Special Issue

Advances in Cytogenetics of Fish

Message from the Guest Editors

With over 35,000 species occupying diverse ecological niches and exhibiting high karyotype variability, fishes represent the most diverse group of vertebrates and serve as excellent models for cytogenetic research. Early fish cytogenetics relied on traditional methods like karyotyping and banding techniques (e.g., C-banding and Ag-NOR). With reduced costs, the field has expanded significantly. Fluorescence in situ hybridization (FISH) and derivative methods such as chromosome painting (WCP) and comparative genomic hybridization (CGH) are now common, enabling mapping of several repetitive DNA elements like ribosomal DNA, satellites, microsatellites, and transposable elements. These tools have advanced knowledge on chromosomal rearrangements, speciation, sex chromosome evolution, karyotype composition (including A and B chromosomes), and overall genome organization. The studies in this Special Issue span evolutionary biology, aquaculture, conservation, and biodiversity characterization, highlighting the continued importance of integrating classical and modern methods in fish cytogenetics.

Guest Editors

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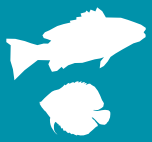

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About the Journal

Message from the Editor-in-Chief

Fishes is a multidisciplinary open access journal focusing on reports of original research and critical reviews and synthesis from the broad area of fishes and aquatic animals. The ultimate objective of *Fishes* is to facilitate the discovery of connections between research areas, advancing science and filling knowledge gaps, and providing solutions for all present and future issues encountered in the sector of fisheries and aquaculture. As Editor-in-Chief, I encourage you to consider *Fishes* for your scientific papers and would be pleased to welcome you as one of our authors.

Editor-in-Chief

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