Special Issue

Biology and Molecular Mechanisms of Plant-Aphid Interactions

Message from the Guest Editor

Aphids are key pests of crop plants throughout the world because they pose serious threats to crop production. As phloem-feeding insects, aphids suck plant juices and secrete sticky “honeydew”, causing serious damage to the host plants. Fortunately, some plants often can withstand aphid feeding with no adverse effect. These plants can mount a successful defense using their natural genetics or alter the ways they interact with aphids; thus, host plant resistance has been used for effective aphid control in many crops. Interactions between plants and aphids happens in parallel or as coevolution, leading to the development of their new relationship, under which aphids must evolve innovative ways to feed and colonize on their hosts, whereas plants must develop novel compounds, express special gene(s) or modify the regulatory mechanisms to defend against aphids. The mechanisms of plant defense against aphids are complicated, highly dynamic, and wide-ranging and involve direct and indirect defenses. The Special Issue welcomes papers on various aspects of plant-aphid interactions, particularly on molecular mechanisms.

Guest Editor

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Deadline for manuscript submissions

closed (15 February 2025)

Insects

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 5.6
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mdpi.com/si/162623

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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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