Jenea I. Adams

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Computational Biologist │Creator │ Community-Builder

SUMMARY

Janssen Oncology Scholar, Penn Presidential PhD Fellow and PhD candidate in Genomics and Computational Biology. Experienced in developing and optimizing computational tools that leverage RNA biology for targeted cancer immunotherapy. Nonprofit founder and director of an organization advocating for Black women computational biologists.

EDUCATION

University of Pennsylvania (Penn), Philadelphia, Pennsylvania   Aug 2019-Present
PhD Student in Genomics & Computational Biology (GCB) Graduate Group
Thesis Advisor: Yi Xing, PhD

University of Pennsylvania, Philadelphia, Pennsylvania   Aug 2019-2024
The Wharton School
MA Student in the Department of Statistics and Data Science
Thesis Advisor: Nancy Zhang

University of Dayton (UD), Dayton, OH   Aug 2015-May 2019
BS in Biology, Minor in Computer Science
Cum   laude

GRADUATE RESEARCH

PhD Thesis Research
Thesis Advisor: **Yi Xing, PhD**   Jul 2020-Present
My doctoral research explores the development of new genomics and bioinformatics tools, informed by RNA biology, to improve cancer treatment options with targeted immunotherapies using clinical trial data. During my rotation, I employed computational tools developed in the lab (e.g., rMATS, IRIS) to investigate alternative splicing in pediatric AML to reveal novel targets of CAR-T cell receptor-mediated immunotherapy.

MA Thesis Research
Thesis Advisor: **Nancy Zhang, PhD**   Jan 2022-Present
My master's research is focused on characterizing and developing statistical pipelines for the analysis of high-dimensional single-cell long-read RNA sequencing data in cancer. I am currently evaluating methods and applications of splicing quantification of full-length isoforms at the single cell level.

Other Graduate Research
Rotation Lab PI: **Ophir Shalem, PhD**   Mar 2020-Jun 2020
Researched computational approaches, including deep-learning methods, for cellular image analysis of protein localization patterns in healthy and diseased neurons from public and in-house databases.

Rotation Lab PI: **Li San Wang, PhD**   Sep 2019-Dec 2019
Investigated the gene regulatory role of long non-coding RNAs by developing a novel computational method to quantify genome-wide co-expression patterns using large transcriptomic and epigenomic datasets.

SELECTED UNDERGRADUATE RESEARCH

Research Assistant in Cancer Genetics   Aug 2018-May 2019
UD Dept. of Biology
Worked with a team of geneticists to computationally and experimentally unravel the proteomics and mechanisms of cancer   targets   on   gliomas   in   fruit   fly   models   for   a   drug   screen.

Bioinformatics Intern via TECBio REU @ Pitt
University of Pittsburgh, Dept. of Computational & Systems Biology
Developed a bioinformatics pipeline to investigate the competency of using protein "sensors" and "effectors" to predict protein-protein interfaces. With mentorship from Carnegie Mellon-University of Pittsburgh Computational Biology postdocs, the findings positively influenced the research direction of an Ivet Bahar lab project.

PUBLICATIONS

Yuntian Fu*, Heonseok Kim*, **Jenea I. Adams**, Susan M. Grimes, Sijia Huang, Billy T. Lau, Anuja Sathe, Hanlee P. Ji & Nancy R. Zhang. (2023). Single cell isoform quantification and alternative splicing analysis with long read sequencing. BioRxiv (under review).

Jenea I. Adams, Taylor Ferebee, Melyssa Minto, Kayla Pennerman, Nyasha Chambwe. *10 Simple Rules for Creating a Global Network in Computational Biology*. PLoS Computational Biology.

Yuanyuan Wang, Zhijie Xie, Eric Kutschera, **Jenea I. Adams**, Kathryn E. Kadash-Edmondson, Yi Xing. *rMATS-turbo: an ultra-fast computational platform for comprehensive alternative splicing analysis on large-scale RNA-Seq dataset* (manuscript near publication)

FEATURED INVITED TALKS & PROGRAMMING

Please see website for more
- **Invited Speaker.** Penn Genomics and Computational Biology/Institute for Biomedical Informatics First annual Retreat. September 2023.
- **Invited Panelist.** *Demystifying Thesis Committee Meetings*. Society for Advancement of Chicanos/Hispanics and Native Americans in Science (**SACNAS**). September 2022.
- **Invited Panelist.** *Navigating Graduate School*. **NIH/NHGRI** Human Molecular Biomolecular Atlas Program (HuBMAP) Undergraduate Internship Program. August 2022.
- **Invited Panelist.** *Building and Maintaining Inclusive Open Science*. Bioinformatics Open Science Conference at the Intelligent Systems for Molecular Biology (**ISMB**). Conference. July 2022 (Honorarium).
- **Invited Speaker.** *Identity in STEM*. **NPR Science Friday** x LSAMP Conference. April 2021. (Paid opportunity)
- **Moderator.** California Section of the American Chemical Society(**ACS**)-**Atomwise Inc.** *Making the Transition from Academia to Industry*. August 2020, Virtual due to COVID-19.

SELECTED PRESENTATIONS

Graduate

Jenea I. Adams, Catriana C. Nations, Deborah L. French, Yi Xing, Paul J. Gadue. Investigating alternative splicing in thrombocytopenia absent radius syndrome with rMATS-turbo.
- Genomics and Computational Biology/Institute for Biomedical Informatics First Annual Retreat 8 Sep. 2023, In-person. Philadelphia, PA (Poster and Invited Talk)

Jenea I. Adams, Yi Xing. rMATS-turb: alternative splicing analysis for massive RNA-seq data.
- Cancer Moonshot Immuno-Oncology Translational Network (IOTN) Bioinformatics and Computational Biology Working Group. 25 Mar. 2022, Virtual from Children's Hospital of Philadelphia. (Oral Presentation)
- Mid-Atlantic Bioinformatics Conference (MABC). 7 Oct. 2022, In-Person (Poster)
- American Society for Human Genetics (ASHG) Annual Meeting. Los Angeles, CA. Oct. 2022, In-Person (Poster)

SELECTED NEWS FEATURES
- Google. *Meet the 16 grantees of the Tech Equity Collective Impact Fund*. 21 March, 2023
- Stanford Medicine, Department of Biomedical Data Science. *Celebrating Black Data Scientists*. 18 February, 2022.
- Nature Computational Science. *Connecting Black women in computational biology*. 14 January 2021. Issue 1.
- Nature Careers. *2020: the year of hard-won lessons*. 15 December 2020
- National Center for Multiscale Modeling of Biological Systems (MMBioS). TECBio Trainee, Jenea Adams, to present TR&D1-supported work at two conferences. MMBioS News, 9 Oct 2018, Pittsburgh, PA.

RECENT ACADEMIC HONORS/AWARDS

2023	UNCF Ernest E. Just Life Science Society Recognition for Outstanding Leadership in the Life Sciences (on behalf of The Black Women in Computational Biology Network)

2022	Janssen Oncology Fellowship
2021	Penn Presidential PhD Fellowship
2020	Certificate of Exemplary Service, Penn Rising Senior Summer Academy (RSSA), Division of Student Engagement
2020	National Science Foundation Graduate Research Fellowship Honorable Mention (Bioinformatics/Computational Biology)

RECENT SCIENTIFIC OUTREACH

- *Professional Development Reflection Associate – STEM,* Netter Center for Community Partnerships, February 2023 – Present, Philadelphia PA
- *STEM Graduate/Medical School Application Consultant.* Project S.H.O.R.T. 2019–Present, Philadelphia, PA
- *ABRCMS Judge.* Computational and Systems Biology Posters. 2021 (virtual conference)
- *Science Education Academy Instructor.* Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS). 2019. Philadelphia, PA

RELEVANT WORK EXPERIENCE & TEACHING

Head Teaching Assistant, Penn School of Arts & Sciences, Biology Department   January 2022-May 2022

As a teaching assistant for an active learning ("flipped classroom") Introduction to Biology A course, my responsibilities were to guide active learning activities during class meetings, review group activities and provide feedback, deliver short lectures on the most difficult topics for the class, exam curation and grading, and leading a group of undergraduate lecture assistants as aides. In addition to reviewing content in cell biology, biochemistry, genetics, and molecular biology, I held office hours and curated individualize study programs for students who needed the most attention in the course.

Founding Program Director - GCB Summer CompBio Preview, Perelman School of Medicine, Biomedical Graduate Studies   March 2021-August 2021

Developed a newly-funded curriculum and accompanied teaching position for an intensive undergraduate training experience in bioinformatics and computational biology, primarily targeting scholars traditionally excluded from funded   research   opportunities   in   the   field.

Penn Rising Senior Summer Academy (RSSA) Graduate Assistant, Penn Division of Student Engagement
                                                                                                                        Jun 2020-Jul 2020
Curated and implemented synchronous and asynchronous online pedagogy related to post-secondary preparedness through a pilot program for Philadelphia Public School students most impacted by the COVID-19 Pandemic.

Founder & Executive Director, **The Black Women in Computational Biology Network**   January 2020-Present
In January 2020, I founded a global online networking platform for Black women advancing biology through a computational lens. We're now a 501(c)(3) nonprofit organization focused on accelerating opportunity at the intersection of biology, math, and computer science, which a global membership of over 250 scientists from over 20 countries. We're backed by Google's Tech Equity Collective Impact Fund and support from Philadelphia's Independence Public Media Foundation. Read more about our mission at www.blackwmencompbio.org.

RECENT EXTRACURRICULAR INVOLVEMENT AND SERVICE
GCB Equity, Diversity, and Inclusion Committee, *Member & Student Chair*	2020-2022
Ernest E. Just Biomedical Society (Penn), *Social & Recruitment Chair*	2020-2021, 2022-23

REFERENCES
Please contact for references.