

Special Issue

Molecular Advances in Human and Animal Disorder: Zebrafish as Model

Message from the Guest Editor

Zebrafish (*Danio rerio*) has become a pivotal model organism for studying molecular mechanisms underlying human and animal diseases. These models have provided profound insights into the pathophysiology of diseases such as cancer, cardiovascular diseases, and neurodegenerative disorders. Researchers can study the effects of genetic mutations, drug responses, and cellular interactions in a living organism, offering a dynamic view of disease mechanisms. Additionally, zebrafish are highly amenable to high-throughput screening, making them ideal for large-scale drug discovery and toxicity testing. Recent breakthroughs include identifying genetic pathways involved in heart regeneration, understanding the molecular basis of muscle degeneration in muscular dystrophies, and elucidating the role of specific genes in brain development and function. These findings enhance our understanding of fundamental biological processes and pave the way for novel therapeutic strategies to treat various human and animal diseases.

Guest Editor

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