

## Bio Base Europe Pilot Plant vzw – MSCA PhD Candidate

### MSCA PhD Candidate in Bioscience Engineering

In the framework of the MSCA Doctoral Network for the development of **Multiscale Frameworks for BioSolutions (FrameBio)**, we are looking for a hands-on, no-nonsense PhD Candidate with a strong background and interest in the field of industrial biotechnology.

This PhD position is part of a **unique multidisciplinary Doctoral Network** (15 partners and 10 countries) that will collaborate and train 13 PhDs in genomics, metabolomics, fermentation and bioprocess optimization, data science, and sustainability assessments. Its goal is to revolutionize biotechnology by developing comprehensive computational modules that simulate the behavior of bioproducts for food applications, such as single-cell proteins (SCP), and quantify their resource dependencies across various scales. This project has received funding from the Horizon Europe, Marie Skłodowska Curie Actions (MSCA) grant (Grant agreement ID: 01227645, <https://doi.org/10.3030/101227645>) ”

Particularly, we aim for a motivated Candidate for the **PhD position (DC5) on "Fermentation and DSP technologies to produce non-conventional SCP from sustainable feedstocks"**. The specific objectives of this PhD research include:

- Exploring the potential of unconventional bacteria and yeasts to upcycle sustainable side streams into SCP
- Developing advanced cultivation strategies for high-protein biomass including liquid and gas fermentation
- Evaluating downstream purification techniques while maximising SCP purity and quality
- Unveiling the sustainability and cost-competitiveness of innovative SCP production at industrial scale

You will be based at Bio Base Europe Pilot Plant, situated in the port of Ghent in Belgium. As a PhD Candidate in our lab and pilot facility, you engage in an **out-of-the-ordinary job**. We offer a dynamic, international, and vibrant working environment with excellent future perspectives. All of our PhD Candidates are intensively coached by a team of experienced post-doctoral researchers and R&D experts.

Moreover, as a PhD Candidate within the MSCA Doctoral Training Network, this position includes **two international research experiences**. This includes a stay of 3 months at University of Iceland (Iceland) for the evaluation of the nutritional quality of SCP products, and a stay of 3 months at DTU (Denmark) for sustainability assessments of the SCP production routes.

The ideal Candidate would hold, or be close to completing, a Master's degree in Bioscience Engineering, Biotechnology, Chemical Engineering or a related field, and have previous research experience in bioprocess development, analytical techniques (e.g., HPLC, GC, TGA), and bioprocess modelling and simulation. Experience in experimental design, parameter optimisation, and statistical analysis is valued.

Further, all MSCA-DN specific eligibility conditions apply:

1. **Mobility rule.** Not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 36 months immediately before the recruitment date.
2. **Doctoral Candidate (DC) definition.** Be — at the date of recruitment — a doctoral candidate (i.e., not already in possession of a doctoral degree).
3. **Be in the position of enrolling in a doctoral programme at the specific country** and meet the specific eligibility requirements at the hosting institution, if applicable.

Candidates interested in the position can **apply by the 30th of January 2026**.

The application must include a **curriculum vitae (CV)** with relevant education and research experience (including professional experience), a **cover letter** explaining motivation to apply and relevance of the position for the candidate, and **other relevant documentation** to illustrate your excellence such as degrees and transcripts of record.

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