{1.},¹BIOQUIMICA Y BIOLOGIA MOLECULAR, CIENCIAS BIOLOGICAS, Universidad De Concepción. (Sponsored by CONICYT, FONDECYT/ Regular 1130818)

148) Metagenomic analysis of pico- and nano-planktonic communities from surface coastal waters from Bahia Fildes, King George Island, Antarctica.

Valdivia, C¹., Moreno-Pino, Mario¹., Ugalde, Juan¹., Trefault, Nicole¹., ¹Centro de Genómica y Bioinformática Universidad Mayor. (Sponsored by Fondecyt #11121554)

149) Immune response of the skeletal muscle in the fine flounder (*Paralichthys adspersus*)

Valenzuela, C¹., Zuloaga, Rodrigo¹., Cruz, Katherine¹., Avendaño-Herrera, Ruben²., Poblete-Molares, Matias²., Irgang, Rute²., Valdes, Juan¹., Molina, Alfredo¹., ¹Laboratorio de Biotecnología Molecular Universidad Andrés Bello. ²Laboratorio de Patología de Organismos Acuáticos y Biotecnología Acuicola Universidad Andrés Bello. (Sponsored by Supported By FONDAP 15110027 And FONDECYT 1130545)

150) Analysis of the mechanisms by which the yeast HMG protein Nhp6 favors the association of the ySWI/SNF complex to gene regulatory regions

Valenzuela, Nicole¹., Hepp, Matías¹., Gidi, Cristián¹., Arriagada, Axel¹., Gutiérrez, José Leonardo¹., ¹Departamento de Bioquímica y Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. (Sponsored by CONICYT, FONDECYT/Regular 1130818)


151) Biophysical characterization and preliminary crystallization assays of the forkhead domain of the transcription factor Fhl1, a key regulator of yeast ribosomal protein genes.

Vallejos, Gabriel¹., Reyes, Javiera¹., Babul, Jorge¹., Ramírez-Sarmiento, César¹., ¹Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias, Universidad de Chile. (Sponsored by FONDECYT 11140601 & 1130510)

152) Characterization of DYRKs kinases in seminiferous epithelium and its possible role as activity regulator of MGS. Vander Stelt, K¹., Arató, K²., Mancilla, H¹., Lopez, C¹., Cereceda, K¹., Slebe, JC¹., De La Luna, S²., Concha, I¹., ¹Instituto de Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile. ²Gene Regulation, Stem Cells and Cancer Programme Centre for Genomic Regulation. (Sponsored by FONDECYT 1110508 (IC), 1141033 (JCS), DID UACH, Beca CONICYT KV, MECESUP AUS 1203 KV)

153) Characterization of gamma³¹ subunit associated to phycoerythrin from *Gracilaria chilensis*

Vasquez, A^{1,2}., Martínez-Oyanedel, Jose²., Bunster, Marta²., ¹Programa de Doctorado en Biología Celular y Molecular Universidad De Concepción. ²Bioquímica



y Biología Molecular, Facultad de Ciencias Biológicas, Universidad De Concepción. (Sponsored by FONDECYT: 1130256)

154) Structural analysis and SDS-induced phenol oxidase activity of hemocyanins from the Chilean Theraphosidae spiders *Grammostola rosea* and *Euathlus condorito*.

Villablanca, Christopher¹., Cáceres, Juan Carlos¹., Barriga, Andrés²., Veloso, Claudio³., Cabrera, Ricardo¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad de Chile. ²Unidad de Espectrometría de Masas, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile. ³Departamento de Ciencias Ecológicas, Facultad de Ciencias, Universidad de Chile.

155) IMPAIRED INSULIN RESPONSE IN UMBILICAL CORDS FROM MATERNAL OBESITY PREGNANCIES

Villalobos-Labra, Roberto^{1,2}., Westermeier, Francisco^{1,2,3}., Sáez, Pablo^{1,2}., Pizarro, Carolina^{1,2}., Kusanovic, Juan¹., Poblete, José¹., Mardones, Francisco⁴., Sobrevia, Luis^{1,2}., Farías-Jofré, Marcelo^{1,2}., ¹Obstetrics and Gynaecology, School of Medicine, Medicine, Pontificia Universidad Católica De Chile. ²Cellular and Molecular Physiology Laboratory (CMPL), Medical Research Centre (CIM), School of Medicine, Medicine, Pontificia Universidad Católica De Chile. ³Advanced Center for Chronic Diseases (ACCDiS), Faculty of Chemical & Pharmaceutical Sciences, Universidad de Chile. ⁴Division of Public Health, School of Medicine, Medicine, Pontificia Universidad Católica De Chile. (Sponsored by FONDECYT (1121145, 1110977, 1150377, 1150344))

156) Genome-wide chimeric-transcript discovery in Wnt/ β -catenin stimulated human hematopoietic precursor cells.

Villaman, Camilo¹., Ugarte, Giorgia¹., Bustos, Bernabe¹., Vargas, Macarena¹., Elorza, Alvaro²., De Ferrari, Giancarlo¹., ¹Centro de Investigaciones Biomedicas, Republica 239, Interior., Ciencias Biológicas, Universidad Andres Bello. ²Laboratorio de Bioenergética Experimental, República 217., Ciencias Biológicas, Universidad Andres Bello.

157) CK2 regulates autophagy via activation of the Akt/mTORC1 pathway in colon cancer cells

Villar, P¹., Silva, E¹., Huerta, H¹., Verdugo, C¹., Carrasco, V¹., Castro, AF²., Tapia, JC¹., ¹Cell Transformation Laboratory, Faculty of Medicine, Program of Cellular and Molecular Biology, ICBM, University of Chile. ²Signal Transduction and Cancer Laboratory, Faculty of Biological Sciences, Biochemistry and Molecular Biology Department, University of Concepcion. (Sponsored by FONDECYT Grant 1120132)

158) MITOCHONDRIA COULD BE THE INTRACELLULAR TARGET OF GLUCOSE POLYMERS-INDUCED APOPTOSIS IN MALE GERM CELLS

Villarroel-Espindola, F¹., Tapia-Andrade, Cynthia¹., Concha, Ilona¹., Slebe, Juan Carlos¹., ¹Bioquímica y Microbiología, Ciencias, Universidad Austral De Chile. (Sponsored by FONDECYT 1141033 (JCS) And 3130449 (FVE))

159) Anticancer activity of a ruthenium complex in gallbladder carcinoma cells

Villota, Hernán¹., Pizarro, Sebastian²., Gajardo, Francisco³., Delgadillo, Álvaro²., Bernal, Giuliano ²., ¹Ciencias Biomedicas, Facultad de Medicina, Universidad Católica Del Norte. ²Departamento de Química, Facultad de Ciencias, Universidad de La Serena. ³Departamento de Química, Facultad de Ciencias, Universidad de La Serena. (Sponsored by CORFO 14IDL2-30087)

160) Adenosine receptor 1 mediates insulin-induced glucose uptake in adult rat cardiomyocytes

Westermeier, Francisco³., Riquelme, Jaime³., Utreras-Mendoza, Yildy¹., Romero, Diego²., Sánchez, Gina¹., Sergio, Lavandero^{3,4}., ¹Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad De Chile. ²Departamento de Anatomía Patológica, Advanced Center for Chronic Diseases (ACCDiS), Facultad de Medicina, Pontificia Universidad Católica de Chile, Santiago, Chile., Pontificia Universidad Católica De Chile. ³Departamento de Bioquímica y Biología Molecular, Advanced Center for Chronic Diseases (ACCDiS), Facultad Ciencias Químicas y Farmacéuticas & Facultad de Medicina, Universidad de Chile, Santiago, Chile., Universidad De Chile. ⁴Department of Internal Medicine, Cardiology Division, Dallas, Texas University of Texas Southwestern Medical Center. (Sponsored by Supported By FONDAP 15130011 (SL), FONDECYT 1120212 (SL), FONDECYT 1130407 (GS), FONDECYT 3140532 (FW).)

161) Isolation and characterization of Outer membrane vesicles (OMVs) produced by *Piscirickettsia salmonis*.

Oliver, Cristian¹., Valenzuela, Karla¹., Hernandez, Mauricio¹., Albornoz, Romina¹., Arriagada, Vicente¹., Sanchez, Fabian¹., Sanchez, Patricio¹., **Yañez, A¹.**, ¹Instituto de Bioquímica y Microbiología, Facultad de Ciencias, Universidad Austral De Chile. (Sponsored by FONDAP- INCAR 15110027)

162) Evolution of structural patterns on ADP-dependent extremophile enzymes: Biophysical and evolutionary study of their structural flexibility.

Zamora, Ricardo A¹., Castro-Fernandez, Victor¹., Ramirez-Sarmiento, Cesar¹., Komives, Elizabeth²., Guixe, Victoria¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. ²Department of Chemistry and Biochemistry University of California San Diego. (Sponsored by FONDECYT 1150460)

163) Evolution of structural patterns on ADP-dependent extremophile enzymes: biophysical and evolutionary study of their structural flexibility.

Zamora, R¹., Castro-Fernandez, Victor¹., Ramírez-Sarmiento, Cesar¹., Komives, Elizabeth²., Guixe, Victoria¹., ¹Departamento de Biología, Facultad de Ciencias, Universidad De Chile. ²Department of Chemistry and Biochemistry University of California San Diego. (Sponsored by Fondecyt 1150460)

164) microRNA expression profiling in breast cancer tumors associated to BRCA1 expression.

Zavala, Valentina¹., Gajardo, Patricia¹., Alvarez, Carolina¹., Fernandez, Wanda²., Cornejo, Valeria²., Gamboa, Jorge³., Carvallo, Pilar¹., ¹Departamento de Biología Celular y Molecular, Facultad de Ciencias Biológicas, Pontificia Universidad Católica de Chile. ²Unidad de Anatomía Patológica Hospital San Borja Arriarán. ³Unidad de Patología Mamaria Hospital San Borja Arriarán. (Sponsored by FONDECYT 1120200, CONICYT 21120269.)

165) Contrasting oceanographic conditions regulate the expression of muscle atrophy and hypertrophy related genes in intertidal fish *Girella laevis*

Zuloaga, R^{1,2}., Méndez, K^{1,2}., Valdés, JA^{1,2}., Pulgar, J³., Molina, A^{1,2}., ¹Facultad de Ciencias Biológicas Universidad Andrés Bello. ²Interdisciplinary Center for Aquaculture Research (INCAR) Universidad De Concepción. ³Facultad de Ecología y Recursos Naturales Universidad Andrés Bello. (Sponsored by FONDECYT N°1130545 & FONDAP INCAR N°15110027 Grants.)

166) Construction and characterization of biological circuits to create a synthetic bacterial consortium

Zúñiga, Ana¹., De Lorenzo, Victor²., Ruz, Gonzalo¹., González, Bernardo¹., ¹Bioingeniería, Ingeniería y Ciencias, Universidad Adolfo Ibáñez. ²Systems Biology Program Centro Nacional de Biotecnología. (Sponsored by Proyecto FONDECYT Postdoctorado N° 3140031)

167) BrainEXchange, Nexos Chile-USA internship program that promotes the collaboration between U.S. laboratories and Chilean Scientists
Ramos, María-Paz¹, Gómez, Daniela², Montecinos, Felipe³, Sepúlveda, Carolina⁴, Nuñez-Parra, Alexia⁵, ¹ Cells for Cells - Consorcio Regenero S.A. ²School of Veterinary Medicine, University of Pennsylvania. ³National Institute of Health. ⁴School of Medicine, University of Pennsylvania. ⁵Anschutz Medical Campus, University of Colorado.

168) Identifying new transient receptor potential (TRP) channels in organisms from across the eukaryotic domain
Alegria-Arcos, M^{1,2}, González-Nilo, F^{2,1}, Latorre, R¹, Almonacid, D^{2,1}, ¹Centro Interdisciplinario de Neurociencias de Valparaíso (CINV), Facultad de Ciencias, Universidad De Valparaíso. ²Center for Bioinformatics and Integrative Biology (CBIB), Facultad de Ciencias Biológicas, Universidad Andrés Bello. (Sponsored by MA And FDG Acknowledge Grant Support From Fondecyt Regular N° 1131003 And Anillo ACT-1107 PIA-CONICYT CINV. MA And DA Acknowledge Grant Support From FONDECYT INICIACION 11130578. The Authors Gratefully Acknowledge Support From ICM-Economía P09-022-F).

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