Gizelle N. K. Fauss

512-992-3704 • gizelle.nicole.kayleen@gmail.com • gnkleal@tamu.edu

Resident Address:
3780 Copperfield Dr. Apt. 218
Bryan, TX 77802

Office Address:
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 — August 2012 – December 2015
Bachelors of Science in Psychology
Minor in Neuroscience
Graduated — December 2015

Texas A&M University, College Station, TX — August 2016 – Present
Doctor of Philosophy in Neuroscience
Department of Psychology
Expected Graduation — May 2021

Research Experience

Undergraduate Research Assistant — August 2014 – December 2015
Texas A&M University
Laboratory of Mark G. Packard, Ph.D.

- Lab exploring the behavioral and neurobiological mechanisms of memory
- Use of peripheral and intra-cerebral drug injections to anatomically dissociate multiple memory systems

Undergraduate Research Project — January 2015 – May 2015
Texas A&M University
Laboratory of Mark G. Packard, Ph.D.

- Trained Long-Evans rats to find food in a hippocampus-dependent place-learning version of the elevated plus-maze task and were then given extinction training using two distinct protocols
- Rats given "response-extinction" were provided the opportunity to make the previously reinforced response
- Rats given "latent extinction" were simply confined to the previously rewarded spatial location without the reinforcement
- Findings indicate that, contrary to classical learning, animals do not need to make the previously reinforced response for extinction to occur
- The findings were published as a part of a larger project that is cited below

Graduate Research Assistant/Student — June 2016 – Present
Texas A&M University
Laboratory of James W. Grau, Ph.D.

- Examined the role of brain circuits in the exacerbation of hemorrhage at the injury site of spinally contused rats after administration of pain caudal to the injury
- Produced a proposal of experiments that determines the role of descending brain circuits and local cellular mechanisms that underlie and mediate secondary injury after nociceptive stimulation in spinally injured rats
- Daily duties include behavioral assessment of rodents and cellular assays in the lab
- Currently completing tasks required of a Ph.D. student

Training

Laboratory

- Histology, including:
    - Cresyl violet tissue staining
    - Cryostat slicing
    - Tissue collection and preparation
    - Western blots
    - Protein extraction
    - Bradford Assay
- Small animal surgery, including:
    - Stereotaxic surgery, prep, and assistance in rats
    - Use of gas anesthesia in rats (isoflurane)
    - Use of intraperitoneal anesthesia in rats (ketamine and xylocine)
    - Intra-cardial perfusion of rats, including brain harvesting
    - Cervical spinal cord transection and sham operations
    - Thoracic and cervical contusion and sham operations
    - Peroneal nerve dissection
    - Sciatic nerve transection
- Behavioral testing, including:
    - Morris water maze
    - Elevated plus-maze task
    - BBB Locomotor scoring
    - Beam and Ladder
    - Instrumental Learning
        - Electrophysiological nerve stimulation
- Pain testing, including:
    - Von Frey (plantar and girdle)
    - Non-invasive blood pressure and heart-rate assessment
- Microscopy, including:
    - Confocal microscopy
    - Brightfield microscopy
- Care and handling of rats, including:
    - Care of spinally injured animals

Certifications

- Ohio State University Spinal Cord Injury Training Program (SCITP) 2018
    - May 6^{th} – 18^{th}, 2018
    - Learned surgical and behavioral techniques for SCI research
    - One-on-one faculty interaction and formal lectures regarding my own research or research in the field
    - Only 12 out of 60 applicants accepted

Organizations

- BRAINS (Building Researchers and Innovators in Neuroscience and Society)
    - Previously known as SANDI (until May 2018)
    - Historian for 2017 – 2018 Year
    - Historian for 2018 – 2019 Year
- SfN (Society for Neuroscience)
    - Attended conference in November 2016
        - San Diego, California, United States
    - Attending conference in November 2018
        - San Diego, California, United States

- NNS (National Neurotrauma Society)
    - Attending conference in August 2018
        - Toronto, Ontario, Canada

Awards

- TAMIN Travel Award 2016: $600
- ISNR Travel Award 2017: $500
- TAMIN Travel Award 2017: $820
- SANDI Travel Award 2017: $149

Abstracts and Presentations

Undergraduate:

1. SfN Local Chapter Symposium, December 2015
    a. College Station, Texas, United States
    b. The memory systems engaged during acquisition determines the effectiveness of different extinction protocols

Graduate:

2. Mission Connect Conference, December 2016
    a. Houston, Texas, United States
    b. Brain circuits mediate increases in blood pressure and hemorrhage caused by nociceptive stimulation after spinal cord injury
3. SfN Local Chapter Symposium, December 2016
    a. College Station, Texas, United States
    b. Brain circuits mediate increases in blood pressure and hemorrhage caused by nociceptive stimulation after spinal cord injury
4. Annual TAMIN Symposium, April 2017
    a. College Station, Texas, United States
    b. Shock-induced hemorrhage and hypertension after spinal cord injury depend on brain systems
5. International Symposium of Neural Regeneration (ISNR) Conference, November 2017
    a. Monterey, California, United States
    b. Nociception-induced hemorrhage and hypertension after spinal cord injury depend on brain systems
6. SfN Local Chapter Symposium, December 2017
    a. College Station, Texas, United States
    b. Does nociceptive input rostral to a spinal cord injury affect recovery?
7. Mission Connect Conference, December 2017
    a. Houston, Texas, United States
    b. Does nociceptive input rostral to a spinal cord injury affect recovery?
8. Annual TAMIN Symposium, April 2018
    a. College Station, Texas, United States
    b. Pain-induced hypertension is neither necessary nor sufficient to drive hemorrhage after spinal cord injury
9. Neurotrauma Conference, August 2018
    a. Toronto, Ontario, Canada
    b. Noxious stimulation after spinal cord injury (SCI) induces a brain-dependent increase in hemorrhage
10. SfN Conference, November 2018
    a. San Diego, California, United States
    b. Noxious stimulation after spinal cord injury (SCI) induces a brain-dependent increase in hemorrhage

Publications

Acknowledgements:

1. Goodman J and Packard M (2015). THE MEMORY SYSTEM ENGAGED DURING ACQUISITION DETERMINES THE EFFECTIVENESS OF DIFFERENT EXTINCTION PROTOCOLS. Front. Behav. Neurosci. 9:314.

Publications: