

YURIANA AGUILAR

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Education

PhD, University of California, Merced Merced, CA 2012-2016
Quantitative and Systems Biology
Advisor: Dr. Ariel L. Escobar

B.S., University of California, Merced Merced, CA 2007-2011
Biological Sciences
Emphasis: Human Biology

Professional Positions

Instructor, Rush University Medical Center Chicago, IL 2016-Present
Department of Physiology & Biophysics

Graduate Student Researcher, UC Merced Merced, CA 2012-2016
School of Natural Sciences

Internships and Research Experience

Josefina Ramos-Franco Laboratory, 2016-Present
Research: Study Ca^{2+} release mediated by IP_3R & RyR channels and its mechanism(s) of local Ca^{2+} control in cells.

Ariel L. Escobar Laboratory, 2012-2016
Research: Explore the electrophysiology of an intact mouse heart and the development of T-wave alternans by focusing on two physiological variables: $[\text{Ca}^{2+}]$ and membrane potential.

Monica Medina Laboratory, 2009-2012
Research: Assessed the increasing ocean temperature's effect on coral health and their symbiotic organisms.

UC LEADS Internship, 2009-2010
Research: A two summer research experience engaged in innovative research with hands on training on various laboratory techniques. The first summer was at UC Merced studying corals. The second summer focused on biomedical science at a UC Davis atherosclerosis lab.

Community Scholars Internship, 2009-2010
Research: Evaluated health disparities in Merced and developed project to address them.

Conferences/Presentations

- Biophysical Society, Platform Presenter** Los Angeles, CA 2016
Aguilar-Sanchez, Y., Saravia, M., Millet, J., Escobar, AL. *Fluorescence Local Field Optical Mapping (FLOM) of Ca²⁺ alternanses temperature dependency in intact perfused mouse hearts.*
- Biophysical Society, Poster Presenter** Los Angeles, CA 2016
Aguilar-Sanchez, Y., Zavalza, M., To, V., Ramos-Franco, J., Escobar, AL. *L-type calcium and NCX currents during ischemia and reperfusion in intact mouse hearts.*
- GradSlam Competition, Platform Presenter** Merced, CA 2016
Runner up winner. *Towards predicting sudden cardiac death.*
- QSB retreat, Poster Presenter** Merced, CA 2014
Aguilar-Sanchez, Y., Zavalza, M., Escobar, AL. *Transmural autonomic regulation of ventricular action potentials and calcium signalling in intact mouse hearts.*
- Biophysical Society, Poster Presenter** San Francisco, CA 2014
Aguilar-Sanchez, Y., Zavalza, M., Escobar, AL. *Transmural autonomic regulation of ventricular action potentials and calcium signaling in intact mouse hearts.*
- UC Merced Research Week, Poster Presenter** Merced, CA 2013,2014
- American Heart Association, Attendant** Los Angeles, CA 2012
- UC Davis UC LEADS, Platform Presenter** Davis, CA 2010
University of California's Leadership Excellence through Advanced Degrees
- UC LEADS Research Symposium, Poster Presenter** Irvine, CA 2009
- UC Merced Research Week, Poster Presenter** Merced, CA 2009
- UC Merced UC LEADS, Platform Presenter** Merced, CA 2009

Publications

- Aguilar-Sanchez, Y.**, Fainstein, D., Mejia-Alvarez, R., Escobar, A. L. Local field fluorescence microscopy: imaging cellular signals in intact hearts. *J. Vis. Exp.* 8;121 (2017).
- Ramos-Franco, J., **Aguilar-Sanchez, Y.** & Escobar, A. L. Intact Heart Loose Patch Photolysis Reveals Ionic Current Kinetics During Ventricular Action Potentials. *Circ. Res.* **118**, 203–215 (2016).
- Mattiazzi, A., Argenziano, M., **Aguilar-Sanchez, Y.**, Mazzocchi, G. & Escobar, A. L. Ca²⁺ Sparks and Ca²⁺ waves are the subcellular events underlying Ca²⁺ overload during ischemia and reperfusion in perfused intact hearts. *J. Mol. Cell. Cardiol.* **79**, 69–78 (2015).

Awards and Distinctions

- UC Merced Fletcher Jones Fellowship, 2015-2016
- Rose R. Ruiz Fellowship, 2015, 2016
- UC Merced Quantitative Systems Biology Summer Research Fellowship, 2016
- UC Merced Quantitative Systems Biology Summer Research Fellowship, 2015
- Miguel Velez Fellowship, 2014

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- UC Merced Quantitative Systems Biology Summer Research Fellowship, 2013
- UC Merced Grossman Award in Molecular Cell Biology, 2011
- Donald A. Strauss 10K Scholarship, 2010
- Chancellor's Honor List, 2007-2008, 2008-2009, 2009-2010, 2010-2011
- UC LEADS Internship, Summer 2009, 2010
- Community Scholars Internship, 2009-2010
- UC Merced Student of Excellence Award, 2008
- Lead Peer Health Educator Award, 2008
- County Bank/Community Foundation of Merced Scholarship, 2008
- Kim and Harold Louie Foundation Scholarship, 2007
- Comcast Leaders and Achievers Scholarship, 2007

Community and University Service

Teaching Assistant,

Physiology for Engineers Lab, Spring 2015

Preparatory Chemistry 001 Discussion, Spring 2014, Fall 2014

Contemporary Biology 1 Lab, Fall 2013

Introduction to Molecular Biology 2 Discussion, Spring 2013

SACNAS Chapter Grad Student Advisor, 2012-2013

Society for Advancement of Chicanos and Native Americans in Science

Technical Skills

Experienced in:

Single channel bilayer recordings, Fluorescence microscopy (pulse local field), Langendorff preparations, sharp glass microelectrode measurements of membrane potential, culturing bacteria and induction of protein expression, PCR, Genotyping mice and corals, Extracting DNA, NanoDrop Spectrophotometer, ELISA, Centrifugating blood samples, Micropipette puller
 Programs: OriginPro, ImagingSource, ImageJ, Microsoft Excel/Word, ChemiDocs, LabView, pCLAMP, Clampfit

Familiar with:

RT-PCR, Western Blotting, Protein cloning, Cell culturing, Pulse Electroporation
 Programs: ELISA Analysing program

Beginning in:

Cell sorting via FACS, Microarrays
 Programs: FACS (analysing FACS data)