

Recruitment of an early stage researcher – 12 months

INRAE Research Unit QuaPA – *Quality of Animal Products*



The QuaPA unit is hiring an early stage researcher (holding a Master's Degree) for a duration of 12 months and starting from September 2021. The unit is located in centre France, in the metropolitan area of the city of Clermont-Ferrand.

Work context

The researcher will work on the unit project focusing on the **valorisation of animal by-products** and in particular on the recovery of high biological and technical value compounds from the bovine bone.

These molecules are demanded and can be applied in numerous fields such as materials and biomaterials, packaging, textiles, health-care and cosmetics, functional nutrition, electrical energy, electronics, and land fertilisation. This valorisation aims to contribute to the national and international circular bioeconomy.

Missions

The scientific mission of the researcher will be the scaling-up of the extraction process of valuable molecules from the bovine bone, developed at a laboratory scale at the QuaPA unit. The objective is to move up from TRL 4 (Technology Readiness Level 4 - validation in laboratory) to TRL 5 (validation in simulated or realspace environment). Fluid dynamics, thermodynamics and kinetics study will be carried out on a pilot plant present in the hosting laboratory, and in order to establish the best operational conditions for the maximum yield of recovery and able to preserve the functionality of the target compounds. The mission of the researcher will be devoted at 70 % to the experimental activity and at 30 % on data elaboration and reporting.

Background and skills

A background in process or bioprocess or chemical engineering, with a focus on the agro-food domain. Capability of interpretation of fluid dynamics, thermodynamics and kinetics data and to identify the mechanisms underlying the mass and energy transfer phenomena. Good knowledge of chemistry and agro-food chemistry. A background on UV/Vis and Infra-Red spectroscopy for the characterisation of materials will be appreciated. Knowledge of English is mandatory.

A strong motivation for the experimental and fundamental research is requested as well as skills for the hand-on activities of the field. Capability to work objectively and cooperatively with colleagues and in a work team. Applicants from all nationalities are welcome.

Educational level

EQF (European Qualification Framework) Level 7 : Master's Degree

Remuneration

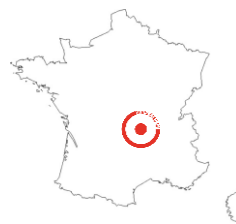
Gross monthly salary ca. 2030 €

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