

The 13th Annual



Fall Undergraduate Research Festival

Wednesday, November 2, 2022

4:00pm-6:00pm

University of Iowa
University Capitol Centre
2nd floor South Atrium
Iowa City, Iowa

**This event is hosted by the
Iowa Center for Research by
Undergraduates.**

**ICRU promotes undergraduate
involvement in research and creative
projects at the University of Iowa,
serving students, staff, and faculty.**

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The 202 Fall Undergraduate Research Festival (FURF) is proud to showcase visual presentations focusing on the research and creative work performed by undergraduates at the University of Iowa. Presenters work in over **40 different departments** and major in over **35 different disciplines**, representing a broad range of sciences, arts, and humanities.

Odd numbered posters will present from 4:00-5:00PM
Even numbered posters will present from 5:00-6:00PM

****Please note that at 5:00, all of the boards will be turned around to show the even numbering and the second hour presenters' posters****

Many thanks to all of the people who make FURF a possibility - all undergraduates presenting their research and creative work, all poster judges, all mentors of undergraduate researchers, the Office of the Provost, the Office of the Vice President for Research and Economic Development, and the ICRU Research Ambassadors.

Programs with full abstracts are available on the ICRU website.

Upcoming ICRU Events and Opportunities

- Excellence in Undergraduate Research Award
- Distinguished Mentor Award
- ICRU Research Fellowships
- Research in the Capitol
- Spring Undergraduate Research Festival (SURF)

4:00 Presentations (Odd-numbered Posters)

1. Morgan Anderson

Genome size in triploid snail

Major: Biology

Graduation: Spring 2024

Mentor: Dr. Maurine Neiman (Biology)

3. Jessica Andrew-Udoh

Gynecologic Tumor Organoid Models for Therapeutic Efficacy

Major: Biochemistry

Graduation: Spring 2023

Mentor: Dr. Kristina Thiel (OB/GYN)

5. Ahmed Baig

Examination of Dorsal Striatal Cell Density After Prenatal Stress & IL-6 Exposure

Major: Neuroscience

Graduation: Spring 2025;

Mentor: Dr. Hanna Stevens (Psychiatry)

7. Kelsey Baller

Do White Matter Lesions Affect the Relationship Between Cardiorespiratory Fitness and Processing Speed in Aging?

Major: Post-Bacc Researcher

Graduation: Fall 2020

Mentor: Dr. Michelle Voss (Psychological and Brain Sciences)

9. Elsy Barahona

A Roadmap to Health Equity

Major: Public Health, Pre-medicine

Graduation: Fall 2025

Mentor: Dr. Martha Carvour (Internal Medicine)

11. Liz Barroso

The Role of Hepatic IRE1 in Protecting the Host During Sepsis

Major: Biochemistry

Graduation: Spring 2025

Mentor: Dr. Ling Yang (Anatomy & Cell Biology)

13. Ferris Bissen; Lizzie Van Es

Microbial Growth on Disposable Masks: How Gross are They?

Majors: Chemistry; Pharmacy Interest

Graduation: 2024; 2027

Mentor: Scott Shaw (Chemistry)

15. Ethan Bley

Encrinuridae Trilobites from the Late Ordovician Maquoketa Formation of Northeast Iowa.

Major: Environmental Science and Geoscience

Graduation: Spring 2024

Mentor: Dr. Jonathan Adrian (Earth and Environmental Sciences)

17. Solange Bolger

College-Aged Men's Beliefs about Sexual Consent: Links to Sexual Aggression

Major: Psychology

Graduation: Spring 2023

Mentor: Dr. Teresa Treat (Psychological and Brain Sciences)

19. Delaney Catania

Structure Determination of the Staphylococcal aureus SrrB Histidine Kinase Cache Domain

Major: Biochemistry

Graduation: Spring 2023

Mentors: Nicholas Hammons and Dr. Ernesto J Fuentes (Biochemistry and Molecular Biology)

21. Kiley Christopher

The Role of C5a and C5aR1 in Pain Sensitization

Majors: Biochemistry, Neuroscience

Graduation: Spring 2025

Mentor: Dr. Yuriy Usachev (Neuroscience and Pharmacology)

25. Allison Eagen

CNTNAP2 deficiency leads to reduced parvalbumin reactivity in the basolateral amygdala of adult mice.

Major: Biomedical Science

Graduation: Spring 2023

Mentor: Dr. Hildegard Janouschek (Psychiatry)

27. Melanie Flores

Lexical access in school-age bilingual: a study of bilingual vocabulary development

Major: Speech and Hearing Science

Graduation: Spring 2025

Mentor: Dr. Kristi Hendrickson (Communication Sciences and Disorders)

29. Daniel Fu

A splice acceptor variant in RGS6 associated with intellectual disability, microcephaly, and cataracts disproportionately promotes the expression of a subset of RGS6 isoforms

Major: Biomedical Sciences

Graduation: Spring 2023

Mentor: Rory Fisher (Neuroscience and Pharmacology)

31. Jason Gao

The Role of ATF4 in the Favorable Metabolic Phenotype of OPA1 Skeletal Muscle KO Mice

Major: Biomedical Sciences

Graduation: May 2023

Mentor: Dr. Jennifer Streeter (Internal Medicine)

33. Nathaniel Gehrke

Conjugate Reduction of Vinyl Bisphosphonates

Majors: Chemistry, Mathematics

Graduation: Spring 2023

Mentor: Dr. David Wiemer (Chemistry)

35. Noah Gilkes

Type I interferon receptor knockout reduces immune system activation and improves behavioral outcomes after traumatic brain injury.

Majors: Neuroscience, Philosophy

Graduation: Spring 2023

Mentor: Dr. Elizabeth Newell (Pediatrics)

37. Walter Golay

Beam me up, SCOTTY! New algorithms for characterizing the beams of next-generation CMB experiments

Majors: Astronomy, Physics

Graduation: Spring 2023

Mentor: Dr. Robert Mutel (Physics and Astronomy)

39. Lauren Groenenboom

A qualitative analysis of undergraduate students' modes of reasoning for organic chemistry reactions

Majors: Human Physiology, Enterprise Leadership

Graduation: Spring 2023

Mentor: Dr. Nicole Becker (Chemistry)

41. Lydia Guo

CFTR-F508del Ferret Model Responds to CFTR Modulator Therapy and Exhibits Mucus Phenotype

Major: Biomedical Sciences

Graduation: Fall 2022

Mentors: Drs. John Engelhardt and Idil Apak Evans (Anatomy and Cell Biology)

43. Claire Haas; Isaiah Pielak

Banzhaf Index and the Electoral College: An Analysis of 2020 Census Data

Majors: Electrical Engineering; Political Science, Psychology, Ethics and Public Policy

Graduation: Fall 2025; Spring 2026

45. Aden Hageman

Telecom-band single-photon sources

Major: Physics

Graduation: Spring 2024

Mentor: Dr. Ravitej Uppu (Physics and Astronomy)

49. Grace Heft

Role of Vangl2 in regulating gut-endoderm morphogenesis

Major: Biomedical Sciences

Graduation: Spring 2024

Mentor: Dr. Fang Lin (Anatomy & Cell Biology)

51. Felipe Herrmann

Educating during the COVID-19 pandemic: The effects of psychological flexibility on depression and anxiety

Major: Psychology

Graduation: Spring 2023

Mentor: Dr. Emily Thomas (Psychological and Brain Sciences)

53. Jason Homann; Will Meiners

Sensing Oxygen and Nitrogen Composition (SONiC)

Majors: Physics, Astronomy; Physics, Astronomy

Graduation: Spring 2025; Spring 2025

Mentor: Dr. David Miles (Physics and Astronomy)

55. Rongzhuo (Selina) Hua

Characterization of the newly discovered lymphatic vascular system of inner ear

Majors: Biomedical Sciences, Art

Graduation: Spring 2024

Mentor: Dr. Marlan Hansen (Otolaryngology)

57. Madeleine Humpal-Pash

MSCs: The Future of Drug Delivery?

Major: Biomedical Engineering

Graduation: Fall 2022

Mentor: Dr. James Ankrum (Biomedical Engineering)

59. Mara Jendro

Selective Vulnerability in Von Economo Neurons in Frontotemporal Lobar Degeneration

Major: Neurobiology

Graduation: Fall 2022

Mentor: Dr. Queena Lin (Iowa Neurobank Core)

61. Preston Johnson

Optimal cut scores for the SPQ-BRU to identify psychosis risk in a non-help seeking undergraduate sample: A Multi-site Study

Major: Neuroscience

Graduation: Spring 2023

Mentor: Dr. Amanda McCleery (Psychological and Brain Sciences)

63. Jamie Jones

Plant Distribution at Ashton Prairie Living Laboratory

Major: BA Environmental Science

Graduation: Spring 2024

Mentor: Dr. Kate Tierney (Earth and Environmental Sciences)

65. Emily Kalmanek

Role of obesity in cancer cachexia

Major: Human Physiology

Graduation: Spring 2023

Mentor: Dr. Erin Talbert (Health and Human Physiology)

67. Miles Kramer

Forever Conquered: The Changing Significance of Vikings in Modern and Contemporary Anglo-American Culture

Major: History

Graduation: Spring 2023

Mentor: Drs. Alyssa Park and Nick Yablon (History)

69. Ryan Langstraat

Development Of An Automated Geometric Lung Meshing Tool

Major: Biomedical Engineering

Graduation: Spring 2023

Mentor: Dr. Suresh Raghavan (Biomedical Engineering)

71. Dana Lapinski

Effect of sleep state and time of day on breathing following seizures in amygdala kindled serotonergic deficient mice

Major: Neuroscience

Graduation: Spring 2023

Mentor: Dr. Gordon Buchanan (Neuroscience)

73. Trevor Larkin

Preparation and Evaluation of Lanthanide Catalysts for Oxygen Reduction

Major: Chemistry

Graduation: Fall 2023

Mentor: Josh Coduto and Kasun Dadallegei (Chemistry)

75. Ondrea Li

Disaster, Migration and Violence in Thailand

Majors: International Relations, Journalism

Graduation: Spring 2025

Mentor: Dr. Elise Pizzi (Political Science)

77. Carson Lovig

Analyzing STEM instructor classroom facilitation

Majors: Neuroscience, Biochemistry

Graduation: Spring 2025

Mentor: Nicole States and Dr. Renee Cole (Chemistry)

81. Megan McGovern

Extremophile mRNA Delivery for Radioprotection

Major: Biomedical Sciences

Graduation: Spring 2024

Mentors: Drs. James Byrne and Jianling Bi (Radiation Oncology, Biomedical Engineering)

83. Jesse Miller

"License to do Evil in the Name of Good": Political Radicalization and Rhetorical Adaptation During the Wilmington Coup

Major: Social Studies Education, History

Graduation: Spring 2024

Mentors: Drs. Alyssa Park and Nick Yablon (History)

85. Aracely Miron-Ocampo

*Searching for Novel Antifungal Treatments and Regulatory Pathways via the Characterization of a Fluphenazine Derivative Against *C. albicans**

Major: Microbiology, Global Health Studies Certificate

Graduation: Spring 2023

Mentors: Drs. Damian Krysan and Sarah Beattie (Microbiology & Immunology)

87. Lilian Montilla

Identifying cognitive abnormalities following cerebellar strokes

Major: Neuroscience

Graduation: Spring 2025

Mentor: Dr. Victoria Muller Ewald (Psychiatry)

89. Joanna Moody

Majors: Public Health, Microbiology

Graduation: Fall 2023

Mentors: Kelsey Dawes and Dr. Robert Philibert (Psychiatry)

93. Ana Novella Maciel; Benjamin Kreitlow

Circadian modulation of seizure-associated death in the Scn1aR1407X/+ mouse model of Dravet Syndrome

Major: Neuroscience; MSTP

Graduation: Visiting Scholar; Fall 2024

Mentor: Dr. Gordon Buchanan (Neurology)

95. Dean Omar

Renal Dysfunction Caused by Multiple Myeloma in Mouse Model

Major: Human Physiology

Graduation: Spring 2025

Mentor: Dr. Dao-Fu Dai (Pathology)

97. Precious Pate

Apple Snails as Model for Gene Modification

Major: Public Health, Pre-Medicine

Graduation: Spring 2024

Mentor: Dr. Maurine Neiman (Biology)

99. Mackenzie Pattridge

Establishment of pure primary rat astrocyte cultures to study the metabolism and toxicity of polychlorinated biphenyls (PCBs)

Major: Public Health, Pre-PA

Graduation: Spring 2023

Mentor: Dr. Hans-Joachim Lehmler (Occupational and Environmental Health)

101. Melissa Peters

Examining Electrostatic Waves at Harmonics of the Electron Cyclotron Frequency at the Moon

Majors: Physics, Math

Graduation: Spring 2023

Mentor: Dr. Jasper Halekas (Physics and Astronomy)

103. John Piaszynski

Lesion Network Mapping: A Novel Approach to Brain Lesion Research

Majors: Statistics, Computer Science

Graduation: Spring 2023

Mentor: Dr. Kanchana Ramchandran (Internal Medicine)

105. Joseph Schopen

Entangled Photon Sources in the Infrared

Majors: Physics, Astronomy

Graduation: Spring 2024

Mentor: Dr. Ravitej Uppu (Physics)

107. Darrell Smith

Prediction of the HOMO-LUMO gap of organic molecules with graph neural networks

Majors: Chemical Engineering, Biochemistry

Graduation: Spring 2023

Mentor: Dr. Joe Gomes (Chemical and Biochemical Engineering)

109. Deven Strief

Optimizing Immunofluorescence Staining of Microglia in Thick Human Brain Tissues

Major: Biomedical Sciences

Graduation: Fall 2025

Mentor: Dr. Michael Dailey (Biology)

111. Zach Vig

Quantifying geochemical provenance of the beaverhead group in southwestern montana using unsupervised machine learning on a sparse dataset

Majors: Physics, Geology

Graduation: Fall 2022

Mentor: Dr. Emily Finzel (Earth and Environmental Sciences)

113. Gracie Weeks

Cardiometabolic Confounding on cg19693031 Methylation Limits Utility for Diabetes Medicine

Major: Human Physiology

Graduation: Spring 2024

Mentor: Kelsey Dawes and Dr. Robert Philibert (Psychiatry)

115. Natalia Weinzierl

Modeling Cancer Cachexia in KPP Mice

Major: Human Physiology

Graduation: Spring 2023

Mentor: Dr. Erin Talbert (Health and Human Physiology)

117. Kaylee Weaver

Psychiatric and Obstetric Disease Share Vascular Mechanisms in the RGS2 Knockout Mouse

Major: Human Physiology

Graduation: Spring 2023

Mentor: Dr. Serena Banu Gumusoglu (Obstetrics and Gynecology)

119. Alexander Williams

The Relationship Between Rejection of Care, Pain, and Delirium in Hospitalized Patients with Dementia

Major: Nursing

Graduation: Spring 2023

Mentors: Drs. Ruth Grossmann and Clarissa Shaw (Nursing)

121. Aasthika Das

Inhibition of FGF13 in adipose tissue increases caveolae density

Majors: Biology, Chemistry

Graduation: Spring 2023

Mentor: Dr. Bhagirath Chaurasia (Internal Medicine)

123. Bailey Goodman

Epidemiology of Gestational Diabetes Mellitus Before and During the COVID-19 Pandemic

Major: Public Health, Pre-Medicine

Graduation: Spring 2025

Mentor: Dr. Martha Carvour (Internal Medicine)

5:00 Presenters (Odd-Numbered Posters)

2. Jacob Andrews

DUNE, Deep Learning for Neutrino Physics

Major: Physics

Graduation: Spring 2025

Mentor: Dr. Jane Nachtman (Physics and Astronomy)

4. Emily Arndt

"There Ain't No Shame in Looking for a Better World": The Evolution of Cultural Influence Behind the Folklore of Robin Hood

Majors: History, English and Creative Writing

Graduation: Spring 2024

Mentor: Dr. Sarah Bond (History)

6. Roxanna Barbulescu

"Nobody is Nostalgic for Stalinism, but..." Post-Communist Nostalgia in the Memory of Romanian Immigrants in Iowa

Major: History and Health and Human Physiology

Graduation: Spring 2023

Mentors: Drs. Elizabeth Heineman and Alyssa Park (History)

8. Leighton Barnes

Hysterical Women: The Fight for an Expanded British Franchise

Majors: Chemistry, History

Graduation: Spring 2024

Mentors: Drs. Elizabeth Yale and Alyssa Park History (History)

10. Nicole Boodhoo

Mortality following induced seizures in amygdala kindled mice: investigation of the corticosterone stress pathway

Major: Biomedical Sciences

Graduation: Spring 2024

Mentor: Dr. Gordon F. Buchanan Buchanan (Neurology)

12. Tom Bruner

Quality Control and Assembly Automation for Upgrades to the CMS Outer Tracker

Majors: Physics, Philosophy

Graduation: Spring 2023

Mentors: Drs. Jane Nachtman and Yasar Onel (Physics)

14. Nina Carnevale

Inhibition of the pentose phosphate pathway in malignant peripheral nerve sheath tumors (MPNSTs)

Major: Biomedical Sciences

Graduation: Spring 2024

Mentor: Dr. Rebecca Dodd (Internal Medicine)

16. Gloria Chang

Social and Structural Correlates of Instrumental and Emotional Support Following a Natural Disaster

Major: Psychology

Graduation: Spring 2023

18. Allison Clark

Commodifying the Spirit Lake Massacre: Abbie Gardner Sharp and Her Role in the Settler-Centric Memory of the Event

Major: History

Graduation: Spring 2023

Mentor: Dr. Stephen Warren (History)

20. Aditya Desai

Majors: Physics, Economics

Graduation: Spring 2023

Mentor: Dr. Thomas Folland

22. William Dong

Heating and artifact testing of a nitinol breast biopsy clip in a high-resolution magnetic resonance imaging (MRI) environment.

Major: Biomedical Engineering

Graduation: Spring 2024

Mentor: Dr. Kanchna Ramchandran (Internal Medicine)

24. Aidan Drozdick

Investigation of the Impact of Tim Ubiquitination Site Deletions on Ebolavirus Infection

Major: Microbiology

Graduation: Spring 2023

Mentor: Dr. Wendy Maury (Microbiology and Immunology)

26. Carter Dwyer

Investigating Viability Assays to Monitor Microbicidal Activity Against Leishmania

Major: Microbiology

Graduation: Spring 2023

Mentor: Dr. Mary Wilson (Microbiology and Immunology)

28. Myles Evangelista

Sprayable biopolymer improves surgical handling of corneal endothelial cell grafts

Major: Biomedical Engineering

Graduation: Spring 2023

Mentors: Drs. Kristan Worthington (Biomedical Engineering) and Christopher Sales (Ophthalmology and Visual Sciences)

30. Jordan Ewald

Novel Lead (203Pb/212Pb) Theranostic Pair Targeting CXCR4 in Small Cell Lung Cancers

Major: Biomedical Engineering

Graduation: Fall 2022

Mentor: Dr. Melissa Fath (Radiation Oncology)

32. Hanlong Fan

Complex Rule Learning in Pigeons and People

Major: Psychology

Graduation: Spring 2023

Mentor: Dr. Leyre Castro (Psychology)

34. Olivia Fortman

Significance of UL51 protein-dynactin interaction

Major: Microbiology

Graduation: Spring 2024

Mentor: Dr. Richard Roller (Microbiology and immunology)

36. Grace Foster

Association of resting central pulse-wave analysis hemodynamic parameters with the blood pressure response to exercise

Major: Human Physiology

Graduation: Spring 2023

Mentor: Dr. Gary Pierce (Health and Human Physiology)

38. Nathan Freesmeier

Targeting cell adhesion to overcome drug resistant melanoma

Major: Biology

Graduation: Spring 2024

Mentor: Dr. Christopher Stipp (Biology)

40. Maunika Gandhamaneni

Features of Proteins That Allow Them to Form Nucleolar Compartments.

Major: Chemical Engineering

Graduation: Spring 2023

Mentor: Dr. Daniel Weeks (Biochemistry and Molecular Biology)

42. Brandon Gerhardt

Profit Status and Quality Assurance Assessment Fees in Iowa Nursing Facilities

Major: Public Health

Graduation: Fall 2022

Mentor: Dr. Hari Sharma (Health Management and Policy)

44. Nicole Gilbert

Fame and Femininity: First Lady Jacqueline Kennedy's Public Diplomacy during the Cold War

Majors: History, Psychology

Graduation: May 2023

Mentor: Drs. Alyssa Park and Tyler Priest (History)

48. Allison Groux

Motor Assessment Procedures in the Efficacy of Diet on Quality of Life in Multiple Sclerosis Study

Major: Health and Human Physiology

Graduation: Fall 2022

Mentor: Dr. Terry Wahls (Internal Medicine, Epidemiology)

50. Bryan Guevara

Assessing the Effects of Plastics on Sperm Morphology

Major: Biology

Graduation: Spring 2023

Mentor: Dr. Maurine Neiman (Biology)

52. Mary Haag

Cooling System for CMS Barrel Timing Layer Upgrade

Majors: Astronomy, Physics

Graduation: Spring 2025

Mentors: Drs. Jane Nachtman and Yasar Onel (Physic and Astronomy)

54. Audrey Hake

*Generating a Δ Imo2839 Mutant in *Listeria monocytogenes* Using the pMAD and pHoss Plasmids for Allelic Exchange*

Major: Microbiology

Graduation: Spring 2025

Mentor: Dr. Liliana Radoshevich (Microbiology and Immunology)

56. Izabella Halinowski

Investigating the role of Checkpoint kinase 2 in gamete quality control

Major: Biochemistry

Graduation: Spring 2024

Mentor: Dr. Pamela Geyer (Biochemistry & Molecular Biology)

58. Daniel Hettrick

Forced Acculturation and Resistance in Post-Purchase Alaska

Majors: History, Anthropology

Graduation: Fall 2022

Mentors: Drs. Alyssa Park and Stephen Warren (History)

60. Talia Hill

A Regional History of Alabama's Black Belt

Majors: Geoscience, History

Graduation: Spring 2023

Mentor: Dr. Ashley Howard (History)

62. Ashley Hoffa

Adult Eustachian Tube Dysfunction: A case study

Major: Speech and Hearing Sciences

Graduation: Spring 2025

Mentor: Dr. Eun Kyung Jeon (Communication Sciences and Disorders)

64. Payton Jaeger

Lewy body Dementia, Parkinson's Disease and Attention Deficit Hyperactivity Disorder: A Genetic Correlate Experiment

Major: Multidisciplinary Sciences

Graduation: Fall 2023

Mentor: Dr. Queena Lin (Iowa Neurobank Core)

66. Liv Jewell; Bree Rubel

Majors: Gender, Women's, and Sexuality Studies; Gender, Women's, and Sexuality Studies

Graduation: Winter 2023; Spring 2024

Mentor: Dr. Teresa Mangum (Obermann Center for Advanced Studies)

68. Joseph Kesteloot

Using Allelic Exchange to Generate a Nutrient Acquisition Deficient Mutant (lmo2839) in Listeria Monocytogenes

Major: Microbiology

Graduation: Spring 2023

Mentors: Drs. Lilliana Radoshevich and Aaron Gillman (Microbiology and Immunology)

70. Karah Kluck

Experience-based Chunking Shapes Real-time Reading Ability

Major: Speech and Hearing Sciences

Graduation: Fall 2022

Mentor: Dr. Stewart McCauley (Communication Sciences and Disorders)

72. Ben Koester

Why Individual Investors Do Not Use Robo-Advisors

Majors: Finance, Economics

Graduation: Fall 2022

Mentor: Dr. John Lewis Jr. (Finance)

74. Emmeline Kraus

*Seasonal effects of the fungal pathogen *Tubakia iowensis* (bur oak blight) on the photosynthetic capacity of infected *Quercus macrocarpa* (bur oak)*

Majors: Environmental Science, Geography

Graduation: Spring 2023

Mentor: Drs. Matthew Dannenberg and Susan Meerdink (Geographical and Sustainability Sciences)

76. Connor Linzer

Sorbs2 regulates smooth muscle phenotype plasticity

Major: Human Physiology

Graduation: Spring 2024

Mentors: Dr. Jared McLendon and Ryan Boudreau (Internal Medicine)

78. Kobie Long

Identifying Areas of Groundwater-Surface Water Exchange along Camp Cardinal Creek at Ashton Prairie Living Laboratory

Major: Environmental Science

Graduation: Spring 2024

Mentor: Dr. Benjamin Swanson (Earth and Environmental Sciences)

80. Madalyn Lovejoy

Rape-Supportive and Sociosexual Attitudes among Heterosexual, Bisexual, Asexual and Gay College Men

Majors: Psychology, Gender, Women's, and Sexuality Studies

Graduation: Spring 2024

Mentor: Dr. Teresa Treat (Psychological and Brain Sciences)

82. Hailey McCoy-Munger

*Identification of potential treatments for the vision disease *Retinitis Pigmentosa**

Major: Biomedical Engineering

Graduation: Spring 2024

Mentor: Dr. Lori Wallrath (Biochemistry and Molecular Biology)

84. Bob Pentuic

Camp Cardinal Creek Creek Water Quality

Major: Environmental Policy

Graduation: Spring 2023

Mentor: Dr. Ben Swanson (Earth and Environmental Sciences)

86. Ana Sofia Peraza Muñuzuri

Nucleus of the solitary tract: molecular ontology and efferent projections

Major: Biomedical Engineering

Graduation: Spring 2023

Mentors: Drs. Joel Geerling and Silvia Gasparini (Neuroscience)

88. Melissa Peters; Emerson Peters

Balloons Learning the Accuracy of Magnetic Field Models (BLAMM)

Majors: Physics, Mathematics; Physics

Graduation: Spring 2023; Spring 2025

Mentor: Dr. David Miles (Physics and Astronomy)

90. Ashley Rhodes

A novel, non-invasive drug delivery device to target bladder cancer

Major: Biomedical Engineering

Graduation: May 2024

Mentors: Emily Witt (Radiation Oncology) and Dr. James Byrne (Radiation Oncology, Biomedical Engineering)

92. Katie Rosol

Discussing Disappointments between Parents and Child Relationships

Major: Psychology

Graduation: Spring 2023

Mentor: Dr. Rachel McLaren (Communication Studies)

94. Karsyn Rush

Neurofeedback Training

Major: Speech and Hearing Sciences

Graduation: Spring 2023

Mentor: Dr. Inyong Choi (Communication Sciences and Disorders)

96. Yasmina Sahir

Middle Eastern, North African, and Arab Representation at University of Iowa

Majors: Criminology, Law, and Justice, Social Justice

Graduation: Spring 2023

Mentor: Dr. Yasmine Ramadan (Arab Studies, French and Italian)

98. Noah Sinclair

Fibroblast to Myofibroblast Conversion in Adipocyte Conditioned Medium

Major: Biomedical Engineering

Graduation: Spring 2023

Mentor: Dr. Edward Sander (Biomedical Engineering)

102. Alexander Slack

Non-Target Analysis of PCB Metabolites in Serum of Mice Exposed to PCBs Via the Diet During Gestation and Lactation

Major: Chemistry

Graduation: Fall 2022

Mentor: Dr. Xueshu Li (Public Health)

104. Matthew Speranza

pH-Based Replica Exchange for Amino Acid Model Bias Parameterization

Major: Biomedical Engineering

Graduation: Spring 2024

Mentor: Dr. Michael Schnieders (Biomedical Engineering)

106. Jenna Springer

Physical activity matters: Investigating the relationship between white matter hyperintensities, vascular health, and executive function

Major: Psychology, Health Promotion

Graduation: Fall 2022

Mentor: Dr. Michelle Voss (Psychological and Brain Sciences)

108. Yabsira Tekle

Using the Zebrafish Model to Investigate the Role of Cryptococcal PLB1 in Infection and Dissemination Across the Blood Brain Barrier

Major: Human Health and Physiology

Graduation: 2023

Mentor: Dr. James Davis (Pediatric-Infectious Diseases)

110. Sanmati Thangavel; Cally Tucker

ER-stress inhibition protects C57 mice from high fat diet-induced weight gain

Majors: Human Physiology; Biochemistry

Graduation: Spring 2024; Spring 2024

Mentors: Drs. Marcelo Correia and Renata Alambert (Internal Medicine)

112. Jacob Venenga

Acute, Dose-Dependent Supplementation of AmaTea MAX Improves Psychomotor and Motor Speed: A Randomized, Double-Blind, Placebo-Controlled, Crossover Trial

Major: Human Physiology

Graduation: Spring 2024

Mentor: Dr. Nathaniel Jenkins (Health and Human Physiology)

114. Zach Vig; Mehdi Assem; Rebekah Brown; Kevin Hall

Detecting Iowa's CO₂ in the Stratosphere using the High Altitude Near Infrared Spectroscopy Experiment (HA-NICSE)

Majors: Geoscience, Physics; Physics, Mathematics; Physics; Physics

Graduation: Spring 2023; Spring 2023; Spring 2024; Spring 2026 (Grad);

Mentor: Dr. David Miles (Physics and Astronomy)

116. Amelia Watson

Measuring discrete and global indicators of shyness: A coding system creation

Major: Psychology, Criminology, Law, and Justice

Graduation: Fall 2023

Mentor: Lilly Bendel-Stenzel and Dr. Danming An (Psychological and Brain Sciences)

118. Elizabeth Wetzel

E-cigarette flavoring does not differentially reduce microvascular endothelial function in healthy young adults

Major: Human Physiology, Pre-Medicine

Graduation: Spring 2024

Mentor: Dr. Anna Stanhewicz (Health and Human Physiology)

120. Micah Williams

Child Externalizing Problems Predicting Later Depressive Symptoms: Comparing Multiple Stressors as Mediators

Major: Psychology

Graduation: Spring 2024

Mentor: Dr. Isaac Petersen (Psychological and Brain Sciences)

122. Meghana Yellepeddi

Cervical Cancer Screening Utilization in Rural FQHCs Across Clinic Characteristics

Major: Ethics and Public Policy, Interdepartmental Studies

Graduation: Spring 2023

Mentor: Dr. Whitney Zahnd (Health Management and Policy)

124. James McMillan

Impact of Violence over the Life Course

Majors: Public Health, Ethics and Public Policy

Graduation: Fall 2022

Mentor: Stephanie DiPietro (Sociology and Criminology)

126. Pedro Marra

Metformin use history and genome-wide DNA methylation profile: potential molecular mechanism for aging and longevity

Major: Biomedical Sciences

Graduation: Spring 2023

Mentor: Dr. Gen Shinozaki (Psychiatry)

