

Amaya Miquelajáuregui Graf

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EDUCATION

2001 - 2006 Ph.D. Neuroscience
Max Planck Research School. University of Göttingen, Göttingen, Germany.

2000 - 2001 M.Sc. Neuroscience
Université Claude-Bernard Lyon I, Lyon, France.

1997 - 2000 B.Sc. Biology Universidad Nacional Autónoma de México (UNAM). Mexico.
Faculty of Sciences.

EMPLOYMENT

2016 - present Assistant Professor, Institute of Neurobiology. UPR-MS

2015 - 2016 Staff Research Associate. UCLA, Semel Institute (PI: Jeste S.)

2010 - 2015 Postdoctoral Fellow. UCLA, Dept. of Neurology (PI: Portera-Cailliau C.)

2006 - 2009 Postdoctoral Fellow. INB-UNAM, Querétaro, México (PI: Varela-Echavarría A.)

1997 – 1998 Program Coordinator. Scientific Children's Museum Papalote, Mexico

AWARDS & GRANTS

2020 NIH NIGMS 5P20GM103475 INBRE-COBRE Supplement “*Immunological modulation of brain activity and cognition in Puerto Rican children*”.

2020 CTSI's RCMI - Scholarly Exchange. University of Rochester (Center of Telehealth).

2020 LASCON2020 Computational Neuroscience Travel award. University of Sao Paulo, Brazil.

2019 - 2020 Leading Emerging & Diverse Scientists to Success (LEADS) Scholar in Translational Research (U.Pitt)

2018 Society for Developmental Biology –Puerto Rico Research Relief Grant.

2018 UNM-EEG Conference Travel award.

2018 NISBRE Young Investigator Travel award.

2017 Pilot Project Award PRCTRC, University of Puerto Rico, Medical Science Campus.

2017 IBRO Global Advocacy Seed Grant.

2014 Charles E. Sawyer Travel Award, UCLA.

2013 1st Prize for Individual Project & Travel Award “*Molecular Neurobiology Course*” Allen Institute for Brain Science & OIST, Okinawa, Japan.

2012 NARSAD Young Investigator Award. Brain and Behavior Foundation, USA.

2012 Sistema Nacional de Investigadores (Level I). Conacyt, Mexico.

2010 Fulbright-García Robles COMEXUS, USA (declined for administrative reasons) .

2009	PABSELA-Harvard U. Course: “IPS Cells” Córdoba, Argentina (Travel Award)
2006	<i>Magna cum laude</i> (Ph.D.), University of Göttingen, Germany
2003	Summer School, Riken Brain Science Institute, Tokyo, Japan (Travel Award)
2001 - 2006	Max Planck Foundation fellowship, Göttingen, Germany
2000 - 2001	Secretaría de Educación Pública (SEP) Fellowship, Mexico
1999 - 2000	Full-time exchange fellowship, UNAM and McGill University, Montreal, Canada
1998 - 2001	Telmex Foundation fellowship, Mexico
1997	Award for academic excellence, UNAM, Mexico

TEACHING EXPERIENCE

Course instruction

Summer, 2015	K-12 Course: Neuroscience. CTY Johns Hopkins University Program, Seattle University, Seattle, WA (160 h.)
2007, 2008	M.Sc. Neuroscience: Neuroanatomy. INB-UNAM (20 h.)
2007	B.Sc. Biology: Neurodevelopment, UAQ, Querétaro, Mexico (12 h.)

Guest lectures

Spring, 2015	Undergraduate course: Biomedical Research, Concepts and Strategies (BR5HA), UCLA (8 h.)
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Teaching assistance

2006, 2008	Graduate Summer Course: “Ricardo Miledi Neuroscience Training Program” IBRO & INB-UNAM (20 h.)
Fall, 2004	M.Sc./Ph.D. Neuroscience: Transcription & RNA processing. Max Planck Research School, Göttingen, Germany

Student Mentoring

Graduate research

2020 – present	Graduate Medical Education Program in Neurological Surgery. UPR-MSc. Supervisor and Local Director (Joel Pellot)
2020 – present	PhD Dissertation External Committee Member (Sergio Davila). Psychology Dept. UPR-RP.
2018 - present	PhD Dissertation Committee Member (Carihann Dominici) UPR-MSc.

Undergraduate research

2019- 2020	Reto Motor Training in Biomedical Research (Mentor). UPR-RCM
2016 - 2020	Mentor of Undergraduate Research (BIOL4990), UPR-RP.
2013 - 2015	Sahana Kribakaran (Neuroscience & Biomedical Research), UCLA
2012	Luis Garza (Neuroscience), UCLA
2008 - 2009	María Cristina González Martínez (Pharmacy). Academia Mexicana de Ciencias (AMC) & Universidad de Querétaro, Mexico

Online teaching

2019	Blackboard Ultra Certification
2016	Cogito Research Award mentor, John Hopkins University-CTY (research project).
2015	1000 Girls, 1000 Futures, The New York Academy of Science (NYAS).

Teaching training

- 2020 Virtual Workshop on Project Design, Monitoring and Evaluation (US Embassy in Mexico).
 2014 – 2015 Workshops: Building Inclusive Classrooms; Instructional Technology in the Classroom I & II; Backwards Course Design I & II; Developing Activities that Foster Student-Centered Teaching. CEILS-UCLA.
 2012 Bioscience Postdoc Educational Leadership Program, UCLA David Geffen School of Medicine (student evaluation= 1.3, scale 1-5)

PRESENTATIONS**Invited speaker**

- 2020 Northern New Mexico College, Biology Dept. “*Health Disparities in Autism Research*”.
 2020 1st Pan-American Congress of Autism, Fragile X Syndrome and Neurodevelopmental Disorders.
 2019 Microsoft Research Summit. Sheraton Hotel, San Juan PR
 2018 Centro Ponceño de Autismo. “*A dialogue about early manifestations of Autism*” . Ponce, PR.
 2017 Dept. of Neurobiology (Novitch & Butler’s Laboratories), UCLA. “*Neurodevelopmental disorders: at the intersection between humans and animal models*”.
 2017 Dept. of Psychiatry (Fröhlich Lab). University of North Carolina, Chapel Hill.
 2017 Dept. of Bioinformatics, Institute of Mathematics. UNAM, Querétaro, México
 2017 Symposium: “*Problemáticas actuales de salud mental en la infancia*” Dept. of Psychology. UAQ, Querétaro, México.
 2017 INBRE-COBRE Symposium. San Juan, PR
 2017 Minisymposium: “*Autism & Neurodevelopment*” UPR-MSU (speaker & organizer).
 2016 Department of Biochemistry, School of Medicine UPR-MSU.
 2016 Puerto Rico Clinical and Translational Research Consortium (PRCTRC) UPR-MSU
 2016 21st Biennial ISDN Meeting, Antibes, France.
 2016 Institute of Neurobiology, University of Puerto Rico-MSU
 2015 Dept. of Biology, University of South Dakota.
 2015 Biomedical Research Minor, University of California, Los Angeles
 2014 “Synapse to Circuits Seminar series”, University of California, Los Angeles
 2014 “Dendrites 2014” Meeting, FORTH, Heraklion, Crete, Greece
 2009 IX Congress SMD, INB-UNAM, Qro., México

Poster presentations (selected)

- 2019 PR Neuroscience Meeting, UCC Bayamón PR
 2019 Neurostimulation Meeting. UNC, Chapel Hill, NC
 2018 Cortical Evolution Meeting. Las Palmas, Spain.
 2015 International Meeting for Autism Research (IMFAR). San Francisco, CA
 2014 SfN Meeting, San Diego CA
 2010 SfN Meeting, San Diego CA
 2008 ISDN Meeting, Asilomar CA
 2007 Cajal Club Meeting: “From Development to Degeneration and Regeneration of the Nervous System” INB-UNAM, Querétaro, Mexico

2005	Cortical Development Meeting “From neural stem cells to neural circuits”, Santorini, Greece.
2005	30 th International Neurobiology Conference, Göttingen, Germany
2004	“Neurizons”, Max Planck Institute for experimental medicine, Göttingen, Germany
2004	Forum of the European Neuroscience Society (FENS), Lisbon, Portugal
2003	IBRO-UNAM Neuroscience School “Development and regeneration” IFC-UNAM, Mexico City, Mexico.
2003	“Molecular Basis of CNS Disorders”, University of Bonn, Germany

COMMITTEES & SERVICE

2020	Ad-hoc Reviewer, Czech Science Foundation.
2017 – present	Ad-hoc Reviewer. Graduate Women in Science (GWIS) Fellowship.
2016	Ad-hoc Reviewer. Tuberous Sclerosis Association (TSA) Research Award.
2015 & 2016	Creator & Co-Organizer. 1 st Brain Awareness Week, Consulate of Mexico & UNAM- LA (directed to K-12 students from underrepresented schools)
2015	Reviewer. UCLA Undergraduate Research Fellows Program.
2013	UCLA Representative. National Postdoctoral Association Meeting, Charleston SC.
2012 – 2013	External Affairs Officer. Society of Postdoctoral Scholars at UCLA
2011, 2012	Jury Member. Postdoctoral Mentor Award, UCLA
2008, 2009	Science fair advisor. Elementary School Camino Nuevo School, Los Angeles, CA
2007	Co-organizer. Brain Awareness Week (SfN-DABI), INB-UNAM, Mexico
2004	Co-creator and co-organizer. 1 st Neurizons Symposium and round table: ‘ <i>Open Access in Scientific Publishing</i> ’. Max Planck Institute. Göttingen, Germany.
1997 - 1998	Scientific advisor and program coordinator. Interactive Scientific Museum Papalote, Mexico City (20h/week).

EDITORIAL SERVICE

2020 – present	NPJ Science of Learning (Ad-hoc reviewer)
2019 – present	Scientific Reports (Ad-hoc editor)
2019 – present	Biotechniques (Ad-hoc reviewer)
2018 – present	Scientific Reports (Ad-hoc reviewer)
2015 – present	Frontiers in Neuroanatomy (Ad-hoc reviewer)

PROFESSIONAL SOCIETIES & AFFILIATIONS

2020 – present	AMPI (Asociación Mexicana de Psiquiatría Infantil)
2019 – present	Cajal Club
2015 - present	International Society for Autism Research (INSAR)
2015 - 2016	Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS)

2014 - 2015	American Association for the Advancement of Science (AAAS)
2013 –2014	National Postdoctoral Association (NPA), USA.
2010 - 2020	Sistema Nacional de Investigadores (SNI), Conacyt, Mexico
2006 - 2019	Society for Neuroscience (SfN)

PEER-REVIEWED PUBLICATIONS

(Full list:

https://pubmed.ncbi.nlm.nih.gov/?sort=date&size=20&term=Miquelaj%C3%A1uregui+A&cauthor_id=32049024)

1. Pearson CA, Moore DM, Tucker HO, Hu H, Miquelajáuregui A and Novitsch BG. *Foxp1 controls neural stem cell competence and bias towards deep layer cortical fate*. Cell Rep. 2020 Feb 11;30(6):1964-1981 doi:10.1016/j.celrep.2020.01.034.
2. García-Peña CM, Ávila-González D, Miquelajáuregui A, Lozano-Flores C, Mastick GS, Tamariz E, Varela-Echavarría A. Neurophilic (2018) *Descending Migration of Dorsal Midbrain Neurons Into the Hindbrain*. **Front Neuroanat**. 2018;12:96. doi: 10.3389/fnana.2018.00096.
3. Frade-Pérez D., Miquelajáuregui A., Varela-Echavarría A. (2017) *Origin and Migration of Olfactory Cajal-Retzius Cells*. **Front. Neuroanat**. 11:97. doi: 10.3389/fnana.2017.00097
4. Miquelajáuregui A*, Sandoval-Schaefer T, Martínez-Armenta M, Pérez-Martínez L, Cárbaz A, Zhao Y, Heide M, Alvarez-Bolado G and Varela-Echavarría A* (2015) *LIM homeobox protein 5 (Lhx5) is essential for mamillary body development*. **Front. Neuroanat**. 9:136. doi: 10.3389/fnana.2015.00136 (*co-corresponding authors).
5. Heide M, Zhang Y, Zhou X, Zhao T, Miquelajáuregui A., Varela-Echavarría A, Alvarez-Bolado G. (2015) *Lhx5 controls mamillary differentiation in the developing hypothalamus of the mouse*. **Front. Neuroanat**. Aug 14;9:113. doi: 10.3389/fnana.2015.00113.
6. Miquelajáuregui A.*, Kribakaran S., Mostany R., Badaloni A., Consalez G., and Portera-Cailliau C.* (2015) *Layer 4 pyramidal neurons exhibit dendritic spine plasticity in vivo after input deprivation*. **J Neurosci**. May 6;35(18):7287-94. (*co-corresponding authors).
7. Mostany, R., Miquelajáuregui A., Shtrahman, M., Portera-Cailliau, C. (2015) *Two-photon excitation microscopy and its applications in Neuroscience*. **Methods Mol Biol.**;1251:25-42. doi: 10.1007/978-1-4939-2080-82.
8. Rouso D.L., Pearson C.A., Gaber Z.B., Miquelajáuregui A., Li S., Portera-Cailliau C., Morrissey E.E., and Novitsch B. (2012) *Foxp-mediated suppression of N-cadherin regulates neuroepithelial character and progenitor maintenance in the CNS*. **Neuron** Apr 26;74(2):314-30.
9. Ricaño-Cornejo I, Altick AL, García-Peña CM, Nural HF, Echevarría D, Miquelajáuregui A., Mastick GS, Varela-Echavarría A. (2011) *Slit-Robo signals regulate pioneer axon pathfinding of the tract of the postoptic commissure in the mammalian forebrain*. **J Neurosci Res**. Jun. 17
10. Karalay O, Doberauer K, Vadodaria KC, Knobloch M, Berti L, Miquelajáuregui A., Schwark M, Jagasia R, Taketo MM, Tarabykin V, Lie DC, Jessberger S. (2011) *Prospero-related homeobox 1 gene (Prox1) is regulated by canonical Wnt signaling and has a stage-specific role in adult hippocampal neurogenesis*. **Proc Natl Acad Sci USA**. Apr 5;108(14):5807
11. Pérez-Monter C, Martínez-Armenta M, Miquelajáuregui A., Furlan-Magaril M, Varela-Echavarría A, Recillas-Targa F, May V, Charli JL, Pérez-Martínez L. (2011) *The Krüppel-like factor 4 controls biosynthesis of thyrotropin-releasing hormone during hypothalamus development*. **Mol Cell Endocrinol**. Feb 20;333(2):127-33.
12. Miquelajáuregui A., Varela-Echavarría A, Ceci ML, García-Moreno F, Ricaño I, Hoang K, Frade- Pérez D, Portera-Cailliau C, Tamariz E, De Carlos JA, Westphal H, Zhao Y. (2010) *LIM-homeobox gene Lhx5 is required for normal development of Cajal-Retzius cells*. **J Neurosci**. Aug 4;30(31):10551-62.
13. Seuntjens E., Nityanandam A., Miquelajáuregui A., Debruyen J., Stryjewska A., Goebbels S., Nave K.A., Huylebroeck D., Tarabykin V. (2009) *Sip1 (Zfhx1b) regulates sequential fate decisions through feedback signaling from postmitotic neurons to progenitor cells* **Nat Neurosci**. Nov;12(11):1373-80.
14. Miquelajáuregui A., Van de Putte T, Polyakov A, Nityanandam A, Boppana S, Seuntjens E, Karabinos A, Higashi Y, Huylebroeck D, Tarabykin V. (2007) *Smad-interacting protein-1 (Zfhx1b) acts upstream of Wnt signaling in the mouse hippocampus and controls its formation*. **Proc Natl Acad Sci USA**. 104(31):12919-24.

Book chapter:

Miquelajauregui, A., Varela-Echavarría, A. (2009) “Genetic Control of Cajal-Retzius Cell Development” in From Development to Degeneration and Regeneration of the Nervous system (edited by Ribak, Ch. et al.). Oxford University Press, Inc. New York, USA. ISBN 978-019-536907.

MEDIA COVERAGE

1. Radio Isla 1320AM (2018): [“La niñez hipotecada”](#)(on brain development, poverty and stress)
2. El Vocero/Nuevo Día (2018): [“Autismo en Puerto Rico: Uniendo Voces”](#)
3. Radio UAQ (2017): [“Sinapsis”](#) (on Puerto Rican Science and the hurricane’s aftermath)
4. UNAM-LA (2015): [“Neuroscience can be fun!”](#)
5. Univision (2015): [“Musica Maestra”](#)
6. Radio UAQ (2008): [“Sinapsis”](#)

SOFTWARE: Office, ImageJ, Adobe, Corel, Netstation, EEGLab (Matlab), Neurolucida.

BEHAVIORAL TRAINING: ADOS-2 (Intro & Advanced, UCSF 2018, in progress). Bayley-III (2019). CRIDI-TEA (2020)

LANGUAGES: Spanish (native), English, French (fluent) German and Italian (proficient).