

# Jung Ha Byun

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## EDUCATION

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### **University of Georgia / Neuroscience**

August 2022 - Present

Department of Physiology and Pharmacology, College of Veterinary Medicine  
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

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### **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.

### **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 Assistant / Dr. 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.

### **Intern for antibacterial patent material / BnC company**

February 2020 – April 2021, Paju-si, South Korea

- Participated in a start-up company in South Korea to receive patent for better prevention of bacteria and virus, including COVID-19.
- Used different methods to prevent bacteria from penetrating masks.
- Conducted experiments to discover antibacterial material for masks.

### **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**

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### **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

## **LANGUAGE PROFICIENCY**

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Language: English (Advanced), Korean (Native)