

Special Issue

Infection and Immunity in Fish Models: Insights into Host Defense and Inflammation

Message from the Guest Editor

This Special Issue creates a consolidated knowledge base on the pathogenesis of infectious diseases in fish and their immune defenses, advancing the field from descriptive studies to mechanistic insights into host-pathogen interactions.

Key Focus Areas:

- Pathogen Mechanisms: Virulence factors, including secretion systems
- Immune Responses: Fish immune markers, mitochondrial molecules, and non-coding RNAs
- Translational Applications: Probiotics, alternative feeds, genetic markers (SNP and DEG analysis), vaccines, and immunoadjuvants
- Comprehensive Coverage: Integrating molecular to organismal-level research on fish-pathogen interactions

Topics Include:

- Bacterial, viral, and fungal pathogens in farmed and wild fish
- Virulence factors and immune evasion mechanisms (e.g., secretion systems in *Aeromonas*)
- Immune response patterns: immune markers, miRNAs, CRISPR/Cas9 applications
- Enhancing immunity: nutritional strategies, environmental modulation, genetic selection
- Experimental models for fish diseases
- Immunoadjuvants, pharmaceuticals, and vaccine development

Call for Papers:

We welcome the submission of original research and review articles to advance the field of infection and immunity in fish models.

Guest Editor

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About the Journal

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.

Editor-in-Chief

Prof. Dr. Hinh Ly

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