Special Issue

Adaption of Herbivorous Insects to Plant Chemical Defense

Message from the Guest Editor

Insect herbivores, confronted with a variety of noxious chemicals in their food, have evolved various counter-defense mechanisms to cope with their harmful effects. The evolution of novel adaptation mechanisms to plant defensive compounds in insects has enabled them to utilize new host plants and retain their ecological position. Therefore, studies on the underlying mechanisms of insects' adaptations to plant defense are crucial to understand how insect herbivores have diversified on plants. These mechanisms include simply avoiding continuous contact, excreting unwanted compounds rapidly, modifying them enzymatically into less or nontoxic molecules, sequestering them for further utilization, or developing target-site insensitivity. In this Special Issue, we will collect basic and applied research papers, as well as minireviews, focusing on the ways that herbivorous insects have adapted to plant defensive compounds, seeking submissions from experts working on topics related to molecular, biochemical, and physiological mechanisms of insects' adaptations to plant chemical defenses.

Guest Editor

Dr. Seung-Joon Ahn

Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology, Mississippi State University, Starkville, MS 39762, USA

Deadline for manuscript submissions

closed (20 February 2023)

Insects

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 5.3
Indexed in PubMed

mdpi.com/si/105597

Insects
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
insects@mdpi.com

mdpi.com/journal/insects

Insects

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 5.3
Indexed in PubMed

mdpi.com/journal/insects

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.

Editor-in-Chief

Prof. Dr. Brian T. Forschler
Department of Entomology, University of Georgia, 413 Biological Sciences Building, Athens, GA 30602-2603, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, GEOBASE, PubAg, and other databases.

Journal Rank:

JCR - Q1 (Entomology) / CiteScore - Q1 (Insect Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.9 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).