

VAN ANDEL INSTITUTE

GRAND RAPIDS, MI

NOV. 8, 2025

PROGRAM

CELEBRATING 19 YEARS OF SCIENTIFIC AND EDUCATIONAL COLLABORATION

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CALVIN UNIVERSITY

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RECRUITER CONTACT INFORMATION

Recruiters will be in the DeVos Foundation Lobby. Availability for recruiters will vary. Recruiter contact information, and their availability is provided on pages 32-38 of this program.

QUESTIONS?

- Prior to the conference, contact Michelle Love at <u>undergrad@vai.edu</u>.
- During the conference, contact a Conference Volunteer at the WMRUGS Information Booth.



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- PROFESSIONAL DEVELOPMENT
 - Flex PD (K-12)
 - Flex PD Bundles (K-12)
 - Project-Based Summer School (K-8)
 - Project-Based After-School (K-8)

PUBLIC EVENTS AND NETWORKS

- Affinity Networks (K-12)
- Public Workshops (K-8)
- Science on the Grand (K-8)
- STUDENT EXPERIENCES
 - o Classroom Field Trips (K-12)
 - Curiosity on Wheels (K-8)
 - High School Journal Club (9-12)

• EDUCATIONAL RESOURCES

- STEM Resources
- Project-Based Learning Resources
- · Skills Building Resources

For Families

- AFTER-SCHOOL COHORT (4-7)
- SUMMER CAMPS (K-12)
- SCIENCE PARTIES (K-8)
- HOMESCHOOL FIELD TRIPS (K-12)







www.VAleducation.org





ACKNOWLEDGEMENTS

WMRUGS RESEARCH CONFERENCE ORGANIZING INSTITUTIONS AND ORGANIZING COMMITTEE MEMBERS

Jennifer Hess, Ph.D. – Aquinas College
Keith Grasman, Ph.D. – Calvin University
Eric Nybo, Ph.D. – Ferris State University College of Pharmacy
Mark Staves, Ph.D. – Grand Valley State University
Kristin Dittenhafer-Reed, Ph.D. – Hope College
Dwight Williams, Ph.D. – Kalamazoo College
Tim Triche, Ph.D. – Van Andel Institute Graduate School and Van Andel Institute















WMRUGS RESEARCH CONFERENCE HOST

Thank you to Van Andel Institute (VAI) for hosting the West Michigan Regional Undergraduate Science Research Conference for 19 years!



WMRUGS RESEARCH CONFERENCE SUPPORT STAFF

VAI Security Services, Facilities Services and Housekeeping Services

Event management and administrative support provided by Michelle Love, VAI Graduate School

Additional administrative support provided by the VAI Graduate School Staff and Graduate Students, VAI

Student Research Fellows and VAI Postdoctoral Fellows

Social media administration and support provided by the VAI Communications & Marketing staff Juliana Cieglo, Kinsey Jones, Rachel Corwin, Zane McMillin, Caitlin Smith and Kayla Habermehl

Audiovisual services provided by Zachary Wallace, Terry Ballard and Bill Baillod with VAI Production Services

Catering services provided by Eurest Dining Services | Special thanks to Beau Burnett, Executive Chef

Catering Services also provided by Kent ISD/KTC Hospitality & Culinary Services

Special thanks the Kent ISD High School Student Caterers

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SCHEDULE OF EVENTS

SATURDAY, NOVEMBER 8, 2025 | 8:00 AM-3:30 PM | DOORS OPEN AT 7:45 AM

Note: The following events may run concurrently: poster sessions, fairs, and panel discussions.

8:00 AM ATTENDEE ARRIVAL AND POSTER SET-UP | RECRUITER ARRIVAL AND SETUP

8:15 AM FAIR | GRADUATE SCHOOL, MEDICAL SCHOOL, PROFESSIONAL SCHOOL AND INTERNSHIP

& EMPLOYMENT RECRUITERS | DEVOS FOUNDATION LOBBY

Meet with recruiters including internship & employment, graduate school, professional schools and

medical school recruiters from 8:15-9:00 AM

9:00 AM WELCOME | OPENING REMARKS | TOMATIS AUDITORIUM

Master of Ceremony | Mark Staves, Ph.D. | Grand Valley State University

9:15 AM KEYNOTE SPEAKER ADDRESS | TOMATIS AUDITORIUM

Sharifa Love-Rutledge, Ph.D. | Keynote Speaker

Associate Professor of Biochemistry | Department of Chemistry

The University of Alabama-Huntsville

10:00 AM POSTER SESSION 1 | COOK-HAUENSTEIN HALL

Presenters at even-numbered posters

10:00 AM FAIR | GRADUATE SCHOOL, MEDICAL SCHOOL, PROFESSIONAL SCHOOL AND INTERNSHIP

& EMPLOYMENT RECRUITERS | DEVOS FOUNDATION LOBBY

Meet with recruiters including internship & employment, graduate school, professional schools and

medical school recruiters from 10:00-11:15 AM

11:15 AM GRADUATE STUDENT SCIENTIFIC RESEARCH TALK | TOMATIS AUDITORIUM

Svetlana Djirackor, Ph.D. Candidate | Van Andel Institute Graduate School

Aquinas College Alumna

11:45 AM UNDERGRADUATE STUDENT SCIENTIFIC RESEARCH TALKS | TOMATIS AUDITORIUM

Annaliese Bol | Kalamazoo College Davi Zola de Araujo | Hope College 12:15 PM LUNCH | DEVOS FOUNDATION LOBBY NEAR WATER FEATURE

Lunch seating available in the VAI Café, VandeWoude Sessions Conference Room, Tomatis

Auditorium and Conference Rooms 3104 & 3105

12:15 PM FAIR | GRADUATE SCHOOL, MEDICAL SCHOOL, PROFESSIONAL SCHOOL AND INTERNSHIP

& EMPLOYMENT RECRUITERS | DEVOS FOUNDATION LOBBY

Meet with recruiters including internship & employment, graduate school, professional schools and

medical school recruiters from 12:15-2:30 PM

12:30 PM GRADUATE SCHOOL/MEDICAL SCHOOL PANEL DISCUSSION | TOMATIS AUDITORIUM

Join us for a grad school/medical school panel discussion with Ph.D. student candidates, M.D. medical students, Postdoctoral Fellows and Faculty Mentors/Recruiters from 12:30-1:15 PM

1:15 PM POSTER SESSION 2 | COOK-HAUENSTEIN HALL

Presenters at odd-numbered posters

2:30 PM UNDERGRADUATE STUDENT SCIENTIFIC RESEARCH TALKS | TOMATIS AUDITORIUM

Lola Piper | Grand Valley State University Evan Schulte | Ferris State University Aerin Baker | Calvin University Taylor Reha | Aquinas College

3:30 PM CLOSING REMARKS | CONCLUSION | TOMATIS AUDITORIUM



9:00 AM | Welcome and Opening Ceremony | Emcee: Mark Staves, PhD | Tomatis Auditorium 9:15 AM | Keynote Address | Tomatis Auditorium



2025 WMRUGS RESEARCH CONFERENCE KEYNOTE SPEAKER

Sharifa Love-Rutledge, Ph.D.

Associate Professor of Biochemistry The University of Alabama-Huntsville For more information on Dr. Love-Rutledge, visit:

https://www.uah.edu/science/departments/chemistry/chemistry-faculty-staff/sharifa-love-rutledge



Scientific Research Area: Biochemistry/Physiology

"Tag You're it: My journey to studying the Ubiquitin-like protein, FAT10"

Abstract: Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD) is the most common chronic liver disease worldwide. Excess fat buildup in the liver can lead to damage or cancer. Identifying proteins that increase susceptibility to this disease is crucial for diagnosis and prevention. Elevated expression of FAT10, a ubiquitin-like modifier involved in immune responses and proteasomal degradation, strongly correlates with MASLD development. Previous research on the Type 1 diabetes model, the LEW.1WR1 rat, showed increased liver fat. Our lab observed that these rats developed fatty liver, glucose intolerance, and insulin resistance independent of type 1 diabetes. To better understand FAT10's role in disease progression, we asked: how does increased FAT10 expression affect hepatocytes? Using confocal microscopy, we found that FAT10 overexpression caused significant changes in mitochondrial structure. There was an increase in total mitochondrial area, a higher ratio of mitochondrial area to cell area, expanded mitochondrial volume, and more mitochondrial segments per cell, observed with a point-scanning confocal microscope. Starting with her decision to attend a Small Private College in Mississippi, this talk traces the strategic choices Dr. Sharifa Love-Rutledge made to become a tenured Associate Professor of Biochemistry. Along the way, we will explore the value of saying yes strategically and the importance of mentorship. Scientifically, we will discuss her lab's current understanding of the causes of hyperinsulinemia, MASLD, and insulin resistance when FAT10 is upregulated.

GRADUATE STUDENT RESEARCH TALK

11:15-11:45 AM | Tomatis Auditorium



Svetlana Djirackor, Ph.D. Candidate

Van Andel Institute Graduate School | Molecular and Cellular Biology

Research Mentor: Hui Shen, Ph.D. | Professor Shen Lab | Epigenomic Analysis in Human Disease Department of Epigenetics | Van Andel Institute

Scientific Research Area: Cancer Epigenetics, Ovarian Cancer

"The Next Chapter in Ovarian Cancer: A stromal perspective"



Abstract: The molecular landscapes of epithelial ovarian cancers (EOCs) have largely been profiled using bulk sequencing techniques. Consequently, biologically relevant signals from the tumor and its microenvironment (hereafter stroma) are often conflated, dampening both tumor and stroma-specific observations. Here, we profiled the carcinoma and stroma compartments separately across clear cell (CCOC), endometrioid (ENOC), and high-grade serous ovarian cancer (HGSC) using laser capture microdissection followed by samplematched whole genome bisulfite sequencing and RNA-seq. Across these OCs, histotype designations drove sample segregation in the carcinoma compartment, yet were not sufficient to explain top expression or methylation variations in the stroma. Unsupervised clustering of the top variable genes in the stroma identified four stromal subtypes (S1-S4) shared across the three histotypes. Of these, S1, S2, and S4 were the most distinguishable and could be recovered in external datasets. S1 was enriched for RNA splicing processes (SFSWAP, RBM25), S2 for metabolism (GATM, ALDH1A1) and S4 for remodeling of the extracellular matrix (FN1, POSTN, SFRP2). While the characteristics of S4 echo previous reports of the desmoplastic/highly fibrous stroma reported in HGSC, we show that S4 is also present in CCOC and ENOC tumors. Using HGSC samples from TCGA, we observed a strong correlation of S4 markers with the Mesenchymal subtype and an inverse correlation of S4 and S2 markers, suggesting mutual exclusivity of these stromal subtypes. Examining the TCGA-derived subtype markers in our microdissected data revealed that the canonical Immunoreactive and Mesenchymal subtypes were driven by signals from the stroma, rather than the carcinoma. Conversely, Differentiated and Proliferative markers were enriched in the carcinoma We next investigated if genetic, epigenetic or transcriptional cues in the carcinoma compartment are associated with the characteristic of its TME but failed to detect differences at 5% FDR. This suggests that the stromal subtype may not be shaped solely by instructions from the cancer cells and that a more complex, reciprocal cross-talk exists between the carcinoma and its TME. With the growing importance of the TME in influencing patient outcomes, and response to treatment, understanding the nature of a tumor's TME is crucial. Thus, coupling the stromal subtypes (S1-S4) with the well-established histotype designations of EOCs may provide a more robust way to classify EOCs and inform optimal treatment strategies that account for the characteristic of the tumor stroma.

Co-Authors: Karolin Heinze, Ian Beddows, David Sokol, Bianca Ribeiro de Souza, Martin Koebel, Marie Adams, Michael Anglesio, Hui Shen

Alumna | Major: Biology | Class of 2020



UNDERGRADUATE STUDENT RESEARCH TALKS

11:45 AM-12:15 PM | Tomatis Auditorium Kalamazoo College and Hope College

Annaliese Bol | Kalamazoo College

Major: Biology | Class of 2026 Scientific Research Area: Biology

"Impacts of heat waves on solitary bee (Osmia lignaria) fitness and development: a comparative study of three western populations"

Abstract: Climate change is a major driver of global species declines, and heatwaves are particularly concerning because they are becoming more frequent and intense and can suddenly push organisms beyond their thermal limits. Cavity-nesting solitary bees may be especially vulnerable, as they develop immobile within above-ground nests with limited protection from extreme heat. Many bee species also span broad geographic ranges, experiencing diverse local climates that may shape their thermal tolerances; yet, we still lack a clear understanding of how heatwaves impact bee fitness across life stages and populations. To address this gap, we exposed developing Osmia lignaria from three western U.S. populations to experimental heatwaves during larval development. We assessed survival and development during and after the heat wave, and the following spring we evaluated adult outcomes, including emergence timing, ovary maturation, and thermal tolerance. Heat wave exposure during larval development reduced survival and altered developmental timing, with variation among populations in the magnitude of these effects. These findings offer insight into the vulnerability of solitary bees to heat waves and highlight the importance of life stage and geographic origin in shaping thermal resilience. Understanding these patterns is critical for predicting the effects of future climate extremes on bee persistence and pollination services in natural and managed ecosystems. Co-Author(s): Dr. Clara Stuligross, Sarah Caso, Alicia Wilgoren, Neal Williams, Hollis Woodard

Research Mentor: Clara Stuligross, Ph.D. | Assistant Professor | Department of Biology



Davi Zola de Araujo | Hope College

Double Major: Biochemistry and Molecular Biology | Class of 2026

Scientific Research Area: Microbiology

"A baffling interaction involving a foreign immunity repressor in Mycobacteriophage Soul22"

<u>Abstract:</u> Phages are viruses that infect bacterial hosts. Lytic phages replicate instantly, whereas temperate phages can pursue lysogenic growth and delay replication until conditions activate

the switch to lytic growth. They achieve this with a phage gene known as the immunity repressor (IR). IR proteins recognize specific DNA sites in phage genomes, bind and block expression of lytic-promoting genes. Normally, IRs are not essential genes. Soul22 (S22) is a temperate (F2) mycobacteriophage that has two distinct/functional IRs: 1) non-essential and specific to F2 phages, 2) 'foreign' IR gene, homologous to known A1 mycobacteriophage IRs. There is a single consensus A1-IR binding site upstream of a gene of unknown function (NKF) adjacent to the A1-IR. Surprisingly, this A1-IR gene is essential for S22 viability unless this NKF gene is also removed. Through microbiology and molecular genetic approaches, the relationship between the A1-IR, the gene it likely regulates, and S22 viability are studied. Co-Author(s): Virginia McDonough Ph.D. and Joseph Stukey, Ph.D.

Research Mentor: Joe Stukey, Ph.D. | Assistant Professor | Department of Biology



UNDERGRADUATE STUDENT RESEARCH TALKS

2:30-3:30 PM | Tomatis Auditorium

Grand Valley State University, Ferris State University-College of Pharmacy, Calvin University and Aquinas College

Lola Piper | Grand Valley State University

Major: Cell and Molecular Biology \mid Class of 2027

Scientific Research Area: Molecular Biotechnology

"New Methods to Map the Master Regulators of Development and Unveil New Axis of Flexibility"

<u>Abstract:</u> The functional output of the human genome is coordinated by site-specific interactions

of thousands of binding proteins. Disruption of these protein-DNA interactions can profoundly impact human health, necessitating better methods to determine when and where specific proteins bind. The Cleavage Under Targets and Tagmentation (CUT&Tag) method was developed to address this need and goes from cells to sequencing-ready libraries in two days. However, stringent high-salt washes used to suppress non-specific signal also remove many proteins of interest. My project reengineered the CUT&Tag enzyme for use under physiological salt conditions, and I identified three mutant enzymes that suppress false signal. Testing these mutants with transcription factors shows promising results, suggesting a way to efficiently map transcription factor–DNA interactions and study cellular differentiation and disease.

VAI Research Mentor: Derek Janssens, Ph.D. | Assistant Professor | Department of Epigenetics



Evan Schulte | Ferris State University

Major: Software Engineering | Class of 2026

Scientific Research Area: Healthcare Informatics

"Automated Extraction of Dosage Information from Unstructured Patient Instructions Using Large Language Models"

Abstract: This study explores the automation of extracting structured dosage data from unstructured patient medication instructions using Large Language Models (LLMs). Manual extraction of daily frequency, dosage amounts (in milligrams), and duration (in days) from text-based patient instructions is time-consuming and typically performed by pharmacy student interns. We evaluated the performance of two LLM models (OpenAl's GPT-OSS:20B and Alibaba's Qwen 3:14B) across different chunk amounts to determine feasibility for automating this process. Results demonstrate that Qwen3:14B achieved the highest average composite score of 9.36/10 for extracting the correct values for each requested field with GPT-OSS:20B close behind with an average composite score of 8.93/10. The findings indicate strong potential for LLM-based automation in pharmaceutical data processing, with implications for improving efficiency in medication management systems and supporting CHARM's goal of providing a reliable and accurate dashboard for Michigan (and other state's) healthcare systems to track their antibiotic usage and prescribing patterns. Co-Author(s): Mohamed Abusharkh, Ph.D.

Research Mentor: Minji Sohn, PhD | Associate Professor | Pharmaceutical Science | College of Pharmacy





Aerin Baker | Calvin University

Major: Chemistry | Minor: Mathematics | Class of 2026

Scientific Research Area: Chemistry

"Defining New Orbital Energies for Quantum Chemistry"

<u>Abstract:</u> The atom is viewed in myriad ways by all different types of chemists. Quantum chemists use the wavefunction to describe an atom, whereas inorganic chemists focus on how

each atom relates to its electrons across the entire periodic table. Using the Virial Theorem, orbital energies in an atom can be elegantly redefined and will now add up to the total energy in an atom. Effective nuclear charge is then able to be calculated unambiguously, which opens a swath of simple pathways for comprehension and calculation of additional periodic properties. Co-Author(s): Douglas Vander Griend, Ph.D. and Roger DeKock, Ph.D.

Research Mentors: Douglas Vander Griend, Ph.D., Professor of Chemistry and Biochemistry, Director-Clean Water Institute and Roger DeKock, Ph.D., Professor Emeritus



Taylor Reha | Aquinas College

Major: Biology | Class of 2027

Scientific Research Area: Microbiology

"Isolation and Characterization of Citrophage LI"

Abstract: Bacteriophages, viruses that infect bacteria, represent the most diverse and abundant biological entities in the biosphere. Due to their specificity and bactericidal activity, they have gained attention as a promising alternative treatment for multidrug-resistant bacterial infections, offering a potential solution to the growing antibiotic resistance crisis. Citrobacter species are opportunistic pathogens implicated in foodborne illness outbreaks and healthcare-associated infections. This study focuses on the environmental isolation and characterization of Citrobacter-infecting bacteriophages (citrophages), specifically phage LI, collected from a freshwater lake. The isolated phage was characterized through plaque morphology, efficiency of plating (EOP), and determination of temperature and pH stabilities. EOP was used to evaluate the relative efficiency of phage infection across a range of incubation temperatures (25- 42°C). Our data for LI shows a slight decrease in EOP at 25°C. Additionally, temperature and pH stabilities were assessed by monitoring plaque formation following exposures to a broad temperature or pH range. Data from temperature stability assays suggest that LI phage is not stable at higher temperatures. These results will contribute to a better understanding of citrophage biology and highlight their potential application in phage therapy against Citrobacter infections. Co-Author(s): Natalia Hubbs, Ph.D.

Research Mentor: Natalia Hubbs, Ph.D. | Assistant Professor | Department of Biology





POSTER SESSION SPONSORS





POSTER PRESENTER INDEX | ALPHABETICAL ORDER BY LAST NAME

Poster presentations will take place in Cook-Hauenstein Hall and the DeVos Foundation Lobby Near Water Feature
Presenters with even-numbered posters will present from 10:00-11:15 AM
Presenters with odd-numbered posters will present from 1:15-2:30 PM

Last Name	First Name	Poster Number	Poster Research Area	Institution
Abraham	Awesome	9	Biochemistry	Hope College
Addo	Naa Kailey	47	Chemistry	Calvin University
Adewole	Benard	73	Computer Science	University of Michigan
Aghabayli	Zeynab	102	Pharmacology	Ferris State University-College of Pharmacy
Angel	Jennah	104	Pharmacology	Ferris State University
Anika	Unayza	59	Chemistry	Kalamazoo College
Bachman	Joe	107	Physics	Hope College
Baldwin	Baylor	48	Chemistry	Kalamazoo College
Basselin	Karis	76	Environmental Science	Calvin University
Bhattarai	Rita	18	Bioinformatics	Grand Valley State University
Bradley	Heaven	84	Environmental Science	Michigan State University
Brako	Adwowa Baafowa	75	Environmental Science	Ferris State University
Bredin	Teige	60	Chemistry	Kalamazoo College
Brekke	Gabriella	104	Pharmacology	Ferris State University-College of Pharmacy
Brown	Courtney	101	Pharmacology	Ferris State University-College of Pharmacy
Bruglio	Alexis	37	Biotechnology	Ferris State University-College of Pharmacy
Bungart	John	49	Chemistry	Kalamazoo College
Cannizzaro	Olivia	61	Chemistry	Kalamazoo College
Cedillo Aguilar	Edgar	2	Biochemistry	Grand Valley State University

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Last Name	First Name	Poster Number	Poster Research Area	Institution	
Liu	Yu-Ting	20	Bioinformatics	Grand Valley State University	
Lowczyk	Alex	104	Pharmacology	Ferris State University-College of Pharmacy	
Luarasi	Xhesika	72	Computational Biology	Ferris State University	
Luarasi	Xhesika	104	Pharmacology	Ferris State University	
MacKersie	Alexa	12	Biochemistry	Hope College	
Maharjan	Prasanna	99	Pharmacology	Ferris State University	
Mares Castro	Lizbeth	35	Biomedical Sciences	Kalamazoo College	
Marlette	Meghan	23	Biology	Hope College	
Marshall	Cody	53	Chemistry	Hope College	
Martel	William	5	Biochemistry	Kalamazoo College	
Martin	Carl	85	Environmental Science	Calvin University	
Mathew	Emily	82	Environmental Science	Hope College	
May	Makenna	92	Microbiology	Grand Valley State University	
Mayernik	Anna	80	Environmental Science	Hope College	
McCain	Kate	10	Biochemistry	Hope College	
McCann	Emersyn	98	Neuroscience	Hope College	
McDowell	Aiden	34	Biomedical Sciences	Grand Valley State University	
McGuire	Molly	112	Biochemistry	Grand Valley State University	
McGuire	Molly	21	Biology	Grand Valley State University	
Memelli	Grace	34	Biomedical Sciences	Grand Valley State University	
Mensah	Ellis	58	Chemistry	Calvin University	
Metz	Lucas	32	Biomedical Sciences	Hillsdale College	
Moody	Andrew	64	Chemistry	Aquinas College	
Morales Zimbron	Juan	37	Biotechnology	Ferris State University-College of Pharmacy	
Morgan	Gavin	34	Biomedical Sciences	Grand Valley State University	
Mulcahy	Carson	104	Pharmacology	Ferris State University-College of Pharmacy	
Mussehl	Morgan	97	Neuroscience	Central Michigan University	
Nimtz	Karen	54	Chemistry	Hope College	
Nowak	Samantha	28	Biology	Ferris State University	
Nulty	Rebecca	56	Chemistry	Calvin University	
Oderinde	Caleb	17	Biochemistry	Hope College	
Ogudoro	Godswill	109	Physics	Hope College	
Paye	Morgan	6	Biochemistry	Kalamazoo College	
Pickett	Cherith	79	Environmental Science	Calvin University	
Pikaart	Benjamin	83	Environmental Science	Hope College	
Plesscher	William	49	Chemistry	Kalamazoo College	
Poirier	Emilie	114	Biochemistry	Aquinas College	
Powers	Haley	40	Cell and Molecular Biology	Grand Valley State University	
Qasim	Muhammad	41	Cell and Molecular Biology	Grand Valley State University	
Rabuck	Grace	13	Biochemistry	Hope College	
Ramillano	Alyson	65	Chemistry	Kalamazoo College	
Ramsey	Fiona	78	Environmental Science	Calvin University	
Ravoor	Sahas	51	Chemistry	Oakland University	
Rhodea	Brianna	7	Biochemistry	Grand Valley State University	
Romaya	Matthew	51	Chemistry	Oakland University	

Last Name	First Name	Poster Number	Poster Research Area	Institution
Rydingsward	Mae	126	Cell and Molecular Biology	Grand Valley State University
Sainju	Alina	74	Computer Science	Calvin University
Satterthwaite	Ella	30	Biomedical Engineering	Aquinas College
Sendijarevic	Haris	87	Mathematics	Aquinas College
Sietsema	Sara	42	Cell and Molecular Biology	Grand Valley State University
Smith	Emma	29	Biology	Hope College
Snyder	Wyatt	89	Mathematics	Hope College
Spooner	Ella	116	Biochemistry	Kalamazoo College
Stafford	Mel	46	Chemistry	Hope College
Streeter	Mackenzie	38	Cell and Molecular Biology	Hope College
Suranyi	Jocelyn	66	Chemistry	Kalamazoo College
Swieringa	Sierra	56	Chemistry	Calvin University
Tabor	Lauren	93	Microbiology	Grand Valley State University
Tatko	Robyn	68	Chemistry	Calvin University
Teitsma	Lily	1	Biochemistry	Calvin University
TenHuisen	Susannah	86	Geology	Calvin University
Timmer	Micayla	104	Pharmacology	Ferris State University-College of Pharmacy
Tumula	Rajasree	43	Cell and Molecular Biology	Grand Valley State University
Uddin	Mohammad Meezaan	110	Bioinformatics	Ferris State University
Valkenburg	Jamie	96	Neuroscience	Grand Valley State University
VanWoerkom	Drew	22	Biology	Calvin University
Vardeman	Hannah	15	Biochemistry	Calvin University
Vo	Tan	103	Pharmacology	Ferris State University-College of Pharmacy
Ward	Aliah	14	Biochemistry	Western Michigan University
Warner	Stephen	100	Pharmacology	Grand Valley State University
West	Ethan	25	Biology/Microbiology	Hope College
Westergaard	Paige	33	Biomedical Sciences	Siena Heights University
Weston	Nick	99	Pharmacology	Ferris State University-College of Pharmacy
Wezeman	Kamryn	44	Cell and Molecular Biology	Grand Valley State University
Williams	Isla	8	Biochemistry	Hope College
Winter	William	11	Biochemistry	Hope College
Wolday	Perci	73	Computer Science	Alma College
Xie	Zirou	51	Chemistry	University of Michigan
Yoder	Hailey	26	Biology	Kalamazoo College
Yoder	London	81	Environmental Science	Hope College
Yoo	Hannah (Jooha)	74	Computer Science	Calvin University
Zeppa	Ben	88	Mathematics	Aquinas College
Zoulek	Angel	18	Bioinformatics	Grand Valley State University
Zuzelski	Abigail	128	Neuroscience	Indiana Wesleyan University



POSTER SESSION SPONSORS





POSTER PRESENTERS

Poster presentations will take place in Cook-Hauenstein Hall and the DeVos Foundation Lobby Near Water Feature
Presenters with even-numbered posters will present from 10:00-11:15 AM
Presenters with odd-numbered posters will present from 1:15-2:30 PM

Due to some of the research not being published, only the presenter names, institutions, co-authors, poster subject areas and presentation titles are included in this program.

1. Amanda Janvier and Lily Teitsma (Co-Presenters) | Calvin University

Biochemistry

Co-Author(s): Dr. Laura Westrate, Dr. Eric Arnoys

"Unraveling Protein Transport and Sorting in the Endoplasmic Reticulum"

2. Edgar Cedillo Aguilar | Grand Valley State University

Biochemistry

Co-Author(s): Josephine Mitchell

"Investigating the Fas Apoptosis Inhibitory Molecule (FAIM) in Drosophila melanogaster"

3. Emily Dalecki | Kalamazoo College

Biochemistry

Co-Author(s): Dr. Regina Stevens-Truss

"Antimicrobial Assessment of Calmodulin-binding Sequences from Nitric Oxide Synthases"

4. Akemi Hori | Olivet Nazarene University

Biochemistry

Co-Author(s): Lucas W. Henderson and Bruce J. Heyen

"Synthesis of trimethyl citrate as potential inhibitor of PFK-1"

5. William Martel Kalamazoo College	Biochemistry
Co-Author(s): S. Bradley King, Eleanor Buchanan, Julia Patrizia Stohn, Rebecca V. Mountain	
"Propranolol treatment does not rescue social isolation-induced bone loss in C57BL/6J mice"	
6. Morgan Paye Kalamazoo College	Biochemistry
Co-Author(s): Dr. Regina Stevens-Truss and Dr. Dwight Williams	
"Investigation of Utilization of Molecular Hybridization as an Antimicrobial Agent"	
7. Brianna Rhodea Grand Valley State University	Biochemistry
Co-Author(s): Josie Mitchell	
"Exploring dietary effects on renal stone formation in Drosophila melanogaster"	
8. Isla Williams Hope College	Biochemistry
Co-Author(s): Dr. Kristen Dittenhafer-Reed	
"Understanding the role of the mitochondrial orphan proteins OXNAD1 and C15ORF61"	
9. Awesome Abraham Hope College	Biochemistry
Co-Author(s): Dr. Sean Beckwith	
"Real-time, live-cell dynamics of a retrotransposon membraneless organelle in budding yeast"	
10. Katherine Hartmann and Kate McCain (Co-Presenters) Hope College	Biochemistry
Co-Author(s): Leah Chase	
"Using LC/MS to Identify Post-translational Modifications on xCT and its Interactome"	
11. Taylor Laurin and William Winter Hope College	Biochemistry
Co-Author(s): Teague Merrill, Ryan Erdmann, Isla Williams, Kristin Dittenhafer-Reed	
"Investigating the Role of SHMT2 in the Mitochondrial Nucleoid"	
12. Alexa MacKersie Hope College	Biochemistry
Co-Author(s): Justin Romero, Awesome Abraham, Sean Beckwith	v
"Elucidating the molecular grammar of a retrotransposon prion-like domain in budding yeast"	
13. Grace Rabuck Hope College	Biochemistry
Co-Author(s): Isla Williams, Kristin E. Dittenhafer-Reed	
"Exploring the Role of PRDX5 in the Mitochondrial Nucleoid"	

14. Aliah Ward | Western Michigan University

Biochemistry

Co-Author(s): Joshua Mitchell, Tom Rothstein

"Investigation of point mutations in FAIM crucial for aggregation inhibition of AB42 and IAPP"

15. Carly Dole and Hannah Vardeman (Co-Presenters) | Calvin University

Biochemistry

Co-Author(s): Dr. David E. Benson, Dr. Chad D. Tatko

"Cys-Tyr Peptides Explore Structure-Function Relationships In Analogous Proteins"

16. Savannah Himebaugh | Michigan State University

Biochemistry

Co-Author(s): Rachel Kerwin and Robert Last

"Root Acylsugars Change in Tomatoes Across Development"

17. Caleb Oderinde | Hope College

Biochemistry

Co-Author(s): Dr. Leah Chase

"Studying the Relationship between System xC- and Calmodulin"

18. Angel Zoulek and Rita Bhattarai | Grand Valley State University

Bioinformatics

Co-Author(s): Rita Bhattarri, Dr. Agnieszka Szarecka

"Investigating Binding Modes of an Experimental Allosteric Inhibitor, BIBR-1532, to Human Telomerase - TPP1 Complex"

19. Michael Irungu | Grand Valley State University

Bioinformatics

Co-Author(s): Zachary DeBruine

"Adaptive Rank Selection for Nonnegative Matrix Factorization via Masked Reconstruction and Group-Sparse Regularization"

20. Yu-Ting Liu | Grand Valley State University

Bioinformatics

Co-Author(s): Zach DeBruine

"Nonnegative Matrix Factorization of a Human Cell Census Reveals Interpretable Biological Signatures and Supports Reference-Guided Transfer"

21. Molly McGuire | Grand Valley State University

Biology

Co-Author(s): Georgette Sass

"Optimizing Detection of Protein Kinase N to Reveal Cytoskeletal Roles in Early Drosophila Embryogenesis"

22. Drew VanWoerkom | Calvin University

Biology

Co-Author(s): K.A. Grasman, M. Annis, J.P. Ludwig

"Legacy and Emerging Pollutants in Young Double-Crested Cormorants of The Great Lakes"

23. Brigit Foley and Meghan Marlette | Hope College

Biology

Co-Author(s): Dr. Benjamin Kopek

"Understanding the Relationship between Viruses and Insects to Control the Emerging Threat of Insect Transmitted Diseases"

24. Rose House | Ferris State University

Biology

Co-Author(s): Keely Baker

"Tracking Mitophagy in Adult Fruit Flies for Aging Study"

25. Estherqueen Koomson and Ethan West | Hope College

Biology

Co-Author(s): Philip Kerber, Virginia McDonough, Joseph Stukey

"Investigating de novo gene formation in phage genomes"

Note: The research presented in this poster falls within the fields of biology and microbiology.

26. Hailey Yoder | Kalamazoo College

Biology

Co-Author(s): Daniel Velasco, Margarita Brandt, Elizabeth Kroger, Nicolás Dávalos, Margarita Brandt "Effects of coral restoration on fish abundance and biodiversity in Galapagos Islands"

27. Lauren Koski | Grand Valley State University

Biology

Co-Author(s): Sawyer Barton, Cynthia L. Thompson

"Assay Validation of Non-Invasive Heat-shock Protein (HSP) Measurement in Mammalian Feces"

28. Samantha Nowak | Ferris State University

Biology

Co-Author(s): Leah Levandowski, Sky Pike, Au Sable Institute

"Sanitary Survey Correlation with Colilert Results for Inland Lakes in DHD #10, Michigan"

29. Emma Smith | Hope College

Biology

Co-Author(s): Madeline G. Shirk, Jacquelin D. D'Lamater, Emma J. Koeman, Lauren M. Cribbs, Brent P. Krueger, Virginia Beard, and Aaron A. Best*

"Drinking Water Quality and Accessibility in Zambia"

30. Ella Satterthwaite | Aquinas College

Biomedical Engineering

Co-Author(s): Dr. Karissa Tilbury

"Microengineering of fiber alignment in collagen hydrogels"

31. Audrey Gonzales | University of Florida

Biomedical Engineering

Co-Author(s): Clinton T. Smith, Grace Koch, and Jamal S. Lewis, Ph.D.

"Functionalization of Cryptococcus neoformans with Nanoparticles for Enhanced Glioblastoma Drug Delivery"

32. Lucas Metz | Hillsdale College

Biomedical Sciences

Co-Author(s): Dr. Sang Chul Nam

"Abnormal Glial Cell Distribution in the Presence of Neuronal A β 42 and Tau Overexpression in Drosophila melanogaster Eyes"

33. Paige Westergaard | Siena Heights University

Biomedical Sciences

Co-Author(s): Dr. Jeffrey Lake

"The Effectiveness of Blue Light Glasses in Relieving Digital Eye Strain Symptoms"

34. Gavin Morgan | Grand Valley State University

Biomedical Sciences

This poster is being co-presentered by Gavin Morgan, Aiden McDowell and Grace Memelli

Co-Author(s): Shkelzen Shabani, Tamara Phillips.

"Interaction of Trace Amine-Associated Receptor 1 and Mu-Opioid Receptor Influence on Motivational Behaviors"

35. Lizbeth Mares Castro | Kalamazoo College

Biomedical Sciences

Co-Author(s): Dwight Williams

"Synthesis of Maleimide-Tryptamine Hybrids as Potential Antibiotics"

36. Leah Gregg | Siena Heights University

Biomedical Sciences

Co-Author(s): Dr. Jeffrey Lake and Dr. Carlee Ann Resh

"Anticoagulant Use In The Geriatric Population"

37. Juan Morales Zimbron and Alexis Bruglio | Ferris State University-College of Pharmacy Biotechnology "PikD-Driven Activation and Redox Engineering Tune 12- vs 14-Membered Macrolide Production"

38. Mackenzie Streeter | Hope College

Cell and Molecular Biology

Co-Author(s): Alexa MacKersie, Dr. Sean Beckwith

"Sequence constraints on retrotransposition of Ty1 in the budding yeast Saccharomyces cerevisiae"

39. Alan Dzelatic | Grand Valley State University

Cell and Molecular Biology

Co-Author(s): Matthew Christians

"Role of the LRB Protein in Transgenic Plants"

40. Haley Powers | Grand Valley State University Cell and Molecular Biology Co-Author(s): Pei-Lan Tsou and Sheila Blackman "Development of a Cost-Effective Multiplex ddPCR Assay for Pathogen Detection in Wastewater Surveillance" 41. Muhammad Qasim | Grand Valley State University Cell and Molecular Biology Co-Author(s): Brett Boudreau, Dr. Matthew Christians "RNAi Knockdown of the CDC20 Gene and its effect on Regeneration in Planaria" 42. Sara Sietsema | Grand Valley State University Cell and Molecular Biology Co-Author(s): Kamryn Wezeman, Dr. Pei-Lan Tsou, Dr. Sheila Blackman "The Bug Stops Here: Development of a Molecular Assay for Detecting WNV in Local Mosquito Populations" 43. Rajasree Tumula | Grand Valley State University Cell and Molecular Biology Co-Author(s): Vincenzo DeBlasi, Hannah Bekius, Sheila Blackman, Pei-Lan Tsou "Keeping Michigan Beaches Safe: Monitoring E.coli Contamination and its Sources" Cell and Molecular Biology 44. Kamryn Wezeman | Grand Valley State University Co-Author(s): Jorgianna Bidwell and Margaret Dietrich, PhD "ULK1-2 Knockdown in Planarian Brain Regeneration" 45. Isabel Henige | Ferris State University-College of Pharmacy Cell and Molecular Biology Co-Author(s): Prasanna Maharjan, Megan Ley, Zeynab Aghabayli, Courtney Brown, Dr. Eric Nybo "Starter-unit engineering of aromatic polyketides to expand anticancer lead space" 46. Mel Stafford | Hope College Chemistry Co-Author(s): Cora Adam, Dr. Ken Brown "Sediment Contamination in Northwest Lake County, IN" 47. Naa Kailey Addo | Calvin University Chemistry Co-Author(s): Orin R. Daspit, Robyn S. Tatko, and Douglas A. Vander Griend "Binding Modes For Tetramethylethylenediamine with Cu(II) Towards a Supramolecular Square" 48. Baylor Baldwin | Kalamazoo College Chemistry Co-Author(s): Emma Muller and Dr. Darren W Johnson "Bis-Imidazolium Receptors for Headgroup Recognition and Binding of PFOA"

49. John Bungart and William Plesscher | Kalamazoo College Chemistry Co-Author(s): Blakely Tresca "Synthesis and Crystalline Structures of Asymmetric Phthalimide Diynes" 50. Devi DeYoung | Kalamazoo College Chemistry Co-Author(s): Blakely Tresca "Relationship Between Peptoid Sequence and Properties" 51. Matthew Romaya, Sahas Ravoor and Zirou Xie | Oakland University Chemistry Co-Author(s): Vincent Casetti, Jahanzaib Qamar, Hadie Alabbas, Alexander A. Rusakov, Ph.D "Adsorption Models of the Chemical Homologs of Super-Heavy Elements (SHEs) on Amorphous Silica (SiO2)" 52. Lena Imanzi | Calvin University Chemistry Co-Author(s): Orin R. Daspit, Robyn S. Tatko and Douglas A. Vander Griend, Ph.D "Determining binding modes for Tetramethylenediamine with Cu(ii) before the self-assembly of supramolecular square" Chemistry 53. Cody Marshall | Hope College Co-Author(s): Meagan Elinski "Sliding Induced Embedment of Nanoparticles into Soft Surfaces" 54. Karen Nimtz | Hope College Chemistry Co-Author(s): Alyssa Franck, Jeffery Johnson* "Expanding the boundaries of carbon-carbon bond activation in pyridyl ketones" 55. Orin Daspit | Calvin University Chemistry Co-Author(s): Aerin E. Baker, Lena Imanzi, Ellis D. Mensah, Robyn S. Tatko, Kailey Addo, Douglas A. Vander Griend "Reliable Ion Molar Volumes from Simple Measurements" 56. Rebecca Nulty and Sierra Swieringa | Calvin University Chemistry Co-Author(s): Professor Brad Veldkamp, Rebecca-Helen Prince, Mariana Dykstra "Alternative Routes to Methacrylate Monomers via Transesterification"

57. Sophie Derusha | Ferris State University

"Multi-targeted MNK inhibitors as anticancer agents"

Co-Author(s): Sonali Kurup, PhD.

2025 WMRUGS Research Conference Program | Page 23

Chemistry

58. Ellis Mensah Calvin University	Chemistry
Co-Author(s): Aerin Baker, Douglas Vander Griend, Roger DeKock	•
"Partitioning the Atom: A New Approach to Effective Nuclear Charge and Radius Most Probable"	
59. Unayza Anika Kalamazoo College	Chemistry
Co-Author(s): Pierre Cadeau, Margot C.F. Debyser, and Tristan J. Horner	
"Black Sea in Your Backyard: Trace Metal Cycling in a Salt-Stratified Pond"	
60. Teige Bredin Kalamazoo College	Chemistry
Co-Author(s): Cecilia H. Vollbrecht	
"Creating an Optical System to Measure Resonant Wavelengths in a Fabry-Pérot Cavity"	
61. Olivia Cannizzaro Kalamazoo College	Chemistry
Co-Author(s): Dr. Dwight Williams	
"Synthetic Route Optimization of Herdmanine-K and Analogues for PPARγ Agonistic Activity"	
62. Grace Connelly Grand Valley State University	Chemistry
Co-Author(s): Dr. Scott Thorgaard	
"Single Entity Electrochemical Collisions of S. saprophyticus in Iodide Solutions at Au Ultramicro	electrodes"
63. Isaac Duncan IV Kalamazoo College	Chemistry
"Synthesis of Non-Natural Herdmanine K Analogues"	
64. Andrew Moody Aquinas College	Chemistry
Co-Author(s): Kevin Boyd	
"Thin Film growth with complexes containing salen and "salen-like" ligand"	
65. Alyson Ramillano Kalamazoo College	Chemistry
Co-Author(s): Dwight Williams	
"Synthesis of Aqabamycin G Analogs as Potential Antibacterials"	
66. Jocelyn Suranyi Kalamazoo College	Chemistry
Co-Author(s): Dr. Blakely Tresca	
"Antimicrobial Properties of Coumarin-Peptoid Hybrids"	
67. Caleb Gatlin and Charlotte Hendrian Calvin University	Chemistry
Co-Author(s): Mark Muyskens	
"Excited State Dynamics of 5-hydroxycoumarin in Aprotic Solvents"	ference Program Page 24

68. Robyn Tatko | Calvin University

Chemistry

Co-Author(s): Aerin E. Baker, Kailey Addo, Orin R. Daspit, Lena Imanzi, Ellis D. Mensah, Noah J. Pehrson, Kachel Bedow, and Douglas A. Vander Griend

"The Supramolecular Cube"

69. Trustin Christopher | Kalamazoo College

Chemistry

Co-Author(s): Landrie G. Fridsma, Dwight A. Williams

"Synthesis of 5,7-Dihydroxy-2-(2-phenylethyl)chromone (5,7-HPEC) Analogs as Potential Neuroprotectants"

70. Channing Green | Aquinas College

Chemistry

Co-Author(s): Dr. Kevin Boyd

"The River Narrative"

71. Devin Chung | Grand Valley State University

Computational Biology

Co-Author(s): Devin Chung, Agnieszka Szarecka

"Exploring Caspofungin Interactions with the 1,3- β -Glucan Synthase (FKS1) via Protein-Ligand Docking"

72. Xhesika Luarasi | Ferris State University

Computational Biology

Co-Author(s): Judah DePaula, Bradley Isler, Kei Ving Wong, and Schuyler Pike.

"Computational Modeling of 1-Carbon (1-C) Metabolism to Analyze Mitochondrial 1-C Flux"

73. Yassine Kraiem, Benard Adewole and Perci Wolday | Alma College

Computer Science

Co-Author(s): Dr. Andrew Thall

"Human-Aware Path Planning for Assistive Robots"

74. Alina Sainju and Hannah (Jooha) Yoo (Co-Presenters) | Calvin University

Computer Science

Co-Author(s): Dr. Kenneth C. Arnold

"How Do People Perceive and Use Different AI Suggestion Types in Their Writings?"

75. Adwowa Baafowa Brako | Ferris State University

Environmental Science

Co-Author(s): Samantha Nowak, Leah Levandowski, Sam Turner, Curran Allison, Simon LaGrand, Heath Garris, and Sky Pike

"Analyzing E. coli Levels and Determinants by Colilert Analysis and Sanitary Surveys for Inland Lakes in Michigan DHD#10"

76. Karis Basselin and Esther Kratzer (Co-Presenters) | Calvin University

Environmental Science

Co-Author(s): Douglas Vander Griend and Luis González

"Analysis of Potable Water for Rural Villages in Guatemala"

77. Gracelynn Kelly | Hillsdale College **Environmental Science** Co-Author(s): Dr. Christopher Heckel "Assessing Carbon Sequestration in Ombrotrophic and Minerotrophic Peatlands of Michigan's Lower Peninsula" 78. Fiona Ramsey and Esther Kratzer | Calvin University **Environmental Science** Co-Author(s): Douglas Vander Griend and Luis González "Evaluation of Pesticide Presence in the Mestelá River" 79. Cherith Pickett | Calvin University **Environmental Science** Co-Author(s): Rachel Drobnak, Christine Sprunger Ph.D "Analyzing Carbon Metric Trends & Variance Throughout Time in MCSE-LTER Prairie Strip Soils" 80. Anna Mayernik | Hope College **Environmental Science** Co-Author(s): Skylar Davis, Lauren Cribbs, Dr. Aaron Best, and Dr. Michael Philben "Methane Production in Peat Bogs Across a Michigan Transect" 81. London Yoder | Hope College **Environmental Science** "Temperature-driven shifts of nitrogen mineralization in Michigan peat bogs" **Environmental Science** 82. Emily Mathew | Hope College Co-Author(s): Dr. Michael Philben "Effect of Nitrogen Addition on Methane Production in Michigan Peatlands" 83. Benjamin Pikaart | Hope College **Environmental Science** Co-Author(s): Michael Philben "Recent Carbon Accumulation Rates of Michigan Peatlands Decline with Increasing Temperature" 84. Heaven Bradley | Michigan State University **Environmental Science** Co-Author(s): Coral Brock, Natalie Love "Cooling Cities Through Plant Selection" 85. Carl Martin | Calvin University **Environmental Science** Co-Author(s): Ivanka Stefanova, Melinda Higley "Preliminary Holocene Pollen Analysis from Flat Iron Lake, Western Michigan"

86. Susannah TenHuisen | Calvin University

Geology

Co-Author(s): Dr. Melinda Higley

"Climate Change Evidence from a West Michigan Kettle Lake: Insights from Charcoal and Sediment Analyses"

87. Haris Sendijarevic | Aquinas College

Mathematics

Co-Author(s): Dr. Joseph Fox

"The Mathematics Behind Sport Rankings"

88. Ben Zeppa | Aquinas College

Mathematics

Co-Author(s): Dr. Joseph Fox

"The Mathematics and Methods of Sports Rankings"

89. Wyatt Snyder | Hope College

Mathematics

Co-Author(s): Dr. Brian Yurk, Dr. Yew-Meng Koh

"Modeling Long-Term Seed Viability with Survival Analysis: A 30-Year Study of Pioneer Plants in Costa Rican Cloud Forests"

90. Brady Curtin | Grand Valley State University

Microbiology

Co-Author(s): Dr. Ian Cleary, Dr. Derek Thomas

"Do Similar Phosphatases Act on the Same Substrate in C. albicans?"

91. Chase DiTullio | Aquinas College

Microbiology

Co-Author(s): Natalia B. Hubbs, Sundhar Subramanian

"Isolation & Characterization of Citrophage Jay-1"

92. Makenna May | Grand Valley State University

Microbiology

Co-Author(s): Dr. Ian Cleary, Dr. Derek Thomas

"The Role of Several Candida albicans Genes in Multidrug-Resistant Candida auris"

93. Lauren Tabor | Grand Valley State University

Microbiology

Co-Author(s): Dr. Michelle Hulin

"Identifying the Genetic Basis of Plasmid Competence in the Plant Pathogen Pseudomonas syringae"

94. Arash Kordbacheh | Grand Valley State University

Neuroscience

Co-Author(s): Arash Kordbachehl, Akash Ranabothul, John Capodilupol, Matthew J. Benskey2

"Synucleinopathy Decreases Expression of the Complement Regulator CD55 in Nigral Dopamine Neurons Prior To Neurodegeneration"

95. Michael Eshleman | Grand Valley State University

Neuroscience

Co-Author(s): Elettra Rizzao, Aiden McDowell, Luis Gallegos-Sanchez, Grace Memelli, Gavin Morgan, Tamara J. Phillips, and Shkelzen Shabani

"Morphine and Methamphetamine co-administration induce severe hypothermia"

96. Jamie Valkenburg | Grand Valley State University

Neuroscience

This poster is being co-presentered by Jamie Valkenburg, Kates Krasin and Emmett Lake

Co-Author(s): John Capodilupo and Jerry Keeney

"Isoforms of GAP-43: Making Connections to Alzheimer's Disease"

97. Morgan Mussehl | Central Michigan University

Neuroscience

Co-Author(s): Shasta Sabo

"Impact of GluN2B Haploinsuffiency on CREB Activation and PSD95 Expression During Cortical Development"

98. Emersyn McCann | Hope College

Neuroscience

Co-Author(s): Natalie Olander, Eden Comer, Jacob Plagens, and Dr. Chase*

"Interneuron Development in an Animal Model of Bipolar Disorder"

99. Nick Weston and Prasanna Maharjan | Ferris State University-College of Pharmacy

Pharmacology

Co-Author(s): S. Eric Nybo

"Generation of a whole-cell biocatalyst for glycodiversification of tylactone"

100. Stephen Warner | Grand Valley State University

Pharmacology

Co-Author(s): Dr. David Linn, Tayler saber

"Characterization of neurogenesis of adult pig retinal cells by a selective nicotinic agonist using a 2-step culture system"

101. Courtney Brown | Ferris State University-College of Pharmacy

Pharmacology

Co-Author(s): Isabel Henige, Megan Ley, Zeynab Aghabayli, Prasanna Maharjan, and S. Eric Nybo

"Enhancement of decilorubicin production by overexpressing a pathway-situated regulator"

102. Megan Ley and Zeynab Aghabayli | Ferris State University-College of Pharmacy

Pharmacology

Co-Author(s): Megan Ley, Zeynab Aghabayli, Courtney Brown, Isabel Henige, Prasanna Maharjan, Dr. Eric Nybo

"Engineering type II polyketide biosynthesis in E. coli to enable anticancer BIQ discovery"

103. Tan Vo | Ferris State University-College of Pharmacy

Pharmacology

Co-Author(s): Kushal Dahal, MS; Michael Klepser, PharmD, FCCP, FIDP; Benjamin Pontefract, PharmD, BCPS, Kaylee Caniff, PharmD, BCIDP; Minji Sohn, PhD, MPP

"Collaboration to Harmonize Antimicrobial Registry Measures (CHARM) Database Analysis of Antibiotic Prescribing in Urgent and Non-Urgent Care: A Retrospective Study on Demographic Factors"

104. Gabriella Brekke | Ferris State University-College of Pharmacy

Pharmacology

This poster is being co-presentered by Gabriella Brekke, Jennah Angel, Alex Lowczyk, Xhesika Luarasi, Carson Mulcahy and Micayla Timmer

Co-Author(s): Dr. Tracey Ward, Dr. Felix Amissah

"Peroxisome Proliferated-Activated Receptor (PPAR) Delta Agonist a Promising Treatment for Non-Alcoholic Fatty Liver Disease"

105. Madeline Gardner | Ferris State University

Pharmacology

Co-Author(s): Minji Sohn PhD, MPP, Benjamin Pontefract PharmD, BCPS, Kushal Dahal, Michael Klepser PharmD, FCCP, FIDP

"Assessment of Disparities in Antibiotic Avoidance for Acute Bronchitis"

106. Jonathan Guerin | Ferris State University-College of Pharmacy

Pharmacology

"Use of Healthcare Effectiveness Data and Information Set (HEDIS) through Collaboration to Harmonize Antimicrobial Registry Measure (CHARM) to Assess Differences in Prescribing Patterns Among Patient Populations For Upper Respiratory Infections"

107. Joe Bachman | Hope College

Physics

Co-Author(s): Dr. Kester Ighodalo

"The Effect of Different Additives in Solution Processed FACsPbI3 Perovskite Films under Ambient Conditions"

108. Isaac Evans | Hope College

Physics

Co-Author(s): Dr. Zachary Williams

"Eigenmode Decomposition Analysis of Resistive Magnetic Reconnection"

109. Godswill Ogudoro | Hope College

Physics

Co-Author(s): Dr. Kester Ighodalo

"Improving the Stability of FACsPbI3 films under Ambient Condition through Additive Strategies"

110. Mohammad Meezaan Uddin | Ferris State University

Bioinformatics

Co-Author(s): Professor Sumith Gunasekera

"Generalized Variable Method for Multiclass Diagnostics in Parkinson's Disease Extending the Youden Index to Real-World Applications"



2025 VAN ANDEL INSTITUTE (VAI) STUDENT RESEARCH FELLOWS POSTER PRESENTERS

Even-numbered posters 112-128 for VAI student research fellows will be featured in the DeVos Foundation Lobby near the Water Feature Area from 10:00-11:15 AM

112. Molly McGuire | Grand Valley State University | Van Andel Institute

Biochemistry

Co-Author(s): Heather LeFaivre, Travis Walton

"Optimizing Isolation and Visualization of Myelinated Axons from Mammalian Brain Tissue"

114. Emilie Poirier | Aquinas College | Van Andel Institute

Biochemistry

Co-Author(s): Molly T. Soper-Hopper, Ryan D. Sheldon

"Developing an Internal Quality Control Method for Proteomic LC-MS Analysis with SDS-PAGE Gels"

116. Ella Spooner | Kalamazoo College | Van Andel Institute

Biochemistry

Co-Author(s): Dr. Amber Ide, Dr. Stephanie Grainger

"Developmental Canonical Wnt Signaling Establishes Lifelong Hematopoiesis"

118. Mike Liang | Calvin University | Van Andel Institute

Biology

Co-Author(s): Clifford Cho, Anutosh Ganguly, Heineken Queen, and Jiayu Liu

"Characterization of Immune-Mediated Vasculature Remodeling Post Histotripsy"

120. Ariana Esquivel-Landero | Aquinas College | Van Andel Institute

Biomedical Sciences

Co-Author(s): Heidi Lempradl, Eduardo Pérez-Mojica

"An Evaluation of CG18542 as a Candidate Gene for the Synthesis of N-Acetylaspartate in Drosophila melanogaster"

122. Julie Celori | Purdue University | Van Andel Institute Cell and Molecular Co-Author(s): Smitha George, and Yvonne Fondufe-Mittendorf

"Inorganic Arsenic Alters SATB2 and circ3915 in Bronchial Epithelial Cells"

Biology

124. Haley Cook | University of Michigan | Van Andel Institute

Cell and Molecular Biology

Co-Author(s): Zhaoyu Xue, Hong Wen

"Optimization of a Potent ENL Degrader to Suppress Oncogenic Transcription and Leukemia Cell Proliferation"

126. Mae Rydingsward | Grand Valley State University | Van Andel Institute Co-Author(s): Jessica Ensing, Stephanie Grainger, Noah Stiltner "Sfrp1a Inhibits Canonical Wnt9a/Fzd9b Signaling"

Cell and Molecular Biology

128. Abigail Zuzelski | Indiana Wesleyan University | Van Andel Institute Co-Author(s): Yakum Bernard Mingo, Kevin Kurgat, Micheal Henderson Neuroscience

"Differential Expression of the Mitochondrial Protein Tfam in Brain Regions Vulnerable to Parkinson's Disease"





INTERNSHIP AND EMPLOYMENT RECRUITER CONTACT INFORMATION PAGES 32-33

GENTEX CORPORATION

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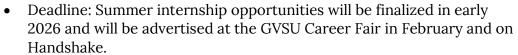
Daniel Quintanilla, Director of Talent Programs

Email: dquintanilla@gentex.com | Telephone: 616-772-1800

Please contact Daniel Quintanilla via email regarding student opportunities with Gentex Corporation.

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• For all other jobs, we keep postings up to date and the deadline is revolving.

Grand River Aseptic Manufacturing

140 Front Ave SW

Grand Rapids, MI 49504

Jill Quillen, Director of Human Resources

Email: jquillen@grandriverasepticmfg.com | Telephone: 616-278-0289

Allie Mollema, Human Resources Manager

Email: amollema@grandriverasepticmfg.com | Telephone: 616-678-2400 ext 334

Grand River Aseptic Manufacturing recruiters / representatives will be available from 8:30 AM-2:30 PM

STEM GREENHOUSE

Informational Website and Online Application: https://stemgreenhouse.org/

- Undergraduate Internship Online Application Period: Rolling
- Online Application and Process: Please visit our booth to learn more about the internship application process through the City of Grand Rapids/GRow1000

STEM Greenhouse

3167 Kalamazoo Avenue SE

203

Grand Rapids, MI 49508

Dr. Keli Christopher, Founder and CEO

Email Address: keli@stemgreenhouse.org | Telephone Number: 616-570-0607

Email Address: info@stemgreenhouse.org

STEM Greenhouse recruiters / representatives will be available from 9:30 AM-2:30 PM









THERMO FISHER SCIENTIFIC

Informational Website: https://www.fishersci.com/us/en/home.html

Online Application: https://jobs.thermofisher.com/global/en

Application Deadline: Deadlines are dependent on role applied for

Please check the website for details as job postings are regularly added

Thermo Fisher Scientific 300 Industry Drive Pittsburgh, PA 15275

Masina Iannucci, Sales Representative

Email Address: masina.iannucci@thermofisher.com | Telephone Number: 269-550-7567

Thermo Fisher Scientific recruiters / representatives will be available from 8:30 AM-2:30 PM

VAN ANDEL INSTITUTE

Informational Website and Online Application: https://www.vai.org/ug-internships

• Research Fellowship Application Period: December 1, 2025-February 2, 2026

Van Andel Institute 333 Bostwick Avenue, NE Grand Rapids, MI 49503

Committee for Student Undergraduate Research Fellowship

Email Address: <u>undergrad@vai.edu</u> | Telephone Number: 616-234-5708

Van Andel Institute recruiters / representatives will be available from 8:30 AM-2:30 PM

Thermo Fisher S C I E N T I F I C







EDUCATIONAL RECRUITER CONTACT INFORMATION PAGES 33-38

FERRIS STATE UNIVERSITY – COLLEGE OF PHARMACY

Informational Website: https://www.ferris.edu/pharmacy

Online Application: https://www.ferris.edu/pharmacy/admissions/apply.htm

Or scan the QR Code below the Ferris logo to access application link Deadlines:

- Priority Online Application Deadline: November 1, 2025
- Regular Online Application Deadline: June 1, 2026

Ferris State University – College of Pharmacy Pharmacy Building

220 Ferris Drive

Big Rapids, MI 49307

Stephen Durst, Ph.D. | Dean-College of Pharmacy

Email Address: dursts@ferris.edu | Telephone Number: 231-591-2254

Thomas Dowling, PharmD, Ph.D. | Assistant Dean for Research

Email Address: thomasdowling@ferris.edu | Telephone: Number 616-643-1139

Faruk Khan, Ph.D. | Assistant Dean - Student Success

Email Address: mdomarkhan@ferris.edu | Telephone Number: 616-643-1122

College of Pharmacy recruiters/representatives will be available from 8:00 AM-3:30 PM





GRAND RAPIDS COMMUNITY COLLEGE

Informational Website: https://www.grcc.edu/

Online Application: See website below

https://www.grcc.edu/students-resources/admissions-enrollment/apply-grcc

• Summer classes begin May 4, 2026

Grand Rapids Community College

143 Bostwick Avenue NE Grand Rapids, MI 49503

Grant Snider, PhD | Associate Dean - School of STEM

Email Address: grantsnider@grcc.edu | Telephone Number: 616-234-3142

Kristi Haik, PhD | Dean of STEM

Email Address: kristihaik@grcc.edu | Telephone Number: 616-234-4230

Grand Rapids Community College recruiters / representatives will be available from 8:30 AM-3:30 PM

GRAND VALLEY STATE UNIVERSITY-CELL AND MOLECULAR BIOLOGY

Informational Website: https://www.gvsu.edu/cmb/

Online Application: https://apply.gvsu.edu/portal/gr_app

• Applications are accepted on a rolling basis. Deadline for fall semester start is February 1, international; and April 1, domestic. Deadline for winter semester start is September 1, international; and November 1, domestic.

• The \$30 non-refundable application fee is waived if the applicant has previously applied to GVSU.

Grand Valley State University Cell and Molecular Biology 3300A P. Douglas Kindschi Hall of Science Allendale, MI 49401

Matthew Christians, Associate Professor of Cell and Molecular Biology Email Address: christmi@gvsu.edu | Telephone Number: 616-331-2315

Grand Valley State University recruiters/representatives will be available from 8:00 AM-2:30 PM

INDIANA UNIVERSITY SCHOOL OF MEDICINE, BIOMEDICAL GRAD PROGRAMS

Informational Website: https://medicine.iu.edu/graduate-

degrees/phd/indianapolis

Online Application: https://go.iu.edu/ApplyIBMG

Deadlines:

• Priority Application Deadline: November 1, 2025

• Final Application Deadline: December 1, 2025

Indiana University School of Medicine

635 N. Barnhill Drive | MS 164 Indianapolis, IN 46202

Britney Hieser, Assistant Director

Email Address: biomed@iu.edu | Telephone Number: 317-274-3441

Indiana University School of Medicine recruiters/representatives will be available from 8:15 AM-2:30 PM









MEHARRY MEDICAL COLLEGE

Informational Website: https://meharrysogs.org/

Online Application: See website below

https://meharrysogs.org/students-fellows/admissions/application-deadlines-and-requirements/

Deadlines:

• December 15, 2025: PhD Priority Application Deadline

• April 30, 2026: MHS Application Deadline

Meharry Medical College 1005 Dr Db Todd Jr Blvd Nashville, TN 37208-3501

Nicolle Patterson, MS, Assistant Dean for Student Affairs

Email Address: npatterson@mmc.edu | Telephone Number: 832-439-0100

Pius N. Nde, PhD, Associate Professor, Director, PhD Program, Department of Biomedical Sciences

Email Address: pnde@mmc.edu | Telephone Number: 615-327-6997

Meharry Medical College recruiters/representatives will be available from 10:00 AM-2:00 PM

MICHIGAN STATE UNIVERSITY (MSU)-COLLEGE OF HUMAN MEDICINE

Informational Website: https://humanmedicine.msu.edu/
Online Application: https://chmadmissions.msu.edu/
Deadlines:

- Traditional MD Primary Application Deadline: October 15
- Traditional MD Secondary Application Deadline: November 15
- MD/PhD Primary Application Deadline: September 1
- MD/PhD Secondary Application Deadline: October 1

Michigan State University-College of Human Medicine

15 Michigan St. NE

Grand Rapids, MI 49503

Molly Monet, MSU CHM Admissions Counselor

Email Address: monetmol@msu.edu | Telephone Number: 616-234-2676

Cindy Grove Arvidson, PhD-MSU CHM MD/PhD Program Director Email Address: arvidso3@msu.edu | Telephone Number: 616-234-2676

MSU-College of Human Medicine recruiters/representatives will be available from 8:00 AM-2:30 PM





MEHARR







THE OHIO STATE UNIVERSITY

INTERDISCIPLINARY LIFE SCIENCES GRADUATE PROGRAMS

 $Informational\ Website: \underline{https://gradsch.osu.edu/interdisciplinary-graduate-programs}$

Online Application: https://gpadmissions.osu.edu/programs/programs.aspx

• Application Deadline: December 3, 2025

Interdisciplinary Life Sciences Graduate Programs:

Biophysics | Biochemistry | Molecular, Cellular and Developmental Biology | Neuroscience

The Ohio State University

111 Biological Sciences Building

484 W 12th

Columbus, OH 43210

Amanda Hargett Program Manager, Interdisciplinary Graduate Program in Molecular, Cellular, and Developmental Biology

Email Address: hargett.5@osu.edu | Telephone Number: 614-292-2804

Anthony Brown, Ph.D. Professor and Co-Director, Interdisciplinary Graduate Program in Molecular,

Cellular, and Developmental Biology

Email Address: anthony.brown2@osumc.edu | Telephone Number: 614-292-1205

The Ohio State University recruiters/representatives will be available from 8:00 AM-2:30 PM

PURDUE UNIVERSITY - INTERDISCIPLINARY LIFE SCIENCE PROGRAM

Informational Website: https://www.purdue.edu/academics/ogsps/pulse/

Online Application: https://gradapply.purdue.edu/apply/

• Application Deadline: December 1, 2025

Interdisciplinary Life Science Program (PULSe)

Purdue University

155 S. Grant Street

West Lafayette, IN 47909

Lindsey Springer, Lead Graduate Program Specialist

Email Address: lbcampbe@purdue.edu | Telephone Number: 765-496-9667

Purdue University recruiters/representatives will be available from 8:00 AM-2:30 PM

UNIVERSITY OF MICHIGAN

MOLECULAR AND CELLULAR PATHOLOGY GRADUATE PROGRAM MEDICAL SCHOOL

Informational Website: https://www.pathology.med.umich.edu/phd-program

Online Application: See website below

https://www.pathology.med.umich.edu/phd-program/prospective-students

• Application Deadline: December 1, 2025

University Of Michigan-Molecular and Cellular Pathology Graduate Program

Office: NI6A11 300

300 North Ingalls Street

Ann Arbor, MI 48109-5416

Jean-Francois Rual, Ph.D. - Associate Professor - UM MCP Graduate Program

Email Address: jrual@umich.edu | Telephone Number: 734-764-6975

University of Michigan Medical School Molecular and Cellular Pathology Graduate Program recruiters/representatives will be available from 8:00-10:00 AM and then 11:30 AM-1:00 PM











UNIVERSITY OF MICHIGAN-PROGRAM IN BIOMEDICAL SCIENCES MEDICAL SCHOOL

 $Informational\ Website: \underline{https://medschool.umich.edu/programs-admissions/phd-programs}$

Online Application: https://www.applyweb.com/cgi-bin/app?s=umgrad

• Application Deadline: December 1, 2025

University Of Michigan-Program in Biomedical Sciences

2960 Taubman Health Sciences

1135 Catherine Street Ann Arbor, MI 48109

Jen Wloszek, Student Outreach Rep and Current Ph.D. Trainee

Email Address: jwloszek@umich.edu | Telephone Number: 734-615-1581

Kelyah Spurgeon, MCDB Ph.D. Trainee

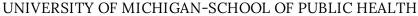
Email Address: <u>kelyahs@umich.edu</u> | Telephone Number: 734-615-1581

Patrick Schrader, Graduate Enrollment Program Manager

Email address: pcshrade@umich.edu | Telephone number: 734-615-1581

 $University\ of\ Michigan\ Medical\ School\ Program\ in\ Biomedical\ Science\ recruiters/representatives\ will\ be$

available from 8:00 AM-2:30 PM



Informational Website: https://sph.umich.edu/

Online Application: https://sph.umich.edu/admissions/mph-mhsa-application-checklist.html Application Deadlines:

- Priority Deadline (all): December 1
- Final MPH/MHSA Deadline: May 15
- MS/PhD Final Deadlines: Vary by Department | Visit the website for final deadline dates

University of Michigan School of Public Health

1415 Washington Heights

Ann Arbor, MI 48109

Lynn Douglass, Graduate Recruitment Lead

Email Address: lynndoug@umich.edu

University of Michigan Public Health recruiters/representatives will be available from 8:00 AM-2:30 PM

VAN ANDEL INSTITUTE GRADUATE SCHOOL

Informational Website: https://www.vai.org/graduate-school

Online Application: https://www.vai.org/graduate-school/admissions

• Application Deadline: December 1, 2025

Van Andel Institute Graduate School

333 Bostwick Avenue, NE Grand Rapids, MI 49503

Christy Mayo, Director of Enrollment and Records

Email Address: christy.mayo@vai.edu | Telephone Number: 616-234-5722

Van Andel Institute Graduate School recruiters/representatives will be available from 8:00 AM-2:30 PM











WESTERN MICHIGAN UNIVERSITY

Informational Website and Online Application: https://wmich.edu/grad

• Application Deadline: Continual

Western Michigan University 1903 W. Michigan Avenue Kalamazoo, MI 49008

Dr. Malia Roberts, Senior Director of Graduate Enrollment

Email Address: malia.roberts@wmich.edu | Telephone Number: 269-387-8212

Western Michigan University representatives will be available from 9:00 AM-3:30 PM





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