



Director's Update

Dr. Deb Miller



Happy New Year and welcome to 2023! I hope that you have all had a healthy and restful holiday time and are gearing up for a productive, adventurous, and exciting year. The turning of a new year is like a new beginning with endless possibilities.

Highlighted in this issue of the UT One Health Initiative newsletter is the [One Health Student Leadership Summit](#) that took place January 7-8. I just want to say "WOW," what an awesome experience! Watching these future One Health professionals interact was inspiring. I left feeling that the future of the health of our planet is in good hands. Hopefully, this summit can be an annual event! Students, please check out and get involved in the Student One Health Coalition. This group includes students from various stages of training and from a variety of disciplines. This is going to be a busy year and we want to have as many students as possible involved in all activities!

I hope that each of you have been able to participate in at least some of the many activities hosted by the OHI. This

is going to be a super busy year for us with many activities so please watch for announcements. Besides our monthly seminar series and podcast, we will be co-hosting (with the Department of Ecology and Evolutionary Biology) Dr. Mike Ziccardi on March first. Dr. Ziccardi is the Executive Director of the [University of California-Davis One Health Institute](#), Director of the [California Oiled Wildlife Care Network](#), and Director of the [California Veterinary Emergency Team](#). Keep watch for details and opportunities to meet with Dr. Ziccardi!

In April, we will be hosting a week-long One Health Rally. This will be a mix of talks, creative (and interactive) presentations, and one health activities. Details will be coming soon, along with a call for abstracts for those interested in presenting, but in the meantime, mark your calendars for April 17-21!

As always, you can keep track of these and many more activities through our [website](#). You can also find resources for K-12 educators, information about the one health minor, and various information on research and educational opportunities there. There is even a donation button for those who want to support OHI activities! So please check it out.

I hope that you enjoy this read and, as always, please join us in uniting disciplines to protect and promote the health of all life on Earth!

UTOHI Research

OHI Seed Grant Program

11 projects, 35 investigators, spanning 8 colleges, centers, and organizations!

As we prepare to announce the 2023 OHI Seed Funding Competition, we're very proud of the amazing portfolio of projects we've been lucky enough to fund so far. Our project teams are collaborations between researchers from very diverse fields, tackling fundamental challenges affecting:

- environmental health (e.g., our team lead by Dr. Saha, using advanced machine learning and process-based modeling to improve prediction of soil's climate mitigation potential),
- plant health (e.g., our team led by Dr. Xinhua, studying the impacts of climate change on cotton production),
- animal health (e.g., our team led by Dr. Truster, using

machine learning and physics models to understand bone injury in goats),

- and human health (e.g., our team led by Dr. McKinney, looking at the impacts of the "living shoreline" of the Tennessee River on human health).

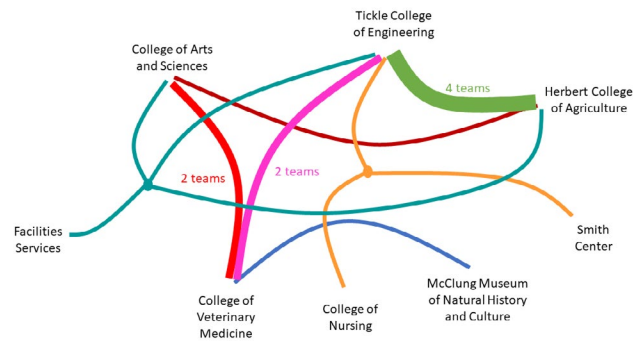
They focus on:

- developing novel insights (e.g., the team led by Dr. Dennis, working to discover causes of mussel mortality in the Clinch River),
- building new tools (e.g., the team led by Dr. Su, developing a new molecular detection and identification system for zoonotic pathogens),
- and training a more prepared One Health workforce (e.g., the team led by Dr. Retherford, piloting an educational program for cross-sectoral engagement in Panama).

These brief descriptions fail to capture the full, transdisciplinary nature of the collaborative teams and unified, One Health perspectives that make these projects so exciting. Some of our seed projects have already succeeded in developing larger proposals for external grants and have brought in millions of dollars in new research funding to extend and expand their work as part of our One Health Initiative family.

Our seed projects reflect the full scope of how a One Health perspective can transform how we do science and support health research. They go beyond the questions individual investigators and traditional research teams can ask to transcend disciplinary boundaries of research, deepen our understanding of the critical interrelatedness of the processes that drive our natural and man-made world, and enable the full process of translating basic scientific insights to practical solutions that protect and promote the health of all life on Earth. We're so proud of this incredible set of projects and the researchers working to make them successful. We can't wait to see what projects are proposed in this coming year!

OHI Seed Grants – Making Connections!



One Health Opportunities

One Health Student Leadership Summit

Mariah Dee and Tamara Roba

On January 7, 2023, 15 graduate and professional level students checked into the Howard J. Baker Center to engage in the first-ever One Health Student Leadership Summit. Involved in the event were 6 volunteers, 8 facilitators, and 11 in-person speakers. Though the turnout was smaller than expected, this marked the beginning of an initiative on the UT campus which will continue to shed more light on One Health issues as well as highlight key competencies for building and sustaining One Health and other cross-disciplinary projects.

Throughout the summit, there were activities like the Root Cause Activity, where participants were challenged to think backwards from a present day One Health issue. Participants chose to dissect out a phenomenon called colony collapse disorder, which is associated with dwindling bee populations. Participants also engaged in activities that challenged them to work in teams. For example, students were tasked to build a car out of cardboard, wooden wheels, dowels, various papers, and other materials that they thought would make their car great. Each item was given a value, a cost... but instead of having a monetary value attached to these



items, they each represented something that might be an important aspect of planning a One Health project (a needs assessment, sustainable materials, etc.).

The summit culminated in a community service project that allowed participants to have an impact in an area that embodied One Health. Here, Alexis Niceley from the Companion Animal Initiative of Tennessee (CAIT) explained the importance of taking care of people experiencing homelessness in Tennessee and the free-roaming cat populations, both of which share a large commonality. Oftentimes, especially during the winter months, conditions can become dangerous and life-threatening. With that in mind, students were responsible for building ~17 cat shelters as well as 25 warm packs, with warm packs including reusable items like warm clothing, water bottles, hygiene products, and snacks. Each warm pack also included a handwritten card written by a participant, facilitator, or volunteer. All supplies were intentionally selected based on



consultation from CAIT and the Volunteer Ministry Center, as well as the Sustainability Coordinator of UT.

This portion of the summit really resonated with the audience, according to our initial results from our post-event survey. Students were excited to see a One Health project in action and thus passionately contributed to what were called “I will...” statements, written and shared at the closing ceremony. In this final activity, students were challenged to share what they plan to do differently following their experience at the One Health Student Leadership Summit. Participants proudly announced their renewed interest in advocacy, One Health, and community service—all of which were important goals for this project.



Hiring Organization	Position
Lincoln Park Zoological Society, Urban Wildlife Institute	One Health Research Coordinator
NatureServe	Chief Scientist
NC State University, Dept. of Entomology and Plant Pathology	Assistant Professor
Public Health Entomology For All (CDC/ESA)	Fellowship/Internship
Swiss Federal Institute for Forest, Snow and Landscape Research	Postdoc
UC Berkeley, School of Public Health, Marshall Lab	Postdoc
USGS Eastern Ecological Science Center	Quantitative Researcher/Statistician
Wells College	Assistant Professor of Environmental Science
Western University, Schulich School of Medicine and Dentistry	Probationary (Tenure Track) Faculty Position in Environmental Health

One Health in the News

- [AVMA-championed One Health Legislation Passes Congress](#)**
Derived from the AVMA-championed Advancing Emergency Preparedness Through One Health Act, a provision directing the development of a One Health Framework across the federal government was included in the final spending bill of 2022. A comprehensive federal One Health Framework will improve coordination between federal agencies that study human and animal health and the environment.
- [AlignCare: A One Health Approach to Veterinary Care Access](#)**
Families with sick or injured pets are often burdened with the difficult decision of how to afford the cost of the required veterinary care, leading to mental and emotional distress of human family members. AlignCare is a community-based program that subsidizes the cost of veterinary care for families in need and connects social services, veterinary social workers, and veterinary service providers. “Vulnerable individuals deserve access to healthcare whether they are human or nonhuman.” – Michael Blackwell, DVM, MPH
- [Will We Be Hearing More About the Nipah Virus in the Future?](#)**
The Nipah virus is a bat-borne pathogen centered in South East Asia that has also been documented in domestic animals, such as farmed pigs, horses, dogs, and cats. Outbreaks have also been known to cause severe respiratory and neurological disease and high mortality in both humans and pigs. A review team noted that the emergence of the virus and potential of transmission to other animals and humans seems to be related to losses in the bats’ habitat.
- [The World has a New Plan to Save Nature. Here’s How it Works – and How it Could Fail](#)**
In December 2022, around 190 countries agreed on a historic plan to halt the decline of wildlife and ecosystems. The

agreement contains 23 targets that countries must achieve within the decade, including conserving at least 30% of all land and water on Earth by 2030 and shrinking subsidies for activities that harm nature. Environmental advocates say this agreement is our last chance to avoid far-reaching ecological collapse.

- **Study to Investigate the Effects of Environmental Factors on Antibiotic Resistance**

During a new 18-month-long study funded by the One Health European Joint Project, Surrey researchers will embark on work to catalog the evidence of the effects of environmental factors on antibiotic resistance. Misuse and overuse of antibiotics were previously believed to be the sole cause of this threat. However, the role of environmental factors such as contamination of water or soil by antibiotics, potentially impacting the food chain, is now being recognized.

One Health Events

One Health

Lunch & Learn Seminar

January 26, 2023 | 12-1pm EST

Exploring the Religious Dimensions of Environmental Challenges

Dr. Joseph Witt
University of Tennessee

Zoom: <https://tennessee.zoom.us/j/95622514541>
Passcode: onehealth

One Health

Lunch & Learn Seminar

February 23, 2023 | 12-1pm EST

Dr. Fortunate Phaka
North-West University
Unit for Environmental Science and Management

Zoom: <https://tennessee.zoom.us/j/99598663330>
Passcode: onehealth

One Health

Lunch & Learn Seminar

March 30, 2023 | 12-1pm EST

Reducing Risk of Spillover by Preventing Pandemics

Dr. Neil Vora
Conservation International

Zoom: <https://tennessee.zoom.us/j/91815847772>
Passcode: onehealth



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