CURRICULUM VITAE

Maite A. Castro

Last updated: 01/15/2021

Office Address: Instituto de Bioquímica y Microbiología
Universidad Austral de Chile
Campus Isla Teja
Valdivia, 50950000, Chile

Janelia Research Campus HHMI
Room 3W.131
19700 Helix Dr
Ashburn, VA 20147, US

Phone: (56) 63 222 1746, (1) 571 209 4000
e-mail1: macastro@uach.cl
e-mail2: castrom@hhmi.org

Education:

2001-2005	Universidad Austral de Chile. Ph.D. in Sciences (Cellular and Molecular Biology)
1998-1999	Universidad de Concepcion, Chile. Biochemist
1994-1998	Universidad de Concepcion, Chile. Lic. Biochemistry

Professional and other Positions:

2020-present	Member, Technical Advisory Committee for Graduate Scholarships Program, ANID.
2020	Deputy Vice Chancellor, Universidad Austral de Chile.
2018-present	Visiting Scientist, Janelia Research Campus HHMI.
2018-present	Associate Editor, Journal of Neuroscience Research
2017-present	Professor, Biochemistry Institute, Faculty of Sciences, Universidad Austral de Chile.
2017-present	Director of International Affairs Office, Universidad Austral de Chile.
2017-present	Member, Study Section Biochemistry and Physiology, Scholarships Program for Graduate Studies, CONICYT-ANID.
2016-2018	Director, Center for Interdisciplinary Studies on Nervous System, Universidad Austral de Chile.
2014-2017	Member, Study Section for Biomedicine (Medicine G1), FONDECYT, CONICYT-Chile.
2010-2016	Associate Professor, Biochemistry Institute, Faculty of Sciences, Universidad Austral de Chile.
2005- 2009	Assistant Professor, Biochemistry Institute, Faculty of Sciences, Universidad Austral de Chile.
2001- 2005	Graduate Student, laboratory of Dr. Ilona I. Concha, Biochemistry Institute, Faculty of Sciences, Universidad Austral de Chile.

1998-2000 Research Assistant, laboratory of Francisco Nualart, Cellular Biology Department, Faculty of Biological Sciences, Universidad de Concepcion.

Major Visiting Appointments:

2018-2019 Visiting Scientist at Clapham Laboratory, Janelia Research Campus, Howard Hughes Medical Institute, Ashburn, VA, USA.
2011 Visiting Professor at Semel Institute, University of California, Los Angeles, CA, USA.
2009 Visiting Associate Researcher at Semel Institute University of California, Los Angeles (UCLA), CA, USA.
2003 Visiting Research Fellow at Miguel Pozo laboratory, Pluridisciplinar Institute, Complutense University, Madrid, Spain.

Professional Societies Membership:

2008 - present International Society for Neurochemistry
2007 - present Chilean Society for Cell Biology
2006 - present American Society for Cell Biology
2005 - present Chilean Society Neurosciences
2004 - present Society for Neurosciences

Awards and Honors :

2016 Best Teacher for Biochemistry School, Universidad Austral de Chile.
2013 International travel award Federation of European Neuroscience
2011 International Short Stay fellowship DID-UACh
2010 International travel award, Gordon Conference Research.
2009 International Short Stay fellowship IUBMB
2008 International travel award, International Society for Neurochemistry
2007 International travel award, International Society for Neurochemistry
2005 International travel award, IBRO-Society for Neuroscience.
2005 Best Graduated Prize, Graduate School of Sciences, U. Austral de Chile.
2005 International Travel Award, Marie Curie Actions/EMBL.
2000 Best Graduated Prize, Biochemistry School, U. Concepción.

Major Research Interests:

During the last 16 years I have been making steady progress in the mechanisms of communication between neurons and glial cells and the way they regulate their metabolism. At the present time, my interest is to study metabolic neuron-glia interactions

in aging and neurodegenerative diseases. Our laboratory combines the use of electrophysiology and imaging (confocal, TIRF and 2-photon microscopy), biochemical and cellular molecular techniques on acute slices, primary cell cultures and in vivo experiments using transgenic model mice.

Scholarships, Fellowships and Research Grants:

2019-2023	Inhibition of alpha-synuclein spreading as a therapy to slow the progression of Parkinson's disease in mouse models. FONDECYT1191620 (****third awarded grant in Study Section for Biomedicine**), Chilean Gov. Principal Investigator.
2018-2021	Rejuvenated BrainNetwork – ReBrainNet. REDES CONICYT 180139. Director.
2018-2020	Unveiling Energy Metabolism Contribution in Tripartite Synapse. HHMI. Janelia Visitor Program JVS0028700. Principal Investigator.
2015-2018	Drosophila Ring in Developmental Adaptations to Nutritional Stress. Anillo CONICYT ACT 1401. Principal Investigator.
2015-2020	Center for Interdisciplinary Studies on Nervous System (CISNe). DID-UACh. Principal Investigator.
2015-2019	An increase in SVCT2 expression at the cell surface slows progression of symptoms in animal models of Huntington's disease. FONDECYT 1151206, Chilean Gov. Principal Investigator.
2015- 2018	Role of Golgi-based KDEL receptor-dependent signaling on lysosome biogenesis and function. FONDECYT 1150986, Chilean Gov. Co-Investigator.
2015-2018	Herpes simplex virus type 1 infection triggers signaling pathways that activate Arc expression resulting in altered neuronal endosomal trafficking, actin remodeling and APP processing. FONDECYT 1150574, Chilean Gov. Co-Investigator.
2012-2014	Center for Interdisciplinary Studies on Nervous System (CISNe). DIDUACH. Principal Investigator.
2011-2015	Impaired homeostasis of ascorbic acid in huntington disease: from the animal model to the clinic, FONDECYT 1110571, Chilean Gov. Principal Investigator.
2011-2014	Study of the regulatory mechanism of testicular glycogen content: participation of malin and laforin. FONDECYT 1110508, Chilean Gov. Co-investigator.
2010-2011	Sertoli cells, oxidative stress and ascorbic acid transporters. DIDUACH. Co-investigator-
2010-2011	Glycogen content in testis: Malin and laforin participation, DIDUACH. Co-investigator.
2009	Ascorbic acid and metabolic failure in Huntington Disease. International collaboration grant IUBMB. Principal Investigator.
2007-2010	GLUT3 participation in neuronal glucose and lactate transport modulation by ascorbic acid, FONDECYT 11070065, Chilean Gov. Principal Investigator.

2007-2009	GLUT3 and glucose metabolism modulation in neuronal cells. DIDUACH. Principal Investigator.
2006-2010	Blood-testis barrier and ascorbic acid transporters: protection of germinal cells against oxidative stress, FONDECYT 1060135, Chilean Gov. Co-investigator.
2003	Neuronal metabolism modulation by ascorbic acid. International research Travel Grant, MECESUP, Chilean Gov. Principal Investigator.
2003-2005	Ascorbic acid and brain energy metabolism. Doctoral Thesis Support Grant, CONICYT, Chilean Gov. Principal Investigator.
2001-2005	Graduate School Scholarship, CONICYT, Chilean Gov.

Original publications:

Citations: 1115, citations since 2015: 713, H-index: 20, H-index since 2015: 16.

1. Francisca Acuña-Hinrichsen , Adriana Covarrubias-Pinto, Yuta Ishizuka, María Francisca Stolzenbach, Carolina Martin, Paula Salazar, Maite A. Castro, Clive Bramham and Carola Otth. 2021. Herpes simplex virus type 1 neuronal infection triggers disassembly of key structural components of dendritic spines. Frontiers Cellular Neuroscience, under revision.
2. Beltrán, F., Torres, L., Troncoso-Escudero, P., Isidora Vicencio, Eduardo Papic, Covarrubias-Pinto A., Da Silva L., Rojas, P., Castro, M.A. 2021. Astrocyte-derived exosomes and the metabolic failure in Huntington's disease. Nat Metab, submitted.
3. Daniela Carreño, Néstor Corro, Javier Cerda-Infante, Catalina Asencio-Barría, Verónica Torres-Estay, Gonzalo Mayorga, Pablo A. Rojas, Loreto P. Véliz, Pedro Cisternas, Viviana Montecinos, Ignacio F. San Francisco, Manuel Varas, Paula C. Sotomayor, Maite A. Castro, Francisco Nualart, Nibaldo C. Inestrosa and Alejandro S. Godoy. 2021. Biological Role of Fructose in Prostate Cancer. Cancer Res, under revision.
4. Adriana Covarrubias-Pinto, Alejandra V Parra, Gonzalo Mayorga-Weber, Eduardo Papic, Isidora Vicencio, Pamela Ehrenfeld, Francisco J Rivera, Maite A Castro. 2020. Impaired intracellular trafficking of sodium-dependent vitamin C transporter 2 contributes to the redox imbalance in Huntington's disease. J Neurosci Res, doi: 10.1002/jnr.24693.
5. Lejie Zhang, Mei Zhang, Karl Bellve, Kevin Fogarty, Maite A. Castro, Sebastian Brauchi, and William Kobertz. 2019. Wheat Germ Agglutinin Conjugated Fluorescent pH Sensors for Visualizing Proton Fluxes. J General Physiol, 156(6): e201912498doi: 10.1085/jgp.201912498.
6. Abraham Rosas-Arellano, Carlos Tejeda-Guzmán, Enrique Lorca-Ponce, Lourdes, Palma-Tirado, Patricio Rojas, Fanis Missirlis, Maite A. Castro. 2018. Huntington's disease leads to decrease of GABA-A tonic subunits in D2 neostriatal pathway and their relocalization in to the synaptic cleft. Neurobiology of Disease, 110:142-153. doi: 10.1016/j.nbd.2017.11.010.
7. Macarena Solís-Maldonado, María Paz Miró, Aníbal I. Acuña, Adriana Covarrubias-Pinto, Anitsi Loaiza, Gonzalo Mayorga, Felipe A. Beltrán, Carlos Cepeda, Michael S. Levine, Ilona I. Concha and Maite A. Castro. 2018. Altered lactate metabolism in

Huntington's disease is dependent on GLUT3 expression. CNSNT-HD-Special Issue, 4:343-352. doi: 10.1111/cns.12837.

8. Covarrubias-Pinto A., Acuña A.I., Boncompain G., Pápic E., Burgos P.V., Perez F. and Castro M.A. 2018. Ascorbic acid increases SVCT2 localization at the plasma membrane by accelerating its trafficking from early secretory compartments and through the endocytic-recycling pathway. Free Radic Biol Med, 120:181-191. doi: 10.1016/j.freeradbiomed.2018.03.013.
9. Abraham Rosas-Arellano, Juan Belarmino Villalóbos-González, Lourdes Palma-Tirado, Felipe A. Beltrán, Alfonso Cárabez-Trejo, Fanis Missirlis, Maite A. Castro, 2016. A simple solution for antibody signal enhancement in immunofluorescence and triple immunogold assays. Histochemistry and Cell Biology, 146:421-30. doi: 10.1007/s00418-016-1447-2.
10. Oscar A., Peralta, Danai Bucher, Constanza Angulo, Maite A. Castro, Marcelo Ratto, Ilona I. Concha, 2016. Tissue localization of GM-CSF receptor in bovine ovarian follicles and its role on glucose uptake by mural granulosa cells. Animal Reproduction Science, 170:157-69. doi: 10.1016/j.anireprosci.2016.04.014.
11. Covarrubias-Pinto, A., Moll, P., Solís, M., Acuña, A.I., Riveros, A., Miró, M.P., Papic, E., Cepeda, C., Concha, I.I., Brauchi, S., Castro, M.A. 2015. Beyond the redox imbalance: oxidative stress contributes to an impaired GLUT3 modulation in Huntington's disease. Free Radic Biol Med, 89:1085-96. doi: 10.1016/j.freeradbiomed.2015.09.024.
12. Mancilla, H., Maldonado, R., Cereceda, K., Villaroel-Espíndola, F., Montesdeoca, M., Angulo, C., Castro, M.A., Slebe, J.C., Lavandero, S., Concha, I.I. 2015. Glutathione depletion induces spermatogonial cell autophagy. J Cellular Biochem, 116(10):2283-92. doi: 10.1002/jcb.25178.
13. Toro, C.A., Veliz, L.A., Sotelo-Hitschfeld, P., Cabezas, D., Castro, M.A., Zimmermann, K., Brauchi, S. 2015. Agonist-dependent Modulation of Cell Surface Expression of the Cold Receptor TRPM8. J Neurosci, 35(2):571-82. doi: 10.1523/JNEUROSCI.3820-13.2015.
14. Acuña A.I., Esparza M., Kramm C., Beltrán F.A., Parra A., Cepeda C., Toro C., Vidal R., Hetz C., Concha I.I., Brauchi S., Levine M.S. and Castro M.A. 2013. Failure on energy metabolism and antioxidant uptake precede the onset of Huntington's disease. Nature Comm, 4:2917. doi: 10.1038/ncomms3917.
15. Villarroel-Espíndola F., MancillaH., Vander Stelt K., Maldonado R., Acuña A.I., Covarrubias A., López C., Angulo C., Castro M.A., Slebe J.C., Durán J., García-Rocha M., Guinovart J.J, Concha I.I. 2013. Muscle glycogen synthase isoform is responsible for testicular glycogen synthesis: glycogen overproduction induces apoptosis in male germ cells. J. Cell Physiol, 114(7):1653-64. doi: 10.1002/jcb.24507.
16. Beltrán, F.A., Acuña, A.I., Miró, M.P., Angulo, C., Concha, I.I., Castro, M.A. 2011. Ascorbic acid-dependent GLUT3 inhibition is a critical step for switching neuronal metabolism, Journal Cell Physiology, 226:3286-94. doi: 10.1002/jcp.22674.
17. Angulo C., Maldonado R., Pulgar E., Mancilla, H., Córdova, A., Villarroel, F., Castro M.A. and Concha I.I., 2010, Vitamin C and oxidative stress in the seminiferous epithelium, Biol Res, 44(2):169-80. doi: /S0716-97602011000200009.
18. Veliz, L., Toro, C., Vivar, J.P., Arias, L.A., Villegas, J., Castro, M.A., Brauchi, S. 2010, Near-membrane dynamics and capture of TRPM8 channels within transient

confinement domains, PLoS Biol, 5(10):e13290. doi: 10.1371/journal.pone.0013290.

19. Zambrano, A.,Jara, E., Murgas, P., Jara C., Castro, M.A., Angulo,C., Concha, I.I., 2010, Cytokine stimulation promotes increased glucose uptake via translocation at the plasma membrane of GLUT1 in HEK293 cells. Journal of Cellular Biochemistry, 110(6):1471-80. doi: 10.1002/jcb.22711.
20. Ramírez, A., Castro, M.A., Angulo, C., Ramió, L., Rivera, M., Torres, M., Rigau, T., Rodríguez-Gil, J.E., Concha I.I., 2009, The presence and function of dopamine type-2 receptors in boar sperm: a possible role for dopamine in viability, capacitation and modulation of sperm motility, Biology of Reproduction, 80(4):753-61. doi: 10.1095/biolreprod.108.070961.
21. Pérez A, Ojeda P, Valenzuela X, Ortega M, Sánchez C, Ojeda L, Castro M, Cárcamo JG, Rauch MC, Concha II, Rivas CI, Vera JC, Reyes AM, 2009, Endofacial competitive inhibition of the glucose transporter 1 activity by gossypol, American Journal Physiology Cellular Physiology, 29angulo7(1):C86-93. doi: 10.1152/ajpcell.00501.2008.
22. Castro, M.A., Angulo, C., Brauchi, S., Nualart, F., Concha, I.I., 2008, Ascorbic acid participates in a general mechanism for concerted glucose transport inhibition and lactate transport stimulation, Pflugers Archiv, 457(2):519-28. doi: 10.1007/s00424-008-0526-1.
23. Angulo, C., Castro, M.A., Rivas, C., Segretain, D., Maldonado, R., Yañez, A., Slebe, J.C., Vera, J.C., Concha, I.I. 2008, Molecular Identification and functional characterization of the vitamin C transporters expressed by Sertoli cells, Journal of Cellular Physiology, 217(3):708-16. doi: 10.1002/jcp.21545.
24. Vidal, R.L., Ramírez, A., Castro, M.A., Concha, I.I., Couve, A., 2008, Marlin-1, a GABAB receptor associated protein, is expressed in testis, Journal Cellular Biochemistry, 103(3):886-95. doi: 10.1002/jcb.21456
25. Castro, M., Pozo, M., Cortés, C., García, M.A., Concha, I.I., Nualart, F., 2007, Intracellular ascorbic acid inhibits transport of glucose by neurons, but not by astrocytes, Journal of Neurochemistry, 102(3):773-82. doi: 10.1111/j.1471-4159.2007.04631.x
26. Otth, C, Torres, M, Ramírez, A, Fernandez, J.C., Castro, M., Rauch, M.C., Brito, M., Yañez, A., Rodríguez-Gil, J.C., Slebe, J.C., Concha, I.I., 2007. Novel identification of peripheral dopaminergic D2 receptor in male germ cells, Journal of Cellular Biochemistry, 100:141-50. doi: 10.1002/jcb.21037
27. Rodríguez-Gil, J.E., Silvers, G., Flores, E., Jesús Palomo, M., Ramírez, A., Rivera, M., Castro, M., Brito, M., Bücher, D., Correa, J., Concha, I. I., 2007, Expression of the GM-CSF receptor in ovine spermatozoa: GM-CSF effect on sperm viability and motility of sperm subpopulations after the freezing-thawing process. Theriogenology, 67:1359-70. doi: 10.1016/j.theriogenology.2007.02.008
28. Astuya, A., Caprile, T., Castro, M., Salazar, K., García, M.A., Reinicke, K., Rodríguez, F., Vera, J.C., Ulloa, V., Low, M., Nualart, F., 2005, Uptake and recicling of vitamin C in normal and tumor nervous system cells, Journal of Neuroscience Research, 79:146-156. doi: 10.1002/jnr.20326
29. Castro, M., Caprile, T., Astuya, A., Millán, C., Reinicke, K., Vera, J.C., Vásquez, O., Aguayo, L., Nualart, F., 2001, High-affinity sodium vitamin C co-transporters (SVCT) expression in embryonic mouse neurons, Journal of Neurochemistry, 78:815-823. doi: 10.1046/j.1471-4159.2001.00461.x

Book chapters:

1. Acuña, A.I., Zambrano, A., Concha, I.I., Castro M.A. 2013, Expression and Regulation of Neuronal Glucose Transporters in Health and Disease, Glucose Uptake: Regulation, Signaling Pathways and Health Implications, Nova Science Publishers, Available from: *https://www.novapublishers.com/catalog/product_info.php?products_id=43753*
2. Beltrán, F.A., Acuña, A.I., Miró, M.P., Castro, M.A. 2012, Brain Energy Metabolism in Health and Disease, Neuroscience - Dealing With Frontiers, Dr. Carlos M. Contreras (Ed.), ISBN: 978-953-51- 0207-6, InTech, Available from: *http://www.intechopen.com/books/neuroscience-dealing-with- frontiers/brain-energy-metabolism-in-health-and-disease*

Reviews:

1. Rosas-Arellano, A., Estrada-Mondragón A, Mantellero, C.A., Tejeda-Guzmán, C, Castro, M.A. 2018. The adjustment of GABA-A tonic subunits in Huntington's disease: from transcription to translation to synaptic levels into the neostriatum. Neural Regeneration Research, 13(4):584-590. doi: 10.4103/1673-5374.230270.
2. Carolina Anazco, Armando Rojas Ileana Gonzalez, Maite A Castro, Paz Robert, Felipe Oyarzun-Ampuero. 2018. Dermal Collagen Stabilization by Polyphenols and Spray Drying as an Encapsulation Strategy. Curr Top Med Chem, 18(14):1242-1251. doi: 10.2174/1568026618666180810143730.
2. Covarrubias-Pinto, A., Acuña, A.I., Beltrán, F.A., Torres, L. and Castro, M.A., 2015, Old things in a new view: Ascorbic acid protecting brain in neurodegenerative disorders. Int J Mol Sci, 16(12):28194-217. doi: 10.3390/ijms161226095.
3. Luis Federico Batiz, Maite A Castro, Patricia V Burgos, Zahady D Velásquez, Rosa Iris Muñoz, Carlos A Lafourcade, Paulina Troncoso, Ursula Wyneken, 2016. Exosomes as novel regulators of adult neurogenic niches. Frontiers in Cellular Neuroscience, 9:501. doi: 10.3389/fncel.2015.00501. eCollection 2015.
4. Castro, M.A., Beltrán, F.A., Brauchi, S., Concha, I.I., 2009, A metabolic switch in brain: glucose and lactate metabolism modulation by ascorbic acid, Journal of Neurochemistry, 110:423-440. doi: 10.1111/j.1471-4159.2009.06151.x.

Invited speaker:

November 2020 Invited Speaker at "Club de la Glia". Argentina.
October 2019 Invited Speaker in Symposium "Glucose and vitamin C transporters in health and disease. A tribute to Juan Carlos Vera", Chilean Society for Biochemistry and Molecular Biology Meeting, Iquique, Chile.
July 2017 Paracelsus University Invited Speaker, Paracelsus University, Salzburg, Austria.
October 2016 Invited Speaker (Plenary conference) in Rare diseases meeting 2016. Chicago, USA.
August 2016 Invited Speaker in Biochemistry students association annual meeting, Concepción, Chile.
October 2015 Invited Speaker in Minisymposium "Redox Signaling in Neurological Dysfunction", SfN Meeting, Chicago, USA.
July 2015 Invited Speaker in Symposium "Glial metabolic control by oxygen and oxygen species", Glial Meeting, Bilbao, Spain.
January 2015 Invited Speaker in CISNe symposium in Biophysics and Neuroscience. Valdivia, Chile.
August 2014 Invited Speaker in "Neuronal circuits symposium", SCN Annual Meeting, Valdivia, Chile.
May 2014 Biomedicine Department Invited Speaker , Aarhus University, Aarhus, Dinamarca.
Abril 2013 Invited Speaker in "Open Seminars in Basic Science", CECs, Valdivia, Chile.
Nov 2010 Invited Speaker in Symposium "Advanced Microscopy for Cell Biology", Chilean Society for Biology Annual Meeting
Sept 2010 Center for Biomedical Research invited speaker "Turning on/off neuronal metabolism", Universidad Andrés Bello, Santiago, Chile.
Sept 2010 Biochemistry School invited speaker "The ascorbic acid metabolic switch: turning on/off neuronal metabolism " Universidad Austral de Chile.
Oct 2009 Invited speaker on "A Convergence of Young Minds: Symposium for Early Career Investigators in Neuroscience and Biophysics". Faculty of Medicine, Universidad Austral de Chile , Valdivia, Chile.
Sept 2009 Faculty of Sciences invited speakers "Turning on/off brain energy metabolism" Universidad Austral de Chile.
July 2008 Invited speaker on "Metabolism and disease workshop" Universidad Austral de Chile.
Sept 2007 Biochemistry School invited speaker "New functions of vitamin C in brain" Universidad Austral de Chile.

Relevant meeting abstracts (last 5 years):

• Beltrán, F., Torres, L., Troncoso-Escudero, P., Isidora Vicencio, Eduardo Papic, Covarrubias-Pinto A., Da Silva L., Rojas, P., Castro, M.A. Astrocyte-derived exosomes and the metabolic failure in Huntington's disease. ReBrain Conference, Valdivia, Jan 2020 and SCN Annual Meeting, Nov 2020.
•Adriana Covarrubias-Pinto, Alejandra V Parra, Gonzalo Mayorga-Weber, Eduardo Papic, Isidora Vicencio, Pamela Ehrenfeld, Francisco J Rivera, Maite A Castro. 2020. Impaired intracellular trafficking of sodium-dependent vitamin C transporter 2 contributes to the

redox imbalance in Huntington's disease. ReBrain Conference, Valdivia, Jan 2020 and SCN Annual Meeting, Nov 2020.

- Eduardo Papic, Adriana Covarrubias-Pinto, Abrham Rosas-Areellano, Felipe Court, Alejandro Rojas-Fernandez, Maite A. Castro. Huntingtin and Rab27a are involved in the secretion of exosomes from astroglial cells. XIV European Meeting on Glial Cells In Health and Disease. Porto, Portugal, July, 2019.
- Felipe A. Beltrán, Leandro Torres, Paulina Troncoso-Escudero, Eduardo Papic, Isidora Vicencio, Xiao-Jiang Li, Luis Lamberti, Maite A. Castro. Altered secretion of astrocyte-derived extracellular vesicles contribute to the early metabolic failure in Huntington's disease. Gordon Research Conference Neurobiology of Brain Disorders, Spain, August 2018.
- Felipe A. Beltrán, Leandro Torres, Paulina Troncoso-Escudero, Isidora Vicencio, Xiao-Jiang Li, Luis Lamberti, Maite A. Castro. ltered secretion of astrocyte-derived extracellular vesicles contribute to the early metabolic failure in Huntington's disease. XIV European Meeting in Glial Cells in Health and Disease. United Kingdom, July, 2017.
- Felipe A. Beltrán, Patricio Rojas, Maite A. Castro. A failure in ascorbic acid recycling and release from striatal astrocytes is responsible for the metabolic impairment in Huntington's disease. FENS meeting, Copenhaguen, Denmark, July 2016.
- Felipe A. Beltrán, Patricio Rojas, Maite A. Castro. Metabolic modulation by ascorbic acid in neurons under glutamatergic activity does not rely on the antioxidant properties of this molecule. Chilean Society for Cell Biology XXV Annual Meeting, La Serena, Chile, September, 2015.
- Covarrubias-Pinto, A., Moll, P., Solís, M., Acuña, A.I., Riveros, A., Miró, M.P., Papic, E., Cepeda, C., Concha, I.I., Brauchi, S., Castro, M.A. 2015. Beyond the redox imbalance: oxidative stress contributes to an impaired GLUT3 modulation in Huntington's disease. ISN ASN Biennial Meeting, Cairns, Australia, August 2015.
- Adriana Covarrubias-Pinto, Alejandra V. Parra, Eduardo Papic, Aníbal I. Acuña, Magdalena Esparza, Carlos Kramm, Ilona I. Concha, Sebastian Brauchi and Maite A. Castro. An impaired expression of ascorbic acid transporter (SVCT2) at cellular surface would contribute to oxidative stress in Huntington's disease. American Society for Cell Biology, Annual Meeting, Philadelphia, USA, December, 2014.
- Adriana Covarrubias-Pinto, Eduardo Papic, Patricia V. Burgos, Maite A. Castro. Constitutive Endocytosis and Endocytic Recycling of the Sodium-dependent Vitamin C transporter 2 (SVCT2) are regulated by ascorbic acid in a Clathrin and Rab11-dependent manner. Chilean Society for Cell Biology XXVIII Annual Meeting, Puerto Varas, Chile, October 2014 and American Society for Cell Biology, Annual Meeting, Philadelphia, USA, December, 2014.
- Eduardo Papic, Adriana Covarrubias-Pinto, Alejandra V. Parra, Aníbal I. Acuña, Ilona I. Concha and Maite A. Castro. Impairment of endocytic trafficking of Sodium dependent Vitamin C transporter 2 SVCT2 in cellular models of Huntington's Disease. Chilean Society for Cell Biology XXVIII Annual Meeting, Puerto Varas, Chile, October 2014.
- Aníbal I. Acuña, Magdalena Esparza, Carlos Kramm, Felipe A. Beltrán, Alejandra Parra,Carlos Cepeda, Carlos Toro, Rene Vidal, Claudio Hetz, Ilona I. Concha, Sebastián Brauchi, Michael S. Levine and Maite A. Castro. A failure in energy metabolism and antioxidant uptake precede symptoms of Huntington's disease in mice. 11Th International Conference on Brain Energy Metabolism, Cophenhague, Denmark, May, 2014.

Thesis advice:

- "The role of huntingtin and Rab27a in exosomes secretion", Eduardo Papic, PhD thesis, (graduate school of Sciences, UACh), in progress. Thesis advisor.
- "Unveiling brain energy metabolism using real-time probes", Carolina Paredes, undergraduate thesis (Biochemistry School, UACh), in progress. Thesis advisor.
-"Acetylation in the modulation of plasticity genes in Huntington's disease", Makarena Yanez, undergraduate thesis (Biochemistry School, UACh), in progress. Thesis co-advisor.
-"Montelukast and adult neurogenesis in Huntington's disease", Carlos Kruggman, undergraduate thesis (Biochemistry School, UACh), 2021. Thesis co-advisor.
-"Neuronal antioxidant defence contribution of astrocytes-derived exosomes containing ascorbic acid", Leandro Torres, PhD thesis (graduate school of Sciences, UACh), 2020. Thesis advisor.
- "Glycocalyx re-engineering to image metabolite efflux and intercellular communication", Aníbal I. Acuña, Ms thesis (graduate school of Sciences, UACh), 2019. Thesis advisor.
- "Role of astroglial exosomes in memory and plasticiy", Juan B. Villalobos, undergraduate thesis (Biochemistry School, UACh), 2018. Thesis advisor.
- "Effect of phospho-ascorbate in the localization and activity of SVCT2", Gonzalo Mayorga, undergraduate thesis (Biochemistry School, UACh), 2017. Thesis advisor.
-"Phospho-ascorbate as a new pharmacological tratment for Huntington's disease", Dayana Perez, undergraduate thesis (Pharmacy School, UACh), 2016. Thesis advisor.
- "Neuronal-derived exosomes and the metabolic failure in Huntington's disease", Isidora Cuevas, undergraduate thesis (Biochemistry School, UACh), 2017. Thesis advisor.
- "Expression and localization of chloride and potassium transporter KCC2 in mice models of Huntington's disease", Tania Mora, undergraduate thesis (Biotechnology School, Universidad Tecnológica Costa Rica), 2016.
-"Ascorbic acid modulation of SVCT2 intracellular trafficking", Adriana Covarrubias, PhD thesis (graduate school of Sciences, UACh), 2016. Thesis advisor.
- "SVCT2 intracellular trafficking in cellular models of Huntington's disease", Eduardo Papic, undergraduate thesis (Biochemistry School, UACh), 2014. Thesis advisor.
- "Expression of nutrient transporters in models of Huntington's disease", Naizmi Valverde, undergraduate thesis (Biotechnology School, Universidad Tecnológica Costa Rica), 2014.
- "Expression and function of glucose transporters in Huntington's disease", Pablo Moll, undergraduate thesis (Biochemistry school UACh), 2014. Thesis advisor. Thesis advisor.
- "Expression and function of monocarboxylate transporters in Huntington's disease", Macarena Solís, undergraduate thesis (Biochemistry school UACh), 2014. Thesis advisor.
- "Pathways for ascorbate release from astrocytes", Paulina Troncoso, undergraduate thesis (Biochemistry school UACh), 2014. Thesis advisor.
- "Role of Huntingtin in ascorbic acid transporter, SVCT2, trafficking", Alejandra Parra, undergraduate thesis (Biochemistry school UACh), 2014. Thesis advisor.
- "A failure in ascorbic acid homeostasis is responsible for the metabolic impairment in Huntington's disease", Felipe Beltrán, PhD thesis (graduate school of Sciences, UACh), 2015. Thesis advisor.
- "Ubiquitination and multivesicular bodies in CFT-b degradation" Hianara Bustamante, undergraduate thesis (Biochemistry School UACh), 2013. Thesis co-advisor.

- "Sodium-dependent vitamin C transporter 2 (SVCT2) availability at plasma membrane is impaired in Huntington's disease models", Carlos Kramm, undergraduate thesis (Biochemistry school UACh), 2013. Thesis advisor.
- "Fluctuations in brain extracellular ascorbic acid concentration could drive changes in the availability of SVCT2 at plasma membrane", Magdalena A. Esparza, undergraduate thesis (Biochemistry school UACh), 2012. Thesis advisor.
- "Malin-laforin interaction with glycogen synthase in Sertoli cells", Karen Vander Stelt, undergraduate thesis (Biochemistry school UACh), 2012. Thesis co-advisor.
- "Revisiting glucose transporter 1 and 3 through live cell fluorescent microscopy", Aníbal I. Acuña, undergraduate thesis (Biochemistry school UACh), 2012. Thesis advisor.
- "Glucose and lactate transport relationships in brain cells", María Paz Miró", undergraduated thesis (Biochemistry school UACh), 2011. Thesis advisor.
- "Gluthathione and vitamin C transporters in Sertoli cells", Héctor Mancilla, undergraduate thesis (Biochemistry school UACh), 2010. Thesis co-advisor.
- "GLUT3 is a key component in glucose transport modulation by ascorbic acid", Felipe Beltrán, undergraduated thesis (Biochemistry school UACh), 2010. ***Awarded thesis**: The best undergraduated thesis in Cellular Biology 2011. Thesis advisor.
- "Vitamin C transporters in Sertoli cells and its neuroprotector effect against oxidative stress", Alex Córdova. Undergraduated thesis (Biochemistry school UACh), 2008. Thesis advisor.
- "Functional expression and subcelular localization of SVCT2 in Sertoli cells", Rodrigo Maldonado, undergraduate thesis (Biochemistry school UACh), 2007. Thesis co-advisor.