

## Detection of viral replication in bees

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DOI: 10.5073/jka.2012.437.051

### Abstract

Recently foraging bees were discovered with pollen loads infected with honey bee viruses uncorrelated with the infection status of the bees itself. This observation has wide implications on the broadly used PCR viral detection techniques. False positives results could be obtained if viral remnants from infected pollen in the bee gut are detected. Integration of the real time PCR technology could help to eliminate these false positive results, however techniques detecting viral replication ultimately prove presence of active viruses. We demonstrated that current minus strand detection methodology often is not selective enough to differentiate between positive RNA strands (inactive virus) and minus RNA strands (replication virus) and provide possible solutions