



## PhD Position in Natural Sciences 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 Universität Hohenheim in Stuttgart, Germany, with planned intersectoral and interdisciplinary stays with collaboration partners totalling a maximum of six months.

The research and PhD thesis will be on “**Inactivation mechanisms of spoilage and pathogenic bacteria in fruit juices by conventional and non-thermal treatments**”.

The ESR will:

- investigate the impact of thermal and non-thermal treatments on the survival of bacteria
- determine inactivation kinetics of selected spoilage bacteria
- evaluate and select suitable surrogate microorganisms for enterohemorrhagic *Escherichia coli* (EHEC) and *Salmonella* spp.
- determine inactivation kinetics of selected pathogens (EHEC, *Salmonella*) and surrogates *in vitro*
- investigate the impact of different thermal and non-thermal treatments on the global gene expression of selected strains (RNASeq)
- determine inactivation kinetics of selected surrogates under industrial conditions (cooperation with the industry)
- evaluation of the effectiveness of non-conventional preservation methods on aroma compounds in comparison to conventional heat treatment
- determine the effect of non-conventional preservation methods on organoleptic parameters in comparison to conventional heat treatment

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 Natural Sciences (Dr. rer. nat.)
- not have resided or carried out their main activity (work, study, etc.) in Germany for more than 12 months in the three years immediately prior to 01.02.2021, 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 01.02.2021
- 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 in depth theoretical and hands-on experience in microbiology, especially food-borne pathogens, and molecular biology.

## Research Fields

Microbiology, molecular biology, analytical chemistry, sensory analysis.

## Career Stage

According to EU HORIZON 2020 guidelines, Early Stage Researchers must have fewer than four years' research experience at the date of employment (1<sup>st</sup> February 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.

## How to Apply

Please send a letter of motivation and your full CV to Dr. Agnes Weiss (coordination.histabjuice@tuwien.ac.at) before **30<sup>th</sup> November 2020**. Please include "**ESR9 Application**" in the reference line. CVs should follow the Europass template available for free download at: [https://www.eea.europa.eu/ab\\_out-us/jobs/application-documents/europass\\_cv\\_template.doc](https://www.eea.europa.eu/ab_out-us/jobs/application-documents/europass_cv_template.doc).