

Development and optimization of green extraction methodologies for the production of bioactive fractions from agro-industrial biomass.

How we are ?

Celabor is a private research centre headquartered in Wallonia, Belgium. The expertise of our Biomass Valorisation Platform covers mainly the development extraction processes using environmental friendly approaches.

What will you do ?

The main objectives of the internship are :

- 1) To realise an update **literature review** on secondary metabolites from several agro-industrial biomasses (e.g : onion skin, olive leaves, vine prunings) and halophytes.
- 2) To develop eco-friendly processes to recover **polyphenols and other secondary metabolites** from the above-mentioned biomasses.
- 3) To study the **antioxidant properties** of the extracts produced using several assay systems.
- 4) To quantify the targeted molecules of these extracts using **HPTLC** and **UPLC-MS**.
- 5) To isolate the most interesting compounds using **Centrifugal Partition Chromatography**.

What will you learn ?

By the end of his internship, the candidate is expected to master to a certain degree :

- (i) Eco-friendly extraction at lab- and pilot-scale (focus on supercritical CO₂ extraction and subcritical water extraction)
- (ii) Evaluation of biological properties of plants extracts (antioxidant)
- (iii) Qualitative and quantitative characterisation of bioactive compounds in complex mixtures (e.g : HPTLC, HPLC-DAD, UPLC-MS)
- (iv) Isolation and characterisation of natural products (CPC, Preparative HPLC)

How to apply ?

Are you interested in this subject ? Please do not hesitate to send your CV and a letter of motivation to Dr Job Tchoumtchoua (job.tchoumtchoua@celabor.be)