

Molly Elizabeth Johnson

(732) 610-1684 | MEJ54@pitt.edu

101 N Dithridge Street, Apartment 722
Pittsburgh, PA 15213

<u>Education</u>	University of Pittsburgh Honors College Pittsburgh, PA Major: Bioinformatics Minor: Chemistry GPA: 3.93	Expected Graduation: 04/2017
<u>Relevant Coursework</u>	Molecular Biology Metabolic Pathways & Regulation Macromolecular Structure & Function Computational Biology Genetics (Honors) Virology Microbiology Algorithm Implementation (Java) Data Structures (Java) Discrete Structures for Computer Science Applied Regression Applied Statistical Methods	
<u>Research Experience</u>	Mount Sinai Icahn School of Medicine Summer Undergraduate Research Program Department of Pharmacological Sciences Principal Investigator: Dr. Avner Schlessinger	Summer 2016
	<ul style="list-style-type: none"><i>Parsed and validated tumor entries from the Catalogue of Somatic Mutations in Cancer (COSMIC), constructed mutational database, and analyzed protein structural features of ~500,000 mutations</i>Presented research to faculty and at Mount Sinai research symposium	
	University of Pittsburgh Undergraduate Research Department of Biological Sciences Principal Investigator: Dr. James Pipas	Spring 2015 – Current
	<ul style="list-style-type: none"><i>Identified novel subtypes of head & neck cancer based on genetic expression patterns and the presence of human papillomavirus (genomic/transcriptomic/proteomic data from The Cancer Genome Atlas)</i>Presented research in interdisciplinary setting and at University of Pittsburgh research symposium	
	University of Pittsburgh School of Medicine Summer Undergraduate Research Program Department of Pathology Principal Investigator: Dr. Nahed Ismail	Summer 2014
	<ul style="list-style-type: none"><i>Analyzed Type 1 IFN and its role in detrimental inflammasome activation during fatal infection of Ehrlichia, an LPS-negative Gram-negative bacterium</i>Presented research to peers and faculty at the University of Pittsburgh School of Medicine	
	University of Pittsburgh First Experiences in Research Department of Biomedical Informatics Principal Investigator: Dr. Madhavi Ganapathiraju	Spring 2014
	<ul style="list-style-type: none"><i>Created a treemap visualization involving gene ontology to carry out interactome analysis of human genes</i>Presented research to the Department of Biomedical Informatics and at a university poster symposium	
<u>Skills</u>	Computational <ul style="list-style-type: none">Proficient in Java and R; familiar with PostgreSQL, bash, perl, HTML, CSS, JavaScript, JSON, PHP Laboratory <ul style="list-style-type: none">Proficient in techniques of ELISA, PCR, culturing cells, stimulating cells; familiar with protocols of Next-Generation Sequencing, Southern/Northern/Western blot, co-immunoprecipitation	
<u>Leadership Experience</u>	University of Pittsburgh Undergraduate Teaching Assistant BIOSC 0350 Genetics Dr. Lewis Jacobson	Fall 2015 & Spring 2016
	<ul style="list-style-type: none">Held weekly office hours and exam review sessions for a class of 100+ students. Led recitations, presented problems and fostered discussion on concepts. Created and managed a Facebook page for the class to encourage discussion among the students outside the classroom.	
	Math Tutor	
	<ul style="list-style-type: none">Taught full-length geometry course to 8th grade student over the course of 2 monthsTutored high school student in algebra and pre-calculus	Summer 2014 2015-2016
<u>Awards</u>	University of Pittsburgh Honors College Brackenridge Summer Research Fellowship	Summer 2015
	<ul style="list-style-type: none">Awarded financial aid to carry out independent research project under the guidance of a University of Pittsburgh faculty mentor and present research to students and faculty in an interdisciplinary setting	
	National AP Scholar	2013
	Bryn Mawr College President's Book Award	May 2012
	<ul style="list-style-type: none">Presented in recognition of an intense intellectual commitment, a purposeful vision of life, and a desire to make a meaningful contribution to the world	
<u>References</u>	James Pipas, PhD University of Pittsburgh pipas@pitt.edu Avner Schlessinger, PhD Icahn School of Medicine at Mt. Sinai avner.schlessinger@mssm.edu Lewis Jacobson, PhD University of Pittsburgh ljac@pitt.edu	