

# Oscar Vazquez, M.D. Ph.D.

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## Education

- University of California, Davis School of Medicine, CA
  - Doctor of Medicine 2016-2020
- University of California, Berkeley, CA
  - Doctor of Philosophy in Neuroscience Degree (3.97 GPA) 2015
  - NSF Graduate Research Fellow 2012-2015
- University of Puerto Rico, Mayaguez, PR
  - Bachelor of Science in Biology with High Honors (3.83 GPA; Magna Cum Laude) 2010

## Continuing Medical Education

- University of California, San Francisco, CA
  - Neurosurgery Update 2018 (9.75 credits) 2018

## Professional Employment

- Chief Executive Officer and Co-founder, CancerMune, Davis, CA 2019-Present
- Assistant Program Manager - Guidelines, Brain Trauma Foundation, Campbell, CA 2016
- Campus Student Liaison, U.S. Department of Veterans Affairs, Mayaguez, PR 2002, 2008
- Chief of Operations/Special Operations, United States Marine Corps 1999-2007

## Teaching Experience

- University of California, Davis School of Medicine, Sacramento, CA
  - Instructor – Human Anatomy 2019
- University of California, Berkeley, CA
  - Teaching Assistant - Cognitive Neuroscience 2015
  - Graduate Student Instructor - Brain, Mind, and Behavior 2013
  - Graduate Student Instructor - Drugs and the Brain 2011
  - Instructor - Brain Lab: An outreach initiative for children (K-12) 2010-2014
- University of Puerto Rico, Mayaguez, PR
  - Tutor - Physiological Psychology
  - Tutor - Molecular and Cellular Neuropsychology 2009
  - Tutor - Biochemistry I 2009
  - Tutor - Cell Physiology 2009
  - Tutor - Modern College Physics I & II 2008
  - Tutor - Calculus for Biological Sciences I & II 2008

- Tutor - Human Anatomy and Physiology 2007
- I Marine Expeditionary Force, Camp Pendleton, CA
  - Instructor - Combat Casualty Reporting 2006-2007
  - Instructor - Fundamentals of Marine Corps Leadership 2003-2007
  - Instructor - Land Navigation 2003

## Research Experience

- **University of California, Davis CA**
  - Postdoctoral Researcher 2018-2020
    - Development of immunotherapies for the prevention and treatment of cancer.
- **Brain Trauma Foundation**
  - Assistant Program Manager – Guidelines 2016
    - Systematic review and meta-analysis on the role of exercise or rest in patients with concussion and mild traumatic brain injury.
- **University of California, Berkeley, CA**
  - Graduate Researcher 2011-2015
    - Astrocytic contributions to seizure-dependent neurogenesis and post-traumatic epilepsy.
  - Graduate Researcher 2011
    - Role of horizontal basal cells in the regeneration of the olfactory epithelium after injury.
  - Graduate Researcher 2010-2011
    - Astrocytes' mediation of adult neurogenesis during stress.
- The Health, Education, Advocacy, Research, and Training (HEART) Corps
  - Senior Researcher, Logistics and Security Officer 2013-2014
    - Employment of loop-mediated isothermal amplification (LAMP) for malaria hotspot identification in Kenya.
- **University of Puerto Rico, Mayaguez, PR**
  - Researcher 2009-2010
    - Biological underpinnings of human aggressive behavior.
  - Research Assistant 2008-2010
    - Characterizing human breast and human colon adenocarcinoma cells' membrane trafficking of superparamagnetic nanoparticles and the apoptotic pathway activated by magnetic fluid hyperthermia.
- **Stanford University School of Medicine, Stanford, CA**
  - Research Assistant 2009
    - *Marcks* participation in retinal pigmented epithelium phagocytosis.

## Research Grant/Fellowship Reviewer

- **University of California, Berkeley, CA**
  - Biology Fellows Program 2012-2014

## Honors, Awards and Fellowships

- Stanford Clinical Opportunity for Residency Experience (SCORE) Program awardee, Stanford Department of Neurosurgery, 2019
- Honors, Sub-internship in Neurological Surgery, Stanford School of Medicine, 2019
- Honors, Sub-internship in Neurological Surgery, Yale School of Medicine, 2019
- Honors, Sub-internship in Neurological Surgery, UC Davis, 2019
- Biomedical + Engineering Entrepreneurship Academy Inductee, UC Davis, 2019
- Smart Toolkit for Accelerated Research Translation (START™) Program awardee, UC Davis, 2019
- Honors, Multidisciplinary Approach to the Neurosurgical Patient Advanced Clinical Clerkship, UC Davis, 2019
- Honors, Continuity Clinic, UC Davis, 2019
- Honors, Psychiatry Clerkship, UC Davis, 2018
- Letter of Distinction, PMD 410B-D, Systemic Pathology, UC Davis, 2018
- Dean's Scholarship, UC Davis, 2017
- Letter of Distinction, HON 420, Oncology Course, UC Davis, 2017
- Sandra L. Reed, M.D. Scholarship, UC Davis, 2016, 2018
- University of California Grant for Medical Education, UC Davis, 2016-2019
- Big Ideas Award for Global Poverty Alleviation, UC Berkeley, 2014
- National Science Foundation's Graduate Research Fellowship Program, 2012
- The Milton I and Florence Krenz Mack Neurology Research Fund, UC Berkeley, 2010
- Amgen Scholars Research Fellowship, Amgen Foundation, 2009
- MARC Research Fellowship, National Institute of General Medical Sciences, 2008
- BioMinds Research Fellowship, Amgen Foundation, 2008
- Biomedical Science Research Mentoring and Teaching Fund, MARC Program at UPRM, 2008, 2009
- Illinois Summer Neuroscience Institute Fellowship, University of Illinois at Urbana Champaign, 2009
- Stanford Diversity Outreach for Doctoral Education Participant Fellowship, Stanford University, 2008
- Dean's List at the University of Puerto Rico, Mayaguez Campus, 2008-2010
- Membership in the Neuroscience Honor Society at the University of Puerto Rico, Mayaguez, 2009
- Membership in the Beta Beta Beta National Biological Honor Society, 2002
- Team Leader of the Year Award for the Beta Beta Beta National Biological Honor Society, 2008
- Frank G. Brooks Award for Excellence in Student Research, BBB National Biological Honor Society, 2009
- Certificate of achievement for Outstanding Presentation in Cell Biological Sciences at the 2009 Annual Biomedical Research Conference for Minority Students, American Society for Cell Biology & Howard Hughes Medical Institute, 2009
- Honorable Discharge, United States Marine Corps, 2007
- Meritorious Promotion to Staff Sergeant, United States Marine Corps, 2007
- Navy and Marine Corps Achievement Medal, United States Marine Corps, 2005
- Marine Corps Good Conduct Medal, United States Marine Corps, 2006
- National Defense Service Medal, United States Marine Corps, 2002

- Armed Forces Reserve Medal with Mobilization Device, United States Marine Corps, 2003
- Selected Marine Corps Reserve Medal, United States Marine Corps, 2002, 2006
- Global War on Terrorism Expeditionary Medal, United States Marine Corps, 2004
- Global War on Terrorism Service Medal, United States Marine Corps, 2004
- Overseas Service Ribbon, United States Marine Corps, 2001-2002, 2004
- Sea Service Deployment Ribbon, United States Marine Corps, 2004
- United States Marine Corps Meritorious Mast, United States Marine Corps, 2002
- Certificate of Appreciation, 7th Special Forces Group, Special Operations Command-South, 2001

### **Association memberships**

- Member of the Congress of Neurological Surgeons, 2019-Present
- Member of the American Association of Neurological Surgeons, 2016-Present
- Member of the California Medical Association, 2016-Present
- Member of the Sierra Sacramento Valley Medical Society, 2016-Present
- Member of the Latino Medical Student Association, 2015-2020
- Member of the Society for Neuroscience, 2009-Present
- Founder and Chief Scientist of the Neuroscience Honor Society at the University of Puerto Rico, Mayaguez, 2008-2010
- Member and Team Leader of the Beta Beta Beta National Biological Honor Society, 2002-2010
- Member of the Industrial Biotechnology Student Association, University of Puerto Rico, Mayaguez, 2008-2010
- Member of the Biology Student Association, University of Puerto Rico, Mayaguez, 2007-2010

### **Voluntary service activities**

- Medical Student volunteer at the Paul Hom Asian Clinic, Sacramento, 2016-2020
- Medical Student volunteer at the Gender Health Center, Sacramento, 2016-2020
- Member of the Engineers without Borders UC Berkeley Chapter, Peru Project, UC Berkeley, 2011
- Co-Chair of the Brain Awareness Organizing Committee at the University of Puerto Rico, 2008-2010
- Member and Volunteer at the Lindsay Wildlife Museum, 2011-2013
- Member and Volunteer at the Oakland Zoo, 2011-2012

### **Publications**

- Kim SY, Senatorov VV, Morrissey CS, Lippmann K, **Vazquez O**, et al. TGF $\beta$  signaling is associated with changes in inflammatory gene expression and perineuronal net degradation around inhibitory neurons following various neurological insults. *Sci Rep.* 2017;7(1):7711.
- Lal A, Kolakowsky-Hayner S, Ghajar J, **Vazquez O**, and Balamane M. A systematic review and meta-analysis on the role of exercise or rest in patients with concussion and mild traumatic brain injury. *British Journal of Sports Medicine* 2017;51:A83.
- Weissberg I, Wood L, Kamintsky L, **Vazquez O**, et al. Albumin induces excitatory synaptogenesis through astrocytic TGF- $\beta$ /ALK5 signaling in a model of acquired epilepsy following blood-brain barrier dysfunction. *Neurobiol Dis.* 2015;78:115-25.

- Soudi L, Conroy C, and **Vazquez O**. Detection of malaria parasitemia for hotspot identification: employment of loop-mediated isothermal amplification (LAMP) in remote clinics in Kenya. *Annals of Global Health*, 2014;80(3):222.
- Hussien R, Rihn BH, Eidi H, Ronzani C, Joubert O, Ferrari L, **Vazquez O**, Kaufer D, and Brooks GA. Unique growth pattern of human mammary epithelial cells induced by polymeric nanoparticles. *Physiol Rep*. 2013;1(4):e00027.
- **Vazquez O**, and Clinton A. Biological insights on school-based aggression. *The School Psychologist* 2009;63(3):120-125.

### **Presentations at National and International Meetings**

- Lal, A., Kolakowsky-Hayner, S., Ghajar, J., Balamane, M., and **Vazquez, O**. (2016). "A systematic review and meta-analysis on the role of exercise or rest in patients with concussion and mild traumatic brain injury," poster at the 5th International Consensus Conference on Concussion in Sport, Berlin, Germany.
- Pedraza, L.L., **Vazquez, O.**, and Kaufer, D. (2015) "Proliferation and neurogenesis in the albumin-exposed mammalian ventral hippocampus," abstract accepted for poster presentation at the 2015 Annual Biomedical Research Conference for Minority Students (ABRCMS), Seattle, WA.
- Pedraza, L.L., **Vazquez, O.**, and Kaufer, D. (2015) "Albumin increases neurogenesis in the dentate gyrus of the hippocampus," oral presentation at the 2015 Maximizing Access to Research Careers Symposium, Berkeley, CA.
- Rangel, L., **Vazquez, O.**, Tan, L., and Kaufer, D. (2015) "Blockade of the Transforming Growth Factor  $\beta$  Receptor prevents the albumin-dependent increase in stem cell proliferation and neurogenesis observe in a model of post-traumatic epilepsy," poster at the National Science Foundation – California Alliance for Minority Participation (NSF – CAMP) Symposium, Irvine, CA.
- Tan, L., **Vazquez, O.**, and Kaufer, D. (2014) "Inhibitor of the TGF- $\beta$  signaling pathway prevents aberrant neurogenesis in a model of traumatic brain injury," poster at the 2014 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX.
- Rangel, L., **Vazquez, O.**, Tan, L., and Kaufer, D. (2014) "Blockade of the Transforming Growth Factor  $\beta$  Receptor prevents the albumin-dependent increase in stem cell proliferation and neurogenesis observe in a model of post-traumatic epilepsy," poster at the 2014 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX.
- Felix, C., **Vazquez, O.**, Tan, L., Nanthavongdouangsy, M., and Kaufer, D. (2014) "Novel mechanism of inhibition of the Transforming Growth Factor  $\beta$ -signaling pathway in a model of traumatic brain injury," poster at the 2014 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX.
- Ibarra, A.G., **Vazquez, O.**, Felix, C., Tan, L., and Kaufer, D. (2014) "Characterizing the efficiency of TGF- $\beta$  Receptor blockers to inhibit phosphorylation of Smad proteins in a model of traumatic brain injury," poster at the 2014 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX.
- Conroy, C.M., Soudi, L.M., Abraham, J., and **Vazquez, O**. (2014) "Detection of malaria parasitemia for hotspot identification: Employment of loop-mediated isothermal amplification (lamp) in remote clinics in Kenya," poster at the 2014 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX.
- Patino, M., **Vazquez, O.**, and Kaufer, D. (2014) "Temporal analysis of proliferation and neurogenesis in the dentate gyrus of the adult hippocampus in the albumin exposure model of epilepsy," oral presentation at the MCB Neurobiology Honors Symposium, Berkeley, CA.

- **Vazquez, O.**, Conroy, C.M., and Soudi, L.M. (2014). “Employment of loop-mediated isothermal amplification (LAMP) in for hotspot identification in Kenya,” oral presentation at the Bay Area Malaria Meeting, Emeryville, CA.
- **Vazquez, O.**, Patino, M., Servin, V., and Kaufer, D. (2014) “Serum albumin increases stem cell proliferation, neurogenesis and synaptogenesis in in a model of post-traumatic epilepsy,” oral presentation at the Helen Wills Neuroscience Institute Neuroscience Seminar, Berkeley, CA.
- **Vazquez, O.**, Patino, M., Servin, V., and Kaufer, D. (2014) “Serum albumin increases neural stem cell proliferation and induces astrogliosis in the dentate gyrus of the adult hippocampus,” oral presentation at the UC Berkeley Student Society for Stem Cell Research, Berkeley, CA.
- Conroy, C.M., Soudi, L.M., and **Vazquez, O.** (2014) “Detection of malaria parasitemia for hotspot identification: Employment of loop-mediated isothermal amplification (lamp) in remote clinics in Kenya,” poster at the Ivy Plus Symposium, Cambridge, MA.
- Patino, M., **Vazquez, O.**, and Kaufer, D. (2014) “Temporal analysis of proliferation and neurogenesis in the dentate gyrus of the adult hippocampus in the albumin exposure model of epilepsy,” poster at the Ivy Plus Symposium, Cambridge, MA.
- **Vazquez, O.**, Conroy, C.M., and Soudi, L.M. (2014). “Employment of loop-mediated isothermal amplification (LAMP) in for hotspot identification in Kenya,” oral presentation at the 5th East African Collaborative Scientific meeting in Kisumu, Kenya.
- Patino, M., **Vazquez, O.**, and Kaufer, D. (2014) “Albumin increases proliferation and neurogenesis in the dentate gyrus of the adult hippocampus,” poster at the National Science Foundation – California Alliance for Minority Participation (NSF – CAMP) Symposium, Irvine, CA.
- Patino, M., **Vazquez, O.**, and Kaufer, D. (2013) “Albumin increases proliferation and neurogenesis in the dentate gyrus of the adult hippocampus,” poster at the 2013 Annual Biomedical Research Conference for Minority Students (ABRCMS), Nashville, TN.
- Patino, M., **Vazquez, O.**, and Kaufer, D. (2013) “Albumin increases proliferation and neurogenesis in the dentate gyrus of the adult hippocampus,” poster at the 2013 UC Berkeley Biology Scholars Program Symposium, Berkeley, CA.
- Servin, V., **Vazquez, O.**, and Kaufer, D. (2013) “A transgenic mouse line to study astrocytic contributions to post-traumatic neurogenesis and epilepsy,” poster at the 2013 National Conferences on Undergraduate Research, La Crosse, WI.
- Balsara, C., **Vazquez, O.**, and Kaufer, D. (2012) “In vitro characterization of the proliferation profiles of neural stem cells exposed to serum albumin,” poster at the 2012 Annual Biomedical Research Conference for Minority Students (ABRCMS), San Jose, CA.
- Balsara, C., **Vazquez, O.**, and Kaufer, D. (2012) “In vitro characterization of the proliferation profiles of neural stem cells exposed to serum albumin,” poster at the 2012 UC Berkeley Biology Fellows Program Symposium, Berkeley, CA.
- Servin, V., **Vazquez, O.**, and Kaufer, D. (2012) “Serum albumin infusion of the lateral ventricles: A novel opportunity to study traumatic epileptogenesis in the temporal lobes,” poster at the 2012 UC Berkeley Biology Fellows Program Symposium, Berkeley, CA.
- **Vazquez, O.**, Strick, D.J., and Vollrath, D. (2009). “Macrophage participation in retinal pigment epithelial phagocytosis,” poster at the 2009 Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, AZ.

- **Vazquez, O.**, Strick, D.J., and Vollrath, D. (2009).“Marcks participation in retinal pigment epithelial phagocytosis,” oral presentation and poster at the 2009 Stanford University Summer Research Program in Biomedical Sciences / Amgen Scholars Program Research Symposium., Stanford, CA.
- **Vazquez, O.**, Latorre-Esteves, M., and Rinaldi, C. (2009). “Green light for all inbound traffic: Characterizing human breast adenocarcinoma and human colon adenocarcinoma cells’ membrane trafficking of superparamagnetic nanoparticles,” oral presentation at the 2009 Beta Beta Beta National Biological Honor Society Convention, Mayaguez, PR.
- **Vazquez, O.**, Latorre-Esteves, M., & Rinaldi, C. (2009).“Green light for all inbound traffic: Characterizing human breast adenocarcinoma and human colon adenocarcinoma cells’ membrane trafficking of superparamagnetic nanoparticles,” poster at the 2009 BioMinds Research Conference, sponsored by the Amgen Foundation, Mayaguez, PR.

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