

# 2022 BC ONE HEALTH & ZOOZOSES SYMPOSIUM



**WEDNESDAY NOVEMBER 2ND, 2022**

Langley Golf Centre & Online Webinar

**PRESENTED AND SUPPORTED BY:**

BC CENTRE FOR DISEASE CONTROL, BC MINISTRY OF AGRICULTURE AND FOOD & BC MINISTRY OF FORESTS

**WITH ADDITIONAL FINANCIAL SUPPORT FROM:** THE BC PHYSICIAN ENGAGEMENT FUND AND THE CANADIAN ANIMAL HEALTH SURVEILLANCE SYSTEM

## WELCOME

9:00 - 9:05

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Erin Fraser, BCCDC &  
Brian Radke, BC Ministry of Agriculture and Food

9:05 - 9:20

### KEYNOTE ADDRESS: ONE HEALTH GENOMICS: THE INTERSECTION BETWEEN HUMAN, ANIMAL, AND ENVIRONMENTAL HEALTH

Federica Di Palma, Genome BC

## SESSION 1

9:20 - 9:40

### GENOMIC EPIDEMIOLOGY OF THE 2022 H5N1 AVIAN INFLUENZA VIRUS OUTBREAK IN BC AND YUKON

Shannon Russell (BCCDC Public Health Laboratory) and Michelle  
Coombe (BC Ministry of Agriculture and Food)

9:40 - 10:00

### THE ONE HEALTH TOOLKIT: WHAT DOES THIS LOOK LIKE IN THE FACE OF COVID-19?

Talia Strang and Doris Leung (Canadian Animal Health  
Surveillance System) and Andrea Osborn (CEZD)

10:00 - 10:20

### BRITISH COLUMBIA TRAPPERS - A VALUABLE RESOURCE TOOL WHEN STUDYING ANIMAL HEALTH ISSUES

Tim Killey, BC Trappers Association

10:20 - 10:40

### ZOONOTIC AND VECTOR-BORNE DISEASE UPDATES FROM WASHINGTON STATE

Hanna Oltean, Washington State Department of Health

## SESSION 2

11:00 - 11:40

### THE IMPACT OF 2021 BC FLOOD FROM AN EMERGENCY MANAGEMENT PERSPECTIVE

Graham Knox (BC Ministry of Agriculture and Food)

### ON THE GROUND IMPACTS OF 2021 BC FLOOD ON ANIMAL HEALTH AND WELFARE AND PRODUCER MENTAL HEALTH

Josh Waddington (Greenbelt Veterinary Services)

11:40 - 12:00

### WASTEWATER SURVEILLANCE

Natalie Prystajeky, BCCDC Public Health Laboratory

## SESSION 3

**Moderators:** Veronique Fryer and Erin Fraser (BCCDC)

1:00 - 2:30

### CASE STUDY

- Inna Sekirov
- Stefan Iwasawa
- Danica Shannon
- Sunny Mak
- Muhammad Morshed
- Theresa Burns

## SESSION 4

2:50 - 3:10

### STUDENT SESSION

Xiaocong Guo, UBC

Characteristics of the urban sewer system and rat presence in Seattle

Ellen Boyd, UBC

Hands off the mink! Using Environmental Sampling for SARS-CoV-2 Surveillance in American Mink

3:10 - 3:30

### SMALL FLOCKS AND ONE HEALTH

Gigi Lin, Canadian Poultry Consultants Ltd

3:30 - 3:50

### PASSIVE SURVEILLANCE REVEALS HUMAN-ASSOCIATED CAUSES OF BAT MORTALITY IN BRITISH COLUMBIA

Kaylee Byers, Canadian Wildlife Health Cooperative

3:50 - 4:00

### CLOSING REMARKS

Muhammad Morshed, BC Centre for Disease Control

## PRESENTERS



### KAYLEE BYERS

*Simon Fraser University*

Dr. Kaylee Byers is a One Health and communications scientist. She is a University Research Associate at the Pacific Institute on Pathogens, Pandemics, and Society at Simon Fraser University as well as the Deputy Director of the British Columbia node of the Canadian Wildlife Health Cooperative. Kaylee is also the host of Genome British Columbia's podcast "Nice Genes!" which explores how genomics can be applied to better understand the world around us.



### ELLEN BOYD

*University of British Columbia*

Dr. Ellen Boyd is a veterinarian with experience in disease surveillance and regulatory medicine. She is currently a graduate student at the University of British Columbia School of Population and Public Health and her thesis will be looking at establishing prevalence and identifying risk factors for Salmonella dublin in dairy cattle in BC. Her thesis supervisor is Dr. Chelsea Himsworth, veterinary epidemiologist and pathologist at the BC Ministry of Agriculture.



### FEDERICA DI PALMA

*Genome BC*

Dr. Federica Di Palma is the Chief Scientific Officer and Vice President, Sectors at Genome BC. She holds a PhD in Immunogenetics from the University of Reading and brings over 15 years of experience in genomics and data science with strong international connections in the US through institutions such as NIH, Harvard, and MIT. She was Director of Science at the Earlham Institute in the United Kingdom and led the Institute BBSRC core strategic programme in food security as well as various research programmes aimed at delivering cross-disciplinary application of novel computational and molecular biology technologies to the understanding of living systems.

She is passionate about exploring and preserving Biodiversity globally. She leads numerous multidisciplinary international research programs generating strategic partnerships, building human and infrastructure capacity, and translating scientific knowledge into policy and private sector engagement to deliver long-term impact.

She remains Professorial Fellow in Biodiversity in the School of Biological Sciences at the University of East Anglia. Her experience also includes roles as Assistant Director, Vertebrate Genome Biology at Broad Institute of Harvard, Senior Research Scientist and Service Centre Manager at Hubbard Centre for Genome Studies at University of New Hampshire, Durham, and Fogarty Fellow, National Institutes of Health.



### MICHELLE COOMBE

*BC Ministry of Agriculture*

Michelle is a veterinary epidemiologist with British Columbia's Ministry of Agriculture and Food. She is also a PhD candidate at the University of British Columbia's Population and Public Health, where her research focuses on environmental sampling for the surveillance of avian influenza viruses in wild waterfowl. Michelle has a degree in Ecology from the University of Calgary and obtained her veterinary degree from the Western College of Veterinary Medicine at the University of Saskatchewan.



## ERIN FRASER

*Public Health Veterinarian, BC Centre for Disease Control*

Erin is a public health veterinarian at the BC Centre for Disease Control. She is a graduate of the University of Guelph and has over 20 years of experience as an epidemiologist, public health veterinarian, researcher, and executive director. She co-founded Veterinarians without Borders - Canada and was the organization's first executive director. Her current work at the BCCDC includes surveillance of zoonotic diseases, foodborne pathogens, antimicrobial resistance in companion animals, and climate change and tickborne diseases.



## VERONIQUE FRYER

*BC Centre for Disease Control*

*Bio TBA*



## XIAOCONG (MAGGIE) GUO

*Student, University of British Columbia*

Xiaocong (Maggie) Guo is a second-year PhD student at the School of Population and Public Health at the University of British Columbia. Her PhD dissertation focuses on the impact of extreme heat on health outcomes in the context of climate change. She completed her MSc in Occupational and Environmental Hygiene at UBC, during which she dedicated herself to the research on rat infestations in urban sewers, to inform evidence-based targeted approaches for rat management.



## TIM KILLEY

*BC Trappers*

Tim is the current president of the British Columbia Trappers Association. He has held positions on the BCTA Board of directors for several years and also served on the board for the Fur Institute of Canada. When not working his day job in the construction field, he enjoys retreating to his trapline in the Nahatlatch Valley. He is a certified instructor for the BC Trappers Association, and has a passion for education pieces of the trapping business. He is often found working with youth at the annual trappers convention or supporting trapper education at public functions like the BCWF Becoming and outdoors women program.



## GRAHAM KNOX

*BC Ministry of Agriculture and Food*

Graham Knox is the Director of Emergency Management for the BC Ministry of Agriculture and Food. Graham has been involved in the field of emergency management for the past 3 decades in a variety of roles including First Aid, Ground and Urban Search and Rescue, Environmental Spill Response, Livestock and Poultry Disease Response, and Flood and Wildfire Response.



## DORIS LEUNG

### *Canadian Animal Health Surveillance System*

Dr. Doris Leung is a communications lead with the Canadian Animal Health Surveillance System (CAHSS). Her professional interests are in disease surveillance, veterinary epidemiology, and health communication. In addition to her work with CAHSS, she is a veterinary epidemiologist with the Ministry of Agriculture, council member of the College of Veterinarians of BC, and regional director of Community Veterinary Outreach in Vancouver.



## GIGI LIN

### *Canadian Poultry Consultants Ltd.*

Dr. Gigi Lin is a poultry veterinarian with Canadian Poultry Consultants Ltd. since she earned her D.V.M from the University of Saskatchewan in 2017. Gigi provides diagnostic, research, consultation, continuing education, and field services to all levels of the poultry industry in Western Canada. In addition to the commercial industry, Gigi is passionate about backyard poultry medicine. She established the small flock branch (Small Flock Veterinary Care) of the practice in 2018. When she is not working with chickens and turkeys, she volunteers at the Langley Animal Protection Society and provides wellness care for shelter animals.



## MORSHED MUHAMMAD

### *BC Centre for Disease Control*

Dr Morshed is a clinical microbiologist and the program head of zoonotic diseases, emerging pathogens and parasitology at the BCCDC Laboratory. He is also a clinical professor in the UBC Department of Pathology & Laboratory Medicine. He received his PhD from the Yamaguchi University School of Medicine (Japan) in 1994. He completed his specialty training at the Research Institute of Tuberculosis in Tokyo and at the College of Natural Resources, University of California (Berkeley). Dr. Morshed is recognized by the national and international research community for his expertise on spirochaetal diseases.



## HANNA OLTEAN

### *Washington State Department of Health*

Hanna Oltean is a senior epidemiologist at the Washington State Department of Health. She currently leads the Zoonotic and Vector-borne Disease Program, in the Office of Communicable Disease Epidemiology. Her work focuses on zoonotic disease surveillance system design, implementation, and evaluation.



## NATALIE PRYSTAJECKY

### *BCCDC Public Health Laboratory*

Dr. Natalie Prystajeky works as a microbiologist at the BCCDC Public Health Laboratory (PHL), where she oversees two laboratories: Environmental Microbiology and the Molecular and Microbial Genomics laboratory. Dr. Prystajeky is also a Clinical Associate Professor in Pathology and Laboratory Medicine at the University of British Columbia. In her clinical roles and research endeavours, she uses emerging technologies such as genomics to improve routine surveillance and outbreak investigations, including for SARS-CoV-2. Over the course of the COVID-19 pandemic, she has provided leadership at the BCCDC PHL to implement wastewater surveillance for SARS-CoV-2 routinely.



## SHANNON RUSSELL

*BCCDC Public Health Laboratory*

Shannon completed her PhD in the Department of Microbiology and Immunology at the University of British Columbia in 2014. In 2015, Shannon moved to South Africa to do global health-related postdoctoral research on tuberculosis at the Wellcome Trust-funded Africa Health Research Institute in Durban. Shannon joined the BCCDC Public Health Lab (PHL) as a Research Associate in 2018 and became involved in One Health enteric pathogen surveillance. In 2021, she took on a Senior Scientist role at the BCCDC PHL, where her work focuses on the research and implementation of translational genomics of emerging pathogens, antimicrobial-resistant organisms and other hospital-acquired infections.



## INNA SEKIROV

*BCCDC Public Health Laboratory*

Inna Sekirov is a Medical Microbiologist at the BCCDC Public Health Laboratory. Her regular field of work is Mycobacteriology/TB, but she also has a keen interest in zoonotic pathogens, in particular arboviruses – and at least the mosquitoes reciprocate by showing a keen interest in her every time she ventures outdoors!



## TALIA STRANG

*Canadian Animal Health Surveillance System*

Talia Strang, MPH, is a public health professional with the Canadian Animal Health Surveillance System, working on One Health engagement, research, and knowledge translation. Talia also works with the BC Centre for Disease Control on projects related to SARS-CoV-2 in animals, and the University of Saskatchewan Companion Animal Surveillance Initiative. Her professional interests include One Health, zoonoses, and health equity.



## JOSH WADDINGTON

*Greenbelt Veterinary Services*

Josh is and has been a farm/food animal veterinarian for his 32 years as a veterinary practitioner, the last 30 in Chilliwack. His involvement with dairy and swine producers and production facilities has been the focus and passion of his career, with an emphasis on implementing and improving animal welfare and food safety standards. His connection with farmers and farm families runs deep, and the last few years of increasing environmental extremes has presented new and unexpected challenges in understanding the role of the veterinary profession in facing and adapting to these changes.

Josh is currently the past president on the Council of the College of Veterinarians of BC, where he active in helping to adapt the veterinary profession to meet the challenges of a rapidly evolving profession.

He lives on a small acreage in Chilliwack with his wife and a variety of critters, including numerous feral grandchildren.