



A 3-year PhD scholarship for a research project in Analytical Chemistry is available at LABERCA (Nantes, France) and Anses (Maisons-Alfort, France). The project will be starting in fall 2022.

Proposal title

Development and application of Suspect Screening (SS) and Non-targeted Screening (NTS) strategies based on multidimensional and very high resolution mass spectrometry in the context of chemical risk assessment in food (EMERGEXPO project).

Abstract

In a context where human exposure to chemical contaminants is of increasing concern, particularly through food as one of the main routes of exposure, recent non-targeted profiling technologies (suspect and non-targeted screening) give access to the production of a broader knowledge of our exposome, in particular the identification of emerging hazards. The project aims to develop innovative analytical strategies involving multidimensional and very high resolution mass spectrometry coupled with different types of chromatographic separations (LC-Q-Exactive/LC-Q-TOF/GC-Q-Exactive) allowing for broad spectrum chemical profiling. The PhD student's research work will thus consist of producing knowledge and data relating to the characterisation of the chemical exposure of individuals (Exposomics), via the characterisation of external (foodstuffs) and internal (breast milk) exposure markers. These markers will go beyond the strict framework of regulated substances, their degradation products and metabolites, by tackling the problem of unknown and emerging compounds.

Qualifications

- Strong chemical background with a M.Sc. in Chemistry, Chemical Engineering, Analytical Chemistry or equivalent
- Hands on experience with analytical method development and advanced data analysis within chromatography and mass spectrometry (multidimensional and/or high resolution MS) workflows
- Experience or knowledge about one or more of the following areas will be an advantage:
 - Chemical contaminants
 - Exposomics
 - Multivariate data analysis
 - Programming
- Good laboratory skills
- Good collaboration and communication skills (written and spoken English)
- Structured and analytical working approach

Coordination / Supervision

Gaud DERVILLY, PhD, HDR (gaud.dervilly@oniris-nantes.fr)

Julien PARINET, PhD, HDR (julien.parinet@anses.fr)

Salary and appointment terms

The salary and appointment terms are consistent with the current rules for PhD degree students. The period of employment is 3 years.

Application

Please submit your application no later than **30th May 2022**. Applications must be submitted as **one pdf file** containing all materials to be given consideration. The file must include:

- A letter motivating the application (cover letter)
- Curriculum vitae
- Details of Master's results (and MSc diploma if available)

You can read more about LABERCA on www.laberca.org

You can read more about Anses on www.anses.fr