

Jung Ha Byun

501 D.W. Brooks Drive, Vet Med-1 Rm 2136
jb64143@uga.edu / +1 (608)-960-2282

EDUCATION

University of Georgia / Neuroscience

August 2022 - Present

Department of Physiology and Pharmacology

PhD Program in Neuroscience

University of Wisconsin - Madison / Microbiology

September 2016 - May 2022

Department of Bacteriology, College of Agriculture & Life Sciences

Bachelor of Science in Microbiology

RESEARCH EXPERIENCE

Graduate Research Assistant / Dr. Jae-Kyung Lee's Lab

July 2023 – Present, University of Georgia

- Involved in a research project on investigating the effects of Regulator of G-protein Signaling 10 (RGS10) on neurodegenerative diseases, including Parkinson's Disease.
 - Performed Immunohistochemistry to observe the synuclein pathology and microglial activation in the mouse brains.
 - Assisted in culturing cortical neuronal cells and primary microglia from mice brains.
 - Assisted in extracting bone marrow cells.
- Participated in a research project on examining the roles of Natural Killer (NK) cells in synuclein pathology in a mouse model of α -synucleinopathy.
 - Helped Isolating NK cells from the spleen of mice.
 - Performed immunohistochemistry to observe the synuclein pathology and microglial activation in the mouse brains.

Graduate Research Assistant / Dr. Claire de La Serre's Lab

January 2023 – June 2023, University of Georgia

- Involved in a research project on the effects of vagal deafferentation on feeding behavior and reward system.
 - Observed the microglia and neuronal activities using immunohistochemistry.
- Participated in a project on the influence of maternal diet on offspring, using rat models.
 - Tested memory using Morris Water Maze test.
 - Collected the brain, the nodose ganglia, the gut, and the liver.
 - Conducted Progressive Ratio test to observe the reward strength.

Undergraduate research program / Federico Rey's Lab

September 2021 – May 2022, UW-Madison

- Involved in a research project on effects of the gut metabolism with different G-protein coupled receptors (GPR41, GPR43, GPR109) on cardiovascular disease and atherosclerosis, using mice models.
- Designed an independent research project on the gut microbiome with different cholesterol levels, using mice models.
- Conducted in vivo research on the interaction between the gut microbiome metabolism and cardiovascular diseases.
- Observed the liver, heart, blood glucose levels to analyze the relationship between butyrate-producing bacteria and cardiovascular diseases.
- Completed the mouse training to conduct experiments that required injection, gavaging, tail snipping, and surgery.

Undergraduate Research Assistant / Dr. Jae-Hyuk Yu's Lab

May - July 2019, UW-Madison

- Conducted experiments to find various methods for degrading aflatoxins.
- Investigated on finding the optimization of solvent for extracting anti-microbial agent from fungal culture fermentation through liquid-liquid reactions.
- Learned how to conduct experiments using different methods such as HPLC to observe the area of fungi.

Undergraduate Research Assistant / Dr. Jean-Michel Ané's Lab

January - May 2017, UW-Madison

- Conducted spot application and plant transformation on *Medicago truncatula* and *Poplar trichocarpa*, using trans-Zeatin, TIBA and rhizobia on the roots to observe the formation of nodules on the roots.

LEADERSHIP EXPERIENCE

Korean Undergraduate Students Association / Event Chair

September 2016 – May 2017, Madison, WI

- Planned events and activities for 100+ students in UW-Madison and helped Korean students with their needs for their successful college experience.
- Hosted an orientation for freshmen and transfer students to introduce different clubs in UW-Madison
- Collaborated with other associations at UW-Madison to make the events more successful.
- Implemented major events such as field day, Halloween party, picnic, and food festival.
- Introduced Korean food and culture in food festival.
- Managed getting a sponsor from the association (KSSA)
- Created a new logo for KUSA at UW-Madison

Conference Attendance and Presentations

- Jaegwon Chung, Janna Jernigan, Kelly Menees, Declan Gresham, Jung Ha Byun, Jae-Kyung Lee. *Evaluating the role of microglial RGS10 in clearing synuclein aggregates in vitro and in vivo preclinical mouse model of synucleinopathy*. Southeastern Neurodegenerative Disease Conference (SENDCon). October 2023. Atlanta, GA.