

# Support for a Lebanese PhD student on investigation of root exudation and interactions with beneficial microorganisms in wheat ancestors and elite cultivars towards sustainable agricultural practices

The main objective of Houssein's PhD project is to investigate and compare the ability of wild and modern wheat cultivars to exude compounds in the rhizosphere and through exudation to determine the ability of the different wheats to shape their microbiota. The hypothesis of a putative loss of capacity of wheat plants to interact efficiently with their underground environment in elite varieties after an active human selection driven under artificialized soil conditions (fertilizers and pesticides) is tested. Houssein has started to answer this important point but won't be able to get an overview for the full gradient of domestication without extension of his PhD. Another objective is to better understand the tight interaction and dialogue between the plant and the bacteria. Bacterial exudate analysis will allow us to identify which secreted molecules are perceived by plants and able to induce a local or systemic response. Without prolongation, Houssein will not be able to investigate this part of his project.

**Responsable :**

**Date de démarrage :** 01/07/2021

**Date de clôture :** 30/06/2022

**Montant :**

