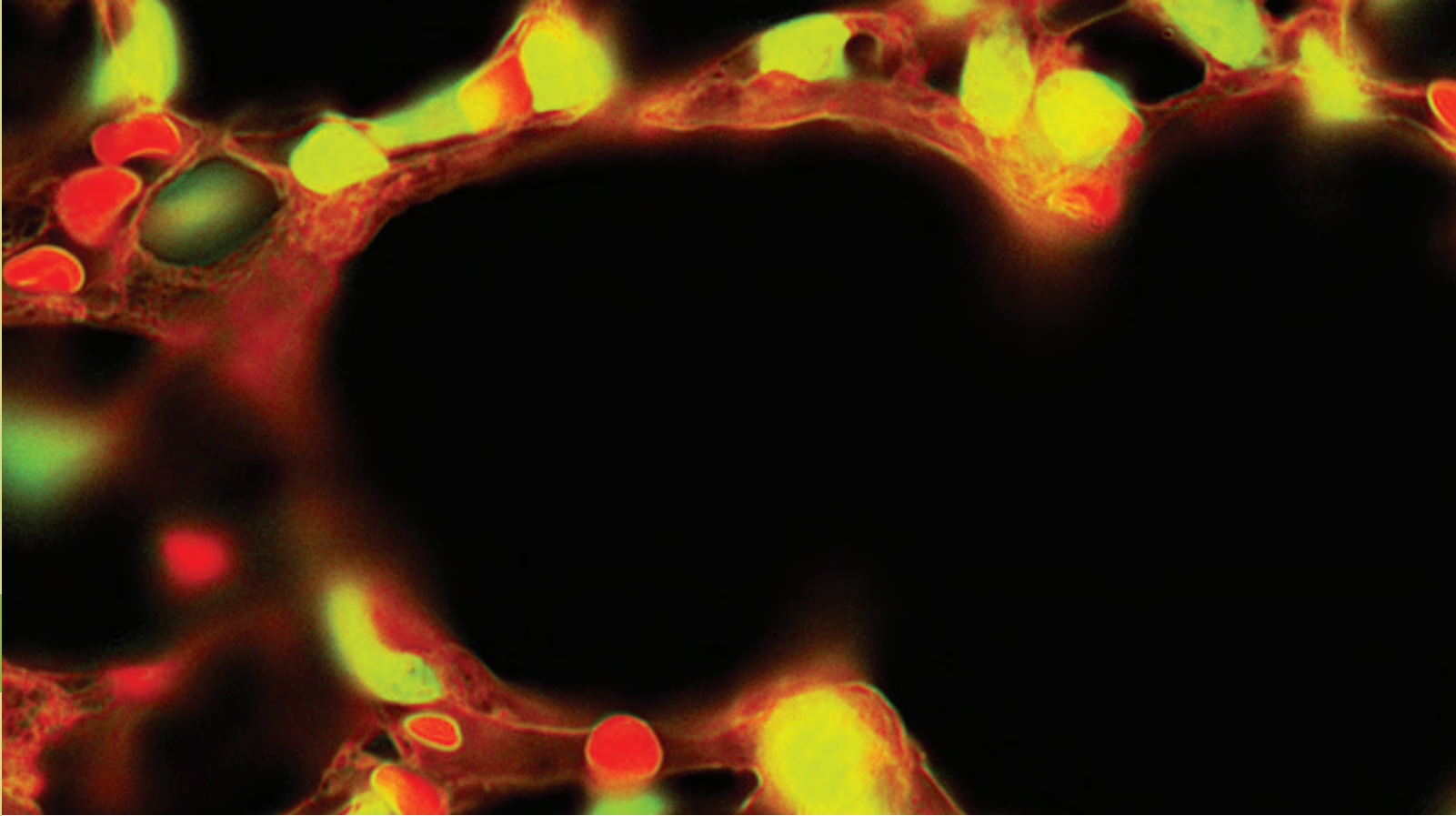


Summer
Undergraduate
Research Program

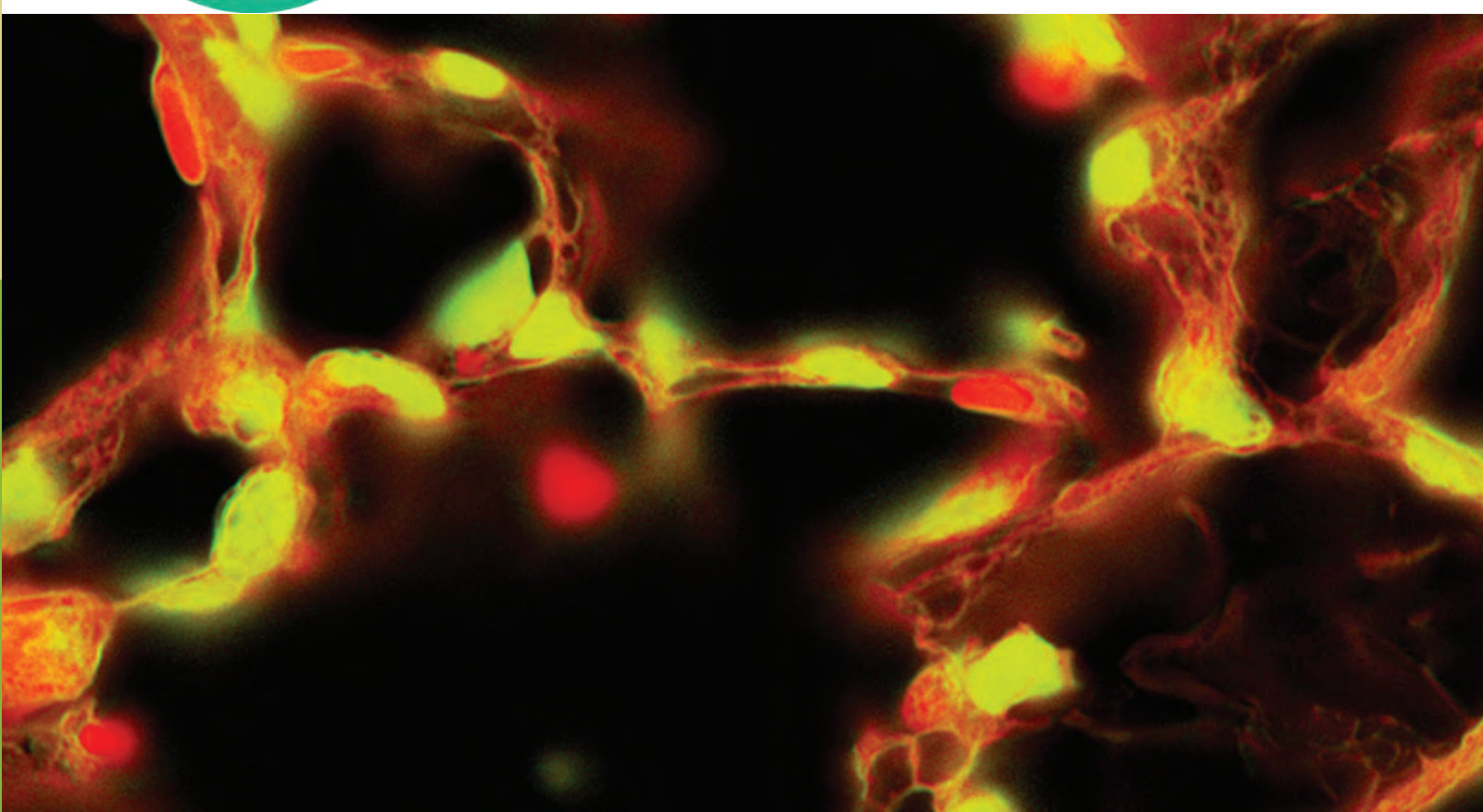
University of Montana
Ctr For Environmental Health Sciences
Summer Undergraduate Research Program
32 Campus Drive
280 Skaggs Building
Missoula, MT 59812

Program Information:
<https://cehsweb.health.umt.edu/education/summer-programs/surp-application>

Email: cehs@mso.umt.edu




Summer
Undergraduate
Research Program



SOT Undergraduate
Intern Travel
Award Recipients

Over the past years, the Society of Toxicology (SOT) has awarded CEHS with scholarship funds which are used to enhance the experience for the undergraduate participants. One of those experiences is to attend the annual SOT conferences.

Below are two recent recipients of the prestigious SOT Undergraduate Intern Travel Award. These recipients receive funds to attend the SOT annual meeting where they are recognized for this singular accomplishment. The recipients present their work and attend the many opportunities available to them.



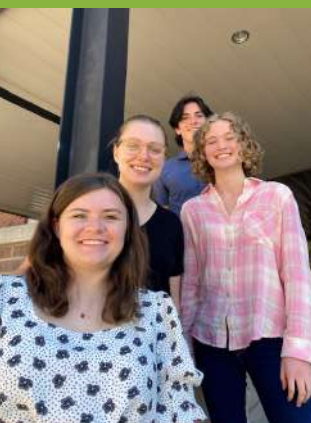
Natalie Alvarez from Clemson University, South Carolina

During the summer program, Natalie researched the role of diet in MWCNT-induced inflammation, as modulated by epigenetics.



Meg Lyons from Troy University, Alabama

During the summer program, Meg researched the role of sex hormones in response to MWCNT-induced inflammation.



Kai Malone, University of North Carolina - Chapel Hill

Left:
Erin Szalda-Petree, University of Montana

Right:
Amy Boote, Big Sky High School

Abby McIver,
East Tennessee University

About SURP

Program Overview

The Center for Environmental Health Sciences (CEHS) sponsors a summer educational research experience for outstanding college undergraduates that are interested in attending graduate school and pursuing a career in environmental health science.

The Summer Undergraduate Research Program (SURP), is part of a national effort to attract and train undergraduates for research careers in the environmental health sciences.

The Center's SURP ten-week summer program presents extraordinary opportunities to learn from expert mentors about the philosophy and practice of conducting current biomedical research in human health and the environment in the Center's state-of-the-art laboratories. Guest seminar lectures and presentations by graduate students, postdoctoral fellows and staff provide SURP students with personal experiences in biomedical research. In addition, students gain key skills to help them successfully apply to graduate programs in environmental health science, the biomedical sciences, and other related fields.

Currently in its' twenty-first year, undergraduate students in the SURP program have come from universities around the country; examples include Gonzaga, Washington State University, Stanford University, Purdue University, University of Massachusetts - Lowell, Notre Dame University, University of Texas - Dallas, University of Puerto Rico and University of North Carolina.

The 2023 SURP Program's thematic focus will be ImmunoToxicology.

Multiple projects will revolve around the topic of immunotoxic effects of environmental exposures and include silica, nanoparticles, pesticides, wood smoke. An overall focus of these projects will be on how they impact immune function and chronic diseases.

Current undergraduate students with a strong interest in science and excellent grades are encouraged to apply by February 28th.

SURP 2023 begins May 22, 2023 through July 28, 2023. Enrollment is limited to 5 students. Stipend is \$5,000.

Applications must be received by February 28, 2023. Applications received after March 15 will be considered if positions are still available.

About CEHS

CEHS was formed in 2000, and is a leading edge biomedical research center focused on diseases associated with exposures to harmful environmental and occupational agents.

Center investigators interact with a network of researchers worldwide to enhance basic and translational research.

Research Focus of the Center

- To determine the mechanisms by which environmental and occupational exposures contribute to the development of human diseases
- To translate that knowledge into development of biomarkers, therapeutic interventions and improved public health information

CEHS Areas of Research Emphasis

Focus SURP Program 2022 - variety of projects approaching the thematic focus of the health effects of wildfires

- Epigenetics
- Nanotoxicology
- Immunology
- Respiratory Toxicology
- Gene Environment Interactions

SURP Co-Advisors



Dr. Andrij Holian, CEHS Director
PhD. Montana State University
Respiratory Toxicology
Nanotoxicology
Macrophage Biology



Dr. Chris Migliaccio, Research Associate Professor
PhD University of California, Davis
PharmD University of Montana
ImmunoToxicology
Wildfire Health Effects
Human Studies and Animal Models

Apply online at:
<https://cehsweb.health.umt.edu/education/summer-programs/surp-application>

Questions: Email CEHS at cehs@mso.umt.edu.

Core Facilities

CEHS supports three Research Cores:

The Fluorescence Cytometry Core, Molecular Histology and Fluorescence Imaging Core, and Inhalation and Pulmonary Physiology Core

Each of the cores are led by experienced faculty and full time staff scientists helping investigators plan, execute and interpret experimental studies.

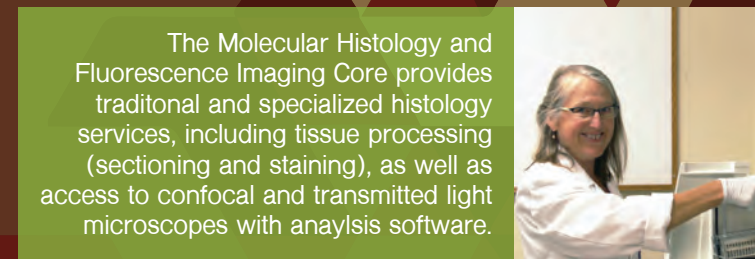
The cores are highly integrated providing collaborative workflows to accomplish complicated research.

The state-of-the-art core facilities and rich research environment make CEHS a unique center in Montana with the closest related centers located in Seattle, Portland and Denver.

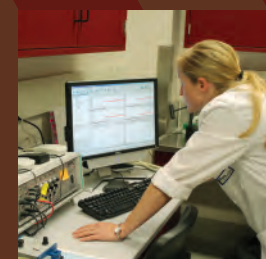
Core Resources



The Fluorescence Cytometry Core offers access to flow cytometers providing fluorescence analysis of tissue, systems for cell sorting, and digital microscopy for in depth examination and photography of tissues and cells.



The Molecular Histology and Fluorescence Imaging Core provides traditional and specialized histology services, including tissue processing (sectioning and staining), as well as access to confocal and transmitted light microscopes with analysis software.



The Inhalation and Pulmonary Physiology Core resources include: inhalation exposure and pulmonary function assessment equipment, a full surgical suite, animal husbandry, and an exposure chamber for studying the health effects of inhaled wood smoke.

About UM and Missoula

The University of Montana is located in beautiful Missoula, Montana and integrates an enriching educational experience with easy access to outstanding recreational activities including hiking, fly fishing, and camping and is located near Glacier National Park.



For more information about Missoula and the surrounding region, please visit www.destinationmissoula.org.

The friendly, collaborative nature of the faculty emphasizes one-on-one faculty-student interactions.

Our SURP students have been highly successful with a number of manuscripts being generated.

In addition, SURP students have won top awards at end of summer conferences representing students from various summer programs campus-wide and have been recipients of Society of Toxicology scholarships. We encourage you to view past project descriptions and posters on our website.



Kai Malone, UNC-Chapel Hill

Abby McIver, East Tennessee University



2022 SURP SOT Interns

This program is funded through a grant obtained from the National Institute of Environmental Health Sciences (NIEHS; R25ES022866) and the Society of Toxicology.