

Proposition for tutored project

Company: AntofénoI

Title: Development of study models to evaluate the biostimulation activity of plant extracts

Context:

AntofénoI, created in 2014 in Montpellier, is specialized in eco-extraction. The company developed an innovative eco-extraction process in order to produce, based on agricultural by-product, alternatives pesticides (biocontrol) more respectful of health and environment. The company is made of two sites (Montpellier and Plestan) and a third site will be created near to Avignon in 2025.

The first product of AntofénoI, named Antoferine®, is currently under registration as a phytopharmaceutic product (regulation CE N°1107/2009) and will arrive on the biocontrol market in 2026. Today, AntofénoI want to develop a new range of products which will enter the biostimulation market.

This is why this subject is related to the two thematic axes:

- Preservation, extraction, transformation and formulation of plant material
- Plant-based food & health

Objectif:

Based on bibliography and your experimental approach suggest several approaches to develop quickly models to evaluate the biostimulation effects of the extracts:

- you will firstly work *in vitro* on *Arabidopsis thaliana*
- you will have to define the controls of experiments, test different extracts produced by the companies, determine the concentration of extract to use, put in place the system of evaluation to interpret the results...etc.
- in a second time, other models could be developed on plant like baby apple tree, salad, tomato...etc.

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