**Brittany M. Jack**

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**Education**

Rockhurst University

Bachelor of Science, December 2016

Major: Biochemistry

University of Kansas Medical Center

NSF Graduate Research Fellow

Second Year Pre-doctoral Candidate

**RESEARCH**

*NSF Graduate Research Fellow,* June 2017-Present

Dr. Prachee Avasthi

* Actin Redundancy is required for Protein Synthesis and Gating of Flagellar Proteins in *Chlamydomonas*

*Research Assistant*, January-May 2017

Dr. Prachee Avasthi

* Actin redundancy in *Chlamydomonas reinhardtii* necessary for protein trafficking

*Intern*, June-December 2016

K-INBRE Summer Scholar

Dr. Prachee Avasthi

* Identifying pathways that regulate flagellar assembly

Dr. Paula Morehouse on Chemistry Education, January 2014 – December 2016

* Goal of research to create more conceptual pre-lab activities that accompany the traditional lab experience

Dr. Mary Haskins, August 2015 – May 2016

* Survey Soils for Contamination with Parasite Eggs

*Summer Intern,* June-August 2015

**ASPET Summer Undergraduate Research Program,** Kansas City, KS

**Kansas University Medical Center, Department of Pharmacology, Toxicology and**

**Therapeutics, Wen-Xing Ding, PhD**

* Research conducted with Wen-Xing Ding, PhD.
  + Parkin protein degradation in HEK293 cells, p62 and LC3 expression in Adipose specific ATG 5 KO mice, neutrophil staining, cell culture, western blot, BSA, ALT, AST, TG, CHOL concentrations with accompanying plot, Caspase 3 activity
* Presented weekly data during group meetings and journal club presentation on Deficient Chaperone-Mediated Autophagy in Liver Leads to Metabolic Dysregulation by Jamie L. Schneider, et. all
* Final presentation Determine the Role of a deletion of Atg5 in Mouse Adipose Tissue on Alcohol-Induced Liver Injury

**Mentoring Experience**

* High School Students: Alexa Cole and Karla Pratts
* Undergraduates: Taylor Kersten, Gabrielle Witter, and Joseph Stautner

**Publications/Presentations**

* Jack B, Mueller DM, Fee AC, Tetlow A, Statuter J Avasthi P. (2018, August). Actin Redundancy in Chlamydomonas is Required for Flagellar Protein Synthesis and Gating. Poster Session at the Gordon Research Conference for Plant and Microbial Cytoskeleton, Andover, New Hampshire.
* Jack B, Mueller DM, Fee AC, Tetlow A, Avasthi P. (2017, December) Actin Redundancy in Chlamydomonas is Required for Flagellar Protein Synthesis and Gating. Invited oral presentation, Gordon Research Conference for Plant and Microbial Cytoskeleton, Andover, New Hampshire.
* Jack, Brittany & Avasthi, Prachee. (2018). Chemical Screening for Flagella-Associated Phenotypes in Chlamydomonas reinhardtii. Methods in molecular biology (Clifton, N.J.). 1795. 203-221. 10.1007/978-1-4939-7874-8\_17.
* Jack B, Mueller DM, Fee AC, Tetlow A, Avasthi P. (2018, April) Actin Redundancy in Chlamydomonas is Required for Flagellar Protein Synthesis and Gating. Poster Session at the Student Research Forum at the University of Kansas Medical Center, Kansas City, Kansas.
* Witter G, Jack B, \*\*\*\*\*\*\*\*\*\*\*\*\*\*
* Jack B, Mueller DM, Fee AC, Tetlow A, Avasthi P. (2017, December) *Actin Redundancy in*Chlamydomonas*is Required for Flagellar Protein Synthesis and Gating*. Poster Session at the Annual Meeting of the American Society of Cell Biology, Philadelphia, Pennsylvania
* Jack B, Mueller DM, Fee AC, Tetlow A, Avasthi P. *Actin Redundancy in*Chlamydomonas*is Required for Flagellar Protein Synthesis and Gating*. BioRxiv [Preprint]. 2017 November 30. DOI: <https://doi.org/10.1101/227553>.
* \*\*\*\*Jack B, Mueller DM, Tetlow A, Avasthi P. (2017, July) *Actin Redundancy in*Chlamydomonas*is Required for Flagellar Protein Synthesis and Gating*. Poster Session at the FASEB Ciliary Confernce in Scottsdale, Arizona.
* Jack B., Avasthi P. (2017, January). *Identifying Pathways that Regulate Flagellar Assembly*. Invited Talk presented at the Annual K-INBRE Symposium, Manhattan, Kansas.
* Jack B., Avasthi P. (2017, January). *Identifying Pathways that Regulate Flagellar Assembly*. Poster Session presented at the Annual K-INBRE Symposium, Manhattan, Kansas.
* Jack B., Avasthi P. (2016, December). *Identifying Pathways that Regulate Flagellar Assembly*. Poster Session presented at the Annual Meeting of the American Society of Cell Biology, San Francisco, California.
* Jack B., Morehouse P. (2016, October). *Development and Assessment of Concept-Based Curriculum in Organic Chemistry*. Poster session presented at the Undergraduate Women in Physical Sciences, Lincoln, Nebraska
* Jack B., Morehouse P. (2016, April). *Development and Assessment of Concept-Based Curriculum in Organic Chemistry*. Poster session presented at the Student Research Forum, Rockhurst University, Kansas City ,MO.
* Jack B., Gonzalez M. Haskins, M (2016, April). *Prevalence of Parasite Eggs in Metropolitan Parks*. Poster session presented at the Student Research Forum, Rockhurst University, Kansas City,MO.
* Jack B., Gonzalez M. Haskins, M (2016, April). *Prevalence of Parasite Eggs in Metropolitan Parks*. Poster session presented at the Annual Meeting of the Missouri Academy of Science, Jefferson City, MO.
* A Renovation in Pre Labs: A New Hands-On Approach. Invited oral presentation, American Chemical Society Midwestern Regional Conference, Northwest Missouri State University, St. Joseph, Missouri, USA, October 23, 2015.

**Professonal Affiliations**

American Chemical Society

American Society for Pharmacology and Experimental Therapeutics

American Society for Biochemistry and Molecular Biology

American Society for Cell Biology

**Teaching Experience**

*Teaching Assistant,* August 2014-December 2016

**Rockhurst University,** Kansas City, MO

* Prep and cleanup for Organic Chemistry lab
* Make sure all chemicals are properly labeled and in the correct place
* Ensure that proper glassware is used for different chemicals for the safety of students and faculty

*General Chemistry, Organic Chemistry, Math, and Biology Tutor,* May 2014-Present**Self- Employed,** Kansas City, MO

* Tutor high school and college students in Chemistry, Math, and Biology
* Create and administer worksheets and quizzes for further comprehension in problem areas

**Honors & Activities**

University of Kansas Medical Center:

National Science Foundation Graduate Research Fellow -June 2017

Rockhurst University:

Phi Theta Kappa Honor Society   
 Phi Theta Kappa Scholarship

Science Division Scholarship

Dean’s List

Vice-President- American Chemical Society, Rockhurst Chapter

Historian- American Chemical Society, Rockhurst Chapter

Phi Lambda Upsilon

Sigma Pi Sigma

Johnson County Community College:  
 Dean’s List,

President’s List  
 Book Scholarship

**Service**  
 Harvester’s  
 Bridging the Gap

Cristo Rey Kansas City

American Cancer Society, Hope Lodge