

Annastassia D. Gallo

Assistant Professor of Chemistry
they/them/theirs

The College of Wooster
Department of Chemistry
943 College Mall
Wooster, OH 44691

Email: agallo@wooster.edu
Office: Severance Hall 124
Phone: (330) 263-2457
Web: discover.wooster.edu/agallo

EDUCATION**Ph.D. Chemistry | Temple University, Philadelphia, PA | 2013 – 2019**

Appointments: Research Assistant, Teaching Assistant

Dissertation: *Homeostasis and trafficking of hydrolysis-prone metals in cells, proteins, and small molecules*

Temple University Teaching in Higher Education Certificate

B.S. Chemistry with ACS certification | Arcadia University, Glenside, PA | 2009 – 2013

Minor: Mathematics

Study Abroad: University College Cork | Cork, Ireland | Fall 2010

SCIENTIFIC EXPERIENCE**Assistant Professor of Chemistry | College of Wooster, Wooster, OH | 2022 – Present**

- Courses taught: General Chemistry I, Inorganic Chemistry, Inorganic Chemistry Lab, Organic Chemistry I Lab, Intro to Independent Study, Bioinorganic Chemistry, Advanced Inorganic Chemistry - Organometallics
- Research with students: Assessment of metal ion dyshomeostasis impact on the structure and activity of enzymes in the biosynthetic pathway for catecholamine neurotransmitters

Postdoctoral Research Associate | Duke University, Durham, NC | 2019 – 2022

- Advisor: Prof. Katherine J. Franz
- Evaluated copper-dependent antimicrobial activity of Histatin peptides
- Collaborated on a project involving copper-binding mucin proteins

Graduate Research Assistant | Temple University, Philadelphia, PA | 2013 – 2019

- Advisor: Prof. Ann M. Valentine
- Evaluated biometal concentration changes in *Rhodococcus ruber* GIN-1 upon exposure to titanium dioxide particles
- Collaborated on a project involving gold-decorated ferritin for environmental remediation

Biological Science Research Technician | U.S.D.A., Wyndmoor, PA | 2012 – 2013

- Agricultural Research Service, Eastern Regional Research Center
- Advisor: Dr. Yelena Sapozhnikova
- Examined phytosterol content in a variety of dried mushroom powders upon exposure to UV-B irradiation

REU Research Assistant | Carnegie Mellon University, Pittsburgh, PA | Summer 2012

- Center for Environmental Implications of Nanotechnology
 - Advisor: Prof. Robert Tilton
 - Studied the mobility of coated magnetite nanoparticles through various porous media to improve groundwater treatment
-

Teaching Experience & Training

- *HHMI Professional Learning Community: Inclusive Research Mentoring* | 2024 – Present
 - *STEM Faculty Learning Community: Meets biweekly at College of Wooster* | 2022 – Present
 - *Building Inclusive Classrooms: Workshops at College of Wooster* | 2022
 - *Guest Lecturer: General Chemistry II at Duke University* | 2020 – 2022
 - *Teaching in Higher Education Certificate: Temple University* | 2019
 - *Teaching Assistant at Temple University: General Chemistry I & II, Inorganic Chemistry, General Chemistry I & II Labs, Introduction to Chemistry Lab, Inorganic Synthesis Lab* | 2013 – 2017
-

HONORS

- *Doctoral Dissertation Completion Grant: Temple University* | 2019
 - *University of Pennsylvania Award: 18th Annual Young Chemists Committee Poster Session Award* | 2018
 - *First Summers Research Initiative Award: Temple University* | 2014, 2015
 - *Phi Beta Delta* (inducted 2013)
 - *Phi Kappa Phi* (inducted 2013)
-

SERVICE**Professional Activities**

- Member of American Chemical Society (ACS) | 2011 – Present
- Member of the ACS Division of Inorganic Chemistry | 2021 – Present
- Member of the International Society of Non-Binary Scientists | 2023 – Present
- Member of the Society for Biological Inorganic Chemistry | 2023 – 2024
- Reviewer for *Dalton Transactions, Inorganic Chemistry, Journal of Inorganic Biochemistry*
- Discussion Leader: Bioinorganic Gordon Research Symposium | 2024

Institutional Service at College of Wooster

- Chemistry Club Advisor | 2023 – Present
- Libraries, Information Resources & Technology Committee | 2023 – 2024
- Admissions Liaison for Chemistry & for BCMB | 2024 – Present
- Educational Assessment Committee | 2024 – Present

Prior Institutional Service at Duke University

- Diversity, Inclusion, and Community (DivInC) Committee Member | 2021 – 2022
- Pushing the Equilibrium Organizer and Facilitator | 2020 – 2021

Prior Institutional Service at Temple University

- Department High-Resolution Mass Spectrometer Manager | 2017 – 2018
- Review Committee Member for the Dean of the College of Science & Technology | 2018
- Graduate Student Host for the Distinguished Lectureship Series | 2017

Outreach

- B-WISER Summer Camp Demonstration Leader | Wooster, OH | 2024
- Workshop Presenter for Exploring STEM Day | Wooster, OH | 2023
- Outreach Volunteer with Duke Chemistry Department | Durham, NC | 2019 – 2020
- Owl-to-Owl Mentor, Alumni Mentorship Program, Temple University | 2019 – 2020
- ACS Science Coaches Program
 - George Washington Carver High School | Philadelphia, PA | 2015 – 2018
- Science Fair Judge
 - NCSSM Science and Engineering Fair, NCSEF Region 3B | Durham, NC | 2020
 - George Washington Carver High School Science Fair | Philadelphia, PA | 2014 – 2017

INTERNAL GRANT FUNDING

- Sophomore and Summer Research Program | 2022 – 2023

PUBLICATIONS

ORCID iD: 0000-0001-9690-9347

- N. Reznik, **A. D. Gallo**, K. W. Rush, G. Javitt, Y. Fridmann-Sirkis, T. Ilani, N. A. Nairner, S. Fishilevich, D. Gokhman, K. N. Chacón, K. J. Franz, D. Fass. Intestinal Mucin is a chaperone of multivalent copper. *Cell*, **2022**, *185*, 1-10.
- **A. D. Gallo**, K. J. Franz. Grab 'n Go: Siderophore-Binding Proteins Provide Pathogens a Quick Fix to Satisfy their Hunger for Iron. *ACS Central Science*, **2020**, *6*, 456-458.
- **A. D. Gallo**, M. R. Zierden, K. E. Jones, L. A. Profitt, C. P. Bonafide, A. M. Valentine. TiO₂ exposure alters transition metal ion quota in *Rhodococcus ruber* GIN-1. *Metallomics*, **2020**, *12*, 8-11.

ORAL PRESENTATIONS

- **American Chemical Society National Meeting** | Virtual | Apr. 15, 2021
 - “Towards understanding the copper-dependent antimicrobial activity of Histatin peptides”
 - **Temple University Chemistry After Dark Series** | Philadelphia, PA | Mar. 8, 2019
 - “My best attempts at being a sea squirt”
 - **Bioinorganic Chemistry Gordon Research Symposium** | Ventura, CA | Jan. 27, 2018
 - “Titanium Incorporation via Cell-Oxide Interactions”
-

INVITED SEMINARS

- **Kenyon College** | Gambier, OH | Oct. 11, 2022
 - “From student to professor: Lessons in bioinorganic chemistry and beyond”
- **Carnegie Mellon University** | Pittsburgh, PA | Sep. 30, 2020
 - “Investigating the bioinorganic chemistry of microbial organisms and their interactions with metal oxides and metallopeptides”

POSTER PRESENTATIONS

* Undergraduate student

- **American Chemical Society National Meeting** | New Orleans, LA | Mar. 17, 2024
 - E. J. Harvey*, **A. D. Gallo**. “Interrogation of the dopamine beta-hydroxylase mechanism through bio-mimetic modeling”
- **American Chemical Society National Meeting** | Indianapolis, IN | Mar. 26, 2023
 - Z. L Semersky*, **A. D. Gallo**. “Recent insights into how metal ion dyshomeostasis disrupts dopamine beta-hydroxylase activity”
- **University of Illinois at Urbana-Champaign Women Chemists Committee Invited Virtual Poster** | Virtual | Dec. 15, 2020
 - **A. D. Gallo**, K. J. Franz. “Understanding how the coordination sphere influences the reactivity of antimicrobial histatin-5 peptides”
- **American Chemical Society National Meeting** | Cancelled due to Covid-19 | Mar. 2020
 - **A. D. Gallo**, J. Moon*, S. E. Conklin, K. J. Franz. “Influence of the coordination sphere on the reactivity of antimicrobial histatin peptides”
- **Frontiers in Metallobiochemistry** | Pennsylvania State University, State College, PA | Jun. 6, 2018
 - **A. D. Gallo**, A. M. Valentine. “Investigation into the binding and uptake of titanium dioxide by *Rhodococcus ruber* GIN-1 bacteria”
- **18th Annual Younger Chemists Committee Student Poster Session** | Temple University, Philadelphia, PA | Apr. 10, 2018
 - **A. D. Gallo**, A. M. Valentine. “Investigation into the binding and uptake of titanium dioxide by *Rhodococcus ruber* GIN-1 bacteria”
- **Bioinorganic Chemistry Gordon Research Symposium** | Ventura, CA | Jan. 25 – 28, 2018
 - **A. D. Gallo**, A. M. Valentine. “Investigation into the binding and uptake of titanium dioxide by *Rhodococcus ruber* GIN-1 bacteria”
- **Metals in Biology Gordon Research Conference** | Ventura, CA | Jan. 21 – 26, 2018
 - **A. D. Gallo**, A. M. Valentine. “Investigation into the binding and uptake of titanium dioxide by *Rhodococcus ruber* GIN-1 bacteria”
- **Philadelphia Inorganic Colloquium (PIC-5)** | Swarthmore College, Swarthmore, PA | Oct. 28, 2017
 - **A. D. Gallo**, A. M. Valentine. “*Rhodococcus ruber* GIN-1 titanium incorporation via cell-oxide interactions”

- **17th Annual Younger Chemists Committee Student Poster Session** | University of the Sciences, Philadelphia, PA | Mar. 27, 2017
 - **A. D. Gallo**, A. M. Valentine. “*Rhodococcus ruber* GIN-1 titanium incorporation via cell-oxide interactions”
- **American Chemical Society National Meeting** | Philadelphia, PA | Aug. 23, 2016
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **Mid-Atlantic Seaboard Inorganic Symposium** | University of Pennsylvania, Philadelphia, PA | Jul. 20, 2016
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **Philadelphia Inorganic Colloquium (PIC-3)** | University of Delaware, Newark, DE | Mar. 19, 2016
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **16th Annual Younger Chemists Committee Student Poster Session** | University of the Sciences, Philadelphia, PA | Feb. 22, 2016
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **Philadelphia Inorganic Colloquium (PIC-2)** | The College of New Jersey, Ewing Township, NJ | Sep. 12, 2015
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **6th Annual Temple University Graduate Fellows Research Symposium** | Temple University, Philadelphia, PA | Oct. 18, 2014
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **Mid-Atlantic Seaboard Inorganic Symposium** | Temple University, Philadelphia, PA | Jul. 30, 2014
 - **A. D. Gallo**, A. M. Valentine. “Improving the efficiency of nicastransferrin expression”
- **American Chemical Society National Meeting** | New Orleans, LA | Apr. 8, 2013
 - **A. D. Gallo**, J. T. Orr. “Investigation into the optical effects on the polarization of liquid mediums”
- **American Chemical Society Philadelphia Regional Meeting** | Temple University, Philadelphia, PA | Feb. 23, 2012
 - **A. D. Gallo**, L. Beatty, J. T. Orr. “Exploring the magneto-optical phenomenon”

UNDERGRADUATE THESIS STUDENTS MENTORED

- **Ama Asante** | Chemistry '25 | Fall 2024 – Present
- **Olivia Galando** | BCMB '25 | Fall 2024 – Present
- **Renick Wiltshire** | BCMB '25 | Fall 2024 – Present
- **Shivam Dewan** | BCMB '24 | Fall 2023 – Spring 2024
 - “Elucidating the Role of Reactive Oxygen Species on Dopamine Beta Hydroxylase Activity and Aggregation”
 - Current: Applying to Medical School

- **Eli Harvey** | Chemistry '24 | Fall 2023 – Spring 2024
 - “Interrogation of the Dopamine Beta-Hydroxylase Mechanism through Biomimetic Modeling”
 - Current: Graduate student at the University of Pennsylvania
- **Seth Owens** | BCMB '24 | Fall 2023 – Spring 2024
 - “The Effect of Titanium on Catecholamine Enzyme Tyrosine Hydroxylase”
 - Current: Applying to Physical Therapy graduate programs
- **Mary Payne** | BCMB '24 | Fall 2023 – Spring 2024
 - “Toward Understanding how metal dyshomeostasis impacts dopamine beta-hydroxylase activity”
 - Current: Quality Lab Technician at AkzoNobel, Columbus, OH
- **Mary Sirois** | Chemistry '24 | Fall 2023 – Spring 2024
 - “Soak Up the Sun: Exploring the Ability of Quantum Dots to Increase PAR Transmission in Seaman Corporation’s *Dura-Grow* Greenhouse Film to Improve Plant Growth”
 - Current: Graduate student at Penn State
- **Sam L. Belsky** | BCMB '23 | Spring 2023
 - “Interrogation of a Conserved Overlap Between Cofactor and Substrate Binding Domains to Facilitate Crosstalk-Induced Conformational Changes in Class A Flavin Monooxygenases: A Case Study of 6-Hydroxynicotinate-3-Monooxygenase”
 - Current: Graduate student at University of Illinois – Urbana Champaign
- **Zoë L. Semersky** | BCMB '23 | Fall 2022 – Spring 2023
 - “Toward a Comprehensive Framework for Investigating Copper Dyshomesotasis: The Role of His-Tag Modularity and Alternative Expression Systems in Evaluating Dopamine β -Hydroxylase”
 - Current: Graduate student at University of Wisconsin – Madison, Integrated Program in Biochemistry

MEMBERS OF THE GALLO LAB

- **Ama Asante** | Chemistry '25 | Fall 2024 – Present
- **Olivia Galando** | BCMB '25 | Fall 2024 – Present
- **Shivam Dewan** | BCMB '24 | Fall 2023 – Spring 2024
- **Eli Harvey** | Chemistry '24 | Fall 2023 – Spring 2024
- **Seth Owens** | BCMB '24 | Fall 2023 – Spring 2024
- **Mary Payne** | BCMB '24 | Fall 2023 – Spring 2024
- **Jeff Allison** | Chemistry '25 | Summer 2023 – Fall 2023
- **Nia Jacques** | BCMB '26 | Summer 2023
- **Somarr Elliott** | Neuropsychology '25 | Fall 2022 – Spring 2023, Fall 2023
- **Zoë Semersky** | BCMB '23 | Fall 2022 – Spring 2023