



Dra Camila Scorticati

Group Leader-2017

Molecular and Cellular Neurobiology lab

Independent Researcher IIBIO-CONICET- Adjunct Professor IIB-UNSAM

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I am specialist in structural neuroplasticity. In particular, I study the molecular mechanisms by which certain genes or proteins are involved in neuronal connections change in response to experience, known as “synaptic plasticity”. I am an independent researcher from CONICET at the Institute for Research in Biotechnology (IIB-INTECH), and I am group leader of the Cellular and Molecular Neurobiology Lab. I am also undergraduate Professor and advisor of Ph.D. students. I published more than twenty five articles in international scientific journals and book chapters. My research has received national funding (CONICET, UNSAM, Ministry of Science, Technology, and Productive Innovation) and international (International Society for Neurochemistry). I am Biochemistry and also has a Ph.D. in Biochemistry. She completed her education as a research assistant at the Complutense University of Madrid (Spain) and the University of Pisa (Italy).

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EDUCATION

- ❖ **Biochemist.** Facultad de Farmacia y Bioquímica. Universidad de Buenos Aires (UBA, 2000).
- ❖ **Master in Education:** Course to becoming Professor of University of Buenos Aires. Escuela de Graduados, Facultad de Farmacia y Bioquímica, UBA. (2000-2003).
- ❖ **Ph.D Universidad de Buenos Aires.** Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires (UBA, 2005).
Field of Study: Physiopathology in liver encephalopathy
- ❖ **Education.** Teaching for understanding I. Project Zero. Graduate School of Education, Harvard University (UBA, 2003).
- ❖ **Postdoctoral trainings:**
2004 – 2005. Universidad Complutense de Madrid (Madrid, Spain). Advisor: Prof Dr. Javier Fernandez-Ruiz. Field of Study: Cannabinoid system on Parkinson´s Disease
2005 -2007 Università degli Studi di Pisa (Italy). Advisor: Prof Dr Tommaso Simoncini. Study: Molecular Biology and Signal Transduction
2007-2009. IIB-INTECH Universidad Nacional de San Martín. Advisor: Carlos A C Frasch´s lab. Field of Study: Molecular Biology and Signal Transduction in Neuronal Plasticity

Positions and Employment

2004-2005 Assistant **Researcher** Universidad Complutense de Madrid. UCM, Madrid (Spain). Advisor: Dr. Javier Fernandez-Ruiz
2005-2007 **Assistant Researcher** Università degli Studi di Pisa, Pisa (Italy). Advisor: Dr. Tommaso Simoncini
2007-present **Adjunct Professor** at School of Biotechnology of National University of San Martín (UNSAM).
2009-2016 **Assistant Scientist.** IIB-INTECH Universidad Nacional de San Martín. Advisor: Carlos A C Frasch´s lab
2017- present **Independent Researcher.** The Argentinian National Research Council (CONICET).
2017-present **Group Leader** at Molecular and Cellular Neurobiology lab. IIBIO-CONICET IIB-UNSAM. Buenos Aires Argentina

Human resources training

Master thesis advisor

- Karina Formoso. Biology. Facultad de Ciencias Exactas y Naturales de la UBA. 03/2011
- Gabriela Aparicio. Biotechnology de la UNSAM. 03/ 2017.
- Rocío Gutiérrez Fuster. Biology Facultad de Ciencias Exactas y Naturales de la UBA. 11/03/2022
- Facundo Brizuela. Biotechnology de la UNSAM in progress since 1/03/2023

Ph.D. thesis advisor

- B.S Antonella León. Doctorado en Biología Molecular y Biotecnología de la UNSAM (2018-
- B.S Gabriela Aparicio. Doctorado en Biología Molecular y Biotecnología de la UNSAM (2017-2022) *Finished*
- Micaela García PhD. Doctorado en Biología Molecular y Biotecnología de la UNSAM (2013-2019). *Finished*
- Karina Formoso PhD. Doctorado en Biología Molecular y Biotecnología de la UNSAM (2011-2016). *Finished*
- B. S. Rocío Gutiérrez Fuster. Doctorado en Biología Molecular y Biotecnología de la UNSAM (2022-

Post Doc

- Gabriela Inés Aparicio PhD. (03/2022-03/2023) Becaria CONICET

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Research background index i10: 16 index h 14

Publicaciones

1. 1 Gabriela I. Aparicio, Antonella León, Rocío Gutiérrez Fuster, Baylen Ravenscraft, Paula V. Monje1*, **Camila Scorticati**. Endogenous glycoprotein GPM6a is involved in neurite outgrowth in rat dorsal root ganglion neurons. *Biomolecules* 2023 Mar 25;13(4):594. doi: 10.3390/biom13040594.
2. León, A, Aparicio, GI, **Scorticati, C**. Neuronal glycoprotein M6a: an emerging molecule in chemical synapse formation and dysfunction. *Front. Synaptic Neurosci.*, 04 May 2021 | <https://doi.org/10.3389/fnsyn.2021.661681>. PMID: 34017241
3. Bürgi M, Aparicio GI, Dorella A, Kratje R, **Scorticati C**, Oggero M. Novel erythropoietin-based therapeutic candidates with extra N-glycan sites that block hematopoiesis but preserve neuroplasticity. *Biotechnol J.* 2021 Jan 20:e2000455. doi: 10.1002/biot.202000455. Epub ahead of print. PMID: 33471394.
4. Aparicio GI, Formoso K, León A, Frasch AC, **Scorticati C**. Identification of Potential Interacting Proteins With the Extracellular Loops of the Neuronal Glycoprotein M6a by TMT/MS. *Front Synaptic Neurosci.* 2020 Jul 23;12:28. doi: 10.3389/fnsyn.2020.00028. PMID: 32848694; PMCID: PMC7396582.
5. Garcia, Micaela D., Formoso, Karina, Aparicio, Gabriela I., Frasch, Alberto C.C., **Scorticati, Camila** The membrane glycoprotein M6a endocytic/recycling pathway involves clathrin-mediated endocytosis and affects neuronal synapses. *Front. Mol. Neurosci.*, 20 September 2017 <https://doi.org/10.3389/fnmol.2017.00296>.
6. 4. Formoso K, Garcia MD, Frasch AC, **Scorticati C** (2016) Evidence for a role of glycoprotein M6a in dendritic spine formation and synaptogenesis. *Mol Cell Neurosci* 77: 95-104
7. Formoso K, Garcia MD, Frasch AC, **Scorticati C** (2015) Filopodia formation driven by membrane glycoprotein M6a depends on the interaction of its transmembrane domains. *J Neurochem* 134: 499-512.
8. Formoso K, Billi SC, Frasch AC, **Scorticati C** (2015) Tyrosine 251 at the C-terminus of neuronal glycoprotein M6a is critical for neurite outgrowth. *J Neurosci Res* 93: 215-229.
9. **Scorticati C**, Formoso K, Frasch AC (2011) Neuronal glycoprotein M6a induces filopodia formation via association with cholesterol-rich lipid rafts. *J Neurochem* 119: 521-531.
10. Simoncini T, **Scorticati C**, Mannella P, Fadiel A, Giretti MS, et al. (2006) Estrogen receptor alpha interacts with Galpha13 to drive actin remodeling and endothelial cell migration via the RhoA/Rho kinase/moesin pathway. *Mol Endocrinol* 20: 1756-1771.

11. Simoncini T, Caruso A, Giretti MS, **Scorticati C**, Fu XD, et al. (2006) Effects of dydrogesterone and of its stable metabolite, 20- α -dihydrodydrogesterone, on nitric oxide synthesis in human endothelial cells. *Fertil Steril* 86: 1235-1242.
12. Simoncini T, Caruso A, Garibaldi S, Fu XD, Giretti MS, **Scorticati C** et al. (2006) Activation of nitric oxide synthesis in human endothelial cells using nomegestrol acetate. *Obstet Gynecol* 108: 969-978.
13. **Scorticati C**, Perazzo JC, Rettori V, McCann SM, De Laurentiis A (2006) Role of ammonia and nitric oxide in the decrease in plasma prolactin levels in prehepatic portal hypertensive male rats. *Neuroimmunomodulation* 13: 152-159.
14. Gonzalez S, **Scorticati C***, Garcia-Arencibia M, de Miguel R, Ramos JA, et al. (2006) Effects of rimonabant, a selective cannabinoid CB1 receptor antagonist, in a rat model of Parkinson's disease. *Brain Res* 1073-1074: 209-219.
15. Eizayaga F, **Scorticati C**, Prestifilippo JP, Romay S, Fernandez MA, et al. (2006) Altered blood-brain barrier permeability in rats with prehepatic portal hypertension turns to normal when portal pressure is lowered. *World J Gastroenterol* 12: 1367-1372.
16. **Scorticati C**, Prestifilippo JP, Eizayaga FX, Castro JL, Romay S, et al. (2004) Hyperammonemia, brain edema and blood-brain barrier alterations in prehepatic portal hypertensive rats and paracetamol intoxication. *World J Gastroenterol* 10: 1321-1324.
17. **Scorticati C**, Fernandez-Solari J, De Laurentiis A, Mohn C, Prestifilippo JP, et al. (2004) The inhibitory effect of anandamide on luteinizing hormone-releasing hormone secretion is reversed by estrogen. *Proc Natl Acad Sci U S A* 101: 11891-11896.
18. Fernandez-Solari J, **Scorticati C**, Mohn C, De Laurentiis A, Billi S, et al. (2004) Alcohol inhibits luteinizing hormone-releasing hormone release by activating the endocannabinoid system. *Proc Natl Acad Sci U S A* 101: 3264-3268.
19. Evelson P, Llesuy S, Filingier E, Rodriguez RR, Lemberg A, **Scorticati C** et al. (2004) Decreased oxidative stress in prehepatic portal hypertensive rat livers following the induction of diabetes. *Clin Exp Pharmacol Physiol* 31: 169-173.
20. **Scorticati C**, Mohn C, De Laurentiis A, Vissio P, Fernandez Solari J, et al. (2003) The effect of anandamide on prolactin secretion is modulated by estrogen. *Proc Natl Acad Sci U S A* 100: 2134-2139.
21. Rettori V, Mohn C, **Scorticati C**, Vissio P, Cella M, et al. (2003) Effect of neurogenic stress and ethanol on nitric oxide synthase and cyclooxygenase activities in rat adrenals. *Ann N Y Acad Sci* 992: 86-98.
22. Rettori V, Lomniczi A, Mohn C, **Scorticati C**, Vissio P, et al. (2002) Mechanisms of inhibition of LHRH release by alcohol and cannabinoids. *Prog Brain Res* 141: 175-181.
23. Scorticati C, Prestifilippo JP, Murer G, Lemberg A, Perazzo JC (2001) [Functional alterations in central nervous system of prehepatic portal hypertensive rats]. *Medicina (B Aires)* 61: 673-675.
24. Mohn C, Lomniczi A, Faletti A, **Scorticati C**, Elverdin JC, et al. (2001) Effects of aminoguanidine and meloxicam on nitric oxide and prostaglandin E production induced by lipopolysaccharide in the hypothalamus and anterior pituitary of the rat. *Neuroimmunomodulation* 9: 276-285.
25. Ghanem C, Ghisolfi C, **Scorticati C**, Lemberg A, Perazzo JC, et al. (2000) [Does TNF- α contribute to liver disease physiopathology?]. *Acta Gastroenterol Latinoam* 30: 151-154.
26. Ghanem C, Ghisolfi C, **Scorticati C**, Lemberg A, Perazzo JC, et al. (1999) [Benzodiazepines metabolism in various models of experimental liver diseases]. *Acta Gastroenterol Latinoam* 29: 3-7.
27. Lemberg A, Calabrese G, Majowicz M, Peredo H, **Scorticati C**, et al. (1998) Prostanoid production in endothelial and Kupffer liver cells from monocrotaline intoxicated rats. *Hum Exp Toxicol* 17: 564-569.

Book and chapters

1-De Laurentiis A, Scorticati C, McCann SM, Retorri V. Neuroimunoendocrinologia Básica. In: Antunes-Rodrigues J, Moreira AC, Elias LLK, Castro M (Org) Neuroendocrinologia Básica e Aplicada. First Edition. Rio de Janeiro Guanabara Koogan, 2005, v. 1, Chapter 35 (Portugués). ISBN 8527709791

Published Abstracts in Scientific Meetings

Nationals + de 100

Internationals + de 50

Invention Patent

1. Invention Patent: AR-20180102793 <https://patents.google.com/patent/WO2020065576A1/en>

Title: Modified human erythropoietin

Worldwide applications: **2018** AR **2019** US JP EP CA PE MX CN AU KR WO **2021** IL CO

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Research grants as a PI

Nationals

From "Agencia Nacional de Promoción Científica y Tecnológica " (ANPCyT) of The Argentinian National Minister of Sciences:

1-PICT-2019-1051: 2022-2025 Consolidated Group.

2- PICT-2016-1223: 2018-2021 Group in formation.

3-PICT 2008-1447 2010-2012. Young Researcher

-From CONICET: PIP 2012-2014 PI research grant .

-From Fundación Florencio Fiorini 2009 Young Researcher grant

Internationals

CAEN "Committee for Aid and Education in Neurochemistry" research supplies award 2011 (International Society of Neurochemistry).

CAEN "Committee for Aid and Education in Neurochemistry" research supplies award 2014 (International Society of Neurochemistry).

Society Members

Nationals

-Sociedad Argentina de Investigación Clínica (SAIC), desde el año 2000

-Sociedad Argentina de Investigaciones en Neurociencias (SAN), desde el año 2008

Internationals

-International Society for Neurochemistry (ISN), since 2011

-International Brain Organization (IBRO), since 2008

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Experience with grant assessment:

- Peer review research grants from University of Buenos Aires School of Medicine/Pharmacy and Biochemistry/Odontology since 2010
- Peer review research grants from "Agencia Nacional de Promoción Científica y Tecnológica " (ANPCyT) of The Argentinian National Minister of Sciences since 2009-
- Member of ad-hoc committee for research grants application from ANPCyT of The Argentinian National Minister of Sciences 2017 and 2021.

Experience with fellowships and professor/researcher assessment:

- Peer review researchers incorporation and promotions from National Research Council from Argentina (CONICET) since 2009.
- Scholarship evaluation for undergraduate and graduate students from University of San Martín (UNSAM), University of Buenos Aires (UBA) since 2012
- Member of the jury for the application to assistant professor at University of Buenos Aires School Pharmacy and Biochemistry 2021.

Journals Peer Review

Journal of Neurochemistry//Journal of Neuroscience Research//Molecular and Cellular Neurobiology//Biochemical Journal//Biochimie//
Synapse//Neural Regeneration research