**IMAS MASTER Academic Year 2022 - 2023**

**Proposal of M1 Internship**

**PROJECT TITLE AND SUMMARY: Study for oviposition pheromones in the almond wasp *Eurytoma amygdali***

One of the main factors limiting the extension of organic almond production is the impact of the pest Eurytoma amygdali (almond wasp), which can destroy 60 to 80% of the crop without treatment. Work carried out in the 1990s demonstrated the existence of kairomones emitted by the almond tree that attract the insect (Kouloussis, 1994) and the existence of oviposition marking pheromones (Kouloussis NA, 1991) emitted by the insect to prevent another female from laying eggs in an already infected almond. A candidate molecule was identified in 2022 and the objective of the internship will be to validate this oviposition pheromone based on the protocol of Kouloussis (1991) through laboratory behavioural tests.

 The emergence of E. amygdali adults takes place over a period of 3 weeks between April and May and is dependent on temperature. The observation of the 2023 emergence of E. amygdali adults will be a second objective of the internship.

**HOST UNIT:** INRAE GAFL, Domaine St Maurice, CS 60094, 84143 MONTFAVET Cedex

**MAIN ACTIVITIES:**

- Observe the emergence of adults in specific traps.

- Make pheromone extracts with water and ethanol solvent

 from female insects

 from newly contaminated almonds.

- Conduct oviposition behaviour studies on almonds with candidate pheromones.

**EXPECTED SKILLS:**

Plant biology, entomology, chemical ecology.

**INDEMNISATION:**

- about 600 € / month

**CONTACT:**

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Organization: INRAE GAFL

Location: Montfavet

Duration: 4 months

Dates : Mars- Juin 2023

Level : Master 1

Internship profile : Research