Special Issue

Insecticide Resistance: The Genetic Basis and Underlying Mechanisms in Pests

Message from the Guest Editors

Insecticide resistance poses a formidable challenge to pest management in agriculture and public health. The genetic basis and underlying mechanisms of insecticide resistance have been the focus of extensive research. This phenomenon is primarily attributed to genetic mutations that confer resistance to insecticides, leading to reduced efficacy of pest control measures. Mechanisms such as enhanced detoxification, target site insensitivity, and behavioral adaptations contribute to the development of resistance. Understanding the genetic factors and molecular mechanisms involved in insecticide resistance is crucial for developing sustainable pest management strategies. This Special Issue seeks to provide a comprehensive overview of the genetic basis and underlying mechanisms of insecticide resistance in pests. It aims to encompass a wide range of topics, including but not limited to, the identification of resistance-conferring genetic mutations, elucidation of detoxification pathways, exploration of target site insensitivity, and understanding behavioral adaptations in resistant pest populations.

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