

David “Travis” Johnston

ADDRESSES

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Texas A&M University
Dept. of Psychological and Brain Sciences
ILSB Bldg. Rm 3149
301 Old Main Dr.
College Station, TX 77843

EDUCATION

Texas A&M University - College Station, TX

Bachelor of Science in Animal Science
Cumulative GPA: 3.504

May 2018

Texas A&M University - College Station, TX

Doctor of Philosophy in Behavioral and Cellular Neuroscience
Cumulative GPA: 4.0

Expected Graduation May 2023

RESEARCH EXPERIENCE

DeBakey Institute for Comparative Cardiovascular Science and Biomedical Devices-*Dr. Ranjeet Dongaonkar*

Texas A&M University -- College Station, TX

Undergraduate Research Scholar

January 2016 – June 2016

- Worked with a research team to devise a protocol to study the effect of ionized radiation on the lymphatic vessels of rats.
- Assisted in the training and preparation of the research team carrying out the study using this novel protocol.

Dr. James Grau’s Neurotrauma, Pain, & Plasticity Neuroscience Lab

Texas A&M University -- College Station, TX

Undergraduate Research Assistant

August 2016 - May 2018

- Assessed the effects noxious stimulation has on recovery after spinal cord injury in adult rats.
- Listed as Co-Author in two poster presentations that were showcased at Neuroscience Conferences.

Graduate Research Assistant

June 2018 - Present

- Designed and performed experiments accessing the effects noxious stimulation has on recovery after spinal cord injury using fluorescent and confocal microscopy
- Daily duties include performing contusion surgeries, behavioral assessment, and cellular assays
- Trained and mentored undergraduate research assistants in lab techniques and protocols
- Presented several poster presentations at national neuroscience conferences

SKILLS

Histology:

- Tissue collection and preparation
- Cryostat sectioning
- Hematoxylin and eosin staining
- Fluorescent microscopy
- Confocal microscopy
- Protein extraction
- Bradford Assay
- Drabkin's Assay
- Western blots

Small animal surgery:

- Use of inhalant (isoflurane) anesthesia in rats
- Thoracic spinal cord contusion operations
- Cervical spinal cord transection operations
- Controlled Cortical Impact traumatic brain injury operations
- Intracardial perfusion
- Tail vein injection & catheter placement

Behavioral testing:

- BBB locomotor scoring
- Beam and ladder
- Tail flick assessment
- Von Frey
- CATWALK

Physiological testing:

- Von frey filament test
- Non-invasive blood pressure and heart rate assessment

PUBLICATIONS

Reynolds J.A., Henwood M.K., Turtle J.D., Baine R.E., Johnston D.T., and Grau J.W. (2019) Brain-Dependent Processes Fuel Pain-Induced Hemorrhage After Spinal Cord Injury. *Front. Syst. Neurosci.* 13:44.

Grau J.W., Baine R.E., Bean P.A., Davis J.A., Fauss G.N., Henwood M.K., Hudson K.E., Johnston D.T., Tarbet M.M., Strain M.M. (2020) Learning to Promote Recovery after Spinal Cord Injury. *Exp. Neurol.*

ABSTRACTS & PRESENTATIONS

International Symposium on Neural Regeneration- Pacific Grove, California January 2020
Poster: Uncontrollable, but not controllable intermittent nociceptive stimulation expands the area of hemorrhage in rats that have received a contusion injury

Mission Connect- Houston, Texas December 2019
Poster: Role of blood pressure in pain-induced hemorrhage after spinal cord injury: Does blocking the nociception-induced rise in blood pressure have a protective effect?

Society for Neuroscience- Chicago, Illinois October 2019
Poster: Role of blood pressure in pain-induced hemorrhage after spinal cord injury: Does blocking the nociception-induced rise in blood pressure have a protective effect?

ABSTRACTS & PRESENTATIONS (Continued)

Neurotrauma- Pittsburg, Pennsylvania

June 2019

Poster: "Bumetanide promotes functional recovery of hindlimb function and reduces hemorrhage after spinal cord injury"

Society for Neuroscience- San Diego, California

November 2018

Poster: "Moderate Pain input, given within days of a contusion injury, can expand the area of hemorrhage and undermine behavioral recovery"