

Book of Speakers



**Cell and Molecular Biology
RESEARCH SYMPOSIUM**

WINTER 2021



Natasha Zandstra



Natasha is a senior at Grand Valley State University completing her Bachelors in Cellular and Molecular Biology. Through her time at Grand Valley, she has been awarded with Dean's List, varying National Honor Society memberships, research presentation awards, and multiple academic scholarships. She has spent two years researching *Schizosaccharomyces pombe* and the interaction between the SIN and MOR pathway in the yeast using a combination of intentional genetic mutation and confocal microscopy. Natasha also enjoys partaking in the arts whether through literature, cinema, or other media. She hopes to continue her path in scientific research while incorporating the arts in a new and unique way during her pursuit in her doctorate in the near future.

Amanda Moy



Amanda has research experience in the fields of cancer biology and genome annotation. She has done work in the labs of Dr. Henry Heng (Wayne State University) and Dr. Martin Burg (Grand Valley State University). Amanda is also a Stanford University Innovation Fellow and a Grand Valley Design Thinking Fellow. After graduation, Amanda plans to go to graduate school for genetics, and eventually become the principal investigator of her own laboratory.

Emily Trombley



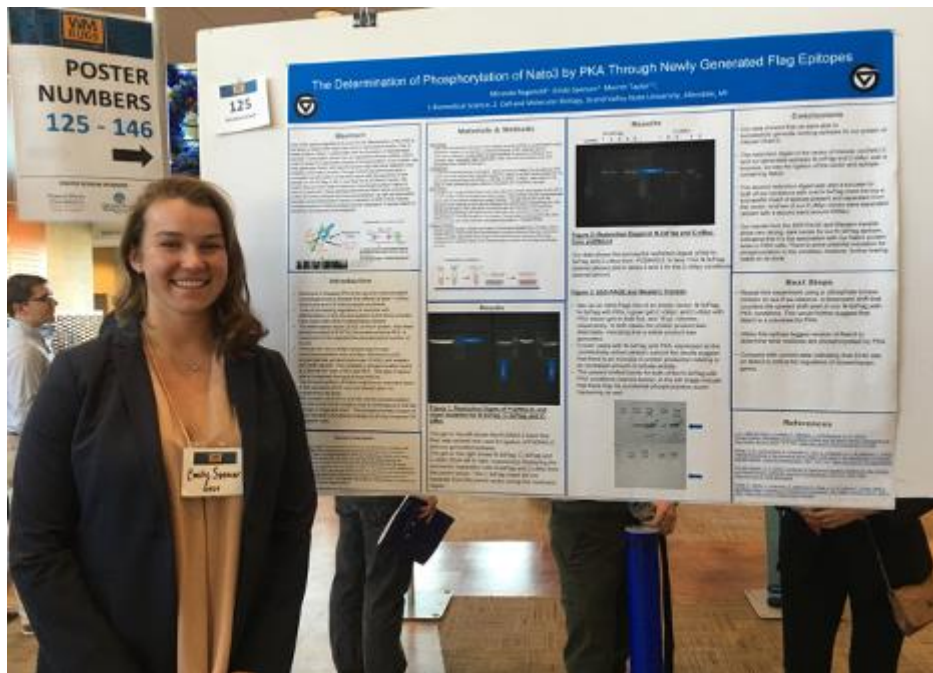
During undergrad, Emily worked in a microbiology research lab for a year doing research on a specific gene in *Candida albicans*, a pathogenic fungus, to assess the impact of the gene on the fungi's growth and development. She found that in most cases, the overexpression of the gene caused a decreased growth rate, which could be beneficial knowledge when studying ways to combat the pathogen. When Emily graduates, she would like to start working in the biotech or pharmaceutical industry doing research and development. In the future, she would like to further her education by getting a Master's Degree.

Isabel Thompson



Isabel is a senior at GVSU studying Cell and Molecular Biology. After jumping around in the biological sciences, she realized research in structural biology and translational medicine is her main interest. In 2019, she was named a Beckman Foundation Research Scholar and worked on a project studying the spatial genetics of a Galápagos lava lizard species using microsatellite analyses. Most recently, she joined the lab of Dr. Sok Kean Khoo at GVSU to study a *Drosophila* model of Parkinson's Disease as a Kindschi Undergraduate Fellow. She has been recognized for her academic commitment on the Dean's List four consecutive years and in 2020 was awarded the Organic Chemistry award by the GVSU Chemistry department. She also tutors organic and biochemistry. After graduation, Isabel hopes to take a gap year to gain research experience and then apply to PhD programs. In her free time, Isabel likes to cycle, practice yoga, read and write, ride horses, and play with her border collie named Lance.

Emily Spencer



Emily is a Cell and Molecular Biology major with a minor in Spanish. She has been involved in Grand Valley's Parkinson Disease (GVPD) lab with Dr. DeLano-Taylor for two years. In this time, Emily has presented at West Michigan Regional Undergraduate Science (WMRUGS) fair on her protein research with the bHLH Nato3. Emily did receive an internship at the Karmanos Institute; however, it was sadly cancelled due to COVID-19. Emily aspires to become a physician in her future working and studying in the oncology field, with a potential secondary specialty in pediatrics. Emily is extremely passionate about her research and school but also participates in several other extracurricular activities, such as maintaining a part time job and running marathons to keep active, as her nickname in the GVPD lab is "The Marathoner." Emily also values culture and explored and studied abroad in Málaga, Spain for seven weeks.

Julia Fagaly



Julia Fagaly is double majoring in Cell and Molecular Biology and Biomedical Science. She has achieved placement on the Dean's List four consecutive years and received the Outstanding Cell and Molecular Biology award in 2018 and 2019. Julia was also selected for an Excellence-in-a-Discipline award in CMB. In the Fall 2019 semester, Julia worked as a laboratory assistant for the course Genetics 376 at Grand Valley State University. She has done research in Dr. Linn and Dr. Renkema's lab in the Biomedical department at GVSU. After graduation, Julia plans to continue her studies in graduate school to seek a master's degree or PhD. After graduate school, Julia aims to use her scientific training to pursue a position of research leadership at an industrial or academic institution.

Jane Beckwell



Jane is a senior at GVSU studying cell and molecular biology and psychology. Her time at GVSU has provided her with opportunities to explore her interests through organizations such as the CMB Club, the Genetic Counseling Organization, and the Symphony Orchestra. Jane has also gained skills in research, communication, and information literacy by working as a Research Consultant through the University Libraries, volunteering as a Support Group Facilitator through Ele's Place, and conducting research alongside Dr. Valdez of the GVSU neuroscience department. Jane is the recipient of several awards, including the "I am GV" Student Leadership Award and the Outstanding CMB Student Award. She has also been named to the Dean's List for five semesters and is a member of the Frederick Meijer Honors College. Jane had the opportunity to intern at the Van Andel Institute (VAI) in the laboratory of Jose Bras and Rita Guerreiro in 2020. In this position Jane learned about the genetics of many neurodegenerative diseases and conducted her own research into disease-causing gene variants in a Turkish dementia cohort. After graduating, Jane plans to join Genomenon as a Variant Analyst for a year before applying to a graduate program in genetics.

Rose Lizzo



Rose has been working with Dr. Szarecka in the Cell and Molecular Biology department for two years studying the GABA(A) receptor mechanism using normal mode analysis and structural analysis. She has presented at Van Andel Institute at the West Michigan Regional Undergraduate Science Research Conference twice as well as at Students Scholar's day at GVSU. She is continuing this research in her final semester for her Honor's student thesis. She also had a temporary voluntary position in Dr. Haley's microbiology laboratory in the biomedical science department studying the relationship between metals and biofilm production in *S. lugdunensis*. She currently has a remote internship with the University of Michigan where she reviews scientific literature specializing in biochemistry and contributes with other peers to create connections on an open online database with the hopes of broadening the knowledge of the public. Rose plans to take a gap-year and be hired to work in a research lab before pursuing a graduate program to run her own lab in the future.

William Howe



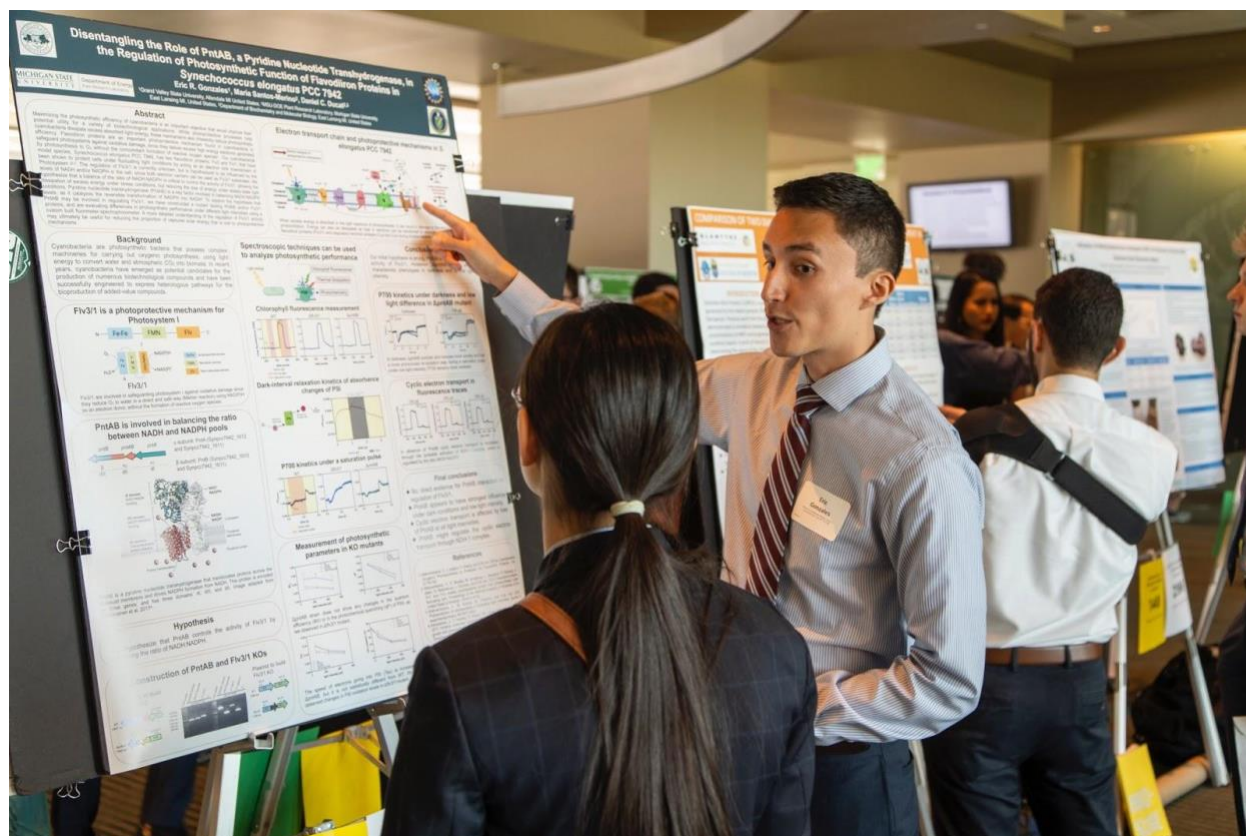
For Will, science and curiosity comes naturally to him as he grew up with 14 acres of woods in his backyard. His spark of interest in scientific topics can quickly turn into many questions and he enjoys the thrill of seeking answers to those questions. When Will was younger, he would drop rocks from treetops and count the seconds to correlate the time with the heights of those trees. Will would spend hours looking at different leaf patterns to figure out how their shapes maximized the surface area for photosynthesis. Science has not just filled the gaps in his understanding of how things work, it has also given him a sense of fulfillment and an appreciation for the world we live in. Now, Will intends to harness his curiosity to help people once he gets his PhD in pharmaceutical sciences and works on finding treatments for chronic illnesses. Outside of science, Will enjoys long walks and playing guitar and bass, which he has done for ten years.

Catherine DeFouw



Catherine is a senior at GVSU and will graduate in spring of 2021 with a degree in Cell and Molecular Biology. This west Michigan native is passionate about science, agriculture, and people. She hopes to exercise these passions post-graduation by serving in the Peace Corps helping to implement sustainable environmental initiatives. In her time as an undergraduate, Catherine was part of a research team that studied the impact of different farming practices on symbiosis-forming fungal communities, as well the impact these communities had on crop growth. She is no stranger to hard work, which is exemplified in the 6 summers she spent working nights at a factory to support her own way through college. This hard work has manifested in her education at Grand Valley as Catherine has been on the Dean's list multiple semesters.

Eric Gonzales



Eric Gonzales is a graduating senior in the Cell and Molecular Biology Department with goals to work in industry. From the early years of his education, he has been interested in the microscopic world; by working in an animal clinic, he saw how this unseen world impacted an organism's health. He then enlisted in the United States Navy as a Sonar Technician to broaden his experience and reflect on future career choices. Realizing he had a passion for the research and lab work involved with treatments, he decided to pursue a career in CMB. By receiving the Navy and Marine Corps Achievement Medal, as well as the Outstanding CMB Student Award, he shows the dedication to further his knowledge in science. Eric is currently applying to master's programs that offer more experience and knowledge on how to succeed within this field.

Han Pham



Han is an international student from Vietnam and has been studying abroad in the U.S. for more than 4 years, which she considers a very valuable experience and a fun journey. Han is a member of the GVSU Frederik Meijer Honors College and has been on the Dean's List for 7 consecutive semesters. When Han was a Biology major, she worked on an animal behavior research project with Dr. Jodee Hunt at John Ball Zoo, which she co-presented at the 2017 West Michigan Regional Undergraduate Science (WMRUGS) conference. Now a Cell and Molecular Biology major with a minor in Chemistry, Han has been studying differential gene expression in *Physcomitrella patens* with Dr. Margaret Dietrich since summer 2020, which she presented virtually at the 2020 WMRUGS conference. After graduation, Han hopes to be able to take a gap year to gain more research experience before applying for graduate schools.

Louis Walter



Louis started off as a computer programming student at community college. He eventually switched to biomedical sciences and from chemistry to genetics really enjoyed being in the lab. One year after transferring to GVSU, he switched again to the cell and molecular biology program. He is now in his first year of the professional science master's combined degree program focusing in biotechnology.

Undergrad research in the lab with Dr. Christians using the plant model organism *Arabidopsis thaliana* has piqued his interest regarding the amazing physiology of the plant kingdom. He hopes to get a job at an agricultural biotech company to continue working with, and learning about plants after graduating with a master's degree in 2022.

Dylan Thompson



Dylan Thompson is a 5th year Cell and Molecular Biology/ Philosophy student at GVSU. He has researched the ethylene signal transduction pathway in *Arabidopsis thaliana* under his mentor Dr. Matthew Christians for the last three years. His research focused on the Ethylene insensitive protein 2 and its potential interactions with the COP-9 Signalosome. Dylan has also interned with the GVSU internal review board as a research ethicist, attending board meetings to discuss research proposals and alterations involving human and animal subjects. Dylan is currently unsure of his next step after graduation but remains ambitious. He would like to obtain a PhD in both Molecular biology and Philosophy before he dies, as well as try out a few inventions that have come to mind during his time here at GVSU.

Logan Brock



Logan is an undergraduate here at GVSU. His current experiences consist primarily of course driven exercises where he has become proficient in general lab techniques and practices. In these courses he most appreciates the opportunity to use RNAi, PCR, Bacterial Transformation, and ELISA.

Logan was also a research assistant under Dr. Blackman at GVSU. Under her supervision he assisted in optimization of yield from RNA extractions, and test for expression of Late Embryogenic Abundant (LEA) 6, LEA 18-1, LEA18-2 in *Arabidopsis thaliana*.

Logan is undecided where he plans to attend graduate school, but as a curiosity driven person, plans to make a career out of research in the Cell and Molecular Biology field.

BreiAnna Bertossi



BreiAnna is a senior in Grand Valley State's (GVSU) Cell and Molecular Biology Department working on her Bachelor of Science degree. She has done extensive coursework related to scientific study and has research and work experience to further her understanding of the field and laboratory protocols. Most notably, she participated in the MiCUP Scholar's Program in 2018, where she worked in Dr. Heldt's Bioseparations Lab alongside a graduate student studying HSV-1, where she won her first poster presentation with the program. She's been conducting research at GVSU alongside Dr. Agnieszka Szarecka since May 2020 working on a bioinformatics-based project focusing on the SLY1 protein, an F-box protein, and the conservation of the region responsible for the binding affinity of the protein to its targets for ubiquitination across species. After graduation, BreiAnna plans to continue her employment as a laboratory technician.

Abigail Cave



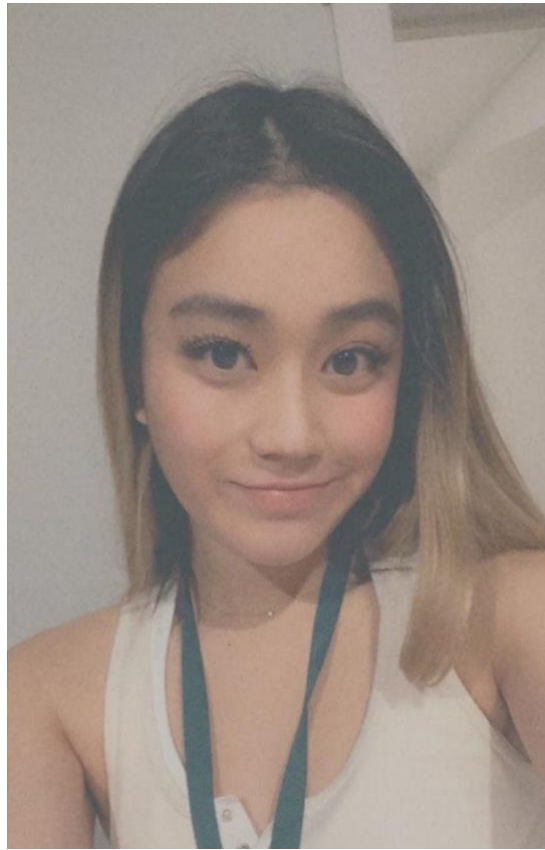
Abigail is a senior at GVSU studying Cell & Molecular Biology, and Applied Statistics. She has always been interested in science, more specifically genetics and human disease. She works at NxGenMDx, a genetic carrier screening and pathogen testing company, while going to school. Over the summer, Abigail gained great experience helping out with the Covid-19 pandemic. She has been researching Covid-19 testing methods, and the factor of error associated with them. PCR and antigen rapid tests are the methods she focused on. Aside from working with Covid-19, Abigail helps the sales team by analyzing insurance data in order to market NxGenMDx's products to healthcare facilities. Working in a research lab or for a biotech company would be most ideal after graduation. A master's program in Bioinformatics or Genetics may be in the future for Abigail as well.

Dominique Ceckiewicz



Dominique is a Cell and Molecular Biology major at Grand Valley State University who enjoys spending time outdoors as well as longboarding. Some achievements which are worth mentioning about her time at Grand Valley include placement on the Dean's list for many semesters as well as nominations to the GVSU National Society of Leadership and Success each year. Some of her lab experience at GVSU includes working with strontium levels between teeth samples to record differences in diet between populations, allowing for their movement across areas focused within the Ukraine and Russia to be tracked. These populations were tracked throughout the cultural periods of the Early Bronze Age, Middle Bronze Age, and Eneolithic Age. After graduation she plans to spend her time working towards a career related to pathology.

Lyla Dao



Lyla is currently a senior at GVSU studying CMB. In 2019, she earned an Associate of Science Degree from GRCC, and has been a member of the Honor Society as well as a RISE Scholarship Program for the past few semesters at GVSU. Lyla also has some research experience, which began this past year. She has been working with her research professor, Dr. Tsou, at CHS in the CMB department studying genes in soybean. Lyla has a passion for helping others, as well as for science and learning. She hopes to one day be able to go to medical school so that she can eventually help those who are underserved.