

# Kyle McGill Percy

## PHD CANDIDATE

### Objective

I am a PhD candidate in the Department of Physiology and Biophysics at Case Western Reserve University School of Medicine. My academic journey has been fueled by a lifelong fascination with neurodegenerative diseases, especially Alzheimer's disease (AD). Witnessing the profound impact of AD, affecting 6.2 million individuals in the United States alone, with symptoms like memory loss, impaired judgment, and daily life challenges, has strengthened my commitment to research in this field.

### Education

2022-Current **Case Western Reserve University, School of Medicine**  
**Cleveland, OH**  
**PhD in Physiology & Biophysics (In progress)**

Research project centers on exploring mitochondrial dysfunction in tauopathy, with a specific emphasis on identifying novel proteins for potential therapeutic interventions.

2019-2020 **University of South Florida, Morsani College of Medicine**  
**Tampa, FL**  
**MS in Aging & Neuroscience**

2015-2017 **University of South Florida**  
**Tampa, FL**  
**BS in Biomedical Science**

Graduated Magna Cum Laude

2012-2014 **Hillsborough Community College**  
**Tampa, FL**  
**AA in Premedical Science**

### Research experience

2023-Current **PhD Candidate | Case Western Reserve University,**  
**Dept. of Physiology & Biophysics**

Advisor: Dr. Xin Qi

- Investigating mitochondrial dysfunction in tauopathy with a focus on novel protein targets for therapeutic intervention.
- Techniques used: Mammalian cell culture, immunoblotting, confocal microscopy, mitochondrial isolation, etc.

2021-2022	<b>Research Assistant   Case Western Reserve University, Dept. of Pathology</b>  Advisors: Dr. David Kang & Dr. JungA Alexa Woo <ul style="list-style-type: none"> <li>• Studied neuron-derived exosomes and their role in neurodegeneration.</li> <li>• Focused on <math>\beta</math>-arrestins in Alzheimer's disease, Slingshot 1 in tauopathies, and CHCHD2/CHCHD10 in neurodegeneration.</li> </ul>
2020-2021	<b>Biological Scientist   USF Byrd Alzheimer's Institute</b>  Advisor: Dr. David Kang & Dr. JungA Alexa Woo

---

## Publications

2025	<b>McGill Percy KC</b> , Liu Z, Qi X. Mitochondrial dysfunction in Alzheimer's disease: Guiding the path to targeted therapies. <i>Neurotherapeutics</i> . 2025 Apr;22(3):
2024	Kee TR, Khan SA, Neidhart MB, Masters BM, Zhao VK, Kim YK, <b>McGill Percy KC</b> , Woo JA. The multifaceted functions of $\beta$ -arrestins and their therapeutic potential in neurodegenerative diseases. <i>Exp Mol Med</i> . 2024 Feb;56(1):129-141.
2022	Kee TR, Wehinger JL, Gonzalez PE, Nguyen E, <b>McGill Percy KC</b> , Khan SA, Chaput D, Wang X, Liu T, Kang DE, Woo JA. Pathological characterization of a novel mouse model expressing the PD-linked CHCHD2-T61I mutation. <i>Hum Mol Genet</i> . 2022 Nov 28;31(23):3987-4005.
2022	Yoo JY, Sniffen S, <b>McGill Percy KC</b> , Pallaval VB, Chidipi B. Gut Dysbiosis and Immune System in Atherosclerotic Cardiovascular Disease (ACVD). <i>Microorganisms</i> . 2022 Jan 5;10(1):108.
2021	Woo JA, Yan Y, Kee TR, Cazzaro S, <b>McGill Percy KC</b> , Wang X, Liu T, Liggett SB, Kang DE. $\beta$ -arrestin1 promotes tauopathy by transducing GPCR signaling, disrupting microtubules and autophagy. <i>Life Sci Alliance</i> . 2021 Dec 3;5(3):e202101183.

---

## Technical Skills

Molecular & Cellular Biology	<ul style="list-style-type: none"> <li>- Mammalian cell culture, microbial culture, mitochondrial isolation</li> <li>- Transfections (cDNA, siRNA), SDS-PAGE, Western blotting</li> <li>- Plasmid prep, immunocytochemistry, confocal microscopy</li> </ul>
Genetics & Histology	<ul style="list-style-type: none"> <li>- DNA extraction, PCR, genotyping, gel electrophoresis</li> <li>- Brain perfusion, slicing, IHC, animal handling and surgeries.</li> </ul>

Biomarker & Assays	<ul style="list-style-type: none"> <li>- Exosome isolation from patient plasma</li> <li>- Enzyme-Linked Immunosorbent Assay (ELISA)</li> <li>- Proximity Ligation Assay (PLA)</li> </ul>
Analytic Tools	<ul style="list-style-type: none"> <li>- Graphpad Prism, ImageJ, R programming language</li> <li>- Microsoft Office, Adobe Illustrator/Photoshop</li> </ul>
Soft Skills	<ul style="list-style-type: none"> <li>- Scientific communication (oral &amp; written)</li> <li>- Team collaboration, time management, data visualization</li> </ul>

---

## Leadership Experience

2019

### **Volunteer Caregiver | Jamie's Adult Day Center, Tampa FL**

- Organizing and participating in various cognitive therapies. (Example: Memory exercises).
- Conversating with patients.
- Prepare and distribute food and beverages.
- Help assist in patients in mobility and comfort. (Rolling wheelchairs or help aid in walking).

2018

### **Science Teacher | Sports Leadership and Management Academy, Tampa FL**

- Facilitate an engaged classroom environment conducive to learning and promote excellent student-teacher interaction
- Utilized knowledge of science to construct interactive curriculum for middle school science.
- Collaboration with team members to increase student learning.

2013-2018

### **Front of House Manager & Server | Outback Steakhouse, Tampa FL**

- Responsible for managing front of house personnel including servers, host, and bartenders.
  - I interacted with guests to ensure a pleasurable dining experience and resolved any issues.
  - Maintained order and flow during peak times.
  - Trained newly hired employees and coordinated updated training classrooms for current staff.
  - Involved with managing the restaurant's finances.
-