



PhD Position in chemistry / biochemistry/ physical chemistry for MSCA-ITN “HiStabJuice”

Job Description

The Marie Skłodowska Curie Innovative Training Network “HiStabJuice” is inviting applications for a 36 month full time fixed term position as an Early Stage Researcher. This research project is a collaboration between 17 organisations, including 7 academic and 10 non-academic, from 7 countries (AT, DE, FR, IT, NL, PT, SL) across Europe. The research aims to analyse and compare in a normalised fashion the impacts of various available processing technologies on the stability of colour and nutrients in various fruit juices.

The successful applicant will be employed by Institut National de Recherche pour l’Agriculture, l’Alimentation et l’Environnement (INRAE) in France, with planned intersectoral and interdisciplinary stays with collaboration partners totalling a maximum of nine months.

The research and PhD thesis will be on “*Key parameters for stabilization of strawberry product colours in order to understand the colour stability during juice processing, avoid additives and favour natural products*”.

The ESR will:

- quantify and characterize anthocyanins and polyphenols as a function of raw material characteristics and preservation treatments, i.e. conventional treatment, ohmic heating, high pressure processing, pulsed electric field
- quantify and characterize polysaccharide structure and composition as a function of raw material characteristics and preservation treatments
- evaluate color stability as a function of raw material characteristic and preservation treatments
- extract and purify anthocyanins, polyphenols and polysaccharides from strawberry samples
- study the key parameters driving the interactions between anthocyanins and polysaccharides with respect to color stability in model solutions using Isothermal Titration Calorimetry, Infra-Red spectrometry, phase diagrams (based on UV-visible spectroscopy) and HPSEC-MALLS.
- study competitive binding to pectin between anthocyanins and polyphenol

Beyond the specific expertise gained during the ESR’s completion of their research work, this position offers an opportunity to gain international research experience, as well as an array of soft skills relevant to project management, research management and career development.

Applicant Description

Candidates must:

- hold a University Master’s Degree in any discipline that makes them eligible for a PhD in chemistry / biochemistry / physical chemistry
- not have resided or carried out their main activity (work, study, etc) in France for more than 12 months in the three years immediately prior to April 2021, unless as part of a procedure for obtaining refugee status under the Geneva Convention, but may be of any nationality
- be available to start on 01.04.2021
- have excellent English language skills
- be able to travel internationally on a regular basis, for example to attend regular project meetings or to take part in conferences
- be able to work in an international environment, be highly motivated and reliable, be able to work to strict deadlines

Preference will be given to candidates with experience in the chemistry of polysaccharides and natural phenols.

Research Fields

Chemistry, biochemistry, physical chemistry

Career Stage

According to EU HORIZON 2020 guidelines, Early Stage Researchers must have fewer than four years research experience at the date of employment (01.04.2021), and must not have been awarded a doctoral degree.

Benefits

Annual Salary: within the range of EU Marie Curie European Training Network programs Monthly Mobility Supplement and Monthly Family Allowance (if eligible): according to the rules of EU Marie Curie European Training Network programs. Specifics available [here](#).

How to Apply

Please send a letter of motivation and your full CV, along with any supporting documents, as a single PDF to Prof. Carine le Bourvellec (coordination.histabjuice@tuwien.ac.at) before 31st January 2021. Please include "ESR11 Application" in the reference line. CVs should follow the Europass template available for free download at: https://www.eea.europa.eu/about-us/jobs/application-documents/europass_cv_template.doc.