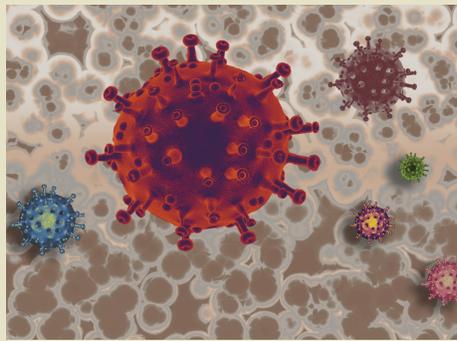


MPH NEWSLETTER

Utah State University
College of Agriculture and Applied Sciences



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DIRECTOR'S MESSAGE

Dear Readers,

This past year has been an incredibly busy one for the field of public health. I am impressed and grateful to the many public health programs and professionals who have been willing to help our students with their MPH projects and research during this time. It is exciting to prepare to have so many students graduate this spring and enter such an essential field. There will be many opportunities for our graduates to utilize core public health skills and knowledge related to the social determinants of health, advocacy and leadership, program implementation and evaluation, and much more. Our upcoming graduates are ready for the field so please let me know if your organization is hiring this spring/summer so we can pass along these great opportunities. We are also excited to start thinking about the 2021-2022 cohort of MPH students! We are currently accepting applications for summer and fall of 2021. If you know of anyone who might be interested in pursuing their MPH in Nutrition or Veterinary Public Health, please have them reach out to a faculty member for more information.

Thank you for taking the time to read our quarterly newsletter. We are excited to share with you highlights of some of the excellent work being done by students and faculty in the CAAS MPH program. In this newsletter you will find information about program and public health current events, our student spotlight Kyler Crosby, our faculty spotlight Dr. Jane Kelly, Dr. Kelly's article titled Reverse Zoonosis, and much more. Thank you to all of our contributors of this issue of the newsletter!

Dr. Mateja R. Savoie-Roskos



Faculty Spotlight: Dr. Jane Kelly, DVM, MS, MPH, ACVPM, ACVM

Our own Jane Kelly, a previous kidney donor, flew to Maryland in July 2020 to prepare for a live liver donation. She donated her right lobe to a 55-year-old teacher in Virginia with cysts on her liver. Cysts on the liver causes pressure on her internal organs, making it hard to breath and digest food. In reference to her surgery, which lasted about 5 hours, and its subsequent recovery, Jane said "It's not easy, but the rewards, the opportunity to save a person's life is worth every ounce of pain."

Jane first got interested in live organ donation in 2010 as an act of gratitude. She says, "The whole thing started when I realized things were going really well for me as a person". Jane wanted others not so fortunate to have the same opportunities she was experiencing in her own life. When the time came to provide a liver donation, Jane states that having previously donated a kidney helped her not feel nervous going into the operation. And though recovery is more painful for the donor than the recipient, as the recipient is replacing an unhealthy organ with a healthy one while the donor is completely healthy, Jane focused only on the opportunity to do good.

If you want to read more of Jane's incredible story, check out this [link](#) to John Hopkin's University Medicine!

"Donors like Jane are good people who
want to help the world"

Benjamin Philosophe, MD, PhD
Transplant Surgeon



STUDENT SPOTLIGHT: KYLER CROSBY

Kyler, a MPH Nutrition student, is the student spotlight for this quarterly newsletter! Kyler grew up on a farm where he planted and grew crops with his family. He was always fascinated by “healthy” foods and how they affect the health of the population. As he watched some family members’ ailing health, he wanted to learn how to treat diseases. At this point he decided he wanted to become a doctor with the belief that eating health is the key to good health. However, this desire changed as he went through his undergraduate degree in nutrition science. He had the opportunity to take an advanced public health nutrition class and learned about how public health is imperative to help prevent diseases instead of treating them, like most physicians do. Kyler felt that working as a public health professional would be just as valuable to the health of the population as being a doctor, so he decided to pursue an MPH Nutrition degree.

Though Kyler hasn’t quite started his MPH project yet, he has started laying the groundwork for it. His project is going to research the actual fiber intake of the population of the United States, including types and quantity of fiber. This will help researchers accurately describe the correlations being fiber intake in the United States population and disease-risk. He is working with a food scientist who specifically researches how fiber interacts with insulin resistance in the body.



Another component of Kyler's project involves investigating the population's intake of Vitamin D and Calcium. In mice studies, research is indicating that diets high in Vitamin D and Calcium are associated with gastrointestinal inflammation and preneoplastic lesions. Preneoplastic lesions are seen in the initial stages of colon cancer. Kyler hopes to be able to apply this information learned in mice studies to the human population.

Not only is Kyler a great student, but he is also involved with a lot of professors in the nutrition department. He was involved with Dr. Clara Cho's research on DNA methylation in rats and its effect on hypothalamic feeding pathways. He has also been a TA for multiple advanced nutrition courses and has experience educating diabetic patients about their condition and nutritional considerations.

Kyler has a deep passion for learning and discovering new things. Nutrition interests him because there is so much to uncover as research constantly morphs and changes. After graduating, Kyler wants to enter the community health or food science sectors of public health. Eventually he wants to go back to school to get a Ph.D. in Nutrition and Food Science and further his research.



ZOONOTIC DISEASE CORNER: REVERSE ZOOZOSIS

Jane E. Kelly, DVM, MS, MPH, DACVPM, DACVM

We don't often think about the possibility that we can infect our pets and other animals with disease rather than the other way round. Reverse zoonoses are infections that spread from human to animal.

The most recent example, and one that is of great concern in some animal populations, is the spread of COVID-19 (SARS-CoV-2) from infected humans to different animals including mink, pet dogs and cats, and big cats at zoos. A recent article in the AVMA (American Veterinary Medical Association) Animal Smart Brief (February 11, 2021) reported that a cougar and a tiger at a wildlife facility in Texas were both positive for COVID-19. This was the first cougar in the US confirmed positive for this virus. Both large cats had clinical signs of coughing and wheezing, but are expected to recover. It is believed that the cats got the infection from a worker or volunteer at the facility. We are still learning about the COVID-19 virus of course, but there is currently no evidence that animals play a SIGNIFICANT role in spreading the virus to people. However, we have had several cases of SARS-CoV-2 in people associated with mink (a mutated virus known as Cluster 5 variant) in Denmark recently, so the story is constantly changing.

Here in Utah we have had an outbreak of SARS-CoV-2 in our farmed mink that is believed to be due to infected mink ranch workers spreading the virus to the animals. This has occurred in several other states including Oregon, Wisconsin, and Michigan. It is a serious disease in mink causing severe respiratory disease and death. The virus killed nearly half of the breeding animals in several mink farms in Utah starting in August 2020.



Another example of reverse zoonosis in mink in Utah happened in 2019. This time the virus that spread from human workers at a mink ranch was an Influenza A virus. In this outbreak which was limited to one farm, the adult females had respiratory disease and the many of the kits (young mink) died.

Some more examples of reverse zoonoses that have reported recently: humans with methicillin-resistant *Staphylococcus aureus* spreading it to pets, cryptosporidia (a parasitic enteric pathogen that readily spreads from animal to human and vice versa), tuberculosis, and even roundworms (*Ascarids*).

These examples remind us of the importance of protecting our pets and other animals from infectious diseases that we may have. It is not something that we think of as often as the opposite scenario (animal to human transmission of viruses and bacteria).

COVID-19 VACCINE UPDATE

There are several COVID-19 vaccines around the world that are now in use with the first mass vaccination programs starting in December 2020. Pfizer, Moderna, and AstraZeneca have all been approved for use. All require two doses to be effective. As of February 21, 2021, 43,628,092 (13.2%) of the United States's population have received the first dose of the COVID vaccine. The number is less for the second dose, which is 18,865,319 (5.7%).

Utah has administered 610,580 doses of the vaccinations so far. The percentage of vaccinated Utahans is slightly less than the national average with 356,371 (11.1%) having received one dose and 146,286 (4.6%) having received their second dose.

Healthcare workers, long-term care facility staff and residents, first responders, K-12 teachers, and those aged 65 and older are currently eligible for the vaccine in Utah. Click [here](#) to learn more about national data and [here](#) to learn more about local data.



UPCOMING EVENTS

The Utah Public Health Association Student Assembly (UPHA-SA) is holding FREE career exploration webinars throughout March-May 2021. The webinars are held virtually and will include current public health professionals working in a variety of different settings ranging from non-profit, to community health, to policy and advocacy.

All webinars start at 3 pm and are held on these dates:

March 9 and March 23

April 13 and April 27

May 11

Check out the MPH Canvas Announcement or contact Mateja at Mateja.Savoie@usu.edu for the Zoom information!



FOLLOW US ON SOCIAL MEDIA

Be the first to hear about MPH program updates by following our social media handles! This is a great way to stay up to date on program changes, class highlights, public health events, and potential job opportunities. It also provides you with the opportunity to network with other public health professionals and programs.

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Linkedin: [USU Master's of Public Health](#)

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