



6th Annual Symposium | Wednesday, June 1st, 2022 Science Research Student Names and Project Titles

<i>Student Name</i>	<i>Project Title</i>
Noah Anderson	Development of a remotely operated underwater vehicle to aid in exploration and mapping of underwater cave systems
Madison Andrews	Portable and inexpensive incubator using electrothermal resins for field-rated <i>E. coli</i> detection
Nicholas Carver	The potential application of Nitinol's shape memory properties for use in internal muscle repair
Ava Chen	The effects of <i>Lactobacillus rhamnosus</i> as an alternative to antidepressants on <i>Caenorhabditis elegans</i> model organisms
Ethan Chen	Examination of essential oils on <i>C. albicans</i> growth as an indicator of anti-dandruff potential
Michael Cherian	Analyzing how different decentralized finance applications handle varying levels of network traffic.
Benjamin Chung	Effects of Tonabersat on calcitonin gene-related peptide levels in migraines
Adelyn Diaz	GIS mapping of traffic pollutant concentrations against socioeconomic and health data in Hennepin County
Lucas Edwards	The impact of green tea flavonoids on bacterial signaling in <i>P. fluorescens</i>
Yousef Eldahshoury	Cyanobacteria aid in simulated martian soil plant growth
Noah Friedman	Bacterial, enzymatic, and yeast mixtures effect on ethanol production in alcoholic fermentation
Kyla Fung	Sustainable bioplastics: seaweed and hemp-based alternatives to fossil fuel-based plastics
Quinn Goergen	Finding growth of <i>Hericium erinaceus</i> and decomposition of pesticides in soil
Tristan Green	Using machine learning to diagnose leukemia
Nicole Haraway	Effects of chemicals found in plastics having estrogenic activity on the synthesization of vitellogenin protein in shrimp <i>Palaemonetes pugio</i>
Sydney Heins	Casein protein diet effect on <i>Palaemonetes paludosus</i>
Abby Hoekstra	Effects of sea cucumber glucocerebrosidase on <i>D. melanogaster</i>
Claire Huang	Creating induced pluripotent stem cells by reprogramming CD34+ cells through episomal gene insertion
John Hultgren	New applications of Topological Data Analysis
Sana Ikramuddin	Inhibition of SASP using Lithocholic Acid in Senescent 3T3-L1 Preadipocyte Cells
Jackson Jaffe	Efficacy of far-UVC light against <i>Escherichia coli</i> and <i>Bacillus subtilis</i>
Eva Kashyap	Using iron and graphene oxide nanoparticles to induce targeted apoptosis in cancerous cells
Grace Kaung	Iron-releasing hydrogels to promote phytoplankton growth and accelerate carbon sequestration
Chaehyun Lee	Effects of dopamine on Parkinson's Disease
Walker Liu	Analyzing the effects of bifidobacterium on gut microbiota, serotonin levels, stress, and anxiety on <i>Faxonius Virillis</i> model organisms
Gavin Lukitsch	Developing an autonomous lawnmower for private homes

Kauravya Mandal	Altruism: A model for intelligence
Caroline Marshall	The effects of β -hydroxy- β -methylbutyrate on neuromuscular function in <i>C. Elegans</i>
Meiling Mathur	A chatbot that talks like a specific person
Maxwell Maveus	Sporophytic abortions under desiccation stress in the mosses <i>Leucobryum glaucum</i> and <i>Bryum caespiticium</i>
Calais Michaelsson	Re-sensitization of <i>E. coli</i> to tetracycline using plant-derived efflux pump inhibitors
Kiefer Miskiw	Realtime 3D Collaboration
Merlin Morton	Using machine learning to improve the accuracy of GPS by reducing the impact of multipath
Valerie Nelson	Soft robotic chamber shapes for artificial hands
Alia Peterson	Design and development of two-piece wirelessly interactive children's toy
Diego Pitt	Creating a human memetic robotic telepresence drone
Sriya Pulavarthi	Beta-amyloid accumulation in relation to AChE in Alzheimer's
Wesley Quist	The relationship between c-reactive protein presence and cytokine expression in regards to atherogenesis.
Cole Rabe	Evaluating the effect of caffeine on <i>Caenorhabditis elegans</i> locomotion
Krish Inba Rajashankar	Medical device recall prediction using MAUDE reports
Henry Rosenhagen	Symmetry in regeneration of dual-headed Planaria
Mahmoud Said	Controlling a computer cursor via basic webcam input
Lauren Salmi	Investigating the effects of nicotine on learning and memory in <i>Lymnaea stagnalis</i>
Saloni Somia	Increasing epinephrine injector availability during allergic reactions through a location tracking application
Scott Sorensen	Optimizing dissolved gas content in acoustic cavitation simulations
Isabelle Stroh	Using artificial intelligence to detect and localize brain tumors
Julia Terrell	Efficacy of bacteriophage therapy during the perinatal period
Zara Thomas	Effectiveness of decellularized porcine bone as a strengthening agent for chitosan-based bioinks
Carter Thomes	The extent of creatine's antimicrobial properties
Katriana Trinh	Effects of silica nanoparticles to mitigate abiotic stress in bush bean plants
Rebekah Turner	How stigma creates a barrier to medical care for chronic pain patients
Rostyslav Volkov	Diagnosing Parkinson's disease with machine learning voice analysis
Alexandra Wagner	Rat pancreatic beta cells and gene expression in response to cinnamon
April Wang	Predicting COVID-19 cases through high dimensional data-analysis
Jack Wherry	Predicting whether planaria grow heads or tails using bioelectricity
Gabriella Wiese	Validating <i>Faxonius virilis</i> as migraine research model by measuring c-fos expression resulting from inflammation
Heinrich Wurdell	Economical dynamometer development