



an Open Access Journal by MDPI

Data Science Challenges and Opportunities in One Health

Guest Editors:

Dr. Lauren Charles

Pacific Northwest National
Laboratory, Richland, WA 99352,
USA

Dr. Samantha Erwin

Pacific Northwest National
Laboratory, Richland, WA 99354,
USA

Dr. Eva Brayfindley

Pacific Northwest National
Laboratory, Richland, WA 99354,
USA

Deadline for manuscript
submissions:

closed (15 September 2023)

Message from the Guest Editors

Dear Colleagues,

One Health is an integrated, transdisciplinary approach based on the foundational concept that the health of humans, animals, plants, and the environment are all intercorrelated and impacted by the multiscale global ecosystem. The heterogeneity of data, data collection methods, reporting methods, and databases available all provide significant hurdles for making available datasets ‘data science ready.’ The nuanced interactions between and varying responses to threats by the environment, plants, humans, and animals—and the different scales of interactions and effects—present significant obstacles when developing data science approaches and thus require innovative integration techniques. At the same time, data science has been transformative across research and industry. It provides the ability to gain situational awareness and predictive insight into short- and long-term integrated health outcomes. In this Special Issue, we invite authors to submit research highlighting specific challenges and unique opportunities arising from the use of a One Health, multi-modal data science approach across a variety of applications.



mdpi.com/si/152244

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Hinh Ly

Department of Veterinary &
Biomedical Sciences, University
of Minnesota, Twin Cities, MN,
USA

Message from the Editor-in-Chief

The worldwide impact of infectious disease is incalculable. The consequences for human health in terms of morbidity and mortality are obvious and vast but, when infections of animals and plants are also taken into account, it is hard to imagine any other disease that has such a significant impact on our lives—on healthcare systems, on agriculture and on world economics. *Pathogens* is proud to continue to serve the international community by publishing high quality studies that further our understanding of infection and have meaningful consequences for disease intervention.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, PubAg, CaPlus / SciFinder, AGRIS, and other databases.

Journal Rank: JCR - Q2 (*Microbiology*) / CiteScore - Q2 (*General Immunology and Microbiology*)

Contact Us

Pathogens Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/pathogens
pathogens@mdpi.com
[X@Pathogens_MDPI](https://twitter.com/Pathogens_MDPI)