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

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