

# Post-Doctorate Fellowship in Nanometallomics

Project title: **Nanometallomics applied to soybean cultivation**

Supervisor: Prof. Dr. Marco A. Z. Arruda, University of Campinas - Unicamp, Brazil

This Post-Doctoral project emphasizes the potentialities of the metallomics and nanoparticles applied to soybean culture, and the researcher will work closely with a group of analytical, organic, and inorganic chemists, and others work on biologists and agronomists. This analytical project is integrated within a broader multi-disciplinary consortium project, funded by FAPESP, entitled “Nanometallomics applied to soybean cultivation and the effects of nanoparticles related to a range of metals”.

Then, the main targets of this work can be summarized as seed planting; metals quantification in plants, soil, and soil solutions; metallobiomolecules extraction, quantification, and identification; evaluation of the dynamics of translocation and absorption of the constituent metals of NPs in different parts of the plant, such as root, stem, and leaf by ICP-MS, as well as the dynamics of NPs absorption and translocation throughout the plant; Evaluate possible differences in plant homeostasis, cultivated in the presence of NPs; To compare each culture with NPs with those obtained with control plants, as well as with plants grown in the presence of the ion that composes NP. Evaluation of possible metallobiomolecules through the LC-ICP-MS or LC-MS-ICP-MS coupling.

Candidates are sought who have a PhD in analytical chemistry, ideally with expertise in chemical speciation, and with the coupling of ICP-MS with HPLC. The expertise of organic mass spectrometry is also welcome. A background in developing transdisciplinary work, as well as a track record of publication in international journals, and scientific experiences abroad are desirable. Proficiency in oral and written English is essential.

The fellowship is for two years initially and is extendable for the third year. The PDRA will be based in Brazil at the University of Campinas – Unicamp – Institute of Chemistry. The monthly salary is the equivalent to *ca.* Brazilian Real R\$ 7.373,10 free of tax while in Brazil. Full details can be found at: <http://www.fapesp.br/en/5427>

Send your Curriculum until November, 30<sup>th</sup> for evaluation to Prof. Marco Aurélio Zezzi Arruda – Institute of Chemistry. e-mail: [zezzi@unicamp.br](mailto:zezzi@unicamp.br). Consideration and decision will be made by the group leaders of the “Temático” Project