



Cit-extracts

The citizens, actors of the research in Chemical Ecology

Project leader: Eric Gelhaye, UMR Interaction Arbre Micro-organismes (IAM) 1136

LabEx partners: Pascale Frey-Klett, Annick Brun-Jacob, Matthieu Godfroy, Juliette Anglade Tous Chercheurs Nancy/ Université de Lorraine-INRAE

Summary

Cit-extracts is an innovative research project led by the Joint Research Unit Interaction-Tree-Microorganisms of the University of Lorraine and INRAE, and the laboratory Tous Chercheurs of Nancy, granted by the Laboratory of Excellence ARBRE.

This project named Cit-extracts (The citizens, actors of the research in Chemical Ecology) focuses on the functions of plant protection. The interactions of plants and their microbiota play a central role in the functioning of ecosystems and their evolution. These interactions are notably governed by a chemical dialogue and involve the production of a large number of specialized metabolites, of diverse chemical nature. The diversity of these metabolites synthesized by plants is the result of a long evolution and particularly of co-evolutionary mechanisms. Indeed, organisms and in particular pathogenic microorganisms impose a very strong selection pressure on plants, forcing them to develop more and more diversified phytochemical defense systems.

The main objectives of this project are (i) to better understand the relationships between plant metabolisms and the associated detoxification systems of pathogenic organisms (ii) to mobilize citizen-researchers to contribute to the development and sharing of this knowledge (iii) to participate in the collection of experiences and in the training of experienced or future professionals in market gardening and arboriculture (iv) to create an inspiring botanical tour based on the biochemical mechanisms revealed through the project.

¹ <https://www.touschercheurs.fr/>

¹ <https://mycor.nancy.inra.fr/ARBRE/>