**The virome associated to *Thrips tabaci* and *Frankliniella occidentalis*: source of new virus vectors for a VIGS strategy to limit thrips populations and tospovirus transmission.**

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Thrips are important pests in the Thysanoptera order that can harm plants directly, or indirectly through transmission of plant viruses of the family *Tospoviridae*. Chemical control of thrips is challenging, and heavy concerns about the use of insecticides in the environment encourage new approaches to contain thrips and their transmission of tospoviruses. Here, we report of a specific effort to derive a new virus induced gene silencing (VIGS) approach envisioned inside the H2020 funded project VIROPLANT. We characterized the virome associated to a number of open field-collected and laboratory-reared populations of both *Frankliniella occidentalis* (WFT) and *Thrips tabaci* (OT) in Italy, Jordan and USA where they transmit mostly TSWV and INSV (the former) and IYSV (the latter). Initial attempts at using VIGS with plant vectors (PVX and TMV) targeting some specific genes (*ATPaseA*, *ATPaseE*, *Tub*, *CytC*) of the host insect through RNAi failed to reveal an effect on thrips vital parameters. A second attempt using a different plant virus vector to target TSWV replication in thrips is currently being explored. Finally, here we will describe a number of new insect viruses associated to thrips population samples and their possible use to derive an insect virus based VIGS vector. **(Maximum 350 words)**