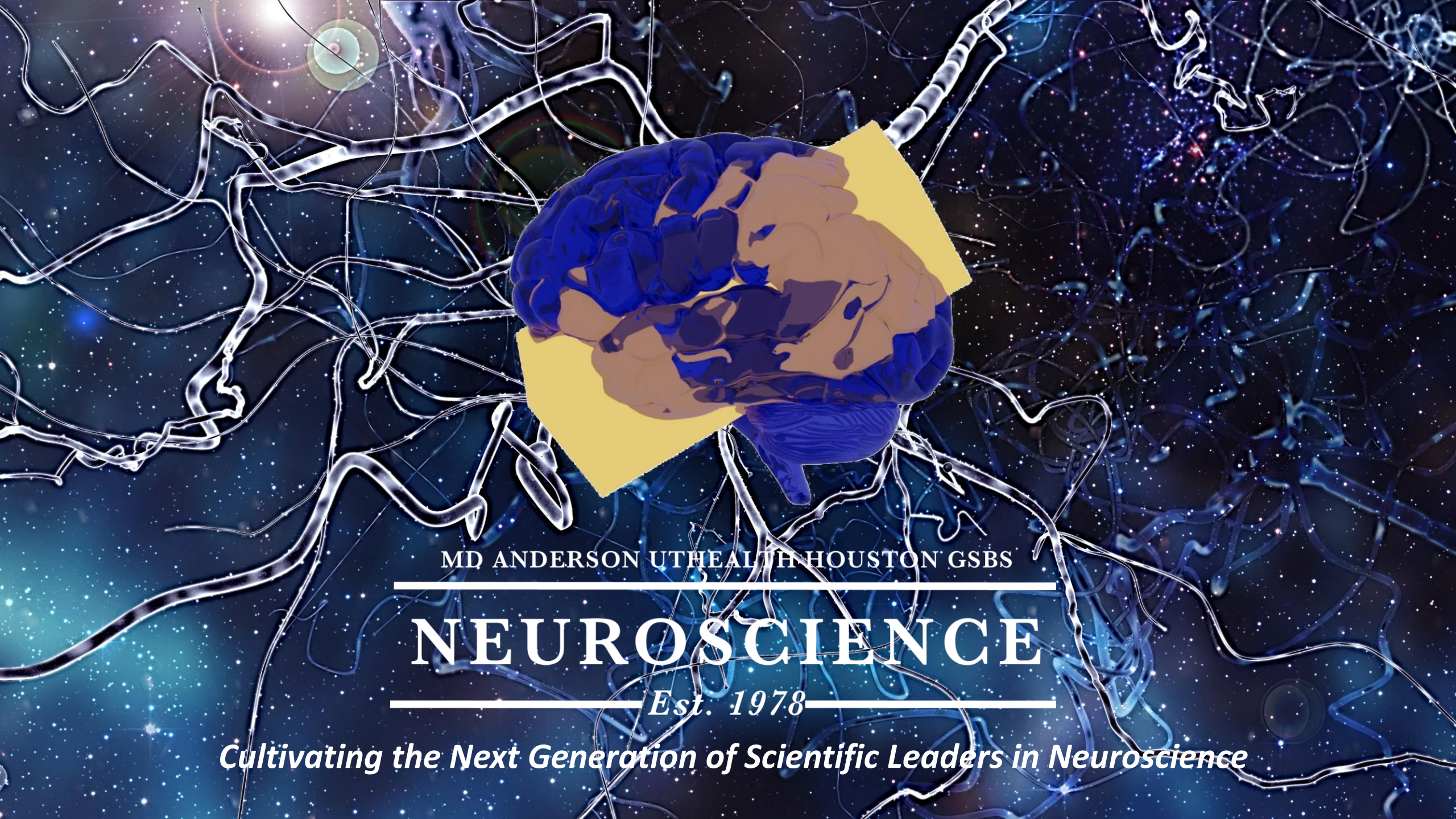
MD ANDERSON UTHEALTH HOUSTON GSBS
NEUROSCIENCE
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Cultivating the Next Generation of Scientific Leaders in Neuroscience

Jack Byrne, Department of Neurobiology and Anatomy
Systems, Circuit, Cellular and Molecular Mechanisms of Simple Forms of Memory

Project 1. Empirical and computational analyses of neuronal circuits underlying rhythmic motor behavior and their modifications by learning.
The issue is addressed by studying ubiquitous forms of associative learning (i.e., classical and operant conditioning) and exploiting the technical advantages of the simple nervous system of the marine mollusk *Aplysia* (Fig. 1). Techniques include extra- and intra-cellular electrophysiological recording (Fig. 2A), large-scale single-neuron resolution recording techniques using voltage-sensitive dyes (Fig. 3A,B), computational modeling, and information theory (Fig. 3C) to infer the underlying neuronal circuity (Fig. 2B, 3D) and how it is modified by learning.

Fig. 1

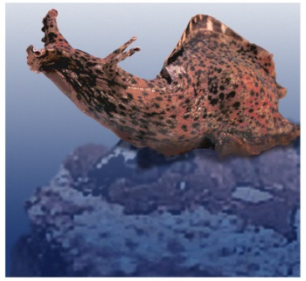


Fig. 2

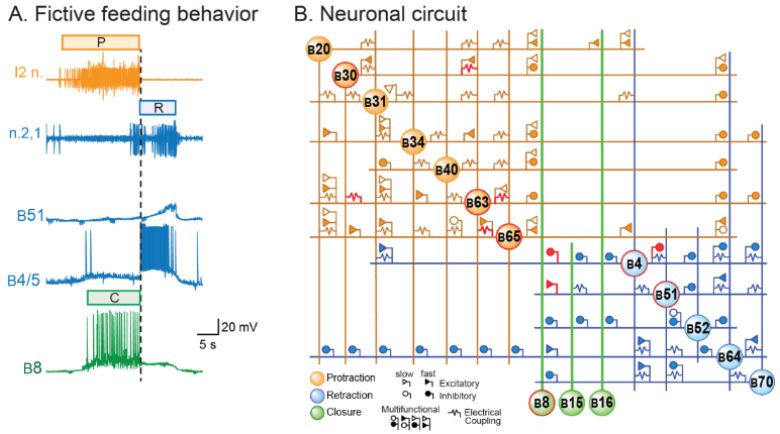
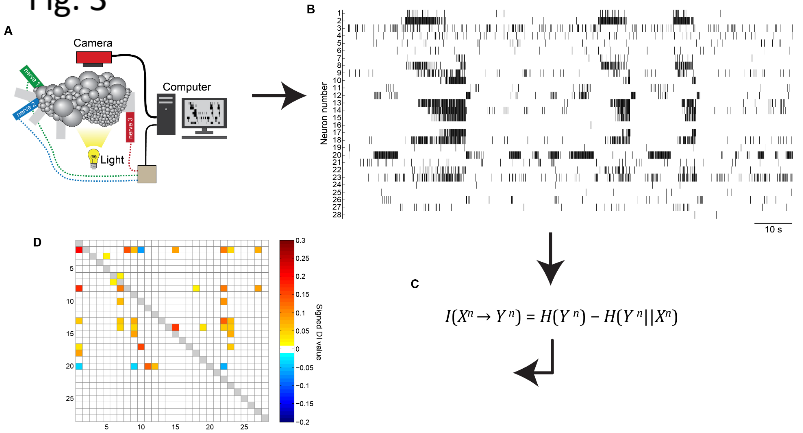
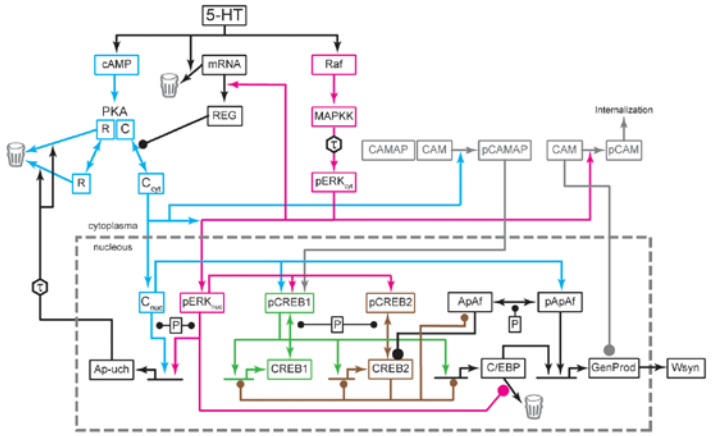


Fig. 3



Project 2. Empirical and computational analyses of biochemical and genetic networks underlying long-term memory formation.
Techniques include electrophysiological, biochemical and molecular approaches (e.g., laser confocal microscopy, western blots, gene expression analyses, siRNA), mathematical models of the molecular circuitry (Fig. 4), and use of computer simulations to identify optimal training protocols, and optimal pharmacological targets, for enhancement of normal memory and rescue of memory deficits.

Fig. 4



Lab Web page: https://med.uth.edu/nba/faculty-labs/byrne-lab/
Wikipedia: https://en.wikipedia.org/wiki/John H._Byrne
Neurotree: https://neurotree.org/beta/tree.php?pid=899
YouTube Biography: https://www.youtube.com/watch?v=-y6sZJt_EiU
CV and Publications: https://med.uth.edu/nba/wp-content/uploads/sites/29/2014/08/Byrne-John_CV_2022_June.pdf

The Cao Laboratory

Research Focus: Neuroinflammation in Alzheimer's Disease

Research Directions

- Microglia heterogeneity and type I interferon signaling in promoting brain aging
- Type I interferon signaling in modifying neurodegeneration associated with tauopathy
- Molecular pathways mediating tau-induced neurotoxicity
- Astrocyte-derived chi3l1 in regulating neuroinflammation and pathogenesis of β-amyloidosis
- Chi3l1 in modifying neurodegeneration associated with tauopathy
- Influence of hypoxia on neuroinflammation and AD pathogenesis
- Activation of transposable elements by tauopathy

Recent Publications

Roy E., Chiu G, … **Cao W** (2022) Concerted type I interferon signaling in microglia and neural cells promotes memory impairment associated with amyloid β plaques. ***Immunity***, 55: 879-894

Cao W (2022) IFN-aging: coupling aging with interferon response. ***Front Aging,*** 3:870489

Ramirez P, … **Cao W.**, …and Frost B (2022). Pathogenic tau accelerates aging-associated activation of transposable elements in the mouse central nervous system, ***Prog Neurobiol*** 208:102181.

Roy ER, and **Cao W** (2020) Antiviral Immune Response in Alzheimer's Disease: Connecting the Dots. ***Front Neurosci.***14:577744.

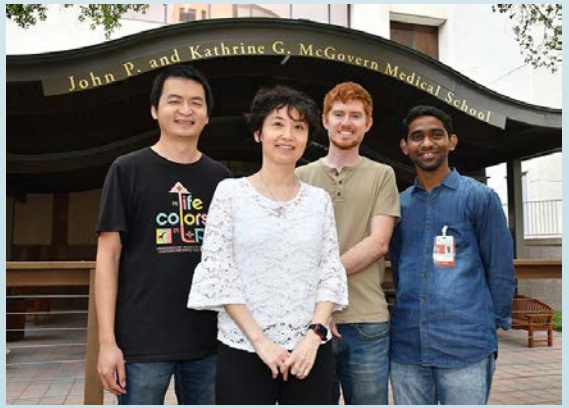
Roy ER, Wang B, …and **Cao W** (2020) Type I interferon response drives neuroinflammation and synapse loss in Alzheimer disease. *J Clin Invest.* 130:1912-30.

Major Techniques

Alzheimer's disease modeling: development of AD pathologies in vivo and in vitro
High resolution confocal microscopy: synaptic integrity and glia activity
Transgenic mice: cell-type specific gene knockout & signaling tracking
AAV-mediated gene transduction: targeted gene expression in brain
Glia isolation, culture, and selective ablation: role of glia cells in the brain
Neuronal culture and manipulation: pathways critical for neurodegeneration
Stereotaxic injection: direct delivery into the brain
RNAseq analysis: pathway delineation

Who and where we are

We are a group newly established in UT. The lab is on the 5th floor of MSB in room 5.034. Currently, there are three postdoc fellows and one technician.



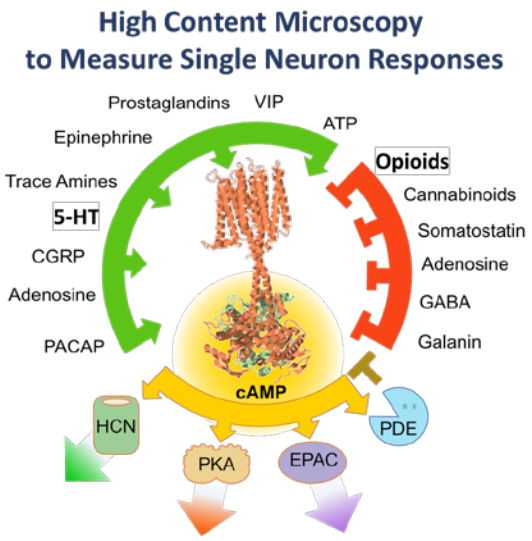
Students are welcome to drop by and visit our lab any time.

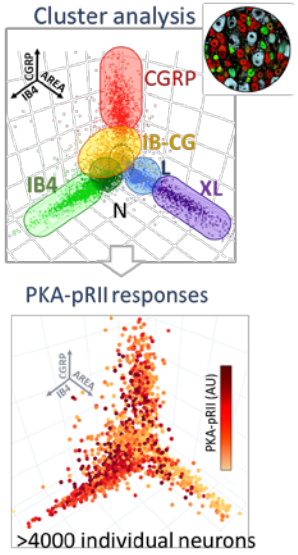
Lab website:
https://med.uth.edu/anesthesiology/research/research-labs/cao-lab/

Contact
Wei Cao
wei.cao@uth.tmc.edu

Carmen Dessauer Laboratory

Research interests: Our lab performs basic research on the mechanisms that drive heart disease/arrhythmias and chronic pain due to the production and localization of the second messenger cyclic AMP. In heart we examine how scaffolding proteins organize and regulate adenylyl cyclase to achieve localized cyclic AMP signaling for cardiac function. In sensory neurons within the dorsal root ganglia, we investigate the synergy between pathways elicited by cyclic AMP and growth factors and/or cytokines to maintain chronic pain states. After injury, we found that inhibition by opioids is blunted due to alterations of adenylyl cyclase by Ras/C-Raf signaling. We use high content microscopy to understand mechanisms driving pain.





Techniques: Biochemistry (protein purification and structure-function assays), mouse genetic models, fluorescence-based imaging approaches (FLIM-FRET, BiFluorescence Complementation, Proximity ligation assays, High content imaging, real-time cellular cAMP measurements), Proximity-dependent biotin identification (BioID) proteomics, and in collaboration with E. Terry Walters, electrophysiology and behavioral assays

Current and Past Trainees: ***Chrystine Gallegos*** (current PhD student), ***Elia Lopez*** (former student, F30 and T32 recipient, currently at NIH / FDA), ***Tanya Baldwin*** (former student, T32 recipient, 6 papers for PhD, currently a postdoc at Cleveland Clinic), ***Cameron Brand*** (former student, T32 recipient, published 7 papers for PhD, now Process Development Scientist at Abzena), ***Sam Berkey*** (former student, now Scientific Liason at Hologic, Inc.)

Contact PI: Carmen Dessauer, PhD. Carmen.W.Dessauer@uth.tmc.edu
Office: 713-500-6308 **Lab website:** www.Dessauer-lab.com
Student contact: Chrystine Gallegos, M.S. Chrystine.Gallegos@uth.tmc.edu

Major Projects (out of many)

- **Understanding the neural mechanisms balancing fear and reward-seeking responses**

- **Deciphering the neural processes involved in memory reorganization across time**
- **Elucidating the neural circuits modulating innate fear responses**

Recent Publications

- **Engelke, D. S., Zhang, X. O.,... & Do-Monte, F. H. (2021). A hypothalamic-thalamostriatal circuit that controls approach-avoidance conflict in rats. Nature communications, 12(1), 1-19.**

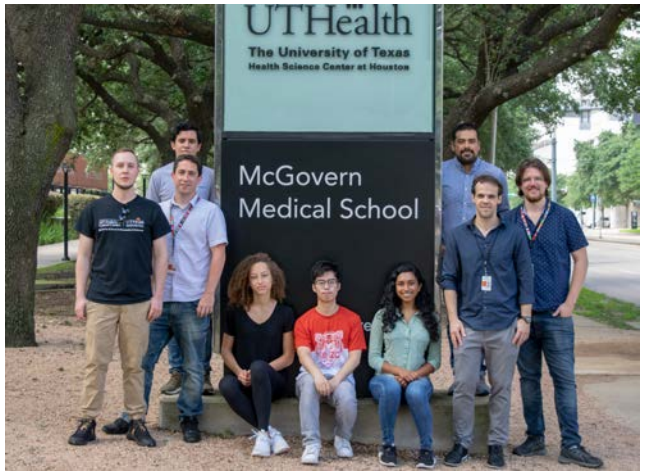
- **Fernandez-Leon, J. A., Engelke, D. S., … & Do Monte, F. H. (2021). Neural correlates and determinants of approach-avoidance conflict in the prelimbic prefrontal cortex. eLife, 10.**

https://sites.google.com/view/domontelab

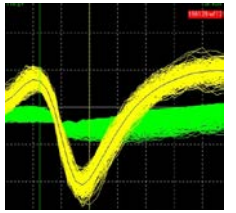
Do Monte Lab

Understanding the neural circuits and mechanisms underlying emotional memories

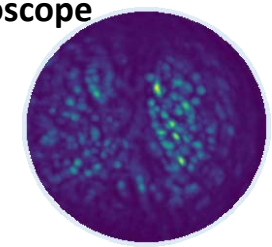
Fabricio H. Do Monte, DVM, Ph.D.
(Fabricio.H.DoMonte@uth.tmc.edu)



Main techniques



- **In vivo single-unit recordings**
- **Optogenetics and chemogenetics**
- **Miniature fluorescence microscope**
- **Immunohistochemistry**
- ***In Situ* hybridization**



Current Students

- **Cana Queve (cana.quave@uth.tmc.edu)**
  Rising 5th year NGP student, studying the neural mechanisms whereby drugs of abuse alter risk-taking behavior in the context of fear. Terry J. Crow, PhD, Scholarship and F31 Scholarship Awardee.

- **Xu Zhang (xu.zhang.1@uth.tmc.edu)**
  Rising 5th year NGP student, studying the neural mechanisms balancing food seeking with predator avoidance. Antje Wuelfrath Gee and Harry Gee, Jr. Family Legacy Scholarship and Dr. Kopchick Fellowship Awardee.

- **Vicky Chuong (Vicky.Chuong@uth.tmc.edu)**
  Rising 2nd year NGP student.

Funding Sources

- **NIH R01-MH120136**
- **UT System Rising Start Award**
- **NASARD Young Investigator Award**

DRAGOI LAB

Department of Neurobiology & Anatomy

Questions?
PI: Valentin.Dragoi@uth.tmc.edu

PhD students:
Melissa.Franch@uth.tmc.edu
Alexandra.McConnell@uth.tmc.edu

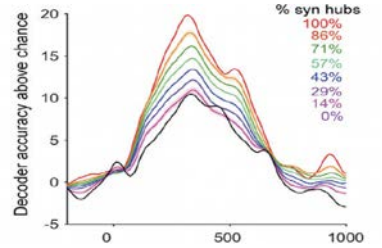
Research topics

Are you interested in rigorous, cutting edge research in systems neuroscience? Consider rotating with the Dragoi Lab!

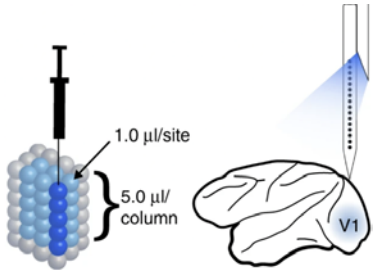
Major techniques:

- *In vivo* electrophysiology: wireless and traditional wired, laminar and surface arrays
- Optogenetics: causal manipulations in awake, behaving animals for circuit dissection
- Behavioral tasks: high level and unique behavior tasks to investigate cognition
- Computational analysis: spike and LFP, decoding, models, and neural networks

1. Behavioral and state-dependent changes in cortical networks



2. Optogenetic manipulation of cortical circuits



3. Network interactions of behavior in freely moving animals

Recent student publications

Milton, R., Shahidi, N. & Dragoi, V. Dynamic states of population activity in prefrontal cortical networks of freely-moving macaque. Nat Commun 11, 1948 (2020).

Pojoga, S.A., Kharas, N. & Dragoi, V. Perceptually unidentifiable stimuli influence cortical processing and behavioral performance. Nat Commun 11, 6109 (2020). link

Shahidi, N., Andrei, A.R., Hu, M. et al. High-order coordination of cortical spiking activity modulates perceptual accuracy. Nat Neurosci 22, 1148–1158 (2019).

Lab website: https://sites.google.com/uth.edu/dragoilab/home

NEI/NIH-funded

The Heidelberger Laboratory

We study neurotransmitter release mechanisms
and identify ways to modulate exocytosis and neuronal communication

Research Interests

- **Neurotransmitter release and SNARE complex formation**
- **Retinal degeneration and vision loss**
- **Vision restoration**
- **Multivesicular release**
- **Exocytosis in immune system function**

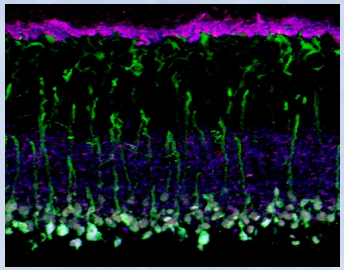
Approaches

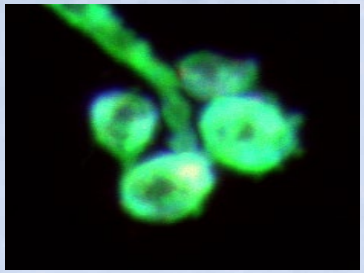
Biophysical: patch clamp electrophysiology, membrane capacitance measurements, flash-photolysis of caged-compounds, quantitative intracellular calcium measurements.

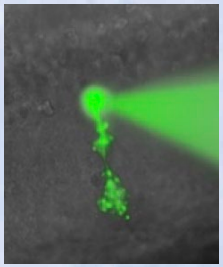
Molecular and biochemical: Design and delivery of interacting peptides, genetic-engineering of mice, *in vivo* electroporation, *in vitro* fusion assays

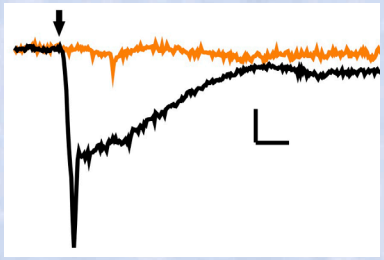
Imaging: confocal, super-resolution and electron microscopy.

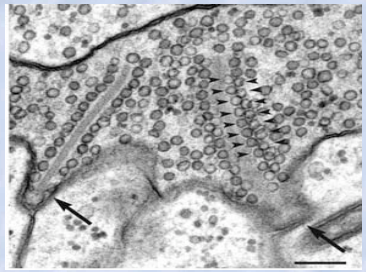
Computational: mathematical models of synaptic vesicle dynamics, retinal bipolar cell function and responses to electrical stimulation











Contact: ruth.Heidelberger@uth.tmc.edu. 713-500-5624
Webpage: https://med.uth.edu/nba/faculty/ruth-heidelberger-md-phd/

The Hu Laboratory

Research focus: Brain Tumor, Glia Biology, Lipid Metabolism

Major techniques

- **Mouse genetics**: Cre-loxP technology to achieve neural cell type specific manipulations
- **Mouse modeling of neurological diseases**: Generation of faithful mouse models for brain tumors, demyelinating diseases, and neurodegenerative diseases
- **Biochemical and cellular biology**: Chromatin structure, transcription regulation, membrane biology, lipid metabolism, subcellular organelle trafficking, immune cell biology

Major Research Directions

- Brain Tumor Stem Cell Biology and Immune Microenvironment
- Demyelinating Diseases Such as Multiple Sclerosis
- Lipid metabolism in the Central Nervous System (CNS) and Peripheral Nervous System (PNS)
- Chemotherapy-Induced Neurological Sequelae
- Neurodegenerative Diseases

More information? Jian Hu: jhu3@mdanderson.org
Lab website: https://www.mdanderson.org/research/departments-labs-institutes/labs/hu-laboratory.html

Recent Student Publications

- **Shin S**…Hu J. Qki activates Srebp2-mediated cholesterol biosynthesis for maintenance of eye lens transparency. *Nat. Comm.* 2021;
- Zhou X., **Shin S**. ….Hu J. Qki regulates myelinogenesis through Srebp2-dependent cholesterol biosynthesis. *eLife*, 2021;
- Shingu T., **Ho AL**…Hu J. Qki deficiency maintains stemness of glioma stem cells in suboptimal environment by downregulating endolysosomal degradation. *Nat. Genetics.* 2017.

Recent Graduates

- **Seula Shin:** PhD 2021, President's Scholarship; postdoc at Denali
- **Daniel Zamler:** PhD 2022, T32 Award; postdoc at Stanford

Current Graduate Students

Fatma Yasar (CCE scholar), Joseph Barnes-Vélez (TL1 award, F31 award), Rocio Zorrilla-Veloz, Bridgitte Palacios (TL1 award), Takese Mckenzie (Dean's Scholar), Yating Li, Jesen Li, Kaylene Lu, Shaolin Mei

The Pathophysiology of Neuropsychiatric Disorders Program

Anilkumar Pillai, PhD (anilkumar.r.pillai@uth.tmc.edu)

Goal: To understand the cellular and molecular mechanisms underlying the pathophysiology of neuropsychiatric disorders

Tools: *in vivo* and *in vitro* pre-clinical models, human peripheral as well as postmortem brain tissues

Focus: Mood disorders, Suicide, PTSD, Schizophrenia and Autism Spectrum Disorders

Major areas of research:

- *Inflammation and Immune mechanisms* – identify abnormal immune pathways and therapeutic targets
- *Neuroprotection and Neuroplasticity* – role of neuroprotective factors in psychiatric disorders

Current projects:

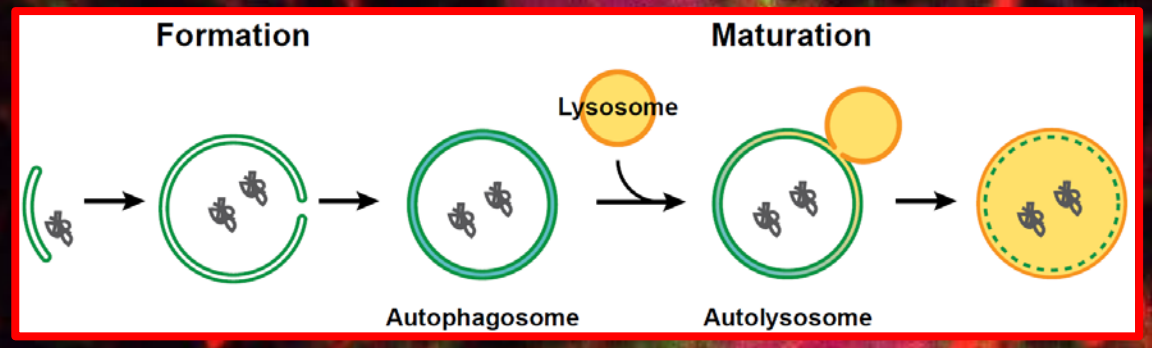
- *Role of complement system in chronic stress-induced changes in behavior and inflammation (NIH funded project)*
- *Role of Interferon signaling in neurobehavior (NIH funded project)*
- *Role of complement system in suicidal behavior and PTSD (VA funded project)*
- *Role of TLR9 in social behavior (NIH funded project)*

UTHealth® The University of Texas Health Science Center at Houston | McGovern Medical School

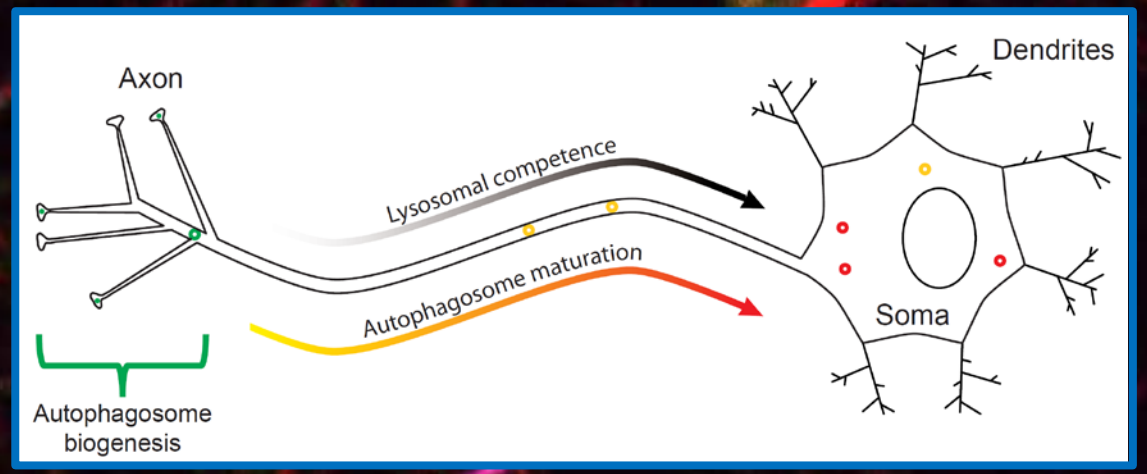
Stavoe Lab

How is neuronal autophagy regulated during aging and disease?

Website: https://sites.google.com/uth.edu/stavoe-lab



Autophagy is implicated in all major age-related neurodegenerative diseases

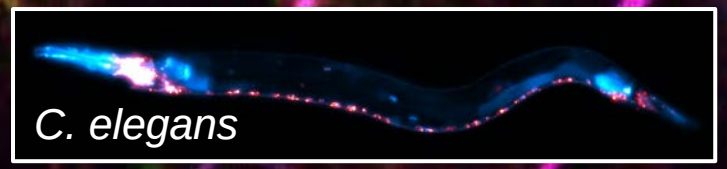


Major Research Questions:

How does autophagy change with age in neurons?

How can we ectopically modulate autophagy in neurons?

Can we extend nervous system healthspan?



Major Techniques:

Live-cell imaging

Live-animal imaging

Biochemistry

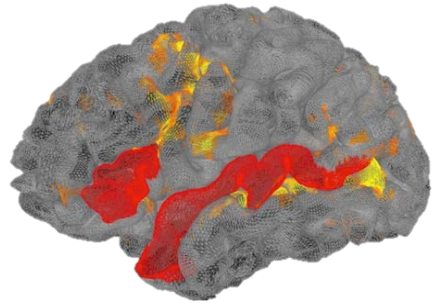
Cell culture

Genetics

Current graduate student: Heather Tsong

The Tandon Lab

Human Neuroimaging and Electrophysiology



Research Topics and Techniques

- We study cognitive functions, especially language processing, using functional and structural neuroimaging and intracranial electrophysiology
- Epilepsy and tumor patients provide us with a unique opportunity to record from multiple units in various cortical areas
- We use intracortical electrophysiological techniques such as ECoG and direct cortical stimulation, along with fMRI, EEG and DTI

People and Funding

- Our lab is composed of eager and curious graduate students, postdocs, med students, residents, undergrads and research assistants
- We are currently expanding our work under the newly formed Texas Institute for Restorative Neurotechnologies (TIRN - uth.edu/tirn)
- Our lab is well funded including U01, UH3 and UG3 Brain Initiative grants from the NIH

Conferences

- Our graduate students attend the annual Society for Neuroscience (SfN) and Society for the Neurobiology of Language (SNL) meetings
- And other basic & clinical conferences related to their research topics

Student Publications

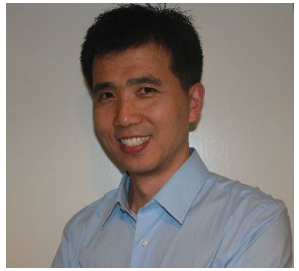
- **McCarty MJ** … Tandon N. The listening zone of human electrocorticographic field potential recordings. *eNeuro, 2022.*
- **Snyder KM** … Tandon N. The critical role of the ventral temporal lobe in word retrieval. *bioRxiv*, 2021.
- **Forseth KJ**…Tandon N. Language prediction mechanisms in human auditory cortex. *Nat. Commun.,* 2020.

Graduate Students

- **Meredith McCarty:** 2nd year PhD student; Project: Neural mechanisms of cognitive control in rapid visual categorization.
- **Kathryn Snyder:** MD/PhD student; Project: Mapping the meaning of words in the brain: Cortical network dynamics of language production. Award: Osborne Endowed Scholarship.
- **Kiefer Forseth:** MD/PhD 2021; Thesis: Cortical Dynamics of Reading; Grants: F30 awardee.

More information?
Email: Eliana.Klier@uth.tmc.edu

Lab Website: tandonlab.org
Email: Nitin.Tandon@uth.tmc.edu



The Tong Laboratory

Research focus: Neurocircuits for Innate Behaviors and Metabolism

Major techniques

- **Mouse genetics**: Cre-loxP technology to achieve neuron specific manipulations;
- **Optogenetics and chemogenetics**: acute and reversible manipulation of specific groups of brain neuron;
- **Stereotaxic viral delivery**: specific gene expression in highly selected groups of brain neuron;
- **Fiber photometry**: real time neuron activity monitoring in behaving animals

Major Research Directions

- To identify novel neurons and circuits for innate behaviors (aversion, anxiety and aggression) related to psychiatric disorders and mental illness;
- To examine key neurons for feeding and metabolism, related to obesity development;
- To unravel the brain mechanism regulating glucose homeostasis related to diabetes pathogenesis;
- Novel creative projects from yourself.

More information? Qingchun Tong: qingchun.tong@uth.tmc.edu; or
Jing Cai: Jing.Cai@uth.tmc.edu or Alex Prince: Alexander.Prince@uth.tmc.edu
Lab website: http://tong-laboratory.com/

Recent Student Publications

- **Cassidy RM**…Tong Q. A lateral hypothalamus to basal forebrain neurocircuit promotes feeding by suppressing responses to anxiogenic environmental cues. *Sci Adv.* 2019;
- **Mangieri LR**….Tong Q. Defensive Behaviors Driven by a Hypothalamic-Ventral Midbrain Circuit. *eNeuro*, 2019;
- **Mangieri LR**…Tong Q. Antagonistic Control of Feeding and Self-grooming Behaviors by GABAergic and Glutamatergic LH→PVH Projections. *Nat. Comm.* 2018.

Recent Graduates

- **Leandra Mangieri:** PhD 2018, an F31 and UTHealth Best Dissertation awardee; a current postdoc at UW;
- **Ryan Cassidy:** MD/PhD 2019, an F30 and UTHealth Best Dissertation awardee; a current resident at Vanderbilt.
- **Jessie Morrill:** PhD 2022, Assistant Professor in the Department of Animal Science at the University of Nebraska - Lincoln

Current Graduate Students

- **Jing Cai:** 4th year of Neuroscience, the 2021-2022 Russell and Diana Hawkins Family Foundation Discovery Fellowship awardee; Project: The DBB→VTA circuit in the regulation of feeding and related behaviors.

Alex Prince: 2nd year of Neuroscience

Aki Lab | Blood-Brain Barrier Laboratory

B4B BRAINS for BRAIN

Current Research

- Regulation of transport processes across the BBB
- Manipulation of glymphatic clearance from the brain
- Biomechanics of vascular basement membrane and endothelial cytoskeleton

Alzheimer's Disease / Cerebral Amyloid Angiopathy / Lysosomal Storage Disease / Single cell transcriptomics based approaches

Major Techniques

- ***In vivo* Multi-photon Microscopy**: Live animal imaging of neuro-glia-vascular events in knock-in AD/CAA mice and Cre-loxP models for vascular endothelial cell specific manipulations
- **Atomic Force Microscopy**: Biophysical assessment for the plasma membrane topography, adhesion, tension, and elasticity.
- **Primary culture of human brain cells**: Live cell imaging of intracellular vesicle trafficking and cytoskeletal organization.

Advantages in joining

Proven excellence in mentorship. Helps prototype research ideas. Enjoy discovery processes. Your journey here leads to future opportunities in academia and industry. **Please write: Akihiko.Urayama@uth.tmc.edu**

Brains for Brain: Current Lab Members

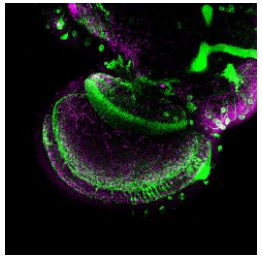
- **Onur Sahin, PhD** (Medical student / Post-doc)
- **Hannah Thompson** (Research Assistant)
- **Kimberly Anderson** (Research Assistant)
- **Aki Urayama, PhD** (PI)

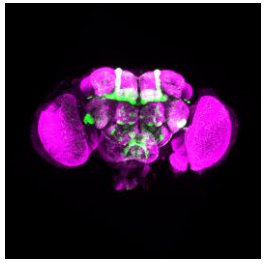
Recent Graduates

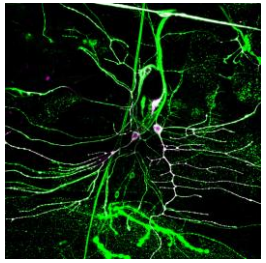
- **Matthew Howe: MD/PhD** (R25 Research-track resident, Brown Univ. SOM)

Lab Alumni

- **Michael Maniskas, PhD** (BRAINS Program manager)
- **Caroline Reynolds** (Tufts Univ. PhD Program)
- **Alexis Mack** (Emory Univ. MD/PhD program)





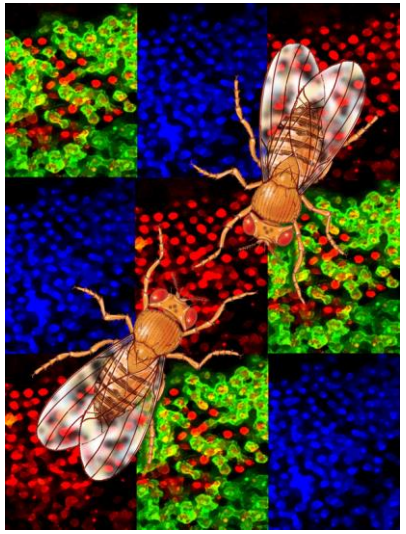


Venkatachalam lab at the McGovern Medical School

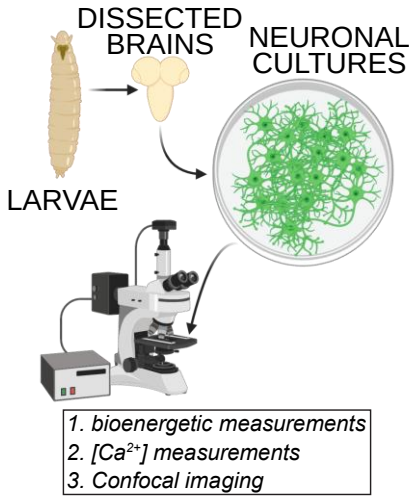
Questions of interest:

1. *What are the mechanisms underlying dysregulation of neuronal excitability in neurodegenerative diseases?*
2. *How do neurons manage dynamic responses to changes in bioenergetic demand?*
3. *What is the role of the nervous system in the regulation of aging and longevity?*

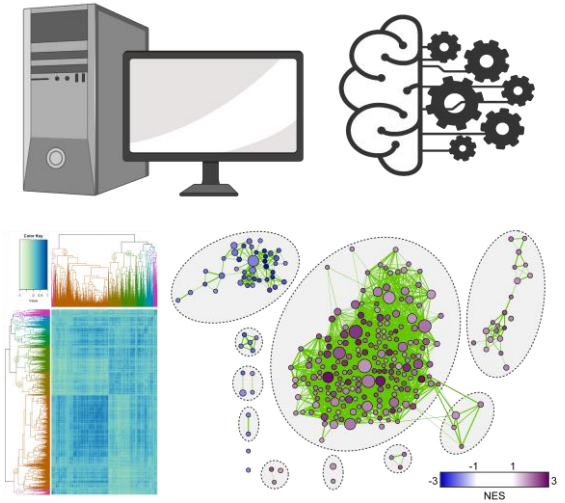
Approach:



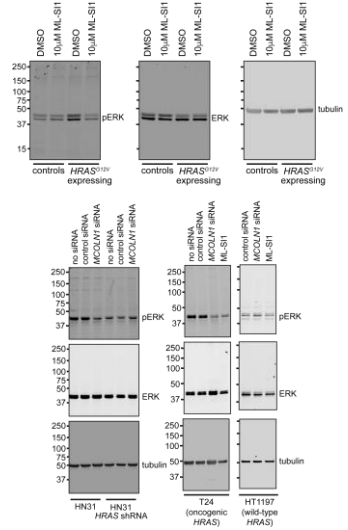
Drosophila genetics



Live imaging of dissociated neurons



Computational biology



Biochemistry and molecular biology

Recent lab trainees:

publications and website

Current funding:

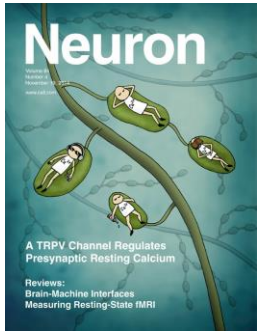
NIH National Institutes of Health
Turning Discovery Into Health

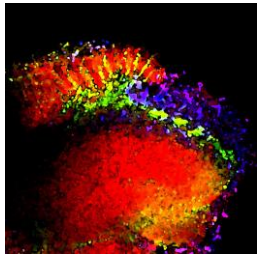
NIH 1RF1AG069076
PI: Kartik Venkatachalam
"NEUROPATHOLOGY IN TAUOPATHIES STEM FROM DEPOLARIZATION-INDUCED ALTERATIONS IN THE PLANAR DISTRIBUTION OF PHOSPHOINOSITIDES"

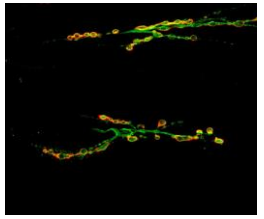
NIH 1RF1AG072176-01
PI: Kartik Venkatachalam
"ALTERATIONS IN SOMATODENDRITIC BIOENERGETICS IN DROSOPHILA MODELS OF TAUOPATHY"

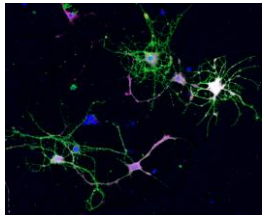
NIH 1R21AG067414
PI: Kartik Venkatachalam
"INVOLVEMENT OF AN ER TO LYSOSOME SIGNALING AXIS IN THE ONSET OF NEURODEGENERATION IN MODELS OF AD"

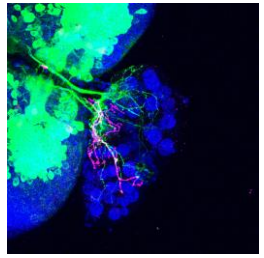
Email: kartik.venkatachalam@uth.tmc.edu











The Walss-Bass Lab

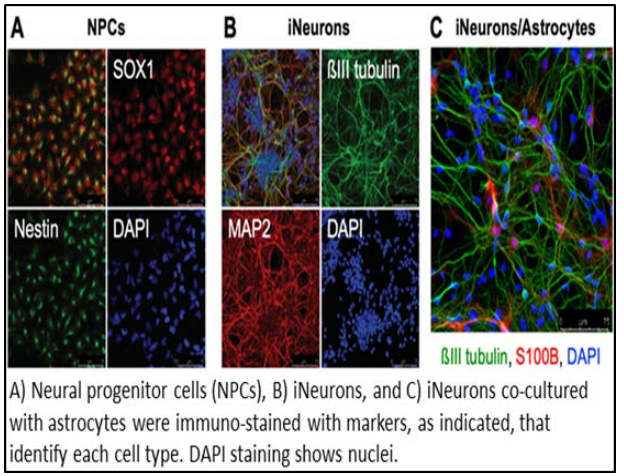
https://med.uth.edu/psychiatry/faculty/consuelo-walss-bass-phd/

Research Focus: Biological Mechanisms of Mental Health Disorders and Diseases of Addiction

Strengths or unique resources: Genomic approaches in human models. Postmortem brain collection. Generation of brain cells derived from patients.

We aim to answer these questions:

- What makes certain individuals vulnerable to developing different psychiatric disorders?
- How do changes in genetic/epigenetic architecture contribute to changes in biological functions that affect the outcome of mental illnesses?
- How can mental illness be treated if we know which genes to target?
- Why do some patients respond well to medications and others do not
- What role do genes involved in regulation of immune system response play in development of psychiatric disorders?
- What are the neurotoxic consequences of different drugs of abuse?



A) Neural progenitor cells (NPCs), B) iNeurons, and C) iNeurons co-cultured with astrocytes were immuno-stained with markers, as indicated, that identify each cell type. DAPI staining shows nuclei.

Current Students

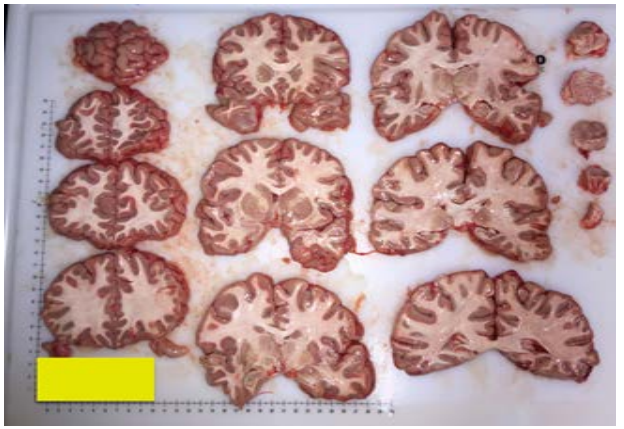
Emily Mendez: 5th year MD/PhD candidate, an NIH-TL1 training grant awardee. Project: Mechanisms of drug-induced neurotoxicity.

Recent Student Publications

Mendez, E.F., Wei, H., Hu, R. *et al.* Angiogenic gene networks are dysregulated in opioid use disorder: evidence from multi-omics and imaging of postmortem human brain. *Mol Psychiatry* (2021). https://doi.org/10.1038/s41380-021-01259-y

Other publications

https://pubmed.ncbi.nlm.nih.gov/?term=walss-bass&sort=pubdate



Zhang Lab

Mechanisms of Neurodegenerative Diseases

Questions we are studying

- Why different neurons die in different neurodegenerative diseases?
- How to prevent and remove plaques/tangles linked to neurodegenerative diseases?

Approaches

- *Drosophila* model
- Cell biology and biochemistry in cultured mammalian cells
- Mouse models (in collaborations)

Research Projects

- Functions of neurodegenerative disease genes (i.e., Huntingtin, Parkin)
- Cellular homeostasis/clearance mechanisms (i.e., chaperones, endolysosomal pathways and autophagy) against protein misfolding and aggregation by mutated disease proteins (Fig. 1)
- The role of neurotransmitter dopamine in selective loss of dopaminergic neurons in Parkinson's disease (Fig. 2).

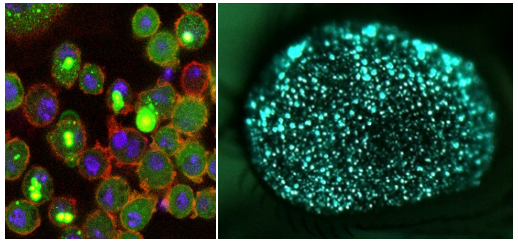


Fig. 1. Aggregates formed by mutant **Huntingtin** in cells (left) and in adult fly eye (right)

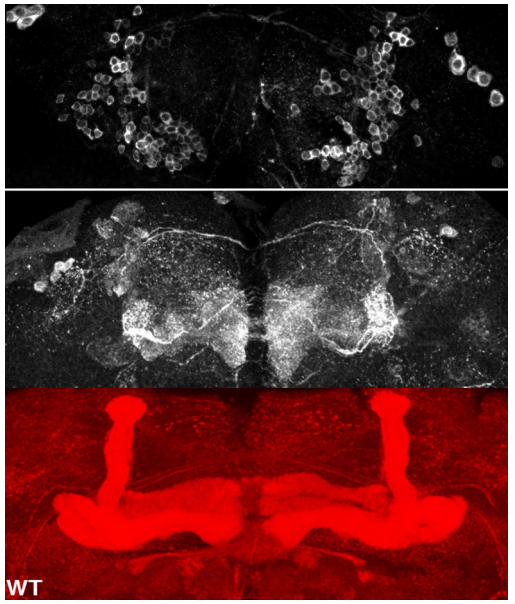
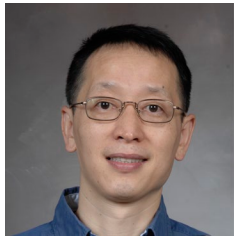


Fig 2. Dopamine neuron cell bodies (top) and the neurotransmitter **dopamine** (middle) they produce, which are projected into the learning and memory center Mushroom bodies (red, bottom) in *Drosophila* brain.

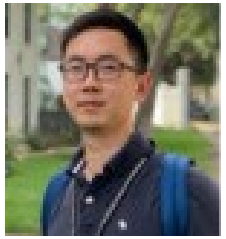
Our Team



Sheng Zhang
Seeking student

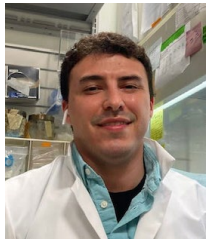
Shiyu Xu
Fly guru

Xin Ye
Lab master

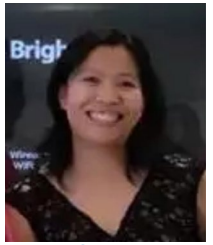


Yue Yu
5th year

Amanda Solbach
3rd year



Steve Farmer
1st year



Lili Ye
Hero behind