MARCH 2022 ISSUE 1

NEWSLETTER

OMNI-RÉUNIS Newsletter





One Health Modelling Network for Emerging Infections

RÉUNIS

Réseau une seule santé sur la modélisation des infections



LAND ACKNOWLEDGEMENT

York University recognizes that many Indigenous Nations have longstanding relationships with the territories upon which York University campuses are located that precede the establishment of York University. York University acknowledges its presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, and the Huron-Wendat. It is now home to many First Nation, Inuit and Métis communities. We acknowledge the current treaty holders, the Mississaugas of the Credit First Nation. This territory is subject of the Dish with One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.

Introducing the **OMNI-RÉUNIS Newsletter!**







Dr. Hélène Carabin

Dr. Mark Lewis

A few words from the Co-Directors of OMNI-RÉUNIS

Welcome to the first newsletter issue of the One Health Modelling Network for Emerging Infections (OMNI). We are excited to launch this newsletter which will keep you informed on a bi-monthly basis about key network updates, events, trainings, publications, and relevant resources on emerging infectious diseases, modelling, One Health and more.

March: Celebrating Women in STEM



nni-reunis@yorku.ca

We celebrate the social, economic, and political achievements of all women around the world. We are equally proud to celebrate the vital contributions of all the women in our network advancing research in infectious disease!

Advancing Women in STEM in the Government of Canada

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OUR WEBSITE IS LIVE!

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LEARN MORE ABOUT OUR OH NETWORK

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Meet our new Scientific Advisory Committee Members



Dr. Zhilan Feng, Purdue University (USA)



Dr. Justin Remais
University of
California
(USA)



Dr. Karine Chalvet Monfray VetAgro Sup (Lyon, France)



Dr. John Edmunds
University of
London
(United Kingdom)



Dr. Lancer StephensUniversity of
Oklahoma (USA)



Dr. Matt Keeling
University of
Warwick
(United Kingdom)

The network welcomes six esteemed experts who have joined the newly formed OMNI-RÉUNIS Scientific Committee to serve a 12-month term as of April 2022. They will provide high-level guidance to OMNI-RÉUNIS governing bodies (Co-Directors, Executive Committee, and Board of Directors) on project themes and research outcomes and engage with the network. Their expertise ranges from modelling zoonotic agents, to epidemiology, to evolution and ecology modelling, to models to address public health and more, as well as equity, diversity, inclusion, and decolonization. To learn about each member, visit the OMNI-RÉUNIS Scientific Advisory Committee page on our website.

Launch of the Distinguished Lecture Series

Lecture #1: "Reflections on Modelling for Infectious Diseases in the Framework of a One Health Approach"



On March 15, we launched the first of many lectures as part of the OMNI-RÉUNIS

Distinguished Lecture Series on Modelling of Infectious Diseases. The event which took place virtually over Zoom was well attended with participants tuning in from universities and institutions across the globe – from Canada, United States, France, China, and more. The link to full lecture is available here and on our website! Dr. Chalvet-Monfray, Veterinarian and Full Professor of Statistics and Epidemiology at VetAgro Sup in Lyon, France, was invited to present her Reflections on Modelling for Infectious Diseases in the Framework of a One Health Approach.

The bilingual event was moderated by OMNI-RÉUNIS Co-Director Hélène Carabin, Full Professor, Faculty of Veterinary Medicine and School of Public Health, Université of Montréal. Two special guests were in attendance who gave compelling opening addresses to launch the series – Dr Alejandro Adem, President of Natural Sciences and Engineering Research Council (NSERC), and York's Dr Amir Asif, Vice President of Research & Innovation. Visit York News for the full article on the event.

Abstract & Bio | Webinar link Speaker's research | YorkU News Article

Selected Publications by & in Collaboration with OMNI members

ROYAL SOCIETY OPEN SCIENCE

School and community reopening during the COVID-19 pandemic: a mathematical modelling study

Yuan Pei, Aruffo Elena, Gatov Evgenia, Tan Yi, Li Qi, Ogden Nick, Collier Sarah, **Nasri Bouchra**, **Moyles Iain** and **Zhu Huaiping** (2022).R. Soc. open sci.



Agent-based epidemiological modeling of COVID-19 in localized environments

P. Ciunkiewicz, W. Brooke, M. Rogers, S. Yanushkevich.Computers in Biology and Medicine (2022).



Epidemic Spreading in Trajectory Networks

Tilemachos Pechlivanoglou, Jing Li, Jialin Sun, Farzaneh Heidari, **Manos Papagelis** Big Data Research, 27 (2022), 100275



When host populations move north, but disease moves south: counter-intuitive impacts of climate warming on disease spread

E. Joe Moran, Maria Martignoni, Nicolas Lecomte. Patrick Leighton and Amy Hurford (2022). For the full list, please visit OMNI-RÉUNIS Publications page.

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<u>Wellcome Trust</u>: Covid-19 - understanding the biological significance of SARS-CoV-2 variants

This call is for research into the biological significance of SARS-CoV-2 variants, focused on laboratory investigations in immunology, virology or structural biology.

Deadline: Monday, April 28 2022, 17:00 (BST): https://bit.ly/3LrIjV5

Upcoming Events - EIDM Consortium

OMNI-RÉUNIS Distinguished Lecture Series

Register: TBA

June: TBA

Speaker: Dr. Matt Keeling, University of Warwick

One Society Network (OSN) Seminars

Register

- · Apr 7, 2022: Interprovincial Response
- Apr 21, 2022: Education sector
- May 5, 2022: Agriculture sector
- May 19, 2022: Marginalized Populations
- Jun 2, 2022: Mathematical Modelling & Epidemiology

Mathematics for Public Health (MfPh) Colloquium

Register

- Apr 5, 2022: TBA
- Apr 19, 2022: Modeling the transmission of Wolbachia in mosquitoes for controlling mosquito-borne diseases

MfPH Next Generation Seminar Series

Register

- Apr 13, 2022:TBA
- Apr 20, 2022: Coupling of transmission models and deep learning techniques

Learn More about our One Health Network

Background

The One Health Modelling Network for Emerging Infections (OMNI)/Réseau une seule santé sur la modélisation des infections (RÉUNIS), is a newly established network of experts born out of the COVID-19 pandemic. We aim to build a modelling network that will enhance Canada's early detection, warning, and response to emerging infectious diseases by systematically incorporating a multi-species, multi-system One Health approach into our thinking, modelling research and training capacity while also recognizing the unique impact of emerging infectious diseases has on Indigenous peoples and their communities. Awarded \$2.5M in federal funding by the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Public Health Agency of Canada (PHAC), OMNI-RÉUNIS is part of the broader Emerging Infectious Diseases Modelling Initiative with four other networks.

HQP Training & Research Projects

Visit our OMNI-RÉUNIS website to learn more about our upcoming <u>HQP Training Activities</u> and our <u>23 research projects</u> which are built around five research themes: Data Management, Risk for Emergence and Spillovers, Early Warning Systems of Emerging Infectious Diseases, Intervention and Control, and Indigenous Peoples Health and Wellbeing.











