



PhD position offer



## Deciphering nickel tolerance mechanisms in plants

A PhD position is available for a period of 3 years in the MetalStress team (<https://www.lpcv.fr/Pages/MetalStress/Presentation.aspx>) at the Cell & Plant Physiology Laboratory (LPCV, UMR1417 INRAE-UMR 5168 UGA-CNRS-CEA), 38000 Grenoble

**Project Leaders:** Jonathan Przybyla-Toscano, Stéphane Ravanel

**Project Description:** In trace amounts, nickel (Ni) is an essential nutrient for plant growth and development. When it is abundant in soils, due to the geological context or to anthropogenic activities, Ni becomes toxic as it accumulates in plants and strongly affects their growth and yield. Understanding the molecular mechanisms involved in Ni tolerance in plants is therefore a major issue for both the depollution and restoration of environments, but also for the development and maintenance of healthy and sustainable food systems. The aim of this PhD proposal is to identify new molecular actors involved in Ni homeostasis in plants. To this end, we will use a combination of physiological, biochemical and genetic approaches using both Ni hyperaccumulating plant species (i.e. *Noccaea caerulescens*) and non-accumulating plant species (i.e. *Arabidopsis thaliana*). This project is expected to provide original results on the mechanisms of Ni distribution and accumulation in plants. In the short-medium term, these results could be integrated in programs of guided selection of plant species adapted to the phytoremediation of Ni-polluted environments.

**Requirements:** Master's degree in biology or a related field; strong background in biochemistry, cell biology, molecular biology, plant biology (not mandatory). Good written and oral communication skills in English.

**Application Process:** Please send your application as one file to Jonathan Przybyla-Toscano ([jonathan.przybyla-toscano@cea.fr](mailto:jonathan.przybyla-toscano@cea.fr)) including (i) a letter summarizing your past research experience and your motivations to work on this project, (ii) a CV, (iii) the names and contact details of at least two referees, and (iv) copies of academic transcripts and degrees. The deadline for application is June 15, 2023. The successful candidate will start from October 2023.