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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Editor-in-Chief

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