

CURRICULUM VITAE

Kyung-An (Kay) Han, Ph.D.

PERSONAL DATA

Citizenship: USA

Work Address: Department of Biological Sciences
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El Paso, Texas 79968
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EDUCATION

1987-1992 Ph.D. in Molecular Biology of Cancer
Mentor: Dr. Molly Kulesz-Martin (currently at OHSU, Professor and Director of Research, Dermatology)
Department of Biochemistry
Roswell Park Cancer Institute (formerly RCMI)
State University of New York at Buffalo, Buffalo, NY

1986-1987 Predoctoral Student
Department of Biochemistry, School of Medicine
State University of New York at Buffalo, Buffalo, NY

1982-1986 Bachelor of Science Degree
Department of Biochemistry
Yonsei University, Seoul, Korea

POSTDOCTORAL TRAINING

1993-1996 Postdoctoral Fellow
Mentor: Dr. Ronald Davis (currently at Scripps Research Institute, Florida)
Baylor College of Medicine, Houston, TX

1992-1993 Postdoctoral Fellow
Mentor: Dr. Ronald Davis
Cold Spring Harbor Laboratory, Cold Spring Harbor, NY

ACADEMIC APPOINTMENTS

2020-present Orville Edward Egbert, M.D. Endowed Professor in Science
University of Texas at El Paso, TX

2018-present Professor
Department of Biological Sciences, University of Texas at El Paso, TX

2009-2018 Associate Professor

	Department of Biological Sciences, University of Texas at El Paso, TX
2006-2009	Associate Professor Department of Biology, Pennsylvania State University, University Park, PA
2004-2006	Assistant Professor Department of Biology, Pennsylvania State University, University Park, PA
1999-2004	Assistant Professor, Department of Biobehavioral Health Pennsylvania State University, University Park, PA
1996-1999	Instructor and Research Assistant Professor Baylor College of Medicine, Houston, TX

ACADEMIC ADMINISTRATIVE APPOINTMENTS

2015-present	Director and Advisor Master of Arts in Teaching Science (Master program for high or middle school teachers) University of Texas at El Paso, TX
2009-2019	Director Neuromodulation Disorders Cluster (formerly Neuroscience & Metabolic Disorders Project) NIH-Sponsored Border Biomedical Research Center University of Texas at El Paso, TX

HONORS AND AWARDS

2021, May	Student Organization Advisor of the Year, The Society for Neuroscience Sun City Chapter
2020, Sept	Orville Edward Egbert, M.D. Professorship in Science, Endowed chair
2020, Aug	Mentoring Award, NIH-sponsored BUILDing SCHOLARS & College of Science
2019, May	Graduate School Faculty Marshal, May Commencement
2019, May	Outstanding Performance in Securing Extramural Funding, ORSP
2017, Apr	Outstanding Performance in Securing Extramural Funding, ORSP
2016, Sept	Outstanding Performance in Securing Extramural Funding, ORSP
2016, Apr	Outstanding Performance in Securing Extramural Funding, ORSP
2014, Dec	Outstanding Performance in Securing Extramural Funding, ORSP
2014, Sept	Outstanding Performance in Securing Extramural Funding, ORSP
2010, Sept	Distinguished Alumnus Award in Leadership, Dong Duk High School
2010, Apr	Outstanding Performance Award, UTEP

MEMBERSHIPS AND OFFICES IN PROFESSIONAL SOCIETIES

A. Membership

Genetics Society on America
IBANGS (International Behavioral and Neural Genetics Society)
Society of Neuroscience

B. Leadership in Professional Societies/Communities

2021	Chair, the NIH study section Molecular, Cellular & Developmental Neurobiology (MCDN) SEP ZRG1
2020-present	Grant Writing Coach, NRMN (National Research Mentoring Network) Mentoring to Diversity the Biomedical Workforce
2018-present	Associate Editor, Genes, Brain and Behavior (Scientific Journal)
2017-present	Editorial Board Member, Behavioral and Brain Functions (Scientific Journal)
2017	Program Committee and Chair of Neurosciences and Neurological Diseases session, The Third Border Biomedical Research Center Symposium on Health Disparities: From Molecules to Disease
2017	Co-Organizer, Workshop “Biogenic Amines and Behavior”, 58 th Annual <i>Drosophila</i> Research conference, San Diego, CA
2016	Chair, Learning and Memory Track, UT Texas FreshAIR Grand Challenges in Neuroscience, Austin, TX
2016	Program Committee, UT Texas FreshAIR Grand Challenges in Neuroscience
2015	Chair, Neurosciences and Neurological Diseases session, The Second Border Biomedical Research Center Symposium on Health Disparities: From Molecules to Disease,
2014	Moderator, General Session IV/closing session, NIMHD Grantee’s Conference (aka International Symposium on Minority Health & Health Disparities)
2013-2014	Chair, Abstract Committee, NIMHD Grantee’s Conference (aka International Symposium on Minority Health & Health Disparities)
2013-2014	Scientific Planning Committee, NIMHD Grantee’s Conference (aka International Symposium on Minority Health & Health Disparities)
2012-2013	President, Society for Neuroscience Rio Grande Texas Chapter
2012	Session facilitator, RTRN Café- Breakfast networking, RCMI international symposium on Health Disparities
2011-2012	Scientific Planning Committee, RCMI International Symposium on Health Disparities
2011-2012	Program Committee, IBANGS (International Behavioral and Neural Genetics Society) Annual Meeting
2009	Session Chair, “Higher brain functions” in “Neurobiology of <i>Drosophila</i> , CSHL meeting, Cold Spring Harbor
2008	Organizer, Workshop “Monoamines” at Annual <i>Drosophila</i> Research Conference

SCIENTIFIC ACTIVITIES AND SERVICES

A. Study Sections & Review Panels

2011-present (3 times a year)	NIH Molecular, Cellular & Developmental Neurobiology (MCDN) SEP ZRG1
2020 Nov	NIH NIDA SEP ZDA IXR-Q U01 Genetic analysis of non-human animal models to understand the genomic architecture of substance use disorders and addictive behaviors
2020 July	NIH Cell Biology and Bioengineering (F05U) SEP Fellowship review panel
2019 Oct	NIH Cell Biology and Bioengineering (F05U) SEP Fellowship review panel
2017	NIH Neurotoxicology & Alcohol (NAL) Study Section
2016	NIH Neurobiology of Motivated Behavior (NMB) Study Section
2013, 2014	NIFA Insects and Nematodes Panel
2011	NSF Neural Systems Cluster Panel

2009	NSF Neural Systems Cluster Panel
2009	NIH Integrative Neuroscience Special Emphasis Panel
2008	NIH Neurogenesis and Cell Fate Study Section
2007	NSF Neural Systems Cluster Panel

B. Ad Hoc Reviewer for Grants

2019	Con Tex Collaborative Research Grants Competition
2011	Japan Society for the Promotion of Science (JSPS) Grants-in-Aid for Scientific Research
2009-2010	NSF Neural Systems Cluster
2010	University of Houston GEAR grant
2006-2009	NSF Neural Systems Cluster
2007-2008	University of Houston GEAR grant

C. Peer Reviewer of Manuscripts

Genetics; Journal of Neurobiology; Journal of Comparative Physiology A; Insect Biochemistry and Molecular Biology; Insect Molecular Biology; Comparative Biochemistry and Physiology; Brain, Behavior and Evolution; Genes, Brain and Behavior; Current Biology; Alcohol; Fly; PLoS ONE; Neuroscience; Developmental Neurobiology; Journal of Neurogenetics; Journal of Neuroscience; Frontier in Neuroscience; PNAS, Journal of Alzheimer's Disease, Scientific Reports, Behavioral and Brain Functions, PLoS Genetics, Nutritional Neuroscience, Cell Report

D. Other Professional Activities and Services

2014	Judge, Student poster competition, NIMHD Grantee's Conference
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ADMINISTRATIVE AND COMMITTEE SERVICES

A. Administrative Service

2015-present	Director, Master of Arts in Teaching, UTEP
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B. University-level Leadership Services

2020-present	Secretary, Executive Committee, Graduate Council, UTEP
2021-2022	Chair, Undergraduate Scholarship Committee, UTEP
2018-2019	University Honors Visioning Committee, UTEP
2009-2019	Director, Neuromodulation Disorders Cluster (formerly, Neuroscience and Metabolic Disorder Project) Border Biomedical Research Center (BBRC)
2013-2018	UTEP Representative, UT System Neuroscience Council
2017	Planning Committee, Interdisciplinary Research and Education (IDRE) Symposium
2016	Organizer & Representative, Graduate School Fair, Annual Society for Neuroscience meeting
2016	UTEP Representative, miniCAST, Presentation and Workshop, El Paso
2015	Planning Committee, Graduate Expo
2010 - 2016	Advisory Committee, COURI (Campus Office of Undergraduate Research Initiatives)

2013 - 2016	Chair, Faculty Senate Academic Policy Committee
2014 - 2015	UTEP Representative, Texas Higher Education Coordinating Board, Academic Course Guide Manual (ACGM) Learning Outcomes for Biology
2012 - 2013	Chair, Faculty Search Committee, BBRC/NMD, UTEP
2011 - 2012	Chair, Faculty Search Committee, BBRC/NMD, UTEP
2009 - 2010	Chair, Faculty Search Committee, BBRC/NMD, UTEP
2001 - 2009	Executive Committee, IGDP (Intercollege Graduate Degree Program) in Genetics, PSU

C. University-level Services

2021	Endowment Review Committee
2020	ad hoc faculty committee/faculty senate for UTEP Recovery Taskforce
2020-present	Faculty advisor for the student organization HOSA (Health Occupations Students of America)
2019-present	Faculty advisor for the student organization SfN (Society for Neuroscience) Sun City Chapter
2019-present	Undergraduate Scholarship Committee, UTEP
2017-present	Graduate Council, College of Science representative
2015-present	Dodson Research Grant proposal review (once or twice a year)
2017	Natalicio Dissertation Fellowship review
2013	Outstanding Thesis & Dissertation competition selection
2010-2013	Faculty Senate, UTEP
< 2009	Judge for the Undergraduate Exhibition, PSU
< 2009	University Marshal for Commencement, PSU
< 2009	Candidacy Exam Committee for IBIOS/Neuroscience, Cell & Developmental Biology, PSU

D. College-level Services

2012 - 2015	Task Force committee, MAT (Master of Arts in Teaching) Science, UTEP
< 2009	Climate Committee for Eberly Science College, PSU

E. Department-level Services

2019-present	Biosciences Ph.D. program curriculum committee, Chair
2020	ad hoc Advisory Committee for merit evaluation
2019 - 2020	Faculty search committee for neuroscience faculty
2018 - 2019	Faculty search committee for computational biologist
2015 -	Biology MS program advisory committee, UTEP
2015 -	Teaching evaluation committee, UTEP
2017	The 50 th year celebration event, co-organizer, UTEP
2014 - 2016	Biology web Committee, UTEP
2010 - 2011	EEB faculty search committee, UTEP
2000 - 2009	Graduate Admissions Committee, IGDP in Genetics, PSU
2001 - 2004	Scholarship and Awards Committee, PSU
2000 - 2004	Graduate Admissions Committee, Biobehavioral Health, PSU
< 2009	Search Committee for new faculty hires, PSU

F. Community Services

2018, 2019	Host Eastwood Middle School Field Trip – BRB and lab tour, Drosophila workshop
2013 -	Organizer and participant, UTEP MOVE, Neuroscience team, annual event
2012-2013	President, Society for Neuroscience Rio Grande Texas Chapter
2010	Public lecture on Alzheimer's Disease for the El Paso community, "Journey into the Alzheimer's Brain: Insights into Living Longer with a Healthier Brain", featured in KINT TV news
2009	Plenary lecture, The Commonwealth Prevention Alliance Conference, "Drug addiction and learning and memory"
2008	Penn State Magazine, Featured article "Fish Hooks of Addiction" http://www.rps.psu.edu/indepth/addiction.html
2007	Public lecture, Frontiers in Science lecture for public sponsored by Eberly College of Science "Drug addiction – bad case of good memory"
2007	WPSU-TV, Pennsylvania Inside out, Main guest for discussion on drug addiction

RESEARCH GOALS AND PROJECTS

Neuromodulatory mechanisms underlying behavior and reproduction:

Overarching goals: the molecular, cellular and neural mechanisms by which monoamines regulate behavioral plasticity (learning, memory and addiction), motivation, attention, inhibitory control and reproduction (courtship behavior and oviposition).

- a. Natural stimuli-induced learning/memory processes: aversive and appetitive olfactory conditioning (classical conditioning), aversive and appetitive visual conditioning (classical conditioning), conditioned courtship (operant conditioning)
- b. Alcohol-induced behavioral adaptation: behavioral disinhibition (cognitive and motor impulsivity), behavioral sensitization, sensitivity and tolerance to the sedative effect
- c. Response inhibition and impulsivity
- d. Dementia: mechanisms by which genetic and non-genetic factors cause neurodegeneration.
- d. Courtship and copulation behaviors
- e. Ovulation/egg laying

GRANT SUPPORT

A. Ongoing Research Support: Extramural Grants

NSF/IRES	Joddar (PI)	3/15/2019 – 2/28/2022
<u>Grant type:</u> IRES 1854008		
<u>Title:</u> US-Canada Collaborative Research on Biomedicals for stem cell culture and neural differentiation		
<u>Goal:</u> To expose UTEP undergraduate students to international collaboration on stem cell research and applications		
<u>Role:</u> co-PI		

European Research Council Advanced Grant	Ewing (PI)	2018 – 2024
<u>Title:</u> Nanoscale Bioimaging of Nerve Cells and Vesicles: Molecular Substructure and the		

Nature of Exocytosis

Role: Collaborator in the study investigating impact of distinct exocytosis mechanisms on learning and memory

B. Completed Research Support: Extramural Grants

Grants as PI

- NIH/NIMH Han (PI) 8/04/2016 – 7/31/2020
Grant type: R21 5R21MH109953
Title: Social and environmental influences on response inhibition
Goal: To identify the mechanisms by which social and environmental factors modulate inhibitory control
Role: PI
- Brain & Behavior Research Foundation Han (PI) 9/15/2016 – 9/14/2018
Grant type: 2016 NARSAD Independent Investigator Award
Title: The genetic basis of social-context sensitive response inhibition
Goal: To identify the molecules critical for response inhibition by genetic screen
Role: PI
- NIH/NIAAA Han (PI) 8/10/2012 – 7/31/2016
Grant type & number: R15 AREA 1R15AA020996
Title: Diversity Supplement *Drosophila* model for behavioral disinhibition
Goal: To elucidate the mechanism by which the dopamine system mediates disinhibited behaviors induced by ethanol in *Drosophila*
Role: PI
- NIH/NIAAA Han (PI) 8/10/2014 – 7/31/2016
Grant type & number: R15 AREA supplement 3R15AA020996-01S1
Title: *Drosophila* model for behavioral disinhibition
Goal: To support Ivan Mercado, a master student in Biological Sciences, for his thesis research on the mechanism that hyper-dopamine receptor activities modulate ethanol-induced disinhibition in *Drosophila*
Role: PI
- USDA Han (PI) 6/1/2010-5/14/2015
Grant type & number: AFRI (Competitive Research Grant) 2010-65105-20625
Title: The octopamine system in *Drosophila melanogaster*
Goal: To delineate octopamine receptor functions in *Drosophila*
Role: PI
- The Foundation for Alcohol Research Han (PI) 1/1/2010-12/31/2011
Grant type & number: ABMRF Grant
Title: Genetic dissection of ethanol-induced behavioral disinhibition and sensitization
Goal: To investigate ethanol-induced behavioral adaptations in *Drosophila*
Role: PI
- NSF Han (PI) 9/1/2006-8/31/2010
Grant type & number: IOB-0620056
Title: Octopamine Functions and Underlying Mechanisms for Associative Learning and

Memory of *Drosophila melanogaster*

Goal: To identify the roles of the octopamine receptor OAMB in learning and memory, and the underlying cellular mechanisms in *Drosophila*

Role: PI

- NIH/NICHD Han (PI) 6/25/2005-5/31/2007
Grant type & number: R03, 5 R03 HD048766-02
Title: Monoamine Functions in *Drosophila* Female Reproduction
Goal: To identify the mechanism by which the octopamine receptor OAMB regulates female reproduction in *Drosophila*
Role: PI
- NIH/NINDS Han (PI) 2/01/1999-1/31/2005
Grant type & number: R01, 1 R01 NS38346-06
Title: Genetic Dissection of Neuromodulatory Function
Goal: To identify the role of the dopamine receptor DAMB in associative memory and to generate the mutations in the octopamine receptor OAMB
Role: PI

Grants as co-PI or co-I or other roles

- NIH Kirken (PI) 7/01/2014 -3/31/2019
Grant type: NCRR 2G12MD007592-21
Title: Border Biomedical Research Center
Goal: To expand and facilitate biomedical research at UTEP
Role: Director of Neuromodulation Disorders Cluster
- NIH Li (PI) 9/01/2014 -8/31/2017
Grant type: SC2 GM103719-01A1
Title: Super Resolution Pump-Probe Microscopy for Biomedical Imaging
Goal: To establish a novel microscopic tool to visualize non-fluorescent molecules
Role: Mentor and collaborator
- NSF Li (PI) 9/01/2014 -8/31/2019
Grant type: MRI DBI 1429708
Title: Development of a scan-less temporal focusing two-photon fluorescence microscope for high speed three-dimensional imaging
Goal: To implement a novel microscopic tool to visualize cell activity in live brains
Role: co-Investigator
- NSF Misra (PI) 9/1/2015-2/28/2017
Grant type & number: MRI DMR 1530891
Title: Acquisition of an Advanced Nanoscale Deformation with Imaging System for Multiscale Study of the Mechanical Behavior of Advanced Materials
Goal: To expand research infrastructure
Role: co-Investigator
- NIH/NCRR Natalicio (PI) 7/01/2009 -6/30/2014
Grant type & number: Center Grant 5G12RR008124
Title: Border Biomedical Research Center

Goal: To expand and facilitate pathobiology research at UTEP.

Role: Director of Neuroscience and Metabolic Disorders Project

NIH/NIGMS

Ewing (PI)

8/1/2006-7/31/2010

Grant type & number: R01 GM078385

Title: Microanalytical Methods for *Drosophila* Neurochemistry

Goal: To develop small-scale analytical methods of monoamines present in the *Drosophila* brain and to apply them to the analysis of monoamines associated with chronic tolerance to alcohol.

Role: co-PI

C. Completed Research Support: Intramural Grants

UTEP

Han (PI)

9/01/2018 -8/31/2019

On-Campus Student Employment Fund

Title: Brain health & health disparity researcher

Goal: Scholarship to support two undergraduate students participating in Han lab research on dementia

Role: PI

NIH/NIMHD

Han (PI)

4//1/2016 – 3/31/2017

Grant type: BBRC pilot grant

Title: Novel targets to control mosquito-borne diseases

Goal: To elucidate the role and mechanism that the octopamine system regulates mosquito female reproduction

Role: PI

UTEP/ORSP

Han (PI)

1/1/2010-12/31/2010

Grant type: University Research Initiative Grant

Title: Neurobiological mechanisms of genetic and social interactions influencing impulsivity

Goal: To map the brain structure crucial for loss of impulse control

Role: PI

UTEP/CoS

Narayan (PI)

2/01/2014-8/31/2014

Grant type: Multidisciplinary Research Pilot Program

Title: Prophylactic drug development against nitrosative-stress linked Parkinson's disease

Goal: To develop an assay to monitor nitrosative-stress *in vivo*

Role: co-I

NIH/NCRR

Llano (PI)

10/1/2010-6/30/2011

Grant type: BBRC Pilot Grant

Title: A *Drosophila* model for Infectious disease mechanism

Goal: To establish a *Drosophila* model for HIV infection and pathogenesis

Role: co-I

PATENTS

2019

Patent No 10306887, Compositions and Methods for Modulation of the Octopamine Receptor and Its Homologs, Issued on 06/04/2019, Inventor

- 2015 Patent Cooperation Treaty (PCT) patent application, Compositions and Methods for Modulation of the Octopamine Receptor and Its Homologs, Application # PCT/US2015/043536, Inventor
- 2014 Provisional Patent application, Compositions and Methods for Modulation of the Octopamine Receptor and Its Homologs, Application # 62033628, Inventor
- 2003 Provisional Patent application, OAMB octopamine receptor mutants and their utility for agricultural and pharmaceutical applications, Inventor
- 1999 Patent application: Invertebrate Octopamine receptor, PCT application No. PCT/US93/22808, Co-inventor: Dr. Ron Davis, Baylor College of Medicine, TX

PUBLICATIONS

(only in peer-reviewed journals/papers; *, graduate student; **, undergraduate student)

A. Manuscripts currently in preparation

Fernandez, A.I.*, Lim, J., James, J.** and Han, K.-A. Octopamine in male courtship behavior.

Saldes, E.*, Sabandal, P.R., Kim, Y.-C., and Han, K.-A. Ethanol interacts with dopamine to induce motor impulsivity in *Drosophila*

Medina, G. *, Sabandal, J.M.** , Lim, J., Sabandal, P.R. and Han, K.-A. The cellular mechanisms by which octopamine controls female fertility.

B. Manuscripts currently in progress

Mercado, I.*, Saldes, E.B.*, Sabandal, P.R., and Han, K.-A. Dopamine D5 receptor DAMB suppresses ethanol-induced disinhibition.

Sabandal, P.R., Saldes, E.B.*, Ablanado Morales, P.*, Pizana, A.*, Valles, V.** , Ontiveros, A.S.** and Han, K.-A. Dampened acetylcholine neurotransmission leads to dysfunctional inhibitory control in an aging-dependent manner.

C. Manuscripts under revision or review

Sabandal, P.R., Kim, Y.-C., Sabandal, J.M.**. Saldes, E.B.* and Han, K.-A. Social Context Impacts Impulsivity, PNAS under revision.

D. Publications

- 2020 Delgado, N.M.** , Sierra, C.M. **, Arzola, A. **, Saldes, E.B. **, Han, K.-A. # and Sabandal, P.R. # Flypub to study ethanol induced behavioral disinhibition and sensitization, *J. Vis Exp*, 2020 May 18;(159). doi: 10.3791/61123. (#, co-corresponding author)
- 2020 Sabandal, J.M.** , Kim, Y.C., Sabandal, P.R. and Han, K.-A. Concerted Actions of Octopamine and Dopamine Receptors Drive Olfactory Learning, *J. Neurosci*, 2020 40(21); 4240-4250. doi: 10.1523/JNEUROSCI.1756-19.2020

- 2018 Lim, J., Fernandez, A.I.* , Hinojos, S.J.** , Aranda, G.P.* , James, J.** , Seong, C.S. and Han, K.-A. The Mushroom Body D1 Dopamine Receptor Controls Innate Courtship Drive, *Genes, Brain and Behavior*, 2018 17(2); 158-167
- 2017 Aranda, G.P.* , Hinojos, S.J.** , Sabandal, P.R.* , Evans, P.D. and Han, K.-A. Behavioral Sensitization to the Disinhibition Effect of Ethanol Requires the Dopamine/Ecdysone Receptor in *Drosophila*, *Frontier Systems Neuroscience*, 2017. 11:56, doi: 10.3389/fnsys.2017.00056
- 2017 Plaçais, P.Y., de Tredern, É., Scheunemann, L., Trannoy, S., Goguel, V., Han, K.-A., Isabel, G. and Preat, T. Upregulated Energy Metabolism in the *Drosophila* Mushroom Body is the Trigger for Long-Term Memory, *Nature Communication*, 8:15510
- 2015 Cassar, M., Issa A.R., Riemensperger, T., Petitgas, D., Rival, T., Coulom, H., Iché-Torres, M., Han, K.-A. and Birman, S. A Dopamine Receptor Contribute to Paraquat-Induced Neurotoxicity in *Drosophila*, *Human Molecular Genetics*, 24 (1): 197-212
- 2014 Lim, J.* , Sabandal, P.* (co-first author)* , Fernandez, A.** , Sabandal, J.M.** , Lee, H.G.* , Evans, P. and Han, K.-A., The Octopamine Receptor Oct β 2R Regulates Ovulation in *Drosophila melanogaster*, *PLoS ONE*, Aug 6;9(8):e104441. doi: 10.1371/journal.pone.0104441. eCollection
- 2013 Kim, Y.-C., Lee, H.-G.* , Lim, J. and Han, K.-A. Appetitive Learning Requires the Alpha1-Like Octopamine Receptor OAMB in the *Drosophila* Mushroom Body Neurons, *J. Neuroscience.*, 33: 1672-1677
- 2012 Zhou, C., Huang, H., Kim, S., Lin, H, Meng, X, Han, K-A, Chiang, A-S, Wang, JW, Jiao, R, and Rao, Y. Molecular Genetic Analysis of Sexual Rejection: Roles of Octopamine and Its Receptor OAMB in *Drosophila* Courtship Conditioning, *J Neuroscience*, 32 (41): 14281-7
- 2010 Han, K.-A. and Kim, Y.-C. Courtship Behavior: The Right Touch Stimulates the Proper Song, *Current Biology*, 20 (1), R25-R28, 2010
- 2010 Makos, M.A.* , Han, K.-A., Heien, M.L. and Ewing A.G. Using in Vivo Electrochemistry to Study the Physiological Effects of Cocaine and Other Stimulants on the *Drosophila melanogaster* Dopamine Transporter, *ACS Chemical Neuroscience*, 1, 74-83
- 2009 Makos, M.A.* , Kim, Y.-C.* , Han, K.-A., Heien M.L. and Ewing A.G. In Vivo Electrochemical Measurements in *Drosophila melanogaster*, *Analytical Chemistry*, 81 (5), 1848-1854
- 2009 Lebestky, T.J., Chang, J.-S., Dankert H., Zelnik, L., Kim, Y.-C.* , Han, K.-A., Wolf FW, Perona, P. and Anderson, D.J. Two Different Forms of Arousal in *Drosophila* are Oppositely Regulated by the Dopamine D1 Receptor Ortholog DopR via Distinct Neural Circuits, *Neuron*, 64 (4), 522-36
- 2009 Selcho, M., Pauls, D., Han, K.-A., Stocker, R.F. and Thum, A.S. The Role of Dopamine in *Drosophila* Larval Classical Olfactory Conditioning, *PLoS ONE*, 4 (6), e5897
- 2009 Lee, H.-G.* , Rohila, S. and Han, K.-A. The Octopamine Receptor OAMB Regulates Ovulation via Ca²⁺/Calmodulin-Dependent Protein Kinase II in the *Drosophila* Oviduct Epithelium, *PLoS ONE*, 4 (3): e4716
- 2009 Liu, X., Buchanan, M., Han, K.-A. and Davis, R.L. The GABA Receptor RDL Suppresses the Conditioned Stimulus Pathway for Olfactory Learning, *J Neuroscience*, 29 (5): 1573-9
- 2008 Andretic, R., Kim, Y-C.* , Jones, F.S., Han, K.-A. and Greenspan, R.J. *Drosophila* D1 Dopamine Receptor Modulates Caffeine-Induced Arousal, *PNAS*, 105 (51): 20392-20397

- 2008 Lee, H.-G.* , Kim, Y.-C.* , Dunning, J.S.** and Han, K.-A. Recurring Ethanol Exposure Induces Disinhibited Courtship in *Drosophila*, *PLoS ONE*, 3 (1): e1391
 News on this research finding were covered in several journals or magazines including Nature, Newsweek, New scientist, and Science daily.
<http://www.newsweek.com/id/83086>
<http://www.nature.com/news/2008/080103/full/news.2007.402.html>
http://www.newscientist.com/channel/sex/dn13136-randy-flies-reveal-how-booze-affects-inhibitions.html?feedId=online-news_rss20
<http://www.sciencedaily.com/releases/2008/01/080102222901.htm>
- 2007 Kim, Y.-C.* , Lee, H.-G.* and Han, K.-A. D1 Dopamine Receptor dDA1 Is Required in the Mushroom Body Neurons for Aversive and Appetitive Learning in *Drosophila*. *J Neuroscience*, 27 (29): 7640-7
- 2007 Kim, Y.-C.* , Lee, H.-G.* and Han, K.-A. Classical Reward Conditioning in *Drosophila melanogaster*, *Genes, Brain and Behavior*, 6 (2): 201-207
- 2005 Powell, P. R.* , Paxon, T. L.* , Han, K.-A. and Ewing, A. G. Analysis of Biogenic Amine Variability among Individual Fly Heads with Micellar Electrokinetic Capillary Chromatography - Electrochemical Detection, *Analytical chemistry*, 77(21): 6902 – 6908
- 2005 Paxon, T. L.* , Powell, P. R.* , Lee, H.-G.* , Han, K.-A. and Ewing, A. G. Micellar Electrokinetic Capillary Chromatography - Electrochemical Detection of Neurotransmitter Metabolites in the Fruit Fly, *Analytical chemistry*, 77: 5249-5355
- 2004 Han, M., Park, D., Kim, Y.-C.* , Han, K.-A. and Taghert, P. H. *Apterous* and the Control of Peptidergic Cell Fate in the *Drosophila* CNS, *Developmental Biology*, 269: 95-108
- 2003 Kim, Y.-C.* , Lee H.-G.* , Seong C.-S., and Han, K.-A. Expression of a D1 Dopamine Receptor dDA1/DmDOP1 in the Central Nervous System of *Drosophila melanogaster*, *Gene expression Patterns, a section of Mechanisms of Development*, 3 (2): 237-245
- 2003 Ream, P. J.* , Suljak, S. W.* , Ewing, A. G., and Han, K.-A. Micellar Electrokinetic Capillary Chromatography - Electrochemical Detection for Analysis of Biogenic Amines in *Drosophila melanogaster*, *Analytical Chemistry*, 75: 3972-3978
- 2003 Lee, H.-G.* , Seong, C.-S., Kim, Y.-C.* , Davis, R. L. and Han, K.-A. Octopamine Receptor OAMB Is Required for Female Reproduction, *Developmental Biology*, 264: 179-190
- 1998 Crittenden, J. R.* , Skoulakis, E. M. C., Han, K.-A., Kalderon, D., and Davis, R. L. Tripartite Mushroom Body Architecture Revealed by Antigenic Markers, *Learning and Memory*, 5 (2): 38-51
- 1998 Han, K.-A., Millar, N. S., and Davis, R. L. A Novel Octopamine Receptor Expressed Preferentially in *Drosophila* Mushroom Bodies, *J. Neurosci*, 18 (10): 3650-3658
- 1996 Han, K.-A., Millar, N. S., Grotewiel, M., and Davis, R. L. DAMB, A Novel Dopamine Receptor Expressed Specifically in *Drosophila* Mushroom Bodies, *Neuron*, 16: 1127-1135
- 1996 Davis, R. L., and Han, K.-A., Mushrooming Mushroom Bodies, *Current Biology*, 6: 146-148
- 1995 Han, K.-A. and Kulesz-Martin, M. Differentiation-Associated Expression of Endogenous Retrovirus-Like Sequence VL30 in Normal Mouse Skin and Squamous Cell Carcinoma, *Molecular and Cellular Differentiation*, 3: 125-136

- 1993 Schneider, B. L., Bowden, G. T., Sutter, C., Schweizer, J., Han, K. -A. and Kulesz-Martin, M. 7, 12-Dimethylbenz[A]Anthracene-Induced Mouse Keratinocyte Malignant Transformation Independent of Harvey *ras* Activation, *J Invest Dermatol*, 101: 595-599
- 1992 Han, K.-A. and Kulesz-Martin, M. Alternatively Spliced p53 RNA in Transformed and Normal Cells of Different Tissue Types, *Nucleic Acids Research*, 20: 1979-1981
- 1992 Han, K.-A. and Kulesz-Martin, M. Altered Expression of Wild-Type p53 Tumor Suppressor Gene during Murine Epithelial Cell Transformation, *Cancer Research*, 52: 749-753
- 1990 Han, K.-A., Rothberg, P. and Kulesz-Martin, M. Altered Levels of Endogenous Retrovirus-Like Sequence (VL30) RNA During Mouse Epidermal Cell Carcinogenesis, *Molecular Carcinogenesis*, 3: 75-82

PROFESSIONAL PRESENTATIONS

A. Extramural invited presentations (seminars & lectures)

- 2020 AKN (Association of Korean Neuroscientists) eTalk Series “*Flies R US: a tale of a tiny but sophisticated brain*”
- 2018 University of Gothenburg, Department of Chemistry and Molecular Biology, Sweden
- 2018 University of Tennessee Health Sciences Center, Memphis, TN
- 2018 New Mexico State University, Department of Biology, Las Cruces, NM
- 2017 University of Texas Health Sciences Center San Antonio, Department of Cellular and Integrative Physiology, TX
- 2016 KIOM (Korea Institute of Oriental Medicine), Daegu, Korea
- 2016 IBANGS (International Behavioral and Neural Genetics Society), Featured talk, Bar Harbor
- 2016 Center for Cognition and Sociality, IBS, Daejeon, Korea
- 2016 Scripps Florida, Department of Neuroscience
- 2015 Chung Song Conference, Seoul, Korea
- 2014 Texas A&M, Department of Entomology
- 2014 Virginia Tech, Department of Entomology
- 2014 Pennsylvania State University, Department of Biology
- 2014 NIMHHD Grantees’ Conference, General session IV
- 2011 Kyung Hee University, Department of Biochemistry, Seoul, Korea
- 2011 Seoul National University, School of Dentistry, Cell & Developmental Biology
- 2010 IBANGS, Symposium on Genetics of Behavioral Plasticity, invited speaker
- 2010 Korea Research Institute of Chemical Technology (KRICT), Daejeon, Korea
- 2010 Korea Institute of Technology and Science (KIST), Seoul, Korea

2010	Oregon Health & Science University (OHSU), Portland
2009	University of Texas at Austin, Neuroscience program
2009	Chung Nam University Medical College
2009	Korea Advanced Institute of Science and Technology (KAIST)
2009	Gwangju Institute of Science and Technology (GIST)
2009	Janelia Farm Conference on Insect Neuromodulators and Neuropeptides,
2009	The Commonwealth Prevention Alliance Conference, Plenary lecture
2008	Kyung Hee University, Medical School, Seoul, Korea
2008	Korea University, School of Life Sciences and Biotechnology, Seoul, Korea
2008	University of Gothenburg, Göteborg, Sweden
2008	Stockholm University, Stockholm, Sweden
2008	Janelia Farm Conference on Learning and Memory: A synthesis of flies and honeybees
2008	Seoul National University Medical College
2007	Gordon Conference, Catecholamines
2006	Penn State University, Hershey Medical Center, Pharmacology
2005	The Babraham Institute, Cambridge, UK
2005	IUBS/TAIB Symposium on "Reproductive and Social Behaviors, from fly to man, an integrative biological approach", Saint-Remy les Chevreuses, France
2005	Neurogenetics group, NIH, Bethesda
2004	<i>Drosophila</i> GPCR workshop, Washington DC
2004	Neuropharmacology group, NIDNS, NIH
2004	Behavioral Neurogenetics Summer School, Memphis, TN
2004	Lehrstuhl fuer Genetik und Neurobiologie, University of Wuerzburg, Germany
2002	Penn State University, Hershey medical center, Neuroscience Seminar
2001	Cephalon, Inc., West Chester, PA; seminar and consultation

B. Intramural invited presentations (seminars & lectures)

2015	Health Exchange Lecture, UTEP
2011	Bioinformatics, UTEP
2010	REU Summer Research Program, UTEP
2001-2004	Slice of Science, Summer Research Program, Penn State University
2003	Penn State University, University Park, Psychology Seminar
2000	Penn State University, Biochemistry and Molecular Biology Seminar

C. Oral & poster presentations at scientific conferences

(* = graduate student; ** = undergraduate student; *** = high school student)

a. Poster & oral presentations on research

2020

2020 Sosa Ontiveros, A.**, Sabandal, PR and Han, K-A. Impacts of *scully* mutations on *Drosophila melanogaster* lifespan, ABRCMS 2020: The Virtual Experience, November 9-13 (won Poster Presentation Award, Neuroscience category)

2020 Boisselier, G.**, Sabandal, PR and Han, K-A. Dopamine D2 receptor in ethanol-induced behavioral disinhibition and sensitization. COURI Summer symposium, UTEP, July 27-31, TX

2020 Romero, A.**, Sabandal, PR and Han, K-A. The role of dopamine in alcohol-associated behaviors, UTEP, COURI Summer symposium, UTEP, July 27-31, TX (only abstract, no presentation)

2020 Abugalyon, Y.**, Sabandal, PR and Han, K-A. Neural mechanism underlying alcohol-induced disinhibition and sensitization. COURI Summer symposium, UTEP, July 27-31, TX (only abstract, no presentation)

2020 Valles, V.**, Sabandal, PR and Han, K-A. The cholinergic system in aging-sensitive memory loss. COURI spring symposium, UTEP, Apr 27-30, TX

2020 Abugalyon, Y.**, Sabandal, PR and Han, K-A. Identification of Synaptic Anomaly in Dementia. COURI spring symposium, UTEP, Apr 27-30, TX

2020 Medina, G.*, Sabandal, PR and Han, K-A. Novel genetic factors for *Drosophila* female fecundity. The annual GSA/TAGC (The Allied Genetics Conference), Apr 22-26, Washington DC (Grecia Medina won the Travel Award but the conference was cancelled due to COVID-19)

2019

2019 Garcia-Trevizo, P**, Sabandal, PR and Han, K-A. Chronic Ethanol Exposure has Long-lasting Effects on Food Consumption in *Drosophila melanogaster*. COURI spring symposium, UTEP, Apr 13, TX

2019 Garcia-Trevizo, P**, Sabandal, PR and Han, K-A. Chronic Ethanol Exposure and Social Environment Affect Innate Behaviors in *Drosophila melanogaster*. Texas Undergraduate Research Day at the capitol, April 1, Austin, TX

2019 Zheng, J**, Han, K.-A., COURI Summer Symposium, "The role of acetylcholine in aging-associated loss of memory," COURI, UTEP. (August 2019).

2019 Lopez, R**, Han, K.-A., COURI Summer Symposium, "The roles of ether-a-go-go and highwire in addiction," COURI, UTEP. (August 2019).

2019 Miller, M** (won the 3rd place; the 1st among BRIDGES scholars), Han, K.-A., LSAMP Summer Symposium, "Neurobiological mechanism for alcohol preference," LSAMP, UTEP. (August 2019).

2019 Nghiem, J**, Han, K.-A., LSAMP Summer Symposium, "Novel Genetic Factors in Dementia," LSAMP, UTEP. (August 2019).

2019 Aguirre, M. (high school teacher), Han, K.-A., COURI Summer Symposium, "The effect of social environments on alcohol-induced euphoria," COURI, UTEP. (August 2019).

2019 Arzola, A**, Han, K.-A., Society for Neuroscience Annual Meeting, "Scully in sleep regulation and dementia," Society for Neuroscience, Chicago, IL. (October 2019).

2019 Delgado, N**, Han, K.-A., Society for Neuroscience Annual Meeting, "Dopamine D2 receptor in ethanol induced behavioral sensitization," Society for Neuroscience, Chicago, IL. (October 2019).

2019 Saldes, E*, Han, K.-A., Society for Neuroscience Annual Meeting, "Genetic and non-genetic factors for sleep and inhibitory control," Society for Neuroscience, Chicago, IL. (October 2019).

2019 Sabandal, P. R., Han, K.-A., Society for Neuroscience Annual Meeting, "Scully in aging-associated loss of memory and inhibitory control," Society for Neuroscience, Chicago, IL. (October 2019).

2019 Sierra, C. M**, Han, K.-A., Society for Neuroscience Annual Meeting, "Social environments alters alcohol responses," Society for Neuroscience, Chicago, IL. (October 2019).

2019 Miller, M. E**, Sabandal, P. R., Han, K.-A., Annual Biomedical Research Conference for Minority Students (ABRCMS), "Dopamine in Alcohol Preference," Anaheim CA. (November 15, 2019).

2018

2018 Garcia-Trevizo, P**, Fernandez, AI*, Sabandal, PR and Han, K-A. Chronic ethanol exposure enhances male courtship in *Drosophila melanogaster*. Spring COURI Symposium, UTEP; El Paso

2018 Quintana, I** (SMART-MIND participant, U. South Florida)**, Sabandal, PR and Han, K-A. Scully in impulsivity and reward-seeking. Summer COURI Symposium, UTEP; El Paso

2018 Arevado, S (SMART-MIND Teacher Program participant, Socorro ISD El Dorado High School teacher), Delgado, N**, Valles, V**, Sabandal, PR and Han, K-A. Alzheimer's-associated gene, Scully, in ethanol-induced sensitization. Summer COURI Symposium, UTEP; El Paso

2018 Xu, L** (SURME Program participant, Beijing Normal University, China), Sierra, CM**, Valles, V**, Sabandal, PR and Han, K-A. Role of APH-1 in alcohol-induced disinhibition. Summer COURI Symposium, UTEP; El Paso

2018 Liu, Z** (SURME Program participant, Beijing Normal University, China), Caballero, K. ** (UT Austin, summer research volunteer), Ceballos, A**, Sabandal, PR and Han, K-A. Role of aph-1 in olfaction and reward-seeking. Summer COURI Symposium, UTEP; El Paso

- 2018 Hernandez, S** (BRIDGES Program participant, EPCC), Arzola, A**, Saldes, E*, Sabandal, PR and Han, K-A. The Effect of Sleep on Ethanol Response in *Drosophila melanogaster*. Summer COURI Symposium, UTEP; El Paso
- 2018 Delgado, N** (SURPASS Program participant; **won Honorable Mention Award, Poster Presentation**), Sabandal, PR and Han, K-A. Dopamine D2 receptor in ethanol-induced behaviors. Summer COURI Symposium, UTEP; El Paso
- 2018 Garcia-Trevizo, P** (SURPASS Program participant), Castillo, P**, Sabandal, PR and Han, K-A. Chronic ethanol exposure affects pleasure-seeking behaviors in *Drosophila melanogaster*. Summer COURI Symposium, UTEP; El Paso
- 2018 Sierra, CM** (RISE Program participant), Xu, L**, Sabandal, PR and Han, K-A. Social factors impact alcohol responses in *Drosophila*. Summer COURI Symposium, UTEP; El Paso
- 2018 Arzola, A**, Saldes, E*, Sabandal, PR and Han, K-A. Genetic factors affecting age-related sleep alterations. Summer COURI Symposium, UTEP; El Paso
- 2018 Sierra, CM**, Sabandal, PR and Han, K-A. Effects of social environment on alcohol responses. Annual Society for Neuroscience meeting, San Diego; CA
- 2018 Delgado, N**, Ceballos, A**, Sabandal, PR and Han, K-A. D2 dopamine receptor in ethanol-induced behaviors. Summer COURI Symposium, UTEP; El Paso. Annual Society for Neuroscience meeting, San Diego; CA
- 2018 Hinojos, S*, Umarova, R*, Sabandal, PR and Han, K-A. Genetic factors for inhibitory control and impulsivity. Annual Society for Neuroscience meeting, San Diego; CA
- 2018 Mercado, I* and Han, K-A. The D5 dopamine receptor DAMB in ethanol-induced behavioral disinhibition. Annual Society for Neuroscience meeting, San Diego; CA
- 2018 Saldes, E*, Arzola, A**, Sabandal, PR and Han, K-A. Aberrant sleep affects inhibitory control. Annual Society for Neuroscience meeting, San Diego; CA

2017

- 2017 Medina, GD*, Crew, C, Watts, D, and Han, K-A. Role of Ecdysone in female reproduction, Third BBRC Symposium, El Paso
- 2017 Sabandal, PR, Sabandal, JM**, and Han, K-A. Cellular and molecular correlates of impulsivity in *Drosophila*, Third BBRC Symposium, El Paso (oral presentation)
- 2017 Saldes, E*, Sabandal, PR, and Han, K-A. Do sleep and alcohol affect inhibitory control? Third BBRC Symposium, El Paso
- 2017 Fernandez, AI*, Lim, J, James, J** and Han, K-A. Octopamine in Sexual Behavior. Third BBRC Symposium, El Paso
- 2017 Diaz Erives, J**, Sabandal, PR and Han, K-A, Genetic factors influencing inhibitory control in *Drosophila*. COURI Symposium, UTEP; Third BBRC Symposium, El Paso
- 2017 Delgado, N**, Sabandal, JM**, Sabandal, PR, Park M***, Park, G*** and Han, K-A. Neural mechanism underlying ethanol sensitivity and tolerance. COURI Symposium, UTEP; Third BBRC Symposium, El Paso
- 2017 Hinojos, S**, Sabandal, PR and Han, K-A. The role of serotonin in movement inhibition. COURI Symposium, UTEP; Third BBRC Symposium, El Paso

- 2017 Li, L^{**}, Sabandal, PR and Han, K-A. Environmental factors affecting fly inhibitory control. COURI Symposium, UTEP
- 2017 Liu, Y^{**}, Sabandal, PR and Han, K-A. Octopamine regulates movement suppression in flies. COURI Symposium, UTEP
- 2017 Villanueva, E, Sabandal, PR, Saldes, E^{*}, Sabandal, JM and Han, K-A. Does sleep disruption affect ethanol-induced locomotor activity in *Drosophila*? COURI Symposium, UTEP
- 2017 Sabandal, JM^{**}, Sabandal, PR^{*}, and Han, K-A. The role of beta-like octopamine receptor in olfactory learning, Texas Academy of Sciences Meeting, **won Best Neuroscience oral presentation and 1st overall in all categories**
- 2017 Sabandal, JM^{**}, Kim, YC, Sabandal, PR^{*}, Burciaga, J^{**} and Han, KA. Social context and dopamine interact in behavioral control, Janelia Farm Conference on Structure and Function of the Insect Mushroom Body

2016

- 2016 Olivas, I^{**} and Han, K-A, Transgenerational Effects of chronic alcohol exposure, COURI symposium
- 2016 Saldes, E^{*}, Sabandal, PR^{*}, Kim, YC, Burciaga, J^{**}, Sabandal, JM^{**} and Han, K-A. Mechanism underlying inhibitory control. The Allied Genetic Conference Annual *Drosophila* Research Conference, Orlando, FI
- 2016 Sabandal, JM^{**}, Kim, YC, Clark, A^{**}, Sabandal, PR^{*}, and Han, K-A. The role of octopamine beta-like adrenergic receptor Oct β 1R in olfactory learning and memory. The Allied Genetics Conference Annual *Drosophila* Research Conference, Orlando, FI
- 2016 Amezcua, L^{**} and Han, K-A. Dopamine mediates ethanol-induced hyperkinetic locomotor activity, COURI symposium
- 2016 Sabandal, JM^{**} and Han, K-A. The role of octopamine beta-like adrenergic receptor Oct β 1R in olfactory learning and memory. COURI symposium
- 2016 Sun, S^{**} and Han, K-A. The role of octopamine in alcohol abuse and addiction. COURI symposium
- 2016 Ye, J^{**} and Han, K-A. The role of the adrenergic receptor Oct β 2R in alcohol drinking-associated behavioral disinhibition and tolerance. COURI symposium
- 2016 Hinojos, S^{**} and Han, K-A. Neural mechanism of ethanol-associated behavioral disinhibition. COURI symposium
- 2016 Park, E^{**} and Han, K-A. The interaction of chronic alcohol intake and genetic factors in Parkinson's Disease. COURI symposium, **won the Honorable Mention Award**
- 2016 Sabandal, PR^{*}, Kim, YC, Sabandal, JM^{**}, Burciaga, J^{**} and Han, KA. Genetic and social factors critical for inhibitory control. NIDA Genetics Consortium Meeting, Rockville, MD

2015

- 2015 Sabandal, JM^{**} and Han, KA. The role of beta adrenergic-like octopamine receptor Oct β 1R in learning and memory. COURI Symposium

- 2015 2 presentations: Olivas, I^{**}, Aranda, G^{*} and Han KA. The role of dopamine in alcohol tolerance. COURI Symposium, Spring 2015 (won Non-Expert Team Completion Award) and ABRCMS meeting (won Travel Award). Seattle, Washington
- 2015 Mercado, I^{*}, Sabandal, PR^{*}, Aranda, G^{*}, and Han, KA. Ethanol-induced behavioral disinhibition and sensitization involve all dopamine receptors. Research Society on Alcoholism Annual Meeting, San Antonio
- 2015 Wang, R^{**} (SURME program participant; Beijing Normal University), Aranda, G^{*}, Olivas, I^{**} and Han, K-A. The Neuropathological Process Underlying Chronic-ethanol Intake. COURI Symposium
- 2015 2 presentations: Benavides, R. (SMART-MIND high school teacher), Meraz-Torres, S^{***} (high school student), and Han, K-A. Alcohol Abuse as a Risk Factor for Alzheimer's Disease. COURI symposium (Aug 2015) and BBRC symposium
- 2015 2 presentations: Clark, A^{**}, Lim, J., Sabandal, JM^{**}, and Han, K-A. The octopamine Oct β 1R receptor's effect on aversive olfactory learning and memory. COURI symposium (Aug 2015) and BBRC symposium (September 2015)
- 2015 Barragan, JA^{**}, Mercado, I^{*} and Han, K-A. Dopamine receptors in ethanol sensitivity and tolerance. 2nd Border Biomedical Research Center Symposium, El Paso, TX
- 2015 Aranda, G^{*}, Olivas, I. ^{**}, Sabandal, PR^{*}, Evans, PD, and Han, K-A ^{*}. *The mechanism underlying ethanol-induced behavioral disinhibition*. 2nd Border Biomedical Research Center Symposium, El Paso, TX, Oral presentation
- 2015 Fernandez, A^{*}, James, J^{**}., Lim, J., Evans, PD, and Han, K-A. Octopamine in Sexual Behavior. 2nd Border Biomedical Research Center Symposium, El Paso, TX
- 2015 Mercado, I^{*}, Lim, J. and Han, K-A. Ethanol-induced behavioral disinhibition. 2nd Border Biomedical Research Center Symposium, El Paso, TX
- 2015 Saldes, E^{*}, Burciaga, J^{**} and Han, K-A, Gene and Environmental Interactions for Parkinson's Disease, 2nd Border Biomedical Research Center Symposium, El Paso, TX
- 2015 Lim, J., James, J^{**}., Johnson, J^{*} and Han, K-A. The Roles of Dopamine in Sexual Behavior. 2nd Border Biomedical Research Center Symposium, El Paso, TX
- 2015 Aranda, G^{*}, Evans, P., and Han, KA. The neuromodulatory mechanism underlying ethanol-induced behavioral disinhibition. Society for Neuroscience Annual meeting, Chicago
- 2015 Fernandez, A^{*}, Lim, J. James, J^{**} and Han KA. Octopamine in Sexual Behavior, Society for Neuroscience Annual meeting, Chicago
- 2015 Lim, J., James, J^{**}, Johnson, J^{*} and Han, KA. The Roles of Dopamine in Sexual Behavior. Society for Neuroscience Annual meeting, Chicago
- 2015 Mercado, I^{*}, Sabandal, PR^{*}, Burciaga, J^{**} and Han, KA. Ethanol-induced behavioral disinhibition. Society for Neuroscience Annual meeting, Chicago
- 2015 Sabandal, JM^{**} and Han, KA. The role of beta adrenergic-like octopamine receptor Oct β 1R in learning and memory. Society for Neuroscience Annual meeting, Chicago
- 2015 Aranda, G^{*}, Olivas, I^{**}, Sabandal, PR^{*}, Evans PD, and Han, K-A. Neuromodulatory mechanism underlying ethanol-induced behavioral disinhibition. Graduate Student Research Expo, Selected Talk

- 2015 Fernandez, A*, Lim, J, James, J**, Evans, P and Han, K-A. Octopamine in Sexual Behavior. Graduate Student Research Expo, Selected Talk
- 2015 Mercado, I*, Han, K-A. Ethanol-induced behavioral disinhibition. Graduate Student Research Expo, Selected Talk
- 2015 Saldes, E*, Burciaga, J** and Han, K-A, Gene and Environmental Interactions for Parkinson's Disease. Graduate Student Research Expo

2014

- 2014 Mercado, I*, Sabandal, PR* and Han, K-A. Dopamine D2 receptor plays a key role in sleep and circadian activity. COURI symposium
- 2014 Ford, RA**, Guerra, C*, Leung, M-Y and Han, K-A, Computational approaches to identify DNA motifs for genes expressed in the mushroom body brain structure of *Drosophila melanogaster*. The 27th annual international symposium at Hunter College, Bioinformatics: Medical Applications. Hunter College, NY. (won the best presentation award)
- 2014 Sabandal, PR*, Burciaga, J**, Mercado, I*, Sabandal, JM**, and Han, K-A., D2 Dopamine Receptor in Brain Development and Behavioral Plasticity. International Behavioural and Neural Genetics Society, Chicago, Oral presentation
- 2014 James, J**, Fernandez, A*, Lim, J, and Han, KA. Behavioral and physiological mechanisms that the neuromodulator octopamine regulates courtship and copulation. COURI Symposium
- 2014 Forster, K**, Sabandal, PR*, Mercado, I**, and Han, KA. Role of D2 dopamine receptors in ethanol induced behavioral disinhibition. COURI Symposium
- 2014 Ford, R**, Guerra, C*, Leung, MY, and Han, KA. A bioinformatics approach to identify potential enhancer elements for genes expressed in the mushroom body neurons in *Drosophila*. COURI Symposium
- 2014 Garcia, R**, Aguirre, D**, Han, KA, and Fuentes, O. Computer vision to automate the analysis of courtship behavior in *Drosophila*. COURI Symposium
- 2014 Guerra, C*, Ford, RA**, Leung MY, and Han, KA. A Bioinformatics Approach to Identify Potential Enhancer Elements for Genes Expressed in the Mushroom Body Neurons in *Drosophila*. SACNAS meeting
- 2014 Burciaga, J**, Sabandal, PR* and Han, KA. The Role of Octopamine in Ethanol-induced Behavioral Plasticity ABRCMS meeting
- 2014 Fernandez A*, Lim, J., James, J**, Evans, PD and Han, K-A. Octopamine's role in sexual behavior, Society for Neuroscience Annual meeting, Washington DC
- 2014 Sabandal, PR*, Kim, YC, Lim, J, Sabandal, JM** and Han, KA. Dopamine modulates high-order motor control. Society for Neuroscience Annual meeting, Washington DC
- 2014 Aranda, G*, Sabandal, PR*, Evans, PD, and Han, KA. The role of the dopamine/ecdysteroid receptor DopEcR in behavioral disinhibition. Society for Neuroscience Annual meeting, Washington DC
- 2014 Mercado, I*, Sabandal, PR*, and Han, KA. Dopamine d2 receptor plays a key role in sleep and circadian activity. Society for Neuroscience Annual meeting, Washington DC

- 2014 Saldes, E* and Han, KA. Ellagic Acid And Sodium Butyrate Relieve Motor Deficits In *Drosophila melanogaster* Parkinson's Model. Dynamica Expo. El Paso Convention Center
- 2014 Forster, KM**, Sabandal, PR*, and Han, KA. Multifaceted genetic approaches to understand the mechanism underlying ethanol-induced behavioral disinhibition. 2014 NIMHHD Grantees' Conference, Washington DC (oral and poster presentations, **won the 2nd award on Student Presentation Competition**)

2013

- 2013 Nava, A**, Lim, J. and Han, K.-A., International Behavioural and Neural Genetics Society Annual meeting, "Dopamine in Sexual Behavior," International Behavioural and Neural Genetics Society, Leuven, Belgium, *Oral presentation*
- 2013 Youngblood, M**, Sabandal, PR*, Burciaga, J** and Han, K.-A., COURI symposium, "The role of dopamine D2 receptor in brain development and ethanol-induced behavioral disinhibition," COURI, UTEP
- 2013 Barragan, J**, Sabandal, PR* and Han, K.-A., ABRCMS (Annual Biomedical Research Conference for Minority Students), "Dopamine in Alcohol Tolerance," ASM, Nashville
- 2013 Muniz, JO**, Sabandal, PR* and Han, K.-A., ABRCMS (Annual Biomedical Research Conference for Minority Students), "The Role of Octopamine in Alcohol Tolerance," ASM, Nashville
- 2013 Aranda, G*, Sabandal, PR*, Evans, P. and Han, K.-A., Society for Neuroscience Annual Meeting, "The dopamine and ecdysteroid receptor DopEcR in ethanol-induced behavioral plasticity," Society for Neuroscience, San Diego, CA
- 2013 Lim, J., Seong, C.-S. and Han, K.-A., Society for Neuroscience Annual Meeting, "The Role of Dopamine in Sexual Motivation, Disinhibition, and Plasticity," Society for Neuroscience, San Diego, CA
- 2013 Sabandal, P*, Gutierrez, J*, Burciaga, J**, Mercado, I*, Sabandal, JM** and Han, K-A, Society for Neuroscience Annual Meeting, "The Roles of Dopamine D2 Receptor in Brain Development and Behavioral Plasticity," Society for Neuroscience, San Diego, CA
- 2013 Aranda, G* and Han, K.-A., 3rd Annual Graduate Research Expo, "The dopamine and ecdysteroid receptor DopEcR in ethanol-induced behavioral plasticity," Graduate School, UTEP
- 2013 Sabandal, PR* and Han, K.-A., 3rd Annual Graduate Research Expo, "The Roles of Dopamine D2 Receptor in Brain Development and Behavioral Plasticity," Graduate School, UTEP

2012

- 2012 Han, K.-A., 13th RCMI International Symposium on Health Disparities, "Impulsivity as an addiction endophenotype," RCMI, San Juan, Puerto Rico, Selected Talk
- 2012 Sabandal, PR* and Han, K.-A., 2012 Graduate Expo, "Locomotor impulsivity in *drosophila*," PUENTES Program, UTEP, Selected Talk, won Honorable Mention Award
- 2012 Smith, A** and Han, K.-A., Annual Biomedical Research Conference for Minority Students (ABRCMS), "Dopamine is critical for courtship behavior in *Drosophila melanogaster*," San Jose, CA

- 2012 Moreno, M** and Han, K.-A., Annual Biomedical Research Conference for Minority Students (ABRCMS), "Octopamine's role in ethanol-induced behavioral disinhibition," San Jose, CA
- 2012 Han, K.-A., NIFA-AFRI Awardee meeting, "The octopamine system in *Drosophila melanogaster*," USDA, Knoxville TN
- 2012 Sabandal, PR*, Lim, J. and Han, K.-A., Society for Neuroscience Annual Meeting, "*Drosophila* Model for Locomotor Impulse Inhibition," SfN, New Orleans, LA
- 2012 Padilla, E** and Han, K.-A., Biological Sciences REU, "Chronic ethanol exposure causes disinhibited behavior in *Drosophila*," COURI, UTEP
- 2012 Smith, A** and Han, K.-A., COURI summer symposium, "Increased levels of dopamine depress courtship behavior in *Drosophila melanogaster*," Bridges to the Baccalaureate, UTEP
- 2012 Melchor, R** and Han, K.-A., SMART-MIND REU, "Aversive Visual Conditioning in *Drosophila melanogaster*," COURI, UTEP
- 2012 Han, K.-A. and Villarreal, P**, 14th Annual Meeting of the International Behavioural and Neural Genetics Society, "Ethanol-induced courtship disinhibition," Boulder, CO, Selected Talk
- 2012 Moya, I** and Han, K.-A., COURI Symposium Spring, "Visual Ethanol Reward Conditioning of *Drosophila*," COURI, UTEP

2011

- 2011 Barron, C**, Kim, YC and Han, K.-A. Dopamine in aversive visual learning. Society for Neuroscience Annual Meeting. Washington DC
- 2011 Han, K.-A. and Kim, YC. DOPAMINE IN ETHANOL-ASSOCIATED BEHAVIORAL DISINHIBITION. Research Society for Alcoholism. Atlanta, GA
- 2011 Han, K.-A. and Kim, YC. Impulsivity as an endophenotype for neurodevelopmental disorders. Genes, Brain & Behavior 13th Annual Meeting. Oral presentation. IBANGS (International Behavioral and Neural Genetics Society). Rome, Italy
- 2011 Lim, J., Johnson, J* and Han, K.-A. The role of dopamine in operant learning and memory. Society for Neuroscience Annual Meeting. Washington DC
- 2011 Monserrat, C** and Han, K.-A. Octopamine's role in ovulation of *Drosophila melanogaster*. Bridges program summer conference. UTEP
- 2011 Sabandal, PR*, Kim, YC and Han, K.-A. Dopamine's role in impulsivity. Society for Neuroscience Annual Meeting. Washington DC
- 2011 Sabandal, PR** and Han, K.-A. Role of Dopamine in Impulse Control. COURI summer symposium. UTEP
- 2011 Saldes, E** and Han, K.-A. Dopamine's Role in Ethanol-Induced Behavioral Disinhibition. COURI and REU summer research conference (**won Honorable Mention Award**). UTEP
- 2011 Trejo, M** and Han, K.-A. Elucidating the Role of Dopamine in *Drosophila* Appetitive Visual Conditioning as a Model for the Alcohol Dependence. REU summer research conference, UTEP

- 2011 Villarreal, P** and Han, K.-A. Effects of Ethanol on Learning and Memory in. Bridges program summer conference. UTEP

2010

- 2010 Sabandal, PR**, Kim, Y.C., Han, K-A. Translational research in addiction, "The role of dopamine in impulse control," Behavior, biology and chemistry (BBC), San Antonio
- 2010 Johnson, J* (Presenter; **won the best poster award**), Han, K-A, Lim, J. Translational research in addiction, "The Role of Dopamine in Operant Conditioning," Behavior, biology and chemistry (BBC), San Antonio
- 2010 Kim, Y-C, Sabandal, PR**, Lim, J, Johnson, J*, Han, K-A. Towards defining the pathophysiology of autistic behavior, "Impulsivity as an endophenotype of neurodevelopmental disorders, "Keystone symposium, Snowbird, Utah
- 2010 Han, K-A, Dopamine in behavioral disinhibition, Invited talk in Symposium on Genetics of behavioral plasticity at Annual IBANGS meeting, IBANGS (International Behavioral and Neural Genetics Society), Halifax, Nova Scotia, Canada
- 2010 Johnson, J*, Lim, J, Han, K-A. Annual meeting of Society of Neuroscience, "The role of dopamine in operant conditioning," Society of Neuroscience, San Diego
- 2010 Kim, YC, Sabandal, PR**, Han, K-A. Annual meeting of Society of Neuroscience, "The role of dopamine in impulse control," Society of Neuroscience, San Diego
- 2010 Han, K-A, Kim, YC, Sabandal, PR**, Lim, J, RCMI 2010 symposium, "Dopamine in Alcohol-associated impulsivity," RCMI, Nashville, TN
- 2010 Hernandez, K*, Kim, YC., Han, K-A. RCMI 2010 symposium, "Dopamine in learning and memory," RCMI, Nashville, TN
- 2010 Han, K-A. NIFA awardee workshop, "Octopamine in female reproduction," USDA, San Diego

2009 and earlier

- 2009 Kim, Y-C., Moore, D*, and Han, K-A. Dopamine in impulse control. Annual meeting of Society for Neuroscience
- 2009 Kim, Y-C., Moore, D*, and Han, K-A. Critical roles of dopamine in behavioral disinhibition. Neurobiology of *Drosophila* Conference, Cold Spring Harbor Lab, Oral presentation
- 2009 Kim, Y-C., Moore, D*, Pezhouh, MK* and Han, K.-A. Dopamine in Impulse Control, JFRC "Insect Neuromodulators and Neuropeptides" Conference, Oral presentation
- 2008 Moore, D*, Kim, Y.-C., Min, JH**, and Han, K.-A. Fly Tracker as a novel system for analyzing movement behaviors in *Drosophila melanogaster*. Annual *Drosophila* Research Conference
- 2008 Kim, Y.-C., and Han, K.-A. Fly Tracker for analyzing monoamine functions: a comprehensive analysis of the dopamine transporter mutant *fumin*, Monoamines workshop, Annual *Drosophila* Research Conference, Oral presentation
- 2008 Lee, H.-G*, Han, K.-A. The octopamine receptor OAMB regulates ovulation through Ca²⁺/Calmodulin-dependent protein kinase II. Annual *Drosophila* Research Conference

- 2008 Lee, H.-G*, Kim, Y.-C., Moore, D*, Pezhouh, M.K. and Han, K.-A. Ethanol-induced behavioral disinhibition and sensitization in *Drosophila*, Annual meeting of Society for Neuroscience, Oral presentation
- 2008 Kim, Y.-C, Lee, H.-G*, Moore, D*, Pezhouh, M.K* and Han, K.-A. Pleiotropic roles of dopamine in ethanol-induced behaviors. International Neurofly *Drosophila* Conference, Oral presentation
- 2008 Kim, Y.-C., Lee, H.-G*, Moore, D*, Lee, Z** and Han, K.-A. Neuromodulatory mechanisms underlying olfactory conditioning in *Drosophila*. JFRC "Learning and Memory" Conference, Oral presentation
- 2007 Lee, H.-G*, Kim, Y.-C*, Dunning, J.S**, McInnis, I**, and Han, K.-A. Alcohol-induced disinhibited courtship and behavioral sensitization. Keystone symposium
- 2007 Lee, H.-G*, Kim, Y.-C*, Dunning, J.S**, Austin, M**, McInnis, I**, Stover, E**, and Han, K.-A. Behavioral disinhibition induced by ethanol requires dopamine in *Drosophila*, Gordon Conference, Catecholamines, Oral presentation
- 2006 Han, K.-A. Kim, Y.-C*, and Lee, H.-G.* Classical Reward Conditioning in *Drosophila melanogaster*, Annual *Drosophila* Conference, Learning and Memory workshop, Oral presentation
- 2006 Lee, H.-G*, Kim, Y.-C., Dunning, J.S**, White, J.R**, and Han, K.-A. Chronic alcohol-induced disinhibited courtship and behavioral sensitization, International Neurofly *Drosophila* Conference
- 2005 Kim, Y.-C*, Lee, H.-G., Chae, S** and Han, K.-A. Dopamine and octopamine receptors play distinctive roles in olfactory learning of *D. melanogaster*. Neurobiology of *Drosophila* meeting at Cold Spring Harbor Laboratory, Oral presentation
- 2005 Lee, H.-G* and Han, K.-A. Mutations in the octopamine receptor OAMB affect short-term memory of conditioned courtship in *D. melanogaster*. Neurobiology of *Drosophila* meeting at Cold Spring Harbor Laboratory
- 2005 Kim, Y.-C*, Lee, H.-G*, and Han, K.-A. The Selective Roles of D1 Dopamine and Octopamine Receptors in Associative Learning and Memory of the *Drosophila melanogaster*. Annual meeting of Society for Neuroscience
- 2004 Han, K.-A. and Lee, H.-G.* The role of the octopamine receptor OAMB in ovulation of *Drosophila*, Annual *Drosophila* Conference, GPCR workshop, Oral presentation
- 2004 Kim, Y.-C., Lee, H.-G*, Soska, K*** and Han, K.-A. Associative learning and memory mediated by dopamine and octopamine receptors that are highly enriched in the mushroom body neuropil of the *Drosophila* Brain. International Neurofly *Drosophila* conference
- 2004 Kim, Y.-C*, Lee, H.-G*, Min, J** and Han, K.-A. Crucial roles of dopamine in basal and alcohol-induced locomotor activities of *Drosophila melanogaster*. Annual meeting of Society for Neuroscience
- 2003 Lee, H.-G*, Seung, C.-S., and Han, K.-A., OAMB, an octopamine receptor preferentially expressed in the mushroom bodies of *Drosophila melanogaster* brain, is crucial for ovulation in *Drosophila* females, Genetics Symposium, Penn State Hershey Medical Center

- 2003 Seung, C.-S. and Han, K.-A. A potential role of D5 dopamine receptor DAMB in courtship behavior of *Drosophila melanogaster*, Genetics Symposium, Penn State Hershey Medical Center
- 2003 Kim Y.-C*, Taghert, P. and Han, K.-A. Expression of D1 Dopamine receptor dDA1 is regulated by Apterous, a LIM homeodomain transcription factor in *Drosophila*, Penn State Graduate Exhibition, won the 3rd prize
- 2003 Seung, C.-S. and Han, K.-A. Altered courtship preference of male *Drosophila melanogaster* associated with the DAMB locus. Neurobiology of *Drosophila* meeting at Cold Spring Harbor Laboratory
- 2003 Kim Y.-C*, Taghert, P. and Han, K.-A. Expression of D1 dopamine receptor dDA1 is regulated by Apterous, a LIM homeodomain transcription factor in *Drosophila*, Neurobiology of *Drosophila* meeting at Cold Spring Harbor Laboratory
- 2002 Han, K.-A. Lee, H.-G*, and Mancino, L**. The role of the octopamine receptor OAMB in *Drosophila melanogaster*, Neurofly (aka International Neurobiology of *Drosophila* Conference), Dijon, France, Oral presentation
- 2001 Han, K.-A., Whemboia, L*, and Liu, S**, DAMB, the D1 dopamine receptor in *Drosophila melanogaster* in drug addiction. Neurobiology of *Drosophila* meeting at Cold Spring Harbor Laboratory
- 2001 Han, K.-A., Mahmoud, T., Liu, S**, and Whemboia, L*. The role of The D1 dopamine receptor DAMB in cocaine and alcohol induced behaviors of *Drosophila melanogaster*. Annual meeting of Society for Neuroscience, San Diego
- 2001 Liu, S** and Han, K.-A. The Role Of The dopamine receptor DAMB in cocaine induced behaviors of *Drosophila melanogaster*, National Conference on Undergraduate Research, Lexington
- 2001 Ream, P.J*, Suljak, S.W*, Han, K.-A., & Ewing, A.G. MEKC Analysis of *Drosophila melanogaster* with electrochemical detection. CEC annual meeting, Las Vegas
- 1999 Han, K.-A. and Davis, R. L. DAMB, A Dopamine Receptor Highly Enriched in the Mushroom Bodies, in Olfactory Learning of *Drosophila melanogaster*. Neurobiology of *Drosophila* at Cold Spring Harbor Laboratory
- 1999 Han, K.-A. and Davis, R. L. DAMB, A Dopamine Receptor Highly Enriched in the Mushroom Bodies, in Olfactory Learning of *Drosophila melanogaster*. Annual *Drosophila* Conference
- 1997 Han, K.-A., Millar, N., and Davis, R. L. Novel Biogenic Amine Receptors Preferentially Expressed In Mushroom Bodies of *Drosophila melanogaster*. Neurobiology of *Drosophila* at Cold Spring Harbor
- 1997 Han, K.-A., Millar, N., and Davis, R. L. Novel Biogenic Amine Receptors Preferentially Expressed In Mushroom Bodies of *Drosophila melanogaster*. 27th Annual meeting of Society for Neuroscience
- 1996 Han, K.-A., Millar, N., and Davis, R. L. Cloning And Characterization Of A Novel Dopamine Receptor of *Drosophila melanogaster* Annual *Drosophila* Conference
- 1995 Han, K.-A. and Davis, R. L., Cloning and Characterization of Biogenic Amine Receptors of *Drosophila melanogaster*, Neurobiology of *Drosophila* at Cold Spring Harbor

- 1995 Han, K.-A. and Davis, R. L. Cloning and Characterization of Biogenic Amine Receptors of *Drosophila melanogaster*, Annual *Drosophila* Conference
- 1991 Han, K.-A and Kulesz-Martin, M. Expression of Retrovirus-Like Sequence (VL30) in Normal Murine Epidermis and Carcinomas, Proc. AACR, Vol 32: 288
- 1991 Han, K.-A. and Kulesz-Martin, M. Altered Expression of Putative Tumor Suppressor Gene p53 Associated with Malignant Conversion in A Murine Multistep Cell Transformation Model, Keystone Symposium on Molecular and Cellular Biology: Genomic Instability and Cancer, J. Cell. Biochem. Suppl. 15D: 125
- 1990 Lisafeld, B., Han, K. -A. and Kulesz-Martin, M. Keratin Expression in Murine Epidermal Tumor cells with Different Degrees of Histopathologic Differentiation, Proc. AACR, 31: 535
- 1989 Han, K.-A., Rothberg, P. and Kulesz-Martin, M. Overexpression of p53 and VL30 in Mouse Epidermal Carcinoma Cells, UCLA Symposium on Molecular and Cellular Biology: Mechanisms in Carcinogenesis and Tumor Progression, J. Cell. Biochem. Suppl. 13B: 30

D. Professional development activities

- 2016 “From Pediatric Encephalopathy to Alzheimer’s: Linking Mitochondria to Neurological Diseases” workshop, sponsored by Society for Neuroscience
- 2010 NIDA Mini Convention: Frontiers in Addiction Research, sponsored by National Institute of Health/ National Institute of Drug Addiction

MENTORING ACTIVITIES

A. Direct Mentoring Postdoctoral Fellow

- 2017 – Paul R. Sabandal, Ph.D., The neural and genetic mechanism underlying inhibitory control. (*Excellence in Research and Mentoring, Honors Convocation 2020*)
- 2008 - 2013 Young-Cho Kim, Ph.D., The role of dopamine and octopamine in behavioral plasticity. Currently at University of Iowa Medical School, Assistant Professor
- 2010 - 2011 Cheon Ho, Park, Ph.D., The role of dopamine and octopamine in behavioral plasticity. Currently at Chemical Institute in Korea
- 2007 - 2009 Suman Rohila, Ph.D., Postdoctoral Associate, the mechanism underlying female reproduction. Currently at USDA
- 2001 - 2003 Chang-Soo Seong, Ph.D., Postdoctoral Associate, the role of D5 dopamine receptor DAMB in sexual behavior of *Drosophila melanogaster*. Currently at Emory University School of Medicine, Research Associate.

B. Direct Mentoring Ph.D. Students

- 2019 – Patricia Ablanedo Morales, PhD Program in Bioengineering, NIH-funded BUILDing Scholar; The neuromodulatory mechanisms underlying neural and behavioral plasticity. (*Dodson Research Grant Award*, May 2020-21)
- 2015 – Erick Saldes, PhD Program in Biosciences; The neuromodulatory mechanisms underlying inhibitory control. (*Keelung Hong Fellowship*, June 2019 - May 2021;

Dodson Research Grant, May 2019-20; 3MT Finalist March 2019, March 2020; Excellence in Research and Mentoring, Honors Convocation, May 2020)

- 2013-2017 Jose L. Guitierrez, Graduate Program in Biological Sciences; The neural basis of behavioral plasticity.
- 2011- 2017 Paul R. Sabandal, Ph.D. PhD Program in Pathobiology; The neural mechanism underlying behavioral disinhibition, Academic & Research Excellence Award on his dissertation, Biological Sciences Department.
- 2008 - 2009 Devashree Vakil. IGDP (intercollege graduate degree program) in Genetics, Roles of dopamine and octopamine in reproductive behavior and physiology, completed Ph.D. with another faculty mentor in 2012
- 2007 - 2009 David Moore. Neuroscience graduate program, Potential roles and underlying mechanisms of dopamine receptors in *Drosophila* associative learning and memory, completed Ph.D. with another faculty mentor in 2014
- 2003 - 2008 Hyun-Gwan Lee, Ph.D., IGDP (intercollege graduate degree program) in Genetics, Potential roles and underlying mechanisms of an octopamine receptor OAMB in *Drosophila* reproduction, and associative learning and memory. Currently at GIST in Korea
- 2002 - 2007 Young-Cho Kim, Ph.D., Neuroscience, The Huck Institute of Life Sciences, D1 dopamine receptor dDA1 functions for development and behavioral plasticity of *Drosophila melanogaster*. Currently at University of Iowa Medical School, Research Assistant Professor

C. Direct Mentoring Master Students

- 2019 – Nathaniel A Andersen, Graduate Certificate in Biological Sciences, The neuromodulatory mechanisms underlying neural and behavioral plasticity.
- 2018 – Abraham Ceballos, Master Program in Biological Sciences, Neural and cellular mechanisms underlying learning and memory.
- 2016 - 2020 Grecia Medina, MS, Master Program in Biological Sciences, Neural and cellular mechanisms underlying sexual behavior. (3M Finalist, March 2019; GSA Travel Award for the annual TAGC conference, Apr 2020)
- 2017-2018 Samantha Hinojos, Graduate Certificate in Biological Sciences, The neurobiological basis of inhibitory control.
- 2015 - 2017 Ana Fernandez, MS, Master Program in Biological Sciences, Neural and cellular mechanisms underlying sexual behavior.
- 2014 - 2017 Ivan Mercado, MS, Master Program in Biological Sciences, Roles of dopamine receptors in behavioral disinhibition and sleep.
- 2013 - 2016 Gissel P. Aranda, MS, Master Program in Biological Sciences, The role of the dopamine/ecdysone receptor DopEcR in ethanol-associated behavioral disinhibition.
- 2010 - 2011 Keziah Hernandez, Graduate Program in Biological Sciences, The roles of dopamine in classical learning and memory.
- 2009 - 2011 Jennifer Johnson, MS, Master Program in Biological Sciences, The roles of dopamine in operant learning and memory.

2007 - 2009 Maryam Kherad Pezhouh, MS, Biology graduate program, The cellular basis of ethanol-induced behavioral disinhibition and sensitization. Currently practicing medicine

D. Direct Mentoring Undergraduate Students (total, >200 students; listed a subset)

i). RISE Scholars

2020 – Jose Alvarado
 2018 – 2020 Nataly Delgado
 2018 – 2020 Carmen Mariana Sierra
 2017- 2017 Julieta Diaz Erives
 2017 - 2017 Ivan Herrejon
 2016 - 2017 Samantha Hinojos
 2014 - 2016 Jacqueline A. James
 2013 - 2015 Ana Fernandez
 2013 - 2014 Ivan Mercado
 2012 - 2013 Jesus Jurado
 2011 - 2011 Cesar Barron

ii). MARC Scholars

2018 –2020 Abraham Arzola (2019 summer internship at NIH)
 2015 - 2017 J. Martin Sabandal
 University Banner Bearer; Academic & Research Excellence Award, COS; Best Neuroscience oral presentation and 1st overall in all categories, Texas Academy of Sciences Meeting 2017; currently at the Neuroscience Ph.D. program, Scripps Florida, admitted in Fall 2017
 2014 - 2015 Jessica Burciaga

iii). Bridges to the Baccalaureate program (El Paso Community College student research internship program) Scholars: Summer or Yearlong

2019 Mary Miller (summer and yearlong; won the 3rd place at the LSAMP conference 2019, which is the 1st place among BRIGES scholars)
 2018 Samantha (Reney) Hernandez (summer)
 2017 Nataly Delgado (summer and yearlong)
 2016 - 2017 Kevin Amezcua (yearlong)
 2016 Luis Amezcua (summer)
 2014 Jacqueline James (summer and yearlong)
 2013 Perla Gonzalez
 2012 - 2012 Arlene Smith
 2011 Carlos Monserrat
 2010 - 2011 Paula Villarreal (summer and yearlong)

iv). SURME REU Participants: Summer

2019 Jinghui (Joan) Zheng (Beijing Normal Univ., China)
 2018 Lixin (Lily) Xu (Beijing Normal Univ., China)
 2018 Zhuoran (Sally) Liu (Beijing Normal Univ., China)

2017	Linlin Li (Beijing Normal Univ., China)
2017	Yan (Sylvia) Liu (Shantou Univ., China)
2016	Jun (Sissi) Ye (Shantou Univ., China)
2016	Simin Sun (Beijing Normal Univ. China)
2015	Runze Wang (Beijing Normal Univ. China)

v). SMART-MIND (Neuroscience REU) Participants: Summer

2019	Ronaldo Lopez (UTEP)
2018	Ignacio Quintana (University of South Florida)
2016	Samantha Hinojos (UTEP) - starting the Ph.D. program in Fall 2017 at UTEP
2016	Emily Park (Wellesley Univ) - Honorable Mention Award in COURI symposium, currently at the MD/PhD program, Baylor College of Medicine, TX
2015	Aaron Clark (UTEP)
2014	Kaitlyn Forster (Virginia Tech Univ)
2013	Mason Younghood (Univ. South Carolina)
2012	Raudel Melchor (UTEP)

vi). SMART-MIND (Neuroscience REU) High School Teacher/Student Participants: Summer

2019	Mario Aguirre – Socorro High School teacher
2018	Sheri Arevalo – El Dorado High School teacher
2017	Ernesto Villanueva – Canutillo High School teacher
2015	Ramon Benavides – Del Valle High School teacher
2015	Samantha Meraz-Torrez- Del Valle High School student

vii). COURI, BUILD, ACSScellence, SURPASS and MERITUS programs

2020-present	Dilean Murillo (MERITUS)
2020	Alheli Romero (BUILD)
2020	Gabriela Boisselier (SURPASS)
2019-2020	Yasmeen Abugalyon (BUILD)
2019-2020	Vanessa Valles (MERITUS; Bristol/Mayberry Endowed Award, 2019; Excellence in Research and Academic Performance, Honors Convocation 2020; Academic and Research Excellence Award, Cellular and Molecular Biochemistry, COS pre-commencement, 2020 Spring)
2018-2019	Prescilla Garcia-Trevizo (SURPASS and ACSScellence; <u>Ph.D. program at Penn State Univ, BBH department; The Bunton Waller Award and University Fellowship</u>)
2016	Jennifer Martinez (EPCC, BUILD, summer)

viii). UT System Louis Stokes Alliance for Minority Participation (LSAMP) Scholars: Summer

2019	Jeannie Nghiem (Tyler Junior College)
2017	Julieta Diaz Erives
2015	Jong Saunders

ix). Bioinformatics UPBiT Scholars

2015 - 2016	Jose Barragan
2014 - 2015	Beatriz Madrigal
2013 - 2015	Raymond Ford (currently working as Data Scientist at Stealth Startup)

2011 - 2011 Andres Oriz
2011 - 2011 Hiva Javaher

x). SMARTS Scholars

2014 - 2016 Gissel Aranda (completed MS, 2016, teaching at EPCC)
2014 - 2016 Idaly Olivas (preparing to pursue a medical school)

xi). BURS Scholars

2018 –2019 Gabrielle S. Ahumada
2014 - 2015 Beatriz Madrigal - **Top Ten Seniors honor** (completed the Registered Nursing Program at UTHSC San Antonio and work at the UTHSC-SA)
2012 - 2012 Erick Saldes (currently in the UTEP Ph.D. program)
2010 - 2011 Paul Sabandal (obtained Ph.D. at UTEP in May 2017)

xii). Biology REU Participants: Summer

2012 Estrella Padilla (NMSU)
2011 Michael Trejo (Rice Univ)
2011 Erick Saldes (UTEP)

xiii). El Paso Community College RISE Interns

2020 - Adrian Sosa Ontiveros
2015 - 2015 Milo Barrera
2014 - 2015 Omar Muniz
2014 - 2014 Oscar Estrada
2013 - 2014 Jose Barragan
2012 - 2013 Manuel Moreno

xiv). High/Middle School Student Participants

2018 fall – Adrian Sosa Ontiveros (El Dorado High School, currently at EPCC)
2018 fall – Natalia Diaz (8th grade)
2017 summer - Grace Park (currently at USC)
2017 summer - Michelle Park (currently at USC)
2012 - 2012 Keun-Woo Lee (admitted to UT-Austin)
2012 - 2012 Joshua Garza (admitted to Johns Hopkins Univ.)

xv). Honors Thesis for Undergraduate Students

2006 - 2009 Sandeep Sandirasegarane, Schreyer's Honors College. Effects of developmental ethanol exposure on behavioral plasticity in the adult. (admitted to Temple Univ. Medical School)
2006 - 2008 Derek Pae, Schreyer's Honors College. Effects of developmental ethanol exposure on behavioral plasticity in the adult.
2004 - 2005 Krystal Ozanik, Schreyer's Honors College B.S. Thesis, The role of octopamine receptor OAMB in alcohol-induced behavior of *Drosophila melanogaster*. (admitted to Univ. Pittsburg Medical School)

- 2000 - 2002 Steven Liu, Schreyer's Honors College B.S. Thesis, The role of dopamine receptor DAMB in cocaine-induced behavior of *Drosophila melanogaster*. (admitted to Univ. Penn Medical School)
- 2001 - 2002 Benjamin Ali Vaghari, Schreyer's Honors College B.S. Thesis, The sedative effects of ethanol intoxication in *Drosophila damb* mutants: Behavioral changes in resistance and tolerance. (admitted to Temple Univ. Medical School)

xvi). Research volunteers or students taking research credits (5-10 students per semester)

E. Dissertation & Thesis Committee

- 2020-present Dissertation committee, Alejandro Rodriguez (Chemistry)
- 2020-present Dissertation committee, Bianka Holguin (Chemistry)
- 2019-present Dissertation committee, Ana Vargas (Bioengineering)
- 2019-present Dissertation committee, Nayeli Reyes (Biology/Biosciences)
- 2017-present Dissertation committee, Maribel Baeza (Biology/EEB)
- 2016-present Dissertation committee, Michael Furth (Bioengineering)
- 2021-present Thesis committee, Denise Avalos (Biology)
- 2017 - 2019 Thesis committee, Alexa Montoya (Biology)
- 2016 - 2017 Thesis committee, Janelly Villalobos (Chemistry)
- 2014 - 2017 Dissertation committee, Paloma Valenzuela (Biology)
- 2013 - 2017 Dissertation committee, Anais Martinez (Biology)
- 2015 - 2016 Thesis committee, Francisco Alvarado (Bioengineering)
- 2013 - 2014 Thesis committee, Jose Varela (Biology), not completed the degree
- 2013 - 2014 Thesis committee, Sarah Vacio (Biology), not completed the degree
- 2013 - 2014 Thesis committee, Yassel Acosta (Physics)
- 2013 - 2014 Thesis committee, Mahmoud F. Helal (Chemistry)
- 2012 - 2013 Thesis committee, Judith N. Rivera (Physics)
- 2010 - 2009 Ph.D. Dissertation Committee at PSU
- Ian Brooks, Biology
- Paula Ream, Chemistry
- Tracy Paxon, Chemistry
- Jizhong Zou, Biochemistry & Molecular Biology
- Woong Kim, Biochemistry & Molecular Biology
- Janice Williams, Biochemistry & Molecular Biology
- Beiyuan Zou, Genetics Intercollege Graduate Program
- Beth Luellen, Neuroscience, IBIOS Neuroscience
- Marc Maxson, Neuroscience, IBIOS Neuroscience
- Kiranmai Kocherlakota, IBIOS Cell & Developmental Biology
- Whenhua Yu, IGDP in Genetics
- Monique Makos, Chemistry
- Nick Kuklinski, Chemistry
- Amanda Bressler, Chemistry
- Shaona Acharjee, IBIOS Genetics
- Anamika Missra - Biochemistry & Molecular Biology
- Lina Yin - IBIOS Neuroscience
- Stefanie Altieri - IBIOS Neuroscience
- Ju-Chieh Wung - Biochemistry & Molecular Biology

2010 - 2009 MS Thesis Committee at PSU
Janice Williams, Biochemistry & Molecular Biology
Shengai Li, Genetics
Gregory Mitchell, Biology
Lindsay Dutko, Cell and Developmental Biology

TEACHING ACTIVITIES

BIOL 2340, Introductory Neuroscience (3 credits; 60%), team-taught with Drs. Cushing (20%) and Khan (20%), spring semester
BIOL 2311, Human Physiology and Anatomy I (3 credits; a large class), spring semester
CBCH 4320, Team taught course, Advanced Topics in Molecular Biochemistry (3 credits; one week), spring semester
BIOL 5131, Ethical, Social and Political Dimensions (Bioethics; 1 credit), spring semester
BIOL 6311 & BIOL 5311, Neurobiology of Brain Diseases (3 credits), fall semester
BIOL 6308 & BIOL 5308, Team-taught course, Research Funding & Professional Development (3 credits), fall semester
BIOL 5301, Selective Advanced Topics; Development of Neuroscience Curriculum for K12 Education (3 credits), summer, sporadic
BIOL/BBH 470, Functional & Integrative Neuroscience (3 credits)
BIOL/BBH 470H (honors section), Functional & Integrative Neuroscience Honors class (3 credits)
BBH 501, Biobehavioral Systems in Health & Development: cellular & molecular module (3 credit)
PSU 016, Science First Year Seminar (1 credit)
BIOL 497, Molecular Basis of Neurological Diseases (3 credits)
IBIOS 598, Seminars in Neuroscience (1 credit)
IBIOS 592, Seminars in Cell and Developmental Biology (1 credit)

CURRICULUM DEVELOPMENT

A. BIOL 5131 Ethical, Social & Political Dimensions (Bioethics)

The course addresses ethical, social, and political issues in biomedical research. The course focuses on several topics including responsible conduct of research (e.g. research misconduct definition and reported cases, mentorship, authorship and peer review) and gray areas entailed by advanced genetic information (e.g. legal and social issues arising from genetic information related to diseases and personal traits; eugenics), stem cell research (e.g. types, sources and application of stem cells; therapeutic vs. reproductive cloning; public perception and significance of education), research involving animals or human subjects (e.g. institutional, national, international regulations and policies such as Belmont Report and Declaration of Helsinki; research on vulnerable individuals), and performance enhancing drugs (e.g. Ritalin and steroids). For individual topics, students learn about background information and are guided for open discussions on pros and cons using case reports and studies. The course uses the education materials provided by the NIH/Office of Research Integrity and articles published in Nature,

Science or other journals. Students are expected not only to learn the basics and issues of each topic but also to develop logical, analytical and critical thinking and to broaden their viewpoints.

The course is offered every spring semesters and is required for all Ph.D. students and elective for Masters students in the Biological Sciences or other graduate programs.

B. BIOL 5301 & BIOL 5311/6311 Neurobiology of Brain Diseases

The course is designed to enhance fundamental concepts of the nervous system functions and provide contemporary knowledge and insights into the genetic, molecular, cellular and neural basis of brain diseases as well as their therapeutic approaches. The course focuses on neurodegenerative and cognitive disorders prevalent in our society that include Alzheimer's disease, Parkinson's disease, Huntington's disease, prion disease/CJD, autism, depression, ADHD, mental retardation and PTSD. The course uses the review articles and research papers. Students are expected to develop analytical, logical and innovative thinking through critical reading, essay assignment, presentation and discussions of research papers.

This course has been taught as BIOL 5301 (Selected Advanced Topics in Biological Sciences) five times since 2010 and offered as a formal course (course numbers BIOL 5311/6311) since Fall 2016 and every fall semester thereafter. This three-hour/week class is an elective for all students in the Pathobiology, Ecology and Evolutionary Biology, MATS and other graduate programs.

C. BIOL 5301 Selected Advanced Topics Biological Sciences: Neuroscience Curriculum for K12 Education

The course is designed to update and upgrade the fundamental knowledge in neuroscience for graduate students in the Master of Arts in Teaching Science (MATS) program and to facilitate them develop neuroscience curriculum for K-12 or high school students. The course is also designed to promote knowledge, awareness, preventive measures and interventions by implementing lesson plans covering the disorders most prevalent to adolescents. The course also facilitates to use of animations and movie clips. The course is offered in Summer 2012 and 2015.

D. BIOL 2311 Human Anatomy & Physiology I

The course is the first part of a two-course sequence and covers the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous, and endocrine systems. Emphasis is on interrelationship between systems and regulation of physiological systems involved in maintaining homeostasis. The course uses the text book Elaine N. Marieb and Katja Hoehn, *Human Anatomy & Physiology*, 8th or 9th or 10th Ed., Pearson Benjamin Cummings, 2010/2012/2015 as well as new research findings whenever appropriate.

The course is offered every spring semester for undergraduate students in the Departments of Kinesiology, Social Work, Pre-nursing, Pre-pharmacy, Pre-medicine and Biological Sciences in the Colleges of Health Science and Science.

E. BIOL 5308/6308 Research Funding & Professional Development (team-taught)

This course is developed to provide instruction and guidance in the construction and submission of competitive grant proposals and fellowship applications, as well as the development of other professional tools needed by graduate students in the Biological Sciences. The team of faculty

including Drs. Renato Aguilera, Igor C. Almeida, Marc B. Cox, Bruce Cushing, Siddhartha Das, Eli Greenbaum, Kyung-An Han, Charles Spencer, JJ Sun and Craig E. Tweedie (coordinator). The course covers i) the responsibilities, obligations and rights of graduate students and the expectations of a thesis/dissertation advisor and graduate program; ii) funding opportunities – discuss and learn types of fellowship and grant funding opportunities from a range of agencies and foundations; iii) grant writing – discuss strategies and review criteria specific to funding agencies, and grantsmanship; iv) authorship and peer review – discuss the factors and processes involved in authorship and the peer review process; v) Scientific and professional integrity – discuss scientific and professional ethics in conducting, reporting, and reviewing research, managing a lab, and interacting with an academic or professional community; v) preparing CV– discuss how to present oneself in a competitive job market; vi) career opportunities in academia, governmental agencies, biotech or pharmaceutical companies and discuss how to balance career development and personal life; vii) skills and strategies involved in transition from a graduate student to a postdoctoral trainee and from a postdoctoral trainee to a professional in academia, governmental agencies, biotech or pharmaceutical companies, and etc.

Students are expected to develop a mock proposal that includes problem statement and goal, specific aims, research background, design and approaches, timeline and budget, and to present it to the class. The proposal is evaluated by peers (classmates) and the instructors. The course is offered every fall semester.