

Permanent scientific position (full-time) in the field of "Intelligent Monitoring of Metabolites from Plant Resources"

Start date: 01/10/2022

Vacancy reference: GxABT-211215-02

[Job description](#)

A position of first assistant, in the field of **Intelligent Monitoring of Metabolites from Plant Resources**, attached to the **Gembloux Agro-Bio Tech** Faculty (single department).

Green chemistry is a sector of the chemical sciences, with social, economic and industrial components, aiming to produce new eco-efficient solutions for humankind and society, as partial or total alternatives to conventional fossil resources. Green chemistry is therefore a progressive paradigm shift in the practice of chemical sciences, with a desire to position the environment, safety and human health as pillars for reflection and action. Green chemistry addresses the drivers of development, whether these be in the materials, health or energy sectors, as highlighted in the United Nations' Agenda 2030 goals. It is also a theme that has been identified as a priority in the European Commission's agenda (H2020 and BBI), as well as in the Walloon Government's recovery plan.

[Teaching activities](#)

Teaching activities include the coordination and supervision of practical work sessions in chemistry (Master's level bioengineering or towards the end of the Bachelor's bioengineering programme in the *Chemistry Bio-industries* stream), in a balanced way for both the *CABS* and *SMARTECH* Faculty areas. Teaching will particularly relate to providing support to the practical teaching of the following courses: CHIM0722 (*extraction, purification, characterisation of biosourced molecules*), CHIM9254-1 and CHIM9254-2 (*Practice of natural products chemistry*), CHIM9269 (*Catalysis*) and MICA0008 (*Flavour analysis*). The successful candidate will also be involved in the supervision of the European Master in Biological and Chemical Engineering for a Sustainable Bioeconomy (*BIOCEB*) and the international university European Hub for Essential Oils (EOHUB) certificate. On a more occasional basis, the candidate may back-up the teaching team for Bachelor's chemistry courses (e.g.: practical part of the CHIM9255 course).

[Research Activities](#)

Research activities focus on green chemistry and more particularly the exploitation of primary metabolites by innovative processes for the production of energy, biofuels, energy carriers, new materials, and molecules. This platform is part of ULIEGE's "locomotive themes" in connection with the Strategic Innovation Areas as validated by the Walloon Government. In addition to primary plant metabolites, numerous uses of which are mentioned above, plants are also an under-exploited source of secondary metabolites, the structural diversity of which opens up equally diverse fields of application. Of these, their use in agronomy meets a strong societal expectation to replace conventional phytosanitary treatments based on chemical synthesis from fossil resources with bio-based products, particularly plant-based products, or new agricultural practices. Secondary plant metabolites, either through their direct biocidal activities, through the stimulation of natural plant defences (e.g. elicitation), or through chemical communication mechanisms (e.g. allelopathy) meet these expectations. Prior to the rational use of these primary and secondary plant metabolites, a

detailed characterisation of the plant resource is essential. This is the context for this permanent scientific position.

The successful candidate will be expected to carry out specific innovative research aimed at developing intelligent monitoring of metabolites in the broad sense (whether primary or secondary) contained in plant resources in relation to the above-mentioned non-food applications.

Services to the Community

Community activities include facilitating the scientific aspects associated with setting up a collaborative, unique and synergistic facility to enable the characterisation and monitoring of molecules contained in plant resources with a view to their subsequent use by various teams associated with the *FoodIsLife*, *AgricultureIsLife* and *ForestIsLife* Research and Teaching Support Units (CAREs). This support structure will be integrated into the infrastructure of the *TERRA* Research Unit. The successful candidate will also be involved at the faculty level in activities to promote courses to secondary school pupils and Bachelor's students looking to study for a Master's degree at Gembloux Agro-Bio Tech (secondary schools, student fairs, open days, etc.).

Other community service activities will be determined in consultation with senior staff.

Qualifications required / profile

- Must hold a first degree in agronomic engineering (or chemistry and bioindustries, or be a bioengineer), a Master's in chemical sciences, or an equivalent university Master's degree, and should also hold a research Doctorate with experience in the relevant area;
- Must demonstrate recognised scientific experience, both in the field and through publications at international level in the relevant field;
- Must be open-minded to the international world (having completed a scientific stay abroad of at least six months is an advantage);
- Must be a good teacher (teaching experience is an advantage);
- Must demonstrate the ability to work on interdisciplinary themes;
- Must be able to work independently and within a team, using pooled human and material resources within the GxABT facilities, and must have excellent organisational and coordination skills;
- Must be available for a variety of different roles relating to services to the community and public education;
- Master French and English (including writing);
- Must be available for missions abroad;
- Must subscribe to the general quality objectives developed by the University and the faculty;
- Upon appointment, the post holder must sign an agreement on the ownership of any research results.

Selection procedure

An ad hoc Faculty committee will select the candidates to be interviewed, giving reasons for its decisions in the light of the call for applications and the candidates' qualifications and merits. It will then interview the candidates. The committee will submit to the Faculty Council its reasoned proposal for appointment on the basis of the evaluation of the applications and the interviews.

On the basis of the information communicated by the committee and the comparison of the respective publications and merits of the candidates, the Faculty Council shall adopt a reasoned proposal for the appointment or closure of the post, which it transmits to the decision-making bodies of the University of Liège.

Our institutional policy is based on diversity and equal opportunities. We select candidates on the basis of their qualities regardless of age, sexual orientation, origin, beliefs, disability or nationality.

Applications

Applicants are requested to submit their applications electronically, to the following address: Postesscientifiques@uliege.be with a copy to the **secretariat of the Dean of Gembloux Agro-Bio Tech**: decanat.gembloux@uliege.be no later than **31/03/2022**.

Documents required:

- An application (with a cover letter) accompanied by a complete curriculum vitae ;
- A report on past and current research activities and a research plan, including the envisaged integration within the University of Liège;
- A teaching file including a report on any prior teaching activities and a teaching plan;
- A complete list of the candidate's publications and a copy of the five publications they consider to be most significant in relation to the area in question.

Recruitment conditions

The position shall be assigned either for a fixed term of four years, which may lead to the permanent appointment of the person concerned or on a permanent basis from the outset.

Information

For any further information, please contact **Professor Frédéric Francis, Dean of the Faculty** – doyen.gembloux@uliege.be

Remuneration:

Salary scales and how they are applied are available from the human resources department of the University: **Ms Ludivine Depas** – tel.: +32 (0) 4 366 52 04 – Ludivine.Depas@uliege.be