



GILGS '24 POSTER SESSION

The GILGS Poster Presentation will be reception-style, allowing registrants to learn about the ongoing work of SING Alumni across disciplines. Please join us for a relaxed evening of highlighting alumni research, sharing knowledge, and networking!

Below is a list of the poster presentations (in alphabetical order).

Presenter	Ray Allen
Title	Can I eat this?: An ongoing community guided assessment of parasites and northern Wisconsin fish health
Abstract	The Lac du Flambeau Indian Reservation is home to the Lac du Flambeau (LDF) Band of Lake Superior Chippewa Indians and to over 250 freshwater lakes containing fish, invertebrates, aquatic plants, and pathogens. This research, in collaboration with the LDF Tribal Fish Hatchery and University of Wisconsin-Madison's Trout Lake Research Station, aims to increase the knowledge of infectious pathogens in fish in area lakes at multiple stages of fish and pathogen development, and begins to address questions on the long-term health of freshwater fish populations in the region in terms of a changing climate, and human-induced changes in lakes.

Presenter	Khalyd Clay
Title	Kinship and caretaking in drug discovery
Abstract	Although the drug discovery process is often described in terms of scientific disciplines (i.e., biology, chemistry, pharmacology), I would like to use this poster session to workshop describing alternative elements of producing new medicines including traditional medicines and non-human relatives. Many biotechnology companies are focusing on developing non-psychoactive versions of traditional medicines, like peyote or <i>Salvia divinorum</i> , and strip away many social-cultural factors that perhaps are included in what we mean when we say medicine. Similarly, animal models are critical in making new drugs. I would like to explore the relationality between the researcher and their research models.

Presenter	Burgundy Fletcher
Title	Sifting through the dirt: DNA testing ancestors without DNA testing ancestors
Abstract	My research looks at the complexities of identity-making and understanding from past to present and future possibilities, as well as technological innovations that keep those possibilities shifting.

Presenter	Jayde Hopkins
Title	Infectious Curiosity: An Artistic Vision of Scientific Exploration
Abstract	Meet Jayde Hopkins, a Gurindji and Woolwonga artist and prospective infectious disease researcher. Through her connection with Menzies School of Health Research, Jayde has crafted a continuing collection of compelling artworks inspired by the theme of scientific discovery. This includes a unique series of seven novel species, discovered through collaborative efforts between Menzies researchers and the wider scientific community, and other standalone artworks created to promote public engagement with research projects and conferences. Showcasing the fascinating intersection of art and science, Jayde's work stands as an engaging example of contemporary science communication, blending creativity with the excitement of new scientific endeavours.

Presenter	Stafford Maracle
Title	A Transdisciplinary Approach to Assessing Freshwater Fish Population Health: eDNA and Indigenous Knowledge
Abstract	Accelerating human impacts continue to drive biodiversity loss and species extinctions. The ability to quantify past and present species distributions and to assess the status of ecosystems are ever more crucial for impactful conservation and management action. We provide a framework for assessing contemporary and historical fish population and ecosystem health using a transdisciplinary approach with techniques from molecular ecology, paleoecology, and Indigenous knowledge. By braiding Indigenous and Western insights, we develop a holistic understanding of the changing fish community health that can inform communities and management authorities about the factors that have impacted and continue to impact important species and habitats.

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Presenter	Tyler Olney
Title	Significance of Dissolved Oxygen on Migration of Sockeye and Summer Chinook Salmon at the Yakima River Delta
Abstract	A thermal barrier, caused by the Bateman Island causeway, at the Yakima River Delta has prevented fish passage during the summer. Work focused on determining the significance that dissolved oxygen levels have on adult Sockeye and Summer Chinook migration through the Yakima River Delta. Data included Dam fish counts, DO and water temperature data from 3 USGS stations, Yakima River Delta water temperature. Analysis of data, along with a review of literature on salmonid migration determined that Sockeye and Summer Chinook salmon in the Yakima River tend to stop migration when dissolved oxygen levels are <6 mg/L and temperature is >21°C.

Presenter	Cheyenne Reuben-Thomas
Title	Playing with Fire: Comparing the Impacts of Indigenous-Led and Settler Land Management Strategies on Insect Biodiversity
Abstract	In recent years, Traditional Ecological Knowledge has received recognition for its contributions to the field of ecology and evolution by providing more detailed insight on topics such as biogeographic patterns, life-history characteristics, and population structure. Good Fire, or traditional uses of prescribed burning, is utilized in many Indigenous communities throughout the world for purposes such as habitat restoration. This poster will lay out my prospective doctoral research, which will investigate how Good Fire impacts insect biodiversity and, further, species richness/abundance and genetic variation of ants, which can be an indicator species. Similarly, I will investigate and compare how agency-led prescribed burns impact insect biodiversity. Through this work, I hope to highlight the need for Indigenous-led conservation and land management.

Presenter	Carissa Sherman
Title	Global Pharmacogenetics: An Analysis of the 1000 Genomes Project
Abstract	Purpose: There have been advances in our knowledge of pharmacogenetics (PGx) and drug-gene interactions, but population-level PGx variation is still not well characterized. Methods: We used PyPGx, a star-allele calling tool, to identify star alleles from whole-genome sequencing (WGS) data from the 1000 Genomes Project to detect structural variants (SVs), single nucleotide variants (SNVs), and insertion-deletion variants (indels). Results: Our findings contribute to an enhanced understanding of global PGx variation. Conclusions: Our findings highlight the potential of WGS data and provide a valuable resource to improve clinical care across diverse populations.

Presenter	Paulina Fernanda Valerio Munguia
Title	What is the Importance of Chytrid fungus for salamanders in Veracruz?
Abstract	A few people around the world do not know the importance of the salamanders and most people do not know the ecology and impact of chytridiomycosis, one of the reasons for decline of the amphibian populations, especially of <i>urodele</i> . Because it is an emerging infectious disease that works hard in the rainforest and jungle in the middle of Veracruz, México to discovering and comparing responses of endemic species of salamanders in the montane areas, where the cold climate can be supported by chytrid growth, and if they affected amphibians.