

## **EDUCATION**

### **UNIVERSITY OF CALIFORNIA, DAVIS**

PhD in Neuroscience (2017)

### **UNIVERSITY OF TEXAS AT DALLAS**

B.S. in Neuroscience (2008) with a Minor in Medical and Scientific Humanities (MaSH)

## **RESEARCH EXPERIENCE**

Sep, 2017 – current

### **POST-DOCTORAL RESEARCHER AT BOSTON UNIVERSITY**

*CENTER FOR INTEGRATED LIFE SCIENCES WITH DR. STEVE RAMIREZ*

- Investigating the neural networks that underlie emotional and spatial memories using optogenetics, DREADDs and calcium imaging tools.

Jun, 2012 – Sep, 2017

### **PHD CANDIDATE AT UNIVERSITY OF CALIFORNIA, DAVIS**

*CENTER FOR NEUROSCIENCE WITH DR. BRIAN J. WILTGEN*

- Investigated the involvement of hippocampus and cortex in *remote* memory retrieval by optogenetic and pharmacological manipulation of hippocampal circuits in transgenic mice
- Tested the effects of environmental boundaries and parameters on hippocampal reactivation
- Quantified reactivation of cortical circuits after optogenetic manipulation in a *recent* memory test

Sep, 2010 – Jun, 2012

### **GRADUATE STUDENT RESEARCHER AT UNIVERSITY OF CALIFORNIA, DAVIS**

*CENTER FOR MIND AND BRAIN WITH DRS. CLIFFORD SARON AND RON MANGUN*

- Analyzed human EEG data collected from the Shamatha Project, a longitudinal study designed to investigate the effects of intensive meditation on the central and autonomic nervous systems
- Designed and executed a team project to assess levels of stress biomarkers (i.e. telomerase, oxytocin) in participants before and after a one-month long intensive meditation retreat

Jul, 2008 – Aug, 2010

### **BEHAVIORAL BIOLOGIST AT NATIONAL INSTITUTE OF MENTAL HEALTH (NIMH)**

*LABORATORY OF MOLECULAR PATHOLOGY (LMP) W/ DRS. GUANG CHEN & HUSSEINI MANJI*

- Evaluated the efficacy and temporal profiles of ketamine for its antidepressant effects through use of a battery of animal behavioral tests (i.e. forced swim test, learned helplessness, elevated plus maze, etc.) and presented the findings of this work at *Society for Biological Psychiatry* meeting (2008)
- Tested a drug candidate (a downstream molecular target of lithium) for its efficacy as a treatment for bipolar disorder using oral gavage drug administration and a battery of behavior tests in c57bl/6 mice
- Fine-tuned the learned helplessness paradigm for use in mood disorder research
- Maintained behavioral facilities, generated animal protocols, facilitated animal transfers, kept protocols up to date, performed troubleshooting of behavioral equipment

Jun-Aug 2007

### **AMGEN SCHOLAR AT HOWARD UNIVERSITY**

*ORGANIC CHEMISTRY LAB WITH DR. JOSEPH FORTUNAK*

- Developed an alternative synthetic method for the most expensive portion of the critical HIV drug ritonavir: 5-hydroxymethylthiazole (5-HMT)

- Identified and subsequently rejected a proposed method of synthesis due to insufficient product yield as revealed through NMR-spectral analysis
- Finalized and submitted a second alternative synthetic method for 5-HMT. The proposal was accepted and has recently been transferred to manufacturers in China and India. The cost impact of this alternative synthetic method is a 15-20% reduction in price for ritonavir

**May, 2006 – Jun, 2008**

**RESEARCH ASSISTANT AT THE UNIVERSITY OF TEXAS AT DALLAS**  
*AGING & MEMORY LAB WITH DR. LUCIEN TRES THOMPSON*

- Collaborated as a research assistant on a project which demonstrated the effectiveness of a particular drug, D-cycloserine (DCS), in improving learning and memory by enhancing after-hyperpolarization mediated plasticity
- Anesthetized and sacrificed Long-Evans rats and prepared viable hippocampal slices for electrophysiology study

**Jun-Aug, 2003**

**WELCH SUMMER SCHOLAR AT THE UNIVERSITY OF TEXAS AT AUSTIN**  
*BIOCHEMISTRY LAB WITH DR. KEVIN DALBY*

- Collaborated on a project which characterized properties of the mammalian protein kinase ERK2 through genetic engineering techniques including: insertion of gene of interest into an expression vector for further study, Polymerase Chain Reaction (PCR) mutagenesis, DNA gel electrophoresis and fast performance liquid chromatography (FPLC)
- The findings of this project served to further elucidate the structure and properties of ERK2 thereby providing for a better understanding of its role and function in various signaling pathways in biological systems

**LABORATORY TECHNIQUES**

Stereotaxic rodent surgery  
Immunohistochemistry  
Optogenetic Training/Testing  
Optogenetic Fiber implants  
Brain Sectioning (Vibratome)

Programming in “R”  
PCR and Gel Electrophoresis  
Viral/Drug Brain Infusions  
Transcardial Perfusion

Fear Conditioning  
Forced Swim Test  
Elevated Plus Maze  
Open Field Test

**PEER-REVIEWED PUBLICATIONS**

Tanaka KZ, Pevzner A, **Hamidi AB**, Nakazawa Y, Graham J, Wiltgen BJ. Cortical representations are reinstated by the hippocampus during memory retrieval. *Neuron*. 2014 Oct; 84(2): 347-54.

Creson TK, Hao Y, Engel S, Shen Y, **Hamidi A**, Zhuo M, Manji HK, Chen G: The anterior cingulate ERK pathway contributes to regulation of behavioral excitement and hedonic activity. *Bipolar Disorders*. 2009 Jun; 11(4): 339-50.

Wang Y, **Hamidi AB**, Zhou R, Guitart X, Chen G, Manji HK, Kaddurah-Daouk R. Stable Isotope-resolved 2etabolomics analysis of lithium effects on glial-neuronal metabolism and interactions. *Metabolomics*. 2010 Jun; 1;6(2):165-179.

O Malkesman, DR Austin, T Tragon, G Wang, G Rompala, **AB Hamidi**, Z Cui, WS Young, K Nakazawa, CA Zarate Jr., HK Manji, G Chen. Acute D-serine treatment produces antidepressant-like effects in rodents. *International Journal of Neuropsychopharmacology*. 2012 Sep; 15 (08): 1135-1148.

**POSTER PRESENTATIONS**

**Hamidi A**, Ota Y, Mardini D, Suarez SL, Wiltgen BJ. Interactions between the hippocampus and cortex during remote memory retrieval. Society for Neuroscience, San Diego, California, 2016.

**Hamidi A**, Wiltgen BJ, Pevzner A. The influence of environmental parameters on hippocampal reactivation. Society for Neuroscience, Chicago, Illinois, 2015. 355.23/CC40

Conklin, Q. A., King, B. G., Zanesco, A. P., **Hamidi, A.B.**, Pokorny, J. J., Lin, J., Epel, E.S., Blackburn, E.H., and Saron, C.D. Increased telomere length following three weeks of intensive Insight Meditation retreat. International Society for Psychoneuroendocrinology. Edinburgh, Scotland, September 2015.

**Hamidi A**, Pearson B, Malkesman O, Martinowich K, Hunsberger JG, O'Donnell K, Schloesser R, Dold G, Chen G, Manji HK. Temporal Profile of Imipramine and Ketamine in the Learned Helplessness Paradigm. Society of Biological Psychiatry, Vancouver, British Columbia, Canada 2008

AY Taha, HW Kim, **A Hamidi**, T Tragon, E Ramadan, G Chen, SI Rapoport, J.S Rao: Chronic N-methyl D- aspartate Administration Induces “Bipolar-like” Behavioral Changes in Rats. International Brain Research Organization, Florence, Italy. July 2011.

### **ORAL PRESENTATION**

#### **Cost reduction of the HIV drug ritonavir: an alternative synthetic method for 5-hydroxymethylthiazole (5-hmt)**

Delivered a presentation to a small audience at Howard University. Outlined the nature of research performed as an Amgen Scholar. Discussed the results and implications of the project.

### **TEACHING EXPERIENCE**

Spring 2016	Cognitive Development with Dr. Katie Graf Estes
Fall 2015, 2016	Cognitive/Infant Development with Dr. Lisa Cantrell
Winter 2015, Spring 2016	Neurobiology Laboratory Methods with Dr. Mark Goldman
Winter 2015	Private Tutor: <i>Intro to Neurobiology (NPB100)</i>
Spring 2012	Intro to Neurobiology with Dr. Barbara Chapman
Spring 2006	Biology Laboratory Methods with Wen-Ju Lin

### **HONORS & AWARDS**

2016	Center for Neuroscience, 15 <sup>th</sup> Annual Poster Contest: 3 <sup>rd</sup> Place
2012-2014	National Science Foundation Graduate Research Fellowship (NSF-GRFP)
2009, 2012	Research Fellow, Mind & Life Summer Research Institute
2008	Dean's List, University of Texas at Dallas
2008	Alpha Epsilon Delta Pre-Health Honor Society
2007	Amgen Summer Scholars Program, Howard University
2006 & 2007	Academic All-Conference ASC Cross Country Award
2004	Student Success Award for Leadership in Education & Community Building
2004	Second Place Winner for Black History Month Essay Contest

### **PROFESSIONAL ACTIVITIES**

2009-2010	National Institute of Health (NIH) Radio, Volunteer
2011-2012	UC Davis Annual Neuroscience, Retreat Organizer
2012-2014	Board Member for Sacramento-Valley Chapter of AWIS
2013-2014	UC Davis Student Organized Seminar Series, Committee Member

### **SERVICE & OUTREACH**

2017	Panelist on “Academic Writing” at <i>Professors for Future Program – UC Davis</i>
2010, 2013	Brain Awareness Week (BAW) Outreach events at local Davis schools
2005-2008	Pre-Health Honor Society – Alpha Epsilon Delta (Volunteer Activities)
2005-2008	Contact Crisis Line – Suicide Prevention Hotline
2004-2005	Secretary of Student Government at Richland College (DCCCD)

## **STUDENT MENTORSHIP**

2015 – 2016	Riva Ballis, B.S. in Neurophysiology & Behavior Junior Specialist in Dr. Jill Silverman's lab
2015 – 2016	Tyler Longenbough, B.S. in Neurophysiology & Behavior NIH Post-Baccalaureate with Dr. Mark Hoon
2015 – 2016	Dunia Mardini, B.S. in Neurophysiology & Behavior Pre-med student applying to medical schools
2014 – 2016	Lisa Straehle, B.S. in Neurophysiology & Behavior Pre-law student applying to law schools

## **SCIENCE WRITING EXPERIENCE**

*Writing Samples: [www.genetic-expressions.com/science-writing-pubs](http://www.genetic-expressions.com/science-writing-pubs)*

2015-current	Science Writer for Kavli Institute / NTNU
2015-current	Science Writer for Maze Engineers
2016	PLOS Blogger for the Society for Neuroscience Annual Meeting
2010, 2015	Official "Neuroblogger" for the Society for Neuroscience Annual Meeting
2013	Santa Fe Science Writing Workshop Participant
2010-2012	Writer for the "Washington Wire" Association of Women in Science (AWIS)
2009-2010	National Institute of Health (NIH) Radio, Volunteer

## **PROFESSIONAL MEMBERSHIPS**

2016 – current	American Society for Biochemistry and Molecular Biology
2008 – current	Society for Neuroscience
2012 – 2016	Association of Women in Science
2014 – 2015	American Association for Advancement of Science

## **REFERENCES**

Available upon Request.