

Jenea I. Adams

Philadelphia, PA 215-821-8242

jiadams@pennmedicine.upenn.edu

EDUCATION:

University of Pennsylvania

Philadelphia, Pennsylvania

**Doctor of Philosophy in
Genomics and Computational Biology**

Date of entry: August 2019

University of Dayton

Dayton, OH

B.S. Biology
Minor: **Computer Science**

Major GPA: 3.57/4.0

Minor GPA: 3.71/4.0

Graduating: May 2019

Cumulative GPA: 3.605/4.0

GRADUATE RESEARCH EXPERIENCE:

Cancer Genomics Rotation Student January 2020-March 2020 | Philadelphia, PA

PI: **Yi Xing, Ph.D.**, Director of the Center for Computational and Genomic Medicine at the Children's Hospital of Philadelphia, Professor of Pathology and Laboratory Medicine
Employed computational tools (such as IRIS, PEGASAS, and rMATs) developed in the lab to investigate alternative splicing in pediatric and adult Acute Myeloid Leukemia data to reveal novel targets of chimeric antigen receptor T cell receptor-mediated immunotherapy.

Bioinformatics Rotation Student September 2019-December 2019 | Philadelphia, PA

PI: **Li San Wang, Ph.D.**, Professor of Pathology and Laboratory Medicine, Co-Director of the Penn Neurodegeneration Genomics Center

Rotation project investigate the gene regulatory role that long non-coding RNA's play by developing a novel computational method to quantify genome-wide co-expression patterns using large transcriptomic and epigenomic datasets. These efforts provide insights in how human genetic variations mechanistically affect phenotypic traits.

UNDERGRADUATE RESEARCH EXPERIENCE:

Cancer Genetics Research Assistant August 2018-May 2019 | Dayton, OH

University of Dayton Department Biology

Worked with a team of geneticists to computationally and experimentally unravel the proteomics and mechanisms of cancer targets on glioblastomas in fruit fly models.

TECBio REU @ Pitt:

Bioinformatics Intern

May 2018- July 2018 | Pittsburgh, PA

University of Pittsburgh School of Medicine Department of Computational and Systems Biology

Developed a bioinformatics pipeline to investigate the competency of using protein "sensors" and "effectors" to predict protein-protein interfaces. With mentorship from CPCB Post-doctorates, conducted a successful experiment suitable for publication through the Dr. Ivet Bahar Lab.

Computational Environmental

Biology Research Assistant August 2017 – August 2018

| Dayton, OH

University of Dayton Department of Biology

Data preparation and statistical data analysis of macroinvertebrate species diversity as it relates to invasive honeysuckle populations (NSF-funded).

Biochemistry Research Assistant January 2017 – May 2017 | Dayton, OH

University of Dayton Department of Chemistry

Gained extensive experience in molecular biology, biotechnology, and biochemistry cloning and amplifying DNA using PCR, gel electrophoresis, DNA purification, and DNA transformation.

PUBLICATIONS:

J.I. Adams; Luca Ponzoni; Burak Kaynak; Hongchun Li; Ivet Bahar, **The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study**. *Manuscript in preparation*.

Kukla, Mitchell J.; Kuminecz, Corey; Maloney, M. E.; Murphy, Joseph; Buskey, Taylor M.; **Adams, Jenea I.**; Little, Michelle N.; Borth, Eric B.; Sparbanie, Taylor M.; Mahoney, Sean D.; Custer, Kevin W.; Chapman, Julia I.; and McEwan, Ryan W., "Macroinvertebrates" (2018). *Data files*. 26. <https://doi.org/10.26890/amur.wxsk7qn6bd>

PRESENTATIONS:

1. Brother Joseph W. Stander Symposium –April 2019, *Dayton, Ohio*
 - a. Madhuri Kango-Singh, **Jenea Imani Adams**, Kaitlyn M Alleman, Luke Alan Bressler, Kirti Snigdha, Katie Katherine Parker, Claire C Sullivan, Karishma Sanjay Gangwani, Kathleen Theresa McCaslin. 2019. Possible pharmacologic glioma treatment in *Drosophila* model. Department of Biology, University of Dayton.
 - b. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study. Department of Computational and Systems Biology, University of Pittsburgh, Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).
2. Annual Biomedical Research Conference for Minority Students—November 2018, *Indianapolis, Indiana*
 - a. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study. Department of Computational and Systems Biology, University of Pittsburgh, Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).
3. University of Dayton Scholarship Ceremony – November 2018, *Dayton, Ohio*
 - a. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study. Department of Computational and Systems Biology, University of Pittsburgh, Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).
4. Council on Undergraduate Research REU Symposium—October 2018, *Washington, D.C.*
 - a. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study.

Department of Computational and Systems Biology, University of Pittsburgh,
Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).

5. Duquesne University Summer Undergraduate Research Symposium—July 27, 2018,
Pittsburgh, Pennsylvania
 - a. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study. Department of Computational and Systems Biology, University of Pittsburgh, Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).
6. University of Pittsburgh School of Medicine Research Symposium—July 26, 2018
Pittsburgh, Pennsylvania
 - a. **J.I. Adams**, Luca Ponzoni, Burak Kaynak, Hongchun Li, Ivet Bahar. 2018. The Role of Sensors and Effectors in Protein-Protein Interactions: A Systematic Study. Department of Computational and Systems Biology, University of Pittsburgh, Undergraduate Research Symposium (Pittsburgh, PA; July 26, 2018).
7. Brother Joseph W. Stander Symposium—March 2018, *Dayton, Ohio*
 - a. ¹Little, M.N., **²J.I. Adams**, ³C. Kuminecz, ⁴M.J. Kukla, ⁵M.E. Maloney, ⁶J. Murphy, ⁷T.M. Buskey, ⁸T.M. Sparbanie, ⁹E.B. Borth, ¹⁰S.D. Mahoney, ¹¹K.W. Custer, ¹²J.I. Chapman and R.W. McEwan. 2018. Aquatic macroinvertebrate density in headwater streams with varying intensities of riparian Amur honeysuckle (*Lonicera maackii*) invasion. University of Dayton, Stander Symposium (Dayton, OH; April 18, 2018).
8. Miami Valley Ecology Symposium—March 2018, Dayton, Ohio
 - a. ¹Little, M.N., **²J.I. Adams**, ³C. Kuminecz, ⁴M.J. Kukla, ⁵M.E. Maloney, ⁶J. Murphy, ⁷T.M. Buskey, ⁸T.M. Sparbanie, ⁹E.B. Borth, ¹⁰S.D. Mahoney, ¹¹K.W. Custer, ¹²J.I. Chapman and R.W. McEwan. 2018. Aquatic macroinvertebrate density in headwater streams with varying intensities of riparian Amur honeysuckle (*Lonicera maackii*) invasion. University of Dayton, Stander Symposium (Dayton, OH; April 18, 2018).

IN THE NEWS:

1. **(MMBioS) TECBio Trainee, Jenea Adams, to present TR&D1-supported work at two conferences** <https://mmbios.pitt.edu/news/48-2018/213-tecbio-trainee-jenea-adams-to-present-tr-d1-supported-work-at-two-conferences>
2. **(University of Dayton) Student Research:** https://udayton.edu/news/articles/2018/04/stander_student_feature.php
3. **(University of Dayton) Giving Day: Scholars** <https://udayton.edu/advancement/give/scholarships/scholars/18-19-adams.php>

ACADEMIC HONORS/AWARDS:

2019	Undergraduate Commencement Speaker
2019	Graduating Scholar of Excellence in the College of Arts and Sciences
2019	Office of Multicultural Affairs Senior Impact Award
2018	Daniel J. Curran and Claire M. Renzetti Scholarship for International Studies \$2,000

2018	American Society for Microbiology: Annual Biomedical Research Conference for Minority Students Research Presentation Award \$300
2018	American Society for Microbiology: Annual Biomedical Research Conference for Minority Students Full Conference Travel Award \$2,500
2018	Inaugural University of Dayton Provost Research Scholar
2016-2019	Mona Guerrier Fallen Endowed Scholarship \$3,300
2016-2019	Black Alumni Scholarship \$8,000
2015-2019	Dean's Merit Scholarship \$48,000
2016-2018	Dean's List Scholar (4 semesters)

PROFESSIONAL SOCIETIES:

University of Pennsylvania Fontaine Society	2019-Present
University of Pennsylvania Ernest E. Just Biomedical Society	2019-Present
American Association for the Advancement of Science	2018-2019
National Society of Black Engineers	2018-2019
Founder, The Black Women in Computational Biology Network	2020-Present

SKILLS:

Experimental Research:

Experimental use of animal models
 Behavioral neurobiology techniques
 Dissection techniques (fruit fly and mammalian brain)
 Statistical Analysis of Biological Data
 Visualization of Biological Data
 Protein and DNA purification
 PCR techniques
 Molecular cloning
 Gel electrophoresis
 Macromolecule blotting and probing
 Microscopy

Language:

Spanish (intermediate-advanced)

Computer Programming:

Advanced in Java
 Advanced in Python
 Advanced in R
 Proficient in Latex
 Proficient in Linux/Unix environments
 Beginner in C/C++

RELEVANT COURSEWORK:

GRADUATE

Genomics and Computational Biology Topics in Computational Biology and Biological Modeling, Experimental Genome Science, Regulation of the Genome

Mathematics Statistics for Genomics and Biomedical Informatics, Bayesian Statistics, Methods for Statistical Genetics and Genomics

UNDERGRADUATE

Biology Courses Concepts of Biology I, Biology I lab Concepts of Biology II, Concepts of Biology II lab, Biology Sophomore Seminar, General Genetics, General Genetics Lab, Ecology, Plant Biology, Environmental Ecology, Physiology,

	Experimental Physiology Lab, Genetics of Human Disease, Neurobiology, Experimental Neurobiology Lab, Analysis of Biological Data, Cancer Biology
Computer Science Courses	Algorithms and Programming I, Algorithms and Programming II, Python Programming and Data Structures, Discrete Structure for Computer Scientists, Data Structures and Algorithms, Design and Analysis of Algorithms
Mathematics Courses	Introductory Calculus I, Introductory Calculus II Independent: Calculus III, Statistical Methodology

SCIENTIFIC OUTREACH/WORK:

Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)

Science Education Academy Volunteer |Philadelphia, PA

SPARK Program, 2019 |Philadelphia, PA
SPARK Lab Volunteer, Mentor

The Wistar Institute, 2019 |Philadelphia, PA
STEM Graduate School Discovery Volunteer

Project S.H.O.R.T., 2019 |Philadelphia, PA
STEM Graduate School/Medical School Application Consultant

UD Department of Biology, UD Center for Social Concern, 2019 |Otangachi, Ecuador
Environmental Service Learner/Educator

GE Aviation Learning Center VIFE, 2018 | Cincinnati, OH
STEM Volunteer

BATU and Conscious Connect, 2017, 2018 | Dayton, OH
STEM Book Drive Facilitator

UD Department of Biology, 2018 | Dayton, OH
Concepts of Biology Tutor

UD Department of Biology, 2018 | Dayton, OH
Volunteer TA

WORK EXPERIENCE:

Chemistry Exam Proctor 2018 – 2019 | Dayton, OH
UD Department of Chemistry
Monitored 100- to 300-level Chemistry exams as a trusted student and upheld the University of Dayton Honor code and guidelines for academic integrity.

Resident Assistant 2017 – 2019 | Dayton, OH
UD Housing and Residence Life

Worked in a residential area to integrate learning and living in a diverse community and administer resources and counseling to those in need.

UD MyLife Blogger 2016-2018 | Dayton, OH
UD Admissions
Documented college life at UD through a well-known and popular blogging portal.

Manager for Marketing and Events 2016 – 2017 | Dayton, OH
University of Dayton Center for Student Involvement
Manage the Hangar Staff, all marketing and event promotion for the Hangar, and handle monetary deposits.

Hangar Associate 2016-2016 | Dayton, OH
University of Dayton Center for Student Involvement
Worked in customer service-, team-oriented role to ensure the best experience for visitors to the University game room.

**Women in Engineering
Summer Camp Counselor** 2017 – 2017 | Dayton, OH
University of Dayton School of Engineering
Worked with young women in high school to facilitate a week of educational engagement opportunities to explore engineering and STEM.

EXTRACURRICULAR INVOLVEMENT AND SERVICE:

Organizations & Committees

Black Graduate and Professional Student Association	<i>Member</i>	2019-Present
Black Action Through Unity	<i>Vice President</i>	2016-2019
University-wide Martin Luther King Jr. Planning Committee		2017-2019
Student Academic Senate	<i>Natural Science Representative</i>	2017-2018

Athletics

University of Dayton Track and Field Team (Division I)	2015-2016
--	-----------

Recent Service

Service/Immersion Abroad	UD Department of Biology <i>Ecuador, South America</i>	March 2019
Service/Immersion Abroad	CRISPAZ <i>El Salvador, South America</i> ,	January 2019
Clean-Up Volunteer	Elevation Collective Build the Block,	September 2018
Engagement Volunteer	K-12 Art Center	Nov 2017- Nov 2017
Engagement Volunteer	Longest Table Dayton	Apr 2017 – Apr 2017
Clean-up Volunteer	Black Action Through Unity	Mar 2017 – Mar 2017
Volunteer	United Cerebral Palsy	2016

REFERENCES:

Li-San Wang Ph.D.

Professor of Pathology and Laboratory Medicine
Co-Director of Penn Neurodegeneration Genomics Center
University of Pennsylvania Perelman School of Medicine
215-746-7015
lswang@pennmedicine.upenn.edu

Ivet Bahar Ph.D.

Distinguished Professor & John K. Vries Chair
Department of Computational & Systems Biology
University of Pittsburgh, School of Medicine & UPMC
Phone: 412-648-3332
bahar@pitt.edu

Madhuri Kango-Singh Ph.D.

Associate Professor of Genetics;
Center for Tissue Regeneration and Engineering at Dayton (TREND)
University of Dayton Department of Biology
937-229-2531 mkangosingh1@udayton.edu
Research Advisor, Professor

Albert Burky Ph.D.

Professor of Biology
University of Dayton Department of Biology
937-321-8700 aburky1@udayton.edu
Academic Advisor

Pothitos Pitychoutis Ph.D.

Assistant Professor in Neuroscience
University of Dayton Department of Biology
Center for Tissue Regeneration & Engineering (TREND)
937-229-2287 ppitychoutis1@udayton.edu
Professor

Ryan McEwan Ph.D.

Associate Professor; Environmental Biology Program Director
University of Dayton Department of Biology
937-229-2558 rmcewan1@udayton.edu
Research Advisor, Professor