

## Special Issue

# Insecticide Resistance in Disease Vectors: Mechanisms, Surveillance, and Control Perspectives

### Message from the Guest Editor

Insecticide resistance threatens the effectiveness of vector control programs, especially where vector-borne diseases remain endemic and chemical control is still key to public health. While alternative tools—such as sterile insect releases, symbionts, and entomopathogens—are emerging, synthetic insecticides remain essential due to their rapid impact and cost-effectiveness in tropical and subtropical regions. Resistance is a complex and evolving issue at the intersection of ecology, genetics, evolution, physiology, and biochemistry. Despite decades of research, major gaps remain, particularly on how climate change and new control tools affect resistant populations. This Special Issue, *Insecticide Resistance in Disease Vectors: Mechanisms, Surveillance, and Control Perspectives*, invites global contributions—original research, reviews, and opinions—on: molecular and physiological mechanisms; evolutionary and genetic dynamics; resistance surveillance; environmental influences; interactions with novel tools; risk modeling; and operational management strategies.

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### Guest Editor

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### Deadline for manuscript submissions

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## Insects

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## About the Journal

### Message from the Editor-in-Chief

Arthropods are a diverse and abundant group of animals that are important to a variety of research dictates. For example, hexapods act as bio-indicators of ecosystem function and pest status and serve as model systems for questions concerning physiology, embryology, genetics, and social interaction. The editorial board and staff at *Insects* is committed to providing contributors an open access forum to showcase objective and innovative research as well as succinct review articles. Our journal is dedicated to providing timely and thorough review of qualified submissions and we welcome you to submit a contribution.

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### Editor-in-Chief

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