

The project aims to develop innovative approaches for reducing the collapses of bee colonies caused by the negative effect of *Varroa destructor* and associated viruses in the context of ongoing climate change. The project outcomes will enable the effective targeting of mitigation interventions in the breeding season and the development of new treatments, thus helping apiarists to prevent the collapse of bee colonies. The project will focus on monitoring the fitness, biochemical, immune and behavioural changes of workers and drones naturally parasitised by mites, after experimental viral infection, and after anti-mite treatment, bringing knowledge about the molecular basis of the infection essential for the development of drugs and the breeding of resistant lines using technical insemination