

Gómez-González Gabriela Berenice,

PhD; MsC

PostDoc position,
Neuroscience Institute Cavalieri Ottolenghi (NICO),
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EDUCATION

- 2016 – 2021** **PhD Biomedical Sciences.**
Institute of Neurobiology, UNAM, México.
Mentor: Ataúlfo Martínez Torres, PhD.
Thesis Project: Anatomical characterization of the neuronal circuit from the subventricular zone in the mouse cerebellum.
- 2012 – 2014** **Master Science Neurobiology** (*Summa cum laude: “Mención Honorífica”*).
Institute of Neurobiology, UNAM, Mexico.
Mentor: Ataúlfo Martínez-Torres, PhD
Thesis Project: Morphological characterization of Bergmann Glia from X lobule of the mouse cerebellum.
- 2007 – 2012** **Bachelor degree in Biology** (*Summa cum laude: “Mención Honorífica”*)
Faculty of Biological Sciences, UAEM, Morelos, Mexico.
Mentor: Edith Sánchez Jaramillo, PhD.
Thesis Project: Characterization of a pTRH-Cre transgenic mouse: Cre expression in the PVN of Hypothalamus in animals stressed by cool or starvation.

SCIENTIFIC PUBLICATIONS

- In revision* Pereida-Jaramillo E, Gómez-González GB, Espino Saldaña AE, Martínez-Torres A. **Calcium signaling in the cerebellar radial glia and its association with morphological changes during zebrafish development.**
- In preparation* Schellino R*, Besusso D*, Parolisi R, Gómez-González GB, Scaramuzza L, Ribodino M, Campus I, Conforti P, Boido M, Cattaneo E- Buffo A. **Long-term transplantation and enriched environment promote human medium spiny neuron maturation, circuits reconstruction and motor recovery in a rat model of Huntington’s disease**

Mendoza M, Gómez-González GB, Rodriguez-Arzate A, Kirchoff F, Martínez-Torres A. **Structural characterization of a nestin/BrdU positive cumuli of cells at the Silvius Aqueduct.**

- 2021 Gómez-González GB, Martínez-Torres A. **Inter-fastigial connections along the fourth ventricle.** *Brain Struct Funct.* 2021 Jan 28. doi: 10.1007/s00429-021-02217-8. Online ahead of print. PMID: 33511462
- 2020 M Becerra-González, R Varman-Durairaj, A Ostos-Valverde, E.J. Gualda, P Loza-Alvarez, W Portillo-Martínez, GB Gómez-González, Annalisa Buffo, A Martínez-Torres. **Response to hypoxic preconditioning of glial cells from the roof of the fourth ventricle.** *Neuroscience*, 2020 Jul 15;439:211-229. doi: 10.1016/j.neuroscience.2019.09.015.
- 2017 González-González MA, Gómez-González GB, Becerra-González M, Martínez-Torres A. **A Novel cellular organizations from the cerebellar periventricular zone.** *Scientific Reports.* 2017 Jan 20;7:40768. doi: 10.1038/srep40768.
- 2016 Di Benedetto B, Malik VA, Begum S, Jablonowski L, Gómez-González GB, Neumann ID, Rupprecht R. **Fluoxetine requires the endfeet protein Aquaporin-4 to enhance plasticity of astrocyte processes.** *Front Cell Neurosci.* 2016 Feb 2;10:8. doi: 10.3389/fncel.2016.00008.

BOOK CHAPTER:

ORGANIZATION OF THE VENTRICULAR ZONE OF THE CEREBELLUM. Martinez-Torres A; Becerra-Gonzalez M, Mendoza M, Rodriguez-Arzate C, Gómez-González GB, Editors. In *Physiology and pathology of Neuroglia*. Editorial CONACYT, in press.

TRAVEL AND ATTENDANCE GRANTS

- 2017 **I@UNITO – Visiting Scientists Fellowship.** University of Torino (Università degli studi di Torino), Turin, Italy. Period: Feb-Apr 2017.
- 2014 **Attendance grant for the “International Workshop: Optics, Forces & Development”.** Given by Biomedical Neuroscience Institute- University of Chile Santiago de Chile, Chile. Period: May 5th-16, 2014.
- 2011 **Internship Grant. TUFTS Medical Center, Diabetes and endocrinology laboratory, Boston, USA.** PI: Ronald Lechan. Given by the Universidad Autonoma de Morelos, Mexico. Period: Jun-Jul 2011.
- 2010 **Prize awarded to the best poster in the 25th Annual Research Meeting.** National Institute of Psychiatry Ramon de la Fuente Muñiz, Mexico. Poster: Alterations of vasopressin caused by environmental toxic polychlorinated biphenyls and polybrominated". Leon Olea Martha, PhD; Sánchez-Jaramillo Edith; Gómez González Gabriela B. (October 4, 2010).

2004 **Attendance grant: Summer Life Science CINVESTAV-** National Polytechnic Institute. Guanajuato, Mexico. Period: August 1-7.

FELLOWSHIPS

2021-present PostDoc fellow (research assistant). Horizon 2021- **UNIVERSITÀ DEGLI STUDI DI TORINO**, Dipartimento di Neuroscienze “Rita Levi Montalchini”/NSC-Reconstruction, EU, Torino-Italy. PI: Dr. Annalisa Buffo.

2017- 2021 *PhD Fellow: 277694 / 445925. National Council of Research and Technology (CONACyT).*

2017 UNITO- young researcher Fellow: 1178-2016.**UNIVERSITÀ DEGLI STUDI DI TORINO**, Department of Neuroscience-International program.

2015-2016 *Research stay fellow: 32132-40736951. German Federal Ministry of Education and Research (BMBF) Germany.*

2014 Assistance fellow, **International workshop: Optics, Force & Development.** Faculty of Medicine, University of Chile, Chile.

2012-2014 *Master in Science Fellow: 277694. National Council of Research and Technology (CONACyT).*

2010-2011 **Initiation to Research Scholarship Program (PROBEI)**, given by National Public Health Department, Mexico.

2004 **Summer Life Science Workshop**, given by Academia Mexicana de las Ciencias (AMC).

TECHNICAL SKILLS IN NEUROSCIENCE

- Immunocytofluorescence and immunohistochemistry
- Microinjection of Neural tracers/markers (brain, stomach, neck veins).
- RT-PCR
- RNA and DNA extraction
- Organization, reproduction and administration of transgenic mice colony
- Genotypification of litters
- Electrophoresis technique
- Stereotaxis in rodents
- Intracardiac perfusion
- Histological procedures (mouse brain tissue and zebra fish embryos).
- Electrophysiology: field extracellular recordings (in training)
- Photometry: Calcium recordings in-vivo
- Organotypic culture
- Primary cellular culture
- Pharmacology treatments in astrocytes culture
- Western Blot
- Viral lysis and filtration
- Bacteria transformation
- Use of microtome, vibratome and cryostat
- Confocal microscopy
- Transmission electronic microscopy (in training)
- Use of image analysis software (ImageJ, AimImage Examiner)

OTHER SKILLS:

Mother tongue(s) Spanish
Other language(s) English: **TOEFL-ITP certificate (530 score)**
CELE-UNAM Certificate in English Translation proficiency

RESEARCH INTERNSHIPS

- 2017 **NICO Institute Turin, Italy.** Dr. Annalisa Buffo. Laboratory of physiopathology of neural stem cells. Steam cells induction protocol and IHQ characterization. Period: Feb-Apr 2017.
- 2016 **Clinical University of Regensburg, Regensburg, Germany.** Dr. Nat. Rar. Barbara Di-Benedetto. Laboratory of Neuro-Glia Pharmacology, Department of Psychiatry and Psychotherapy. Project: Antidepressant effects on AQP4 expression in astrocytes. Period: Jul 2015-Feb 2016.
- 2011 **TUFTS Medical Center:** Division of Endocrinology, Diabetes and Metabolism, Boston MA, USA. Dr. Ronald M. Lechan /Dr. Gabor Wittman. Trinning: pharmacology approach by stereotaxic procedures and gastral surgery in transgenic mice (pTRH-GFP). Period: Jun-Jul 2010.
- 2009 **Institute of Biotechnology-UNAM,** Morelos, Mex. Dr. Patricia Joseph Bravo. Laboratory of Neuroendocrinology and Molecular Physiology. Project: Characterization of the HHT axis in a pTRH-GFP transgenic mouse by RT- PCR. Period: June- Dec 2009.
- 2008 **Biotechnology Research Center (CEIB)-UAEM, Laboratory of Environmental Sciences,** Morelos, Mex. MSc Enrique Sánchez Salinas. Period: Jan-Jul 2008.

COURSES AND WORKSHOPS

- 2021 **NSC-Reconstruct Workshop (ONLINE):** Regulatory and ethical issues related to the development and clinical use of next generation cell therapy products. LUND University, Sweden. November 22nd-23rd
- Fiber Photometry workshop, Karl Deisseroth Lab, Stanford University, USA.** Remote. Sept 25th-Oct 1st.
- 2020 **Allen Institute Modeling Workshop.** USA, *Virtual event.* August 12-14.
- "Preparación de muestras biológicas mediante cryo-microscopía electrónica",** Capítulo estudiantil Cinvestav-Zacatenco, México. *Virtual event.* July 8-9th.
- 2019 **Advanced Optical Microscopy Imaging Techniques.** ICFO-Barcelona/CFATA-UNAM. PhD Pablo Loza. CFATA-Qro. Mexico. October 28-31.

- 2018 **Ischemic tolerance by occlusion of cerebral arteries.** Theoretical and practical course. Dr. Miroslav Gottlieb/Dr. Rogelio Arellano. Institute of Neurobiology-UNAM, Qro, Mexico. August 13-15.
- 2018 **Summer course: Neural Engineering Methods and Applications.** UT Dallas- INB, UNAM. Qro, Mexico. August 6-10.
- 2017 **Electronic Microscopy for Biological Samples.** Theoretical and practical course in 3 modules. Institute of Neurobiology, UNAM-Juriquilla, México. MsC Lourdes Palma. August-October.
- 2017 **Experimental microsurgery in endocrinology.** Theoretical and practical course. Institute of Neurobiology, UNAM-Juriquilla, México. Dr. Andrés Quintanar and Dr. Maricela Luna. March 14-18.
- 2015 **Workshop in advanced microscopy: OLYMPUS Company.** Miami FL, USA. March 2-6.
- 2014 **International workshop: Optics, Force & Development.** Faculty of Medicine, University of Chile, Chile. May 5-16.
- 2013 **Select Topics: Histology, Immunohistochemistry and Molecular pathology.** Pediatric National Institute. Guanajuato, Mexico. September 2.
- 2013 **Workshop Light and Confocal Microscopy, ZEISS Mexico;** Neurobiology Institute-UNAM. Queretaro, Mexico. July 31- August 2.
- 2010 **RT-PCR practical course.** given by ACCESLAB; Institute of Biotechnology-UNAM, Mexico. Dec,1°-3.
- 2010 **Basic course of radioactivity, theoretical.** Institute of Biotechnology-UNAM. Morelos, Mexico. October 29-1°.
- 2004 **Summer Life Science Workshop, CINVESTAV-** Mexican Academia of Science / National Polytechnic Institute. Guanajuato, Mexico. (August 1-7).

CONGRESS & POSTERS (attendance/ presentations)

- 2020 **3rd National symposium: Physiology and Pathology of Neuroglia.** Virtual event.
Poster 1: *Structural changes and calcium signals in radial glia during zebrafish development.* Pereida-Jaramillo E, Gómez-González GB, Espino-Saldaña AE, Martínez-Torres A.
Poster 2: *A novel stem cell cluster at the roof of Aqueduct of Sylvius.* Martínez Mendoza ML, Rodríguez-Arzate A, Gómez-González GB, Martínez-Torres A.
- 2019 **26th Annual Conferences of the Institute of Neurobiology September** UNAM, Mexico.
 Poster: *Anatomical evidence of bilateral communication between the cerebellar fastigial nuclei.* Gómez-González GB, Martínez-Torres A. Sept 23-27th.

- 2018 **18th WPA World Congress of Psychiatry.** Mexico City, Mexico. Sept 27-30.
- 2017 **24th Annual Research Conference. Instituto de Neurobiología, Mexico.** Poster: *Neuronal populations of the subventricular zone from mouse cerebellum.* Gómez-González GB, Martínez-Torres A. Sept 25-29.
- 2014 **International symposium: Visualization and manipulation of signals and forces in developing tissues.** Neuroscience Research Institute – University of Chile. Santiago de Chile. Poster: *Diversity of Bergamnn glia from cerebellum lobe X.* Gómez-González GB., González-González MA, Martínez-Torres A. May 11-16.
- 2018 **ENDO Annual Meeting 2016, Boston, USA.** Poster: *Perinatal exposure to Aroclor 1254 exerts a stimulatory effect on parvocellular PVN TRH mRNA level and has an inhibitory action in response to salt-loading stress.* Edith Sánchez-Jaramillo, Eduardo Islas, Gabriela B Gómez-González, Fidelia Romero, Victor Rivelino Juárez-González, Nashieli Yáñez-Recendis, Roberto Toni and Martha Leon-Olea. Apr 1-4th.
- 2014 **21th Annual Conferences of the of Neurobiology Institute, UNAM, Mexico.** Poster: *Cellular diversity on the roof of the fourth ventricle.* González-González MA, Gómez-González GB, Miledi y Dau R, Martínez-Torres A. Sept 29-Oct 3.
- 2010 **25th Annual Research Meeting. National Institute of Psychiatry Ramon de la Fuente Muñiz.** Poster: *Characterization of a transgenic mouse pTRH-Cre: Analysis of Cre expression to identify neural circuits which regulates the TRhergic neuron response to stress.* Gómez-González GB, Romero F, Joseph-Bravo P, Sanchez-Jaramillo E. October 4th.
- 2010 **25th Annual Research Meeting. National Institute of Psychiatry Ramon de la Fuente Muñiz.** Poster: *Alterations of vasopressin caused by environmental toxic polychlorinated biphenyls and polybrominated.* Olea-León Martha, PhD; Sánchez-Jaramillo Edith; Gómez-González GB.
- 2010 **VIII Conferences of Biological Sciences and XXIII: Week of scholar research Dr. J. Félix Frías Sánchez; UAEM.** Poster: *A transgenic mouse like alternative tool to use antibodies Ab-TRH in animal models under stress.* Gómez-González GB, Fidelia Romero, Jhoseph-Bravo Patricia, Sánchez-Jaramillo Edith. October 19.

SCIENCE DIFUSION

- 2019 **Radio news break. "Topic: The cerebellum function beyond the motor control".** At Panormana Informativo Queretaro show. 106.5 FM. Mexico.
- 2018-2019 **"EXPOCITEQ, Querétaro"**, participation as an exhibitor, certificate issued by National Council of Science and Technology, CONCYTEQ, Mexico. October.
- 2018-2019 **"Brain Awareness Week"**. participation in organization of activities and talks to public audience, Commission of the Neurobiology Institute-UNAM, México. March.
- 2012-2014 **"EXPOCITEQ, Querétaro"**, participation as an exhibitor, certificate issued by National Council of Science and Technology, CONCYTEQ, Mexico. October.

- 2012-2014 **"Brain Awareness Week"**. "Every year participation in organization of activities and talks to public audience. Commission of the Neurobiology Institute-UNAM, México. March.
- 2014 **Radio interview and talk: "The study of the cerebellum"**. Radio Sinapsis Show. INB-UAQ from the Autonomous University of Queretaro. Mexico.
- 2008 XLIII Anniversary of Biological Sciences Faculty. Autonomous University of State of Morelos (UAEM). **Oral presentation: "Aquaculture"**. February 25-March 3.