

Erika Calvo-Ochoa, Ph.D.
Curriculum vitae

Hope College
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Schaap Science Center 2019
Holland, MI 49423
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CURRENT POSITION

2020 – present

Assistant Professor of Biology and Neuroscience
Hope College, Holland MI

EDUCATION

2015

Ph.D. in Biomedical Sciences. Universidad Nacional Autonoma de Mexico (UNAM)
Dissertation: "*Hippocampal insulin resistance, structural and functional alterations due to high-fat-and-fructose diet feeding*". Advisor: Clorinda Arias
Graduated with Honors. Grade: 9.77/10, equivalent to 4.0 GPA.

2008

B.Sc. in Basic Biomedical Research. School of Medicine, Universidad Nacional Autonoma de Mexico.

Undergraduate Research Fellow. Universidad Nacional Autonoma de Mexico

2007 – 2008	Advisor: Adolfo Garcia-Sainz. Topic: Adrenergic α_1 receptor desensitization
2006 – 2007	PI: Imelda Lopez-Villasenor. Topic: Molecular biology of <i>Trichomonas vaginalis</i>
2005 – 2006	PI: Rene Drucker-Colin. Topic: Neurogenesis in Parkinson's disease
2004 – 2005	PI: Enrique Ortega-Soto. Topic: Signal transduction of Fc γ receptors

PEER-REVIEWED JOURNAL PUBLICATIONS

- 1. Calvo-Ochoa E.,** Byrd-Jacobs, C. A., Fuss, SH. " Constitutive neuronal turnover and regenerative capacity of the zebrafish olfactory system". *Cell and tissue research*. 2020. Nov 27. doi: 10.1007/s00441-020-03334-2. *Invited manuscript*
- 2. Calvo-Ochoa E.,** Byrd-Jacobs, C. A. " The olfactory system of zebrafish as a model for the study of neurotoxicity and injury: implications for neuroplasticity and disease". *International Journal of Molecular Sciences*. 2019, 20(7), 1639. *Invited manuscript*
- 3. Barón-Mendoza I.,** García O., **Calvo-Ochoa E.,** Rebollar-García J. O., Garzón-Cortés D., Haro-Valencia R., González-Arenas A. "Alterations in neuronal cytoskeletal and astrocytic proteins content in the brain of the autistic-like mouse strain C58/J". *Neuroscience Letters*. 2018 24(682):32-38
- 4. Calvo-Ochoa, E.,** Sánchez-Alegría, K., Gómez-Inclán, C., Ferrera, P., Arias, C. "Palmitic acid stimulates energy metabolism and inhibTQq gs BDC--5441

PROPOSALS UNDER REVIEW AND DECLINED

2020 "Ecotoxicity of Pb/Hg/Cd-free Quantum Dots: Evaluation of their transformation in the environment, bioaccumulation and behavioral effects in zebrafish and the house sparrow"

MENTORING

- 2020** **Sydney Chen.** Biomedical Science Major Undergraduate, WMU. Sydney joined the Byrd lab as a freshman, and I have been closely working with her in lab techniques and experimental design. Based on her lab performance during her first semester, Sydney was awarded an Undergraduate Research and Creative Scholarship Excellence Award from WMU.
- 2020** **Bridget Salazar.** Biomedical Science Major Undergraduate, WMU. Bridget joined the Byrd lab to work with me in an 8-week internship sponsored by WMU's Latino association, CAMP.
- 2019 – 2020** **Bonnie Ebendick-Corpus.** Doctoral program in Biomedical Sciences, WMU. Bonnie is a first-year student at the Byrd-Jacobs lab. I have been closely working with her in lab techniques and experimental design.
- 2019** **Maria Rodrigues Soares.** Biomedical Science Major Undergraduate, WMU. Maria was a student in my Endocrinology course, and I recruited her to work as an undergraduate student in Dr. Byrd's lab during her senior year. She collaborated on my postdoctoral project.
- 2018 – 2019** **Michelle Morales.** Biomedical Science Major Undergraduate, WMU. Michelle was a student in my Anatomy lab in 2017 and I recruited her to work as an undergraduate student in Dr. Byrd's lab during her freshman year. She collaborated on my postdoctoral project. Michelle was awarded an NSF Michigan Alliance for Minority Participation professional development award to attending the LXI AChemS meeting, where I presented my postdoctoral project results, to which she contributed.
- 2018 – 2020** **Mamoon Ali.** Masters in Science Program, WMU. Mamoon is a second year student at the Byrd-Jacobs lab. I have been closely working with him in lab techniques, experimental design, data analysis, scientific writing and poster presentation.
- 2014 – 2015** **Cecilia Gomez-Inclan.** Basic Biomedical Research Baccalaureate Program, UNAM. Under my direct and comprehensive tutoring, Cecilia successfully developed an independent research project related to my Ph.D. thesis during her junior year. This project was very fruitful, and our results were published in a peer-review journal manuscript and presented in two international conferences. Cecilia was awarded a "Best Session Poster Award" at the 22nd ISCOMS, Netherlands for the quality of our research work and her outstanding presentation skills.

STUDENT COMMITTEE MEMBER

- 2020** **Bonnie Ebendick-Corpus.** Doctoral program in Biomedical Sciences. WMU

FEATURED COVER PUBLICATIONS AND POPULAR SCIENCE ARTICLES

- 1. Calvo-Ochoa E.,** Christine Byrd-Jacobs, C. A. "The olfactory system of zebrafish as a model for the study of neurotoxicity and injury: implications for neuroplasticity and disease". *International Journal of Molecular Sciences*. 2019, 20(7), 1639
- 2. Calvo-Ochoa E.,** Arias, C. "Food for thought: what happens to our brain when we eat foods high in fat and sugar ?" *Frontiers for Young Minds*. 2019
- 3.** "Image of the Day: Zebrafish Olfactory Epithelium" Microscopy images featured in The Scientist magazine. <https://www.the-scientist.com/image-of-the-day/image-of-the-day--zebrafish-olfactory-epithelium-66663>

CONFERENCE TALKS

- 1. Calvo-Ochoa, E.,** Hernández-Ortega, K., Ferrera, P., Morimoto, S., Gutiérrez-Juárez R., Arias, C. "Short-term high-fat and high-fructose diet feeding produces hippocampal insulin signaling alterations, dendrite and spine loss and neuroinflammation in the rat" *Society for Neuroscience Annual Meeting*, San Diego, CA, USA, November 2013.
- 2. Calvo-Ochoa E.,** Hernández-Ortega, K., Gutiérrez-Juárez, R., Arias C. "Short-term high-fat diet feeding produces hippocampal insulin signaling alterations associated with tau phosphorylation and astrocytic activation" *Society for Neuroscience Annual Meeting*, New Orleans, LA, USA, October 2012.

CONFERENCE PRESENTATIONS

- 1. Calvo-Ochoa, E.,** Miyasaka, N., Yoshihara, Y., Byrd-Jacobs., C. " Zebrafish olfactory system degeneration and regeneration following a focal lesion of the olfactory bulb" *Zebrafish Neural Circuits and Behavior meeting*, Cold Spring Harbor Laboratory, NY, USA, November 2019.

OUTREACH AND ACTIVITIES TO PROMOTE DIVERSITY IN STEM

Mentoring

2019 **MaryJose Cisneros Garza.** U.S. – Mexico Leaders Network. Women in STEM, Future Leaders is a mentoring program, in STEM designed for young women in public high schools in Mexico. With this program we want to empower them and give them a close look to the world of science, expecting to wake in them the urge to continue their professional studies in these areas.

2018 **Carlos Cervantes and James Gore.** 7th grade, High Tech Middle, Chula Vista, CA.
I met Carlos and James through a “Skype a Scientist” session with their classroom. I am their scientific advisor for an independent research project on “diet and memory” that they present at the end of the academic year.

Panelist and reviewer

2020 **Cientifico Latino.** Scholarship reviewer and mentor

2020 **Hispanic Association of Colleges and Universities (HACU).** Scholarship reviewer

2019 **Western Michigan University.** *Ad hoc* task force of the Office for diversity and inclusion

Talks and workshops

1. “Getting To and Getting Through“ discussion panel. *Invited panelist by the Latino Student Alliance*, Western Michigan University, October 2019.
2. Brain dissection laboratory with Ms. Moore’s middle school class. Kalamazoo Country Day School, Portage, MI, March 2019
3. “Skype a Scientist” session with Ms. Herrera’s kindergartners. Isaac E. Imes Elementary in Glendale, AZ, November 2018
4. “Exploring the brain through science” *Invited science Workshop to CAMP students.* Western Michigan University, November 2018.
5. “Skype a Scientist” session with Mr. Clarke’s 7th graders. High Tech High Middle School, Chula Vista, CA, October 2018
6. “Questions you wanted to ask about the brain but never could. Ask a neuroscientist!” *Invited science Workshop to CAMP students.* Western Michigan University, October 2018.
7. “A journey through memory and food - y un poquito de ciencia” *Invited informational talk to CAMP students.* Western Michigan University, April 2018.
8. “Overcoming overwhelm in college: the neuroscience behind anxiety” *Invited informational presentation of the Delta Tau Lambda Sorority, Inc. XI Chapter.* Western Michigan University, November 2017.

LEADERSHIP AND SERVICE

2020 **Hope College**
Neuroscience Program social media coordinator

2019 **Western Michigan University**
Ad hoc task force of the Office for diversity and inclusion
Panelist for the Graduate College Professional Development Workshop
Panelist for the Graduate College Professional Development Workshop
Panelist for Latino Student Alliance Workshop
2018 Medallion Scholarship Observer

2019 – present **EI Concilio.** Non-profit organization in Kalamazoo, MI
Board of Directors member
Fundraising committee member
COVID-19 relief funds “Mi Gente” committee member
2015-2017 Volunteer

2020	Cientifico Latino. Scholarship reviewer and mentor
2020	Hispanic Association of Colleges and Universities (HACU). Scholarship reviewer
2019 – 2020	Association for Chemoreception Sciences. Social media committee member
2019 – 2020	U.S. – Mexico Leaders Network, Women in STEM, future leaders. Mentor
2017– present	Latinas in STEM. Professional Member
2014	

13. "Alto consumo de grasa y azúcar perjudica memoria y cognición". La Jornada newspaper. Featured in the cover.
("High-fat and sugar intake impairs memory and cognition")