

Komal R. Patel

Athens, GA • (848) 702-8070 • kp624470@gmail.com

Education

Rutgers, The State University of New Jersey

August 2020 - Jan 2024

School of Arts and Sciences

GPA: 3.949

- Major 1: Cell Biology and Neuroscience (CBN)
- Major 2: Psychology

University of Georgia in Athens

August 2024

Physiology and Pharmacology

- PhD student in Neuroscience

Publications

- Dylan W. Crawford, **Komal R. Patel**, et. al. Unpredictable mixed-valence outcomes induce a chronic and reversible generalized anxiety-like phenotype in genetically heterogeneous mice. *Biological Psychiatry*, May 2024
- Mark A. Gradwell, ... , **Komal R. Patel**, et. al. Multimodal sensory control of motor performance by glycinergic interneurons of the mouse spinal cord deep dorsal horn. *Neuron*, March 2024
- Aman Upadhyay, ... , **Komal R. Patel**, et. al. The dorsal column nuclei scales mechanical allodynia during neuropathic pain. *BioRxiv: The preprint server for biology*, February 2024
- Melissa Gonzalez, ... , **Komal R. Patel**, et. al. DeepLabCut-Live to probe state dependent neural circuits of behavior with closed-loop optogenetic stimulation. *BioRxiv: The preprint server for biology*, August 2024
- Louis D. Matzel, ... , **Komal R. Patel**, et. al. Negative attributes of mixed-valence memories strengthen over long retention intervals and the degree of enhancement is predicted by individual differences in state anxiety. *Behavioral Neuroscience*, October 2023

ORCID: 0009-0006-1141-0613

Certificates

Aresty Rutgers Undergraduate Research Journal | Peer Reviewer Sep 2022 - May 2023

Basic Life Support (CPR and AED) | American Heart Association

Jan 3, 2023

Fellowships

Division of Life Sciences Summer Undergraduate Research Fellowship

Rutgers, The State University of New Jersey

June 2023 - August 2023

Dorothy and David Cooper Scholarship Summer Undergraduate Research

Fellowship

Rutgers, The State University of New Jersey

June 2022 - August 2022, June 2023 - August 2023

Research Experience

Rutgers University

Piscataway NJ

Dr. Victoria Abaira: Cell Biology & Neuroscience

Research Assistant: Post-Bacc

January 2024 - July 2024

- Main project focuses on Serotonin Receptor 6 in the lower lumbar segment of the spinal cord and its role in pain modulation.
- Second project focuses on programming DeepLabCut-Live to manipulate state dependent behavioral neural circuits with optogenetics.
- Study of distribution, chemical properties, and activity of the neurons of interest in the regions of interest.

Research Assistant: Intern

August 2022 - January 2024

- Main project focuses on the Dorsal Column Nuclei in the brainstem and its role in chronic/neuropathic pain.
- Second project focuses on Parvalbumin interneurons in the lower lumbar segment of the spinal cord and their role in motor control.
- Study of distribution, chemical properties, and activity of the neurons of interest in the regions of interest.

Summer Internship

May 2022 - June 2022

- Focused on creating an effective computer program to trace the movement of mice in order to measure recovery from spinal cord injury.
- Used cameras that detected elevation of the mice in order to observe locomotion.

Rutgers University

September 2021 - January 2024, Piscataway NJ

Dr. Louis Matzel: Psychology Research Assistant

- Behavioral and Systems Neuroscience subdivision
- Focused on studying stress and generalized anxiety and the ways in which they can be induced and impacted.
- Developed behavioral experiments for the induction of generalized anxiety in mouse models

Work Experience

Total Family Solutions

June 2022 - August 2022, Avenel NJ

Intern

- Shadowed psychologists at an outpatient mental health agency to learn proper interaction with patients to help them cope with distress.
- Responsible for reaching out to other mental health institutions, hospitals, schools, child protective services, and other institutions to give them information about us so that people of all age groups can have easier access to help if needed.

Samudhra Premium Restaurant and Lounge May 2021 - August 2021, Franklin Park NJ

Host

- Assigned guests and waiters to tables based on needs and restaurant section rotation.
- Took reservations and to-go orders by phone, answered customer questions, and relayed important information to managers and guests.
- Communicated with the kitchen team, managers, and waiters to assess cooking times, avoid worker overload and minimize customer dissatisfaction.

Robert Wood Johnson University Hospital July 2019 - March 2020, New Brunswick NJ

Volunteer

- Volunteered at a nursing station for patients with kidney transplants and other related issues.
- Responsible for organizing patient charts, answering patient calls, and running errands for nurses and patients.

Y. B. Choi Tae Kwon Do School

June 2018 - September 2020, Franklin Park NJ

Instructor

- Conducted classes and made sure each student got the attention they needed to improve.
- Helped plan and set up events and fundraisers.

Skills

- **Research:** Cryo/Vibratome sectioning, IHC, RNAscope, Perfusion, Mice handling, Scientific writing, Data collection/presentation.
- **Soft:** Time management, Fast learner, Organization, Critical thinking, Team work, Problem solving, Leadership/teaching