

# CURRICULUM VITAE

## FELIPE G. SERRANO

### ANTECEDENTES ACADÉMICOS

- 2005-2008 : Grado de Bachiller en Ciencias Biológicas en la Pontificia Universidad Católica de Chile.
- 2008 - 2010 : Licenciatura en Ciencias Biológicas en la Pontificia Universidad Católica de Chile.
- 2012 - 2014 : Magister en Ciencias Biológicas mención biología celular y molecular en la Pontificia Universidad Católica de Chile.
- 2015 : Diplomado en Diseño Editorial en la Universidad de Chile.
- 2016 : Taller Lumen: Taller de libro ilustrado

### EXPERIENCIA LABORAL

#### BIÓLOGO EN EL LABORATORIO DE NEUROBIOLOGÍA MOLECULAR A CARGO DEL DR. NIBALDO INESTROSA CANTÍN (2010-2014)

Manejo en el conocimiento de la biología celular y fisiología. Especialidad en el área de la neurobiología celular y fisiología del sistema nervioso, además de procesos relacionados con enfermedades neurodegenerativas como la enfermedad de Alzheimer.

Conocimiento en el campo de la neurociencia relacionado con memoria y plasticidad sináptica en el hipocampo. Uso de técnicas electrofisiológicas para evaluar potenciales de campo excitatorios (fEPSP), potenciación a largo plazo (LTP), depresión a largo plazo (LTD), test de facilitación. Además, realizo test de memoria y análisis mediante la técnica del laberinto acuático de Morris (Morris Water Maze, MWM) en diversos modelos de ratón, incluyendo el ratón transgénico de la enfermedad de Alzheimer.

#### BIÓLOGO EN EL LABORATORIO DE CITOLOGÍA A CARGO DEL DR. ALFONSO GONZÁLEZ (2010-2012)

Conocimiento en el campo de la neurociencia relacionado con memoria y plasticidad sináptica en el hipocampo. Uso de técnicas electrofisiológicas para evaluar potenciales de campo excitatorios (fEPSP) y potenciación a largo plazo (LTP) para explorar anticuerpos derivados de pacientes con lupus eritematoso (SLE) en procesos de plasticidad sináptica y memoria espacial en hipocampo.

#### ILUSTRADOR CIENTÍFICO (2012- A LA FECHA)

Manejo de herramientas de diseño (Illustrator e Indesign) para la formación de material gráfico para presentaciones y publicaciones científicas en diversos tópicos biológicos y médicos. Además, manejo en diseño editorial para la preparación de libros con orientación hacia la divulgación científica.

## INVESTIGADOR ASOCIADO EN RESEARCH HEALTH REPRODUCTION INSTITUTE, RHRI (2015 -2016)

Investigador asociado que desarrolla material de divulgación científica y tecnológica en áreas clínicas ligadas a la salud humana. Uso de herramientas asociadas al diseño gráfico y editorial.

## DIRECTOR DE INVESTIGACIÓN EN RESEARCH HEALTH REPRODUCTION INSTITUTE, RHRI (2016 -2018)

Director de investigación que desarrolla material de divulgación científica y tecnológica en áreas clínicas ligadas a la salud humana. Uso de herramientas asociadas al diseño gráfico y editorial.

## CURSOS Y BECAS INTERNACIONALES

2012 Ricardo Miledi Neuroscience Training Program: *"Neuroscience: synapses, circuits and behavior"* Buenos Aires, Argentina (del 5 al 30 de Marzo, 2012). Organizado por Society for Neuroscience con la fundación Grass, la Sociedad Argentina de Investigación en Neurociencias (SAN) and IBRO. Financiado por la beca Hugo Arechiga

## FERIA CIENTÍFICA

7, 8 y 9 de Mayo 2014: 1era feria de divulgación científica UC. Exposición en feria científica para cursos de 3ero y 4to medio con el tema titulado: Funciones del Cerebro Humano. Proyecto EXPLORA, CONICYT y Pontificia Universidad Católica de Chile, Santiago, Chile.

## PUBLICACIONES

*Wingless-type family member 5A (Wnt-5a) stimulates synaptic differentiation and function of glutamatergic synapses.* Varela-Nallar L, Alfaro IE, Serrano FG, Parodi J, Inestrosa NC. 2010. Proc Natl Acad Sci U S A 107:21164-9

*IDN5706 decreases tau phosphorylation, A $\beta$  oligomers, cognitive deficit and induces LTP in brains of a double transgenic model of Alzheimer's disease.* Inestrosa NC, Tapia-Rojas C, Serrano FG, Griffith TN, Marín PB, Hancke J, Alvarez A, Parodi J and Varella-Nallar L. Translational psychiatry. 2011

*Peroxisome proliferators reduce spatial memory impairment, synaptic failure and neurodegeneration in brains of appsw/psen1 $\Delta$ 9 mouse model of Alzheimer's disease.* Inestrosa NC, Carvajal FJ, Zolezzi JM, Tapia-Rojas C, Serrano FG, Karmelić D, Toledo E and Santos M. Journal of Alzheimer's Disease. 2013

*Nicotine prevents synaptic impairment induced by amyloid- $\beta$  oligomers through  $\alpha$ 7-nicotinic acetylcholine receptor activation.* Inestrosa NC, Godoy JA, Vargas JY, Arrazola MS, Rios JA, Carvajal FJ, Serrano FG, Farias GG. Neuromolecular Medicine 2013.

*Synthesis and multitarget biological profiling of a novel family of rehin derivatives as disease-modifying anti-Alzheimer agents.* Viayna E, Sola I, Bartolini M, De Simone A, Tapia-Rojas C, Serrano FG, Sabaté R, Juárez-Jiménez J, Pérez B, Luque FJ, Andrisano V, Clos MV, Inestrosa NC, Muñoz-Torrero D. Journal of Medical Chemistry, 2014

*EphA4 Activation of c-Abl mediates synaptic loss and LTP blockade caused by amyloid- $\beta$  oligomers.* M Vargas L, Leal N, Estrada LD, González A, Serrano FG, Araya K, Gysling K, Inestrosa NC, Pasquale EB, Alvarez AR. PLoS One, 2014.

*Andrographolide reduces cognitive impairment in young and mature A $\beta$ PPsw/PS-1 mice.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Hancke J, Cerpa W, Inestrosa NC. Molecular Neurodegeneration, 2014.

*Anti-Ribosomal P protein Autoantibodies from Neuropsychiatric Lupus impair memory.* Bravo-Zehnder M, Toledo EM, Segovia-Miranda F, Serrano FG, Benito MJ, Metz C, Retamal C, Alvarez A, Massardo L, Inestrosa NC, González A. Arthritis and Rheumatology, 2015

*Pathogenicity of lupus anti-ribosomal p antibodies: Role of cross-reacting neuronal surface p-antigen in glutamatergic transmission and plasticity.* Segovia-Miranda F, Serrano FG, Dyrda A, Ampuero E, Retamal C, Bravo-Zehnder M, Parodi J, Zamorano P, Valenzuela D, Massardo L, van Zundert B, Inestrosa NC, González A. Arthritis and Rheumatology, 2015

*Fructose consumption reduces hippocampal synaptic plasticity underlying cognitive performance.* Cisternas P, Salazar P, Serrano FG, Montecinos-Oliva C, Arredondo SB, Varela-Nallar L, Barja S, Vio CP, Gomez-Pinilla F, Inestrosa NC. Biochim Biophys Acta, 2015

*Wnt5a inhibits K(+) currents in hippocampal synapses through nitric oxide production.* Parodi J, Montecinos-Oliva C, Varas R, Alfaro IE, Serrano FG, Varas-Godoy M, Muñoz FJ, Cerpa W, Godoy JA, Inestrosa NC. Molecular Cell Neuroscience, 2015.

*The increased potassium intake improves cognitive performance and attenuates histopathological markers in a model of Alzheimer's disease.* Cisternas P, Lindsay CB, Salazar P, Silva-Alvarez C, Retamales RM, Serrano FG, Vio CP, Inestrosa NC. Biochim Biophys Acta, 2015.

*Rhein-huprine derivatives reduce cognitive impairment, synaptic failure and amyloid pathology in AβPPswe/PS-1 mice of different ages.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Cisternas P, Viayna E, Irene S, Muñoz-Torrero D, Inestrosa NC. Current Alzheimer Research, 2015.

*Regulation of memory formation by the transcription factor XBP1.* Martínez G, Vidal RL, Mardones P, Serrano FG, Ardiles A, Wirth C, Valdés P, Thielen P, Schneider BL, Kerr B, Valdés JL, Palacios AG, Inestrosa NC, Glimcher LH and Hetz C. Cell Report, 2015.

*Ovulation, a sign of health.* Vigil P, Lyon C, Flores B, Rioseco H, Serrano F. Linacre Q, 2017.

*Insulin Sensitivity and Testicular Function in a Cohort of Adult Males Suspected of Being Insulin-Resistant.* Contreras PH, Serrano FG, Salgado AM, Vigil P. Front Med (Lausanne), 2018.

*Steroid Hormones and Their Action in Women's Brains: The Importance of Hormonal Balance.* Del Río JP, Allende MI, Molina N, Serrano FG, Molina S, Vigil P. Front Public Health, 2018.

*Neuroprotective Effects of Ferruginol, Jatrophone, and Junicedric Acid Against Amyloid-β Injury in Hippocampal Neurons.* Zolezzi JM, Lindsay CB, Serrano FG, Ureta RC, Theoduloz C, Schmeda-Hirschmann G, Inestrosa NC. J Alzheimers Dis., 2018.

## CONGRESOS NACIONALES E INTERNACIONALES

*IDN5706 diminished the neuropathological marks and prevent the cognitive damage and induce Itp in a transgenic model of the Alzheimer disease.* Tapia-Rojas C. 1, Serrano FG., Álvarez A., Parodi J., Varela-Nallar L., Inestrosa N.C. Center Of Aging And Regeneration (Care), Catholic Pontifical University from Chile. Congress of Neuroscience of Chile, Valdivia, Chile. Septiembre 2010.

*Wnt-5a modulates the amplitude of field Excitatory Post-Synaptic Potential (fEPSP) through nitric oxide in mouse hippocampal slices.* Serrano FG. Godoy JA, Parodi J., Inestrosa, N.C. Center of Aging and Regeneration (CARE), Biological Science Faculty, Catholic Pontifical University from Chile. Congress of Biology of Chile, Santa Cruz, Chile, Noviembre 2010.

*Enhanced excitatory neurotransmission in hippocampal slices by anti-p autoantibodies from a patient with Systemic Lupus Erythematosus (SLE).* Parodi J, Serrano FG, Segovia F, Cárcamo C, Bravo-Zehnder M, Massardo L, Jacobelli S, Inestrosa NC And González A. The Conference "Alzheimer's and Parkinson's Diseases:

Explore New Horizons and Emerging Disease-Modifying Therapies”, Barcelona, España, Marzo 2011.

*Wnt-5a modulates the Amplitude of field Excitatory Post-Synaptic Potential (fEPSP) Through Nitric Oxide In Mouse Hippocampal Slices in the Induction of the LTP in Hippocampal Slices from mice.* Serrano FG, Parodi J and Inestrosa NC. Publicacion Poster Laboratorio Mural CARE, Santiago, Chile, Agosto 2011.

*Peroxisome proliferators decrease synaptic plasticity failure and neurodegeneration in APP<sup>swe</sup>/PSEN1 E9 mouse model of Alzheimer’s disease.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Parodi J, Santos MJ and Inestrosa NC. Congress of Neuroscience of Chile, Santa Cruz, Chile, Septiembre 2011.

*Anti-p autoantibodies enhance cytosolic calcium and neurotransmission in hippocampal neurons by cross-reacting with cell surface NSPA.* Fabian Segovia-Miranda, Jorge Parodi, Felipe G. Serrano, Noelia Escobedo, Marcela Bravo-Zehnder, Pedro Zamorano, Juan Larraín1, David Valenzuela, Loreto Massardo, Nibaldo C. Inestrosa, Alfonso González. Chilean Society For Cell Biology, Puerto Varas, Octubre 2011

*Andrographolide prevent the decrease of synaptic proteins and induces LTP in brains of a double transgenic model of Alzheimer’s disease, possibly by a mechanism involving canonical Wnt pathway.* Cheril Tapia-Rojas, Felipe G. Serrano and Nibaldo C. Inestrosa. Centro de Envejecimiento y Regeneración (CARE), Departamento de Biología Celular y Molecular, Pontificia Universidad Católica de Chile. Chilean Society For Cell Biology, Puerto Varas, Chile, Octubre 2011.

*Wnt-5a mediates metaplasticity in mouse hippocampal CA3-CA1 synapse.* Felipe G. Serrano and Nibaldo C. Inestrosa. Annual meeting Society for Neuroscience, New Orleans, Estados Unidos, Octubre 2012. Beca Hugo Arechiga.

*Wnt pathways modulate the  $\alpha$ -7 nAChR activities in hippocampal neurons and protect neurons from Ab oligomers.* Juan A. Godoy, Juvenal A. Ríos, Felipe G. Serrano, Rodrigo Varas and Nibaldo C. Inestrosa. Departamento de Biología Celular y Molecular, Departamento de Fisiología, Pontificia Universidad Católica de Chile. Chilean Society For Cell Biology, Puerto Varas, Chile, Octubre 2012.

*ANDRO block the long-term depression by inhibition of GSK-3 $\beta$  and protect the A $\beta$  peptide damage.* Felipe G. Serrano, Cheril Tapia-Rojas and Nibaldo C. Inestrosa. 1st European Neuroscience Conference by Doctoral Students, Bordeaux, Francia, Abril 2013.

*Hormonal Abnormalities in Patients with Ovulatory Dysfunction are Associated with Changes in Mood States.* Serrano F.G., Osorio T., and Vigil P. 2017. IV Edition International Workshop in Neuroendocrinology. Concon, Chile. 8-13 August 2017.

*Prolactin hyper-response is associated with incidence of oral herpes in womens.* Serrano F.G., Bernal Y.A., & Vigil P. March, 2018. ISGE, Florence. 3-7 March 2018.

*Insulin sensitivity and testicular function in a cohort of adult males suspected of being insulin-resistant.* Contre-ras, P. H., Serrano, F. G., Salgado, A. M., & Vigil, P. March, 2018. ISGE, Florence. 3-7 March 2018.

## ILUSTRACIONES CIENTÍFICAS

### FERIAS CIENTÍFICAS

1era feria de divulgación científica UC. Exposición en feria científica para cursos de 3º y 4º Medio con el tema titulado: Funciones del Cerebro Humano. Felipe Serrano. (2014). Proyecto EXPLORA, CONICYT y Pontificia Universidad Católica de Chile, Santiago, Chile.

## PORTADAS

*Special Issue: Wnt signaling cascades in neurodevelopment, neurodegeneration and regeneration.* Volumen 6 número 1. Journal of Molecular Cell Biology, Febrero 2014.

*COVER: Molecular and Cellular Neuroscience.* Volume 69, Molecular and cellular neuroscience, November 2015.

*Biological Reviews.* Volumen 92, Número 4, Noviembre. Cambridge Philosophical Society, 2017.

*Special focus: Protein Quality Control.* Volumen 69, Número 2, Molecular Cell, Enero 2018.

*COVER.* Volumen 21, Número 6, Nature Cell Biology, Junio 2019.

*COVER.* Volumen 29, Número 12, Trends in Cell Biology, Diciembre 2019.

## LOGOS

*ALAM 2018.* Logo de la Asociación Latinoamericana de Microbiología, para el Congreso Latinoamericano de Microbiología, Santiago 2018.

*CEBIMA.* Logo del Centro de Excelencia en Biomedicina de Magallanes (CEBIMA), Dirigido por el Dr. Nibaldo Inestrosa C. de la Pontificia Universidad Católica de Chile y la Universidad de Magallanes.

*LysoLab.* Logo del laboratorio de lisosomas y enfermedades raras, dirigido por la Dra. Silvana Zanlungo de la Pontificia Universidad Católica de Chile.

## GRAPHICAL ABSTRACTS

*Neuronal gene repression in Niemann-Pick type C models is mediated by the c-Abl/HDAC2 signaling pathway.* Contreras PS, Gonzalez-Zuñiga M, González-Hódar L, Yáñez MJ, Dulcey A, Marugan J, Seto E, Alvarez AR, Zanlungo S. (2015) Biochim Biophys Acta.

*Fructose consumption reduces hippocampal synaptic plasticity underlying cognitive performance.* Cisternas P, Salazar P, Serrano FG, Montecinos-Oliva C, Arredondo SB, Varela-Nallar L, Barja S, Vio CP, Gomez-Pinilla F, Inestrosa NC. (2015). Biochim Biophys Acta.

*Rhein-huprine derivatives reduce cognitive impairment, synaptic failure and amyloid pathology in A $\beta$ PPswe/PS-1 mice of different ages.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Cisternas P, Viayna E, Irene S, Muñoz-Torrero D, Inestrosa NC. (2015). Curr Alzheimer Res.

*Recent insights on the role of cholesterol in non-alcoholic fatty liver disease.* Arguello G, Balboa E, Arrese M, Zanlungo S. (2015). Biochim Biophys Acta.

*Interactions of pannexin 1 with NMDA and P2X7 receptors in central nervous system pathologies: Possible role on chronic pain.* Bravo D, Maturana CJ, Pelissier T, Hernández A, Constandil L. (2015). Pharmacological Research.

*Regulation of memory formation by the transcription factor XBP1.* Martínez G, Vidal RL, Mardones P, Serrano FG, Ardiles A, Wirth C, Valdés P, Thielen P, Schneider BL, Kerr B, Valdés JL, Palacios AG, Inestrosa NC, Glimcher LH and Hetz C. Cell Report, 2015.

*Corticotropin-releasing factor type-2 receptor and corticotropin-releasing factor-binding protein coexist in rat ventral tegmental area nerve terminals originated in the lateral hypothalamic area.* Slater PG, Noches V, Gysling K. (2016). Eur J Neurosci.

*RNF12 X-Linked Intellectual Disability Mutations Disrupt E3 Ligase Activity and Neural Differentiation.* Bustos F, Segarra-Fas A, Chaugule VK, Brandenburg L, Branigan E, Toth R, Macartney T, Knebel A, Hay RT, Walden H, Findlay GM. (2018). Cell Report.

*The Protein Tyrosine Phosphatase Receptor Delta Regulates Developmental Neurogenesis.* (2019). Hideaki Tomita, Francisca Cornejo, Begoña Aranda-Pino, Cameron L. Woodard, Constanza C. Rioseco, Benjamin G. Neel, Alejandra R. Alvarez, David R. Kaplan, Freda D. Miller, Gonzalo I. Cancino. Cell Report.

## ARTÍCULOS

*Transforming growth factor  $\beta$  1 modulates amyloid  $\beta$ -induced glial activation through the smad3-dependent induction of MAPK phosphatase-1.* Flores B and Von Bernhardi R. (2012). Journal of Alzheimer's Disease.

*Peroxisome proliferator-activated receptor (PPAR)  $\gamma$  and PPAR $\alpha$  agonists modulate mitochondrial fusion-fission dynamics: Relevance to reactive oxygen species (ROS)-related neurodegenerative disorders?.* Zolezzi JM, Silva-Alvarez C, Ordenes D, Carvajal FJ, Santos MJ and Inestrosa NC. (2013). Plos One.

*Canonical Wnt signaling protects hippocampal neurons from A $\beta$  oligomers: role of non-canonical Wnt-5a/Ca<sup>2+</sup> in mitochondrial dynamics.* Silva-Alvarez C, Arrázola MS, Godoy JA, Ordenes D and Inestrosa NC. (2013). Frontiers in Cellular Neuroscience.

*SIRT1 Protects Dendrites, Mitochondria and Synapses from A $\beta$  Oligomers in Hippocampal Neurons.* Godoy JA, Allard C, Arrázola MS, Zolezzi JM, Inestrosa NC. (2013). Journal of Alzheimers Disease and Parkinsonism.

*Wnt-5a increases NO and modulates NMDA receptor in rat hippocampal neurons.* Muñoz, F. J., Godoy, J. A., Cerpa, W., Poblete, I. M., Huidobro-Toro, J. P., & Inestrosa, N. C. (2014). Biochemical and Biophysical Research Communications.

*Wnt-5a Modulates Mitochondrial Fission-Fusion in Rat Hippocampal Neurons.* Godoy JA, Arrázola MS, Ordenes D, Silva-Alvarez C, Braidly N, Inestrosa NC. (2014). Journal of Biological Chemistry.

*Andrographolide activates the canonical Wnt signalling pathway by a mechanism that implicates the non-ATP competitive inhibition of GSK-3 $\beta$ : Auto regulation of GSK-3 $\beta$  in vivo.* Tapia-Rojas C, Schüller A, Lindsay CB, Ureta RC, Mejías-Reyes C, Hancke J, Melo F, Inestrosa NC. (2014). Biochemical Journal.

*Age progression of neuropathological markers in the brain of the chilean rodent Octodon degus, a natural model of Alzheimer's disease.* Inestrosa NC, Ríos JA, Cisternas P, Tapia-Rojas C, Rivera DS, Braidly N, Zolezzi JM, Godoy JA, Carvajal FJ, Ardiles AO, Bozinovic F, Palacios AG, Sachdev PS. (2014). Brain Pathology,

*Andrographolide reduces cognitive impairment in young and mature A $\beta$ PPswe/PS-1 mice.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Hancke J, Cerpa W, Inestrosa NC. (2014). Molecular Neurodegeneration.

*WASP-1, a canonical Wnt signaling potentiator, rescues hippocampal synaptic impairments induced by A $\beta$  oligomers.* Vargas JY, Ahumada J, Arrázola MS, Fuenzalida M, Inestrosa NC. (2015). Experimental Neurology.

*p35 and Rac1 underlie the neuroprotection and cognitive improvement induced by CDK5 silencing.* Posada-Duque RA, López-Tobón A, Piedrahita D, González-Billault C, Cardona-Gomez GP. (2015). Journal of Neurochemistry.

*Transgenic overexpression of Niemann-Pick C2 protein promotes cholesterol gallstone formation in mice.* Acuña M, González-Hódar L, Amigo L, Castro J, Morales MG, Cancino GI, Groen AK, Young J, Miquel JF, Zanlungo S. (2015). Journal of Hepatology.

*The increased potassium intake improves cognitive performance and attenuates histopathological markers in a model of Alzheimer's disease.* Cisternas P, Lindsay CB, Salazar P, Silva-Alvarez C, Retamales RM, Serrano FG, Vio CP, Inestrosa NC. (2015). Biochim Biophys Acta.

*Rhein-huprine derivatives reduce cognitive impairment, synaptic failure and amyloid pathology in A $\beta$ PPswe/PS-1 mice of different ages.* Serrano FG, Tapia-Rojas C, Carvajal FJ, Cisternas P, Viayna E, Irene S, Muñoz-Torres D, Inestrosa NC. (2015). Curr Alzheimer Res.

*CDK5 knockdown in astrocytes provide neuroprotection as a trophic source via Rac1.* Posada-Duque RA, Pala-

cio-Castañeda V, Cardona-Gómez GP. (2015). *Molecular Cellular Neuroscience*.

*Wnt-5a-regulated miR-101b controls COX2 expression in hippocampal neurons*. Codocedo JF, Inestrosa NC. (2016). *Biol Res*.

*Wnt-5a/Frizzled9 Receptor Signaling through the Gao-G $\beta$ y Complex Regulates Dendritic Spine Formation*. Ramírez VT, Ramos-Fernández E, Henríquez JP, Lorenzo A, Inestrosa NC. (2016). *J Biol Chem*.

*Wnt5a Increases the Glycolytic Rate and the Activity of the Pentose Phosphate Pathway in Cortical Neurons*. Cisternas P, Salazar P, Silva-Álvarez C, Barros LF, Inestrosa NC. (2016). *Neural Plast*.

*Activation of Wnt Signaling in Cortical Neurons Enhances Glucose Utilization through Glycolysis*. Cisternas P, Salazar P, Silva-Álvarez C, Barros LF, Inestrosa NC. (2016). *J Biol Chem*.

*Quercetin Exerts Differential Neuroprotective Effects Against H<sub>2</sub>O<sub>2</sub> and A $\beta$  Aggregates in Hippocampal Neurons: the Role of Mitochondria*. Godoy JA, Lindsay CB, Quintanilla RA, Carvajal FJ, Cerpa W, Inestrosa NC. (2016). *Mol Neurobiol*.

*Silencing strategies for therapy of SOD1-mediated ALS*. van Zundert B, Brown RH Jr. (2017). *Neurosci Lett*.

*Identification of novel cellular clusters define a specialized area in the cerebellar periventricular zone*. Gonzalez-Gonzalez MA., Gómez-González G, Becerra-González GB & Martínez-Torres A. (2016). *Scientific Reports*

*High glucocorticoid levels during gestation activate the inflammasome in hippocampal oligodendrocytes of the offspring*. Maturana CJ, Aguirre A, Sáez JC. (2016). *Dev Neurobiol*.

*Structural and functional analysis of the ASM p.Ala359Asp mutant that causes acid sphingomyelinase deficiency*. Acuña M, Castro-Fernández V, Latorre M, Castro J, Schuchman EH, Guixé V, González M, Zanlungo S. (2016). *Biochem Biophys Res Commun*.

*CyDiv, a Conserved and Novel Filamentous Cyanobacterial Cell Division Protein Involved in Septum Localization*. Mandakovic D, Trigo C, Andrade D, Riquelme B, Gómez-Lillo G, Soto-Liebe K, Díez B, Vásquez M. (2016). *Front Microbiol*.

*Glutamatergic stimulation induces GluN2B translation by the nitric oxide-Heme-Regulated eIF2a kinase in cortical neurons*. Ramos-Fernández E, Tajés M, Ill-Raga G, Vargas L, Busquets-García A, Bosch-Morató M, Guiverneau B, Valls-Comamala V, Gomis M, Grau C, Fandos C, Rosen MD, Rabinowitz MH, Inestrosa N, Maldonado R, Altafaj X, Ozaita A, Alvarez A, Vicente R, Valverde MA, Muñoz FJ. (2016). *Oncotarget*.

*Inhibition of Wnt signaling induces amyloidogenic processing of amyloid precursor protein and the production and aggregation of Amyloid- $\beta$  (A $\beta$ )<sub>42</sub> peptides*. Tapia-Rojas C, Burgos PV, Inestrosa NC. (2016). *J Neurochem*.

*Wnt5a Increases the Glycolytic Rate and the Activity of the Pentose Phosphate Pathway in Cortical Neurons*. Cisternas P, Salazar P, Silva-Álvarez C, Barros LF, Inestrosa NC. (2016). *Neural Plasticity*.

*Inhibition of Wnt signaling induces amyloidogenic processing of amyloid precursor protein and the production and aggregation of Amyloid- $\beta$  (A $\beta$ )<sub>42</sub> peptides*. Tapia-Rojas C, Burgos PV, Inestrosa NC. (2016). *J Neurochemistry*.

*Wnt Signaling Prevents the A $\beta$  Oligomer-Induced Mitochondrial Permeability Transition Pore Opening Preserving Mitochondrial Structure in Hippocampal Neurons*. Arrázola MS, Ramos-Fernández E, Cisternas P, Ordóñez D, Inestrosa NC. (2017). *PLoS One*.

*Induction of hypothyroidism during early postnatal stages triggers a decrease in cognitive performance by decreasing hippocampal synaptic plasticity*. Salazar P, Cisternas P, Codocedo JF, Inestrosa NC. (2017). *Biochim Biophys Acta*.

*MLN64 induces mitochondrial dysfunction associated with increased mitochondrial cholesterol content*. Balboa E, Castro J, Pinochet MJ, Cancino GI, Matías N, José Sáez P, Martínez A, Álvarez AR, Garcia-Ruiz C, Fernandez-Checa JC, Zanlungo S. (2017). *Redox Biol*.

*Wnt3a ligand facilitates autophagy in hippocampal neurons by modulating a novel GSK-3 $\beta$ -AMPK axis.* Ríos JA, Godoy JA, Inestrosa NC. (2018). Cell Commun Signaling.

*Neuroprotective Effects of Ferruginol, Jatrophone, and Junicedric Acid Against Amyloid- $\beta$  Injury in Hippocampal Neurons.* Zolezzi JM, Lindsay CB, Serrano FG, Ureta RC, Theoduloz C, Schmeda-Hirschmann G, Inestrosa NC. (2018). J Alzheimers Dis.

*Differential functional selectivity and downstream signaling bias of ghrelin receptor antagonists and inverse agonists.* Ramirez VT, van Oeffelen WEPA, Torres-Fuentes C, Chruścicka B, Druelle C, Golubeva AV, van de Wouw M, Dinan TG, Cryan JF, Schellekens H. (2018). FASEB J.

*Genetic ablation of tau improves mitochondrial function and cognitive abilities in the hippocampus.* Jara C, Aránguiz A, Cerpa W, Tapia-Rojas C, Quintanilla RA. (2018). Redox Biology

*Modulation of Glucose Metabolism in Hippocampal Neurons by Adiponectin and Resistin.* Cisternas P, Martinez M, Ahima RS, William Wong G, Inestrosa NC. Mol Neurobiol.

*Fructose and prostate cancer: toward an integrated view of cancer cell metabolism. (2018).* Carreño D, Corro N, Torres-Estay V, Véliz LP, Jaimovich R, Cisternas P, San Francisco IF, Sotomayor PC, Tanasova M, Inestrosa NC, Godoy AS. Prostate Cancer Prostatic Dis.

*Wnt-induced activation of glucose metabolism mediates the in vivo neuroprotective roles of Wnt signaling in Alzheimer disease. (2018).* Cisternas P, Zolezzi JM, Martinez M, Torres VI, Wong GW, Inestrosa NC. J Neurochem.

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