



pathogens



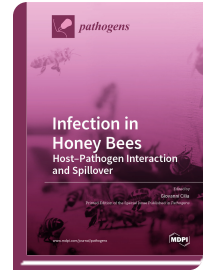
Special Issue Reprint

Infection in Honey Bees: Host—Pathogen Interaction and Spillover

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Honey bee pathogens are spread worldwide and are strongly related to the decline of honey bee populations, which has severe implications for beekeeping, honey production and ecology. Honey bee pathogens are continuously studied by researchers with the aim to better understand the host–parasite relationship of these pathogens and the effects that they have on bee colonies. Honey bee pathogens include bacteria (i.e., *Melissococcus plutonius* and *Paenibacillus larvae*), microsporidia (i.e., *Nosema apis* and *Nosema ceranae*), fungi (i.e., *Ascosphaera apis*), protozoa (i.e., *Lotmaria passim*, *Crithidia bombi* and *Crithidia mellificae*) and viruses (i.e., ABPV, CBPV, IAPV, KBV, DWV, BQCV and SBV). All of these pathogens are able to infect other bee species; infections would have important implications for their life cycles (e.g., *Osmia* sp. and *Bombus* sp.) or cause unknown epidemiological effects for other hymenopterans. In addition, old and new invasive pests (such as *Varroa destructor*, *Aethina tumida*, *Vespa velutina*, etc.) necessitate more studies to define their role as possible vectors or possible sources of infection for honey bees. For these reasons, knowledge on honey bee pathogens has become a matter of public interest and is connected with the critical role of honey bee health. The aim of this Special Issue is to explore honey bee pathogens, considering any aspect in relation to host–pathogen interaction and highlighting the possible interaction and spillover with other bee species and invasive pests, through a series of research articles that focus on different aspects of pathologies.



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