Translational Pain Research Fall Colloquium

October 19, 2018

Graduate School of Biomedical Science (GSBS) Large Classroom (BSRB S3.8371)
6767 Bertner
Houston

Gulf Coast Consortia
Quantitative Biomedical Sciences
Conference Sponsor:
The Gulf Coast Consortia (GCC), is a dynamic, multi-institution collaboration of basic and translational scientists, researchers, clinicians and students in the quantitative biomedical sciences, who benefit from joint training programs, topic-focused research consortia, shared facilities and equipment, and exchange of scientific knowledge.

**GCC Research Consortia** include Regenerative Medicine, Translational Pain Research, Neuroengineering, Mental Health Research, Theoretical and Computational Neuroscience, NanoX, Alcohol and Addiction Research, Chemical Genomics, Magnetic Resonance, and Antimicrobial Resistance.

**GCC Training Programs** currently focus on Biomedical Informatics, Computational Cancer Biology, Molecular Biophysics, Neuroengineering, Pharmacological Sciences, and Precision Environmental Health Sciences.

Current members of the GCC Regenerative Consortium include Baylor College of Medicine, Rice University, University of Houston, The University of Texas Health Science Center at Houston, The University of Texas Medical Branch at Galveston, The University of Texas M. D. Anderson Cancer Center, The Institute of Biosciences and Technology of Texas A&M Health Science Center.

Gulfcoastconsortia.org
Anastasio, Noelle
Assistant Professor
UT Medical Branch at Galveston
Pharmacology and Toxicology
ncanasta@utmb.edu

Research Interests:
substance use disorders; psychiatric disorders

Baitemirova, Aisha
Student
University of Saint Thomas
Bioinformatics and Computer Science
Ayshabakyt@gmail.com

Research Interests:
E. Coli long-term evolution experiments
Genome editing
**Burish, Mark**
Clinician
UT Health Science Center at Houston
Neurosurgery
mark.j.burish@uth.tmc.edu

**Research Interests:**
Cluster headache
Migraine

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**Chung, Jin Mo**
Professor
UT Medical Branch at Galveston
Neuroscience, Cell Biology & Anatomy
jmchung@utmb.edu

**Research Interests:**
Neuropathic pain
Sex difference in chronic pain mechanism
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Dessauer, Carmen  
Professor  
UT Health Science Center at Houston  
Integrative Biology and Pharmacology  
carmen.w.dessauer@uth.tmc.edu

Research Interests:
1) Defining the cAMP signaling pathways required for maintenance of a chronic pain state in nociceptors
2) identifying factors that contribute to development of opioid insensitivity, chronic pain, and ultimately opioid dependence after spinal cord injury.

Resources willing to share:
Our laboratory uses high content microscopy to examine signaling in individual neuronal cell types.

Type of Collaborator looking for:
Would love an expert in mass spectroscopy for identification of protein in small sample sizes or identification of protein modifications. Would also like to obtain DRG tissue from other pain models to test biochemically, loss of opioid inhibition of adenylyl cyclase.

Dineley, Kelly  
Professor  
UT Medical Branch at Galveston  
Neurology  
ktdinele@utmb.edu

Research Interests:
Cocaine abuse and addiction. Animal models utilizing genetic and pharmacological manipulations. Omics and bioinformatics approaches for the identification and validation of novel mechanisms that underlie cognitive deficits induced by aging, neurodegenerative disease, and drug abuse. Nicotinic acetylcholine receptors, nuclear receptors (PPAR), ERK MAPK, CREB, CBP, calcineurin, protein-protein interactions
Do, Jung Hwa

Research Assistant I
UT Health Science Center at Houston
Nursing System
Jung.hwa.Do@uth.tmc.edu

Research Interests:
brain
chronic pain

Dougherty, Patrick

Professor
UT MD Anderson Cancer Center
Pain Medicine
pdougherty@mdanderson.org

Research Interests:
Human DRG anatomy
Human DRG physiology
Enemodia, Roesline

Student
University of Houston School of Education
erosey2016@gmail.com

Research Interests:
Cognitive learning
Children with special needs

Resources willing to share:
I am interested in knowing about Translational Pain Research. My son had to cope with pain as he was diagnosed with neurofibromatosis. Sincerely, I do not know if this has to do with your area of research.

Type of Collaborator looking for:
Science is gradually creeping into education.; as science has been able to show us the importance of brain development from age zero to five. As an educator this means a lot to me and having a special need son, I want to know more about science related stuff that affects growth in children as well as young adults.

Galko, Michael

Professor
UT MD Anderson Cancer Center
Genetics
mjgalko@mdanderson.org

Research Interests:
Tissue damage-induced nociceptive sensitization
Nociceptive sensitization associated with disease and/or disease treatment

Resources willing to share:
We are expert at fruit fly genetics and nociceptive behavioral assays in Drosophila. Happy to share that expertise.

Type of Collaborator looking for:
We have strong collaborators in pharmacology and mouse genetics. We have long been looking for a steady collaborator with expertise in sensory neuron electrophysiology.
Gorniak, Stacey
Associate Professor
University of Houston
Health and Human Performance
gorniak@uh.edu

Research Interests:
Peripheral nerve damage
Cortical & cognitive deficits

Resources willing to share:
Non-invasive single motor unit EMG measurement
Motion capture lab (Vicon)

Type of Collaborator looking for:
Neuroimaging (fMRI/MRI)

Grace, Peter
Assistant Professor
UT MD Anderson Cancer Center
Critical Care Research
pgrace@mdanderson.org

Research Interests:
Neuroimmunology
Behavior

Resources willing to share:
Primary glial cell cultures

Type of Collaborator looking for:
Single cell sequencing/ bioinformatics
Guan, Xin
Postdoc
UT MD Anderson Cancer Center
Anesthesiology
xguan1@mdanderson.org

Research Interests:
Chronic pain and CNS with pain.

Han, Sangheon
Student
Rice University
Bioengineering
shin9108@gmail.com

Research Interests:
Cancer imaging, antibody conjugation
**Heijnen, Cobi**

Professor  
UT MD Anderson Cancer Center  
Division of Internal medicine, department of Symptom research  
cjheijnen@mdanderson.org

**Research Interests:**  
Neurotoxicity as a result of chemotherapy  
Mitochondrial transfer  

**Resources willing to share:**  
behavior : cognition, depression, pain

**Type of Collaborator looking for:**  
Mitochondrial researchers  
2-photon microscopy  
I-disc

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**Kavelaars, Annemieke**

Professor  
UT MD Anderson Cancer Center  
Laboratory of Neuroimmunology, Department of Symptom Research  
akavelaars@mdanderson.org

**Research Interests:**  
Mechanisms underlying transition to chronic pain and co-morbid depression  
Identifying mechanisms underlying chemotherapy-induced peripheral neuropathy in order to identify novel targets for treatment.

**Resources willing to share:**  
Seahorse flux analyzer to assess mitochondrial function in DRG neurons and peripheral nerve  
FACS analysis of leukocytes in various tissues  
CPP in mice

**Type of Collaborator looking for:**  
expertise in mechanisms underlying restoration of mitochondrial function/integrity in the peripheral nervous system
Kim, Hee Kee
Assistant Professor
UT MD Anderson Cancer Center
Pain Medicine
hkim9@mdanderson.org

Research Interests:
My research interests are to find the patho-mechanisms of neuropathic pain and to develop new medicines for neuropathic pain.

La, Jun-Ho
Assistant Professor
UT Medical Branch at Galveston
Dept. of Neuroscience, Cell Biology, and Anatomy
jula@utmb.edu

Research Interests:
1. Mechanisms underlying the sensitization of peripheral and spinal sensory neurons.
2. Mechanisms of the transition to and maintenance of chronic pain.

Resources willing to share:
Spinal cord slice patch clamp technique.

Type of Collaborator looking for:
Researchers with experience in 1) viral vectors including AAV, 2) dorsal root electrical stimulation, and 3) RNAi (siRNA or antisense oligonucleotides) approaches.
Laumet, Geoffroy
Instructor
UT MD Anderson Cancer Center
Symptom Research
golaumet@mdanderson.org

Research Interests:
chemotherapy-induced peripheral neuropathy
resolution of pain
neuroimmunology of pain

Lopez Bellido, Roger
Research Scientist
UT MD Anderson Cancer Center
Genetics
rlopez5@mdanderson.org

Research Interests:
Mechanical/Chemical Pain
Opioid Analgesia

Resources willing to share:
Characterization of chemical pain using Drosophila as a model

Type of Collaborator looking for:
Calcium Imaging
Optogenetics
Electrophisiology
Papageorgiou, T. Dorina
Assistant Professor
Baylor College of Medicine
Psychiatry & Behavioral Sciences - papageor@bcm.edu

Research Interests:
Human Brain Neuroimaging
Pain neurorehabilitation; Advanced fMRI
real-time fMRI neurofeedback methods

Resources willing to share:
Advanced fMRI technology and methods to elucidate neuromodulation at the brain level before and after treatment in patients.

Type of Collaborator looking for:
Deep learning computational methods
Referrals of patients with chronic pain

Poongavanam, Mohan
Postdoc
Baylor College of Medicine
Pediatrics
mohan.www883@gmail.com

Research Interests:
Animal models for analgesic efficiency
Mouse models for Migraine
How to bridge the gap between pain research and clinical pain management
How to develop objective pain assessment tools
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**Sun, Qigang**
Postdoc
UT Health Science Center at Houston
Pathology
828715@163.com

*Research Interests:*
- pancreatic cancer
- stem cells

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**Uhelski, Megan**
Assistant Professor
UT MD Anderson Cancer Center
Pain Medicine
helsinki426@gmail.com

*Research Interests:*
- peripheral nerve electrophysiology
- transgenic mouse models of chronic pain

*Resources willing to share:*
- Teased fiber single unit recording of primary afferent fibers

*Type of Collaborator looking for:*
- Open at this time
Walters, Edgar (Terry)
Professor
UT Health Science Center at Houston
Integrative Biology and Pharmacology
edgar.t.walters@uth.tmc.edu

Research Interests:
Neuropathic pain
Inflammatory pain

Resources willing to share:
Custom electrophysiological software

Wang, Xin

UT Health Science Center at Houston
biochem
xin.wang.2@uth.tmc.edu

Research Interests:
protein expression and function

Wang, Yan

UT MD Anderson Cancer Center
Genetics
ywang17@mdanderson.org

Research Interests:
chronic pain mechanism and pain sensitization.
Yan, Jiusheng
Assistant Professor
UT MD Anderson Cancer Center
Anesthesiology
jian1@mdanderson.org

Research Interests:
Functional proteomics of ion channel signaling complexes.
Ion channel signaling in pain.

Resources willing to share:
My lab is strong in using quantitative proteomics as a tool to identify new proteins involved in ion channel regulation and signaling.

Type of Collaborator looking for:
Medicinal chemistry.
Molecular dynamic simulation
Cryo-EM.

Zhu, Michael
Professor
UT Health Science Center at Houston
Department of Integrative Biology and Pharmacology
michael.x.zhu@uth.tmc.edu

Research Interests:
Ion Channels
Pain Mechanisms

Resources willing to share:
Ion Channel function and pharmacology

Type of Collaborator looking for:
Translational studies on pain