

**Vacancy announcement:
R&D positions for two PhD students in the domain of
Environmental technology, biological nutrient recovery**

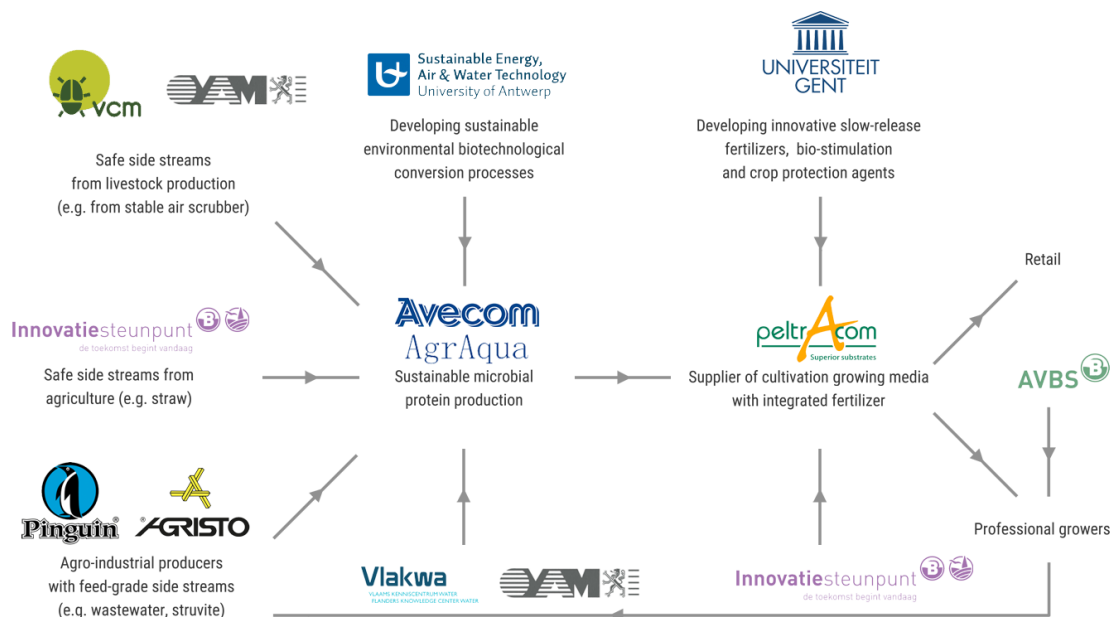
JOB DESCRIPTION

Project: MicroNOD

The **Microbial Nutrients On Demand (MicroNOD)** project is based in Flanders and supported by MIP and I-Cleantech. The MicroNOD project aims to overcome key barriers to establish an innovative sustainable value chain that upgrades inorganic nutrients from safe industrial side streams to a high-quality organic fertilizer for professional growers as well as for the retail sector.

Nutrients will be immobilized microbially through aerobic and phototrophic mechanisms, with a strong focus on a technological leap in knowledge that leads to cost efficiency, minimum input of fresh water, fossil-based energy and non-recovered materials. The processing of the microbiota to organic fertilizer in low impact crop growing media is directed to maximally align the nutrient release from the fertilizers with the plants needs.

MicroNOD targets systemic innovation through strong interaction with all stakeholders throughout society. It is intended to stimulate demand and public acceptance of the recovered bioproduct, create economic value for all business activities along this innovative value chain, set up a quality assurance system, meet product legislation and finally quantify sustainability. More information: www.micronod.be.



The scientific developments within MicroNOD are coordinated by prof. Siegfried Vlaeminck at the University of Antwerp. **The specific R&D goals for the vacant positions in the research group of prof. Vlaeminck focus on the production of microbial biomass (single-cell protein) on industrial sidestreams, investigating among others the potential of purple non-sulfur bacteria production using infrared light on secondary resources on laboratory scale.**



We offer you

- A full-time appointment for **1 year: 1/9/2016-31/8/2017**;
- Intensive coaching and support in applications for a full term (4 years) doctoral grant;
- A competitive salary (around **2000 EUR net/month**) under the form of a doctoral grant (which is exempt from tax);
- A young, dynamic, respectful and international working environment;
- The opportunity to work in close interaction with industrial partners;
- The opportunity to tutor BSc and MSc students working in your research topic;
- The opportunity to personally develop new competences through professional training moments, courses and workshops;
- A chance to make a difference, and personally contribute to the development of sustainable biotechnological answers to urgent societal challenges.

PROFILE SELECTION CRITERIA

Background, experience and commitment

- You hold (or will hold by 1/8/2016) a degree as **bio-engineer, environmental engineer, (bio)chemical engineer**, or equivalent MSc degree.
- Preferably you have demonstrable affinity for **environmental technology** in general and **biological technologies for the treatment of aqueous streams** in particular.
- Preferably you have experience in bioreactor design, control/automation, operation and relevant chemical/microbial/molecular analytics.
- You comply with the eligibility rules for a doctoral grant strategic basic research as stipulated by the Research Foundation Flanders - FWO ([www.fwo.be/en/fellowships-funding/phd-fellowships/doctoral-\(phd\)-grant-strategic-basic-research-\(sb\)/regulations-doctoral-\(phd\)-grants-strategic-basic-research](http://www.fwo.be/en/fellowships-funding/phd-fellowships/doctoral-(phd)-grant-strategic-basic-research-(sb)/regulations-doctoral-(phd)-grants-strategic-basic-research)). These include among others:
 - You have a master degree from one of the countries of the EU or the EER or Switzerland;
 - You have obtained this degree with at least 'distinction' (cum laude), and no longer than 5 years before 15/9/2016;
 - On January 1st 2017, you have no more than 18 months of scientific experience as a researcher;

- You are eager to obtain a PhD degree, and **you commit to apply for a doctoral grant** strategic basic (SB) research as stipulated by the Research Foundation Flanders – FWO (deadline 15/9/2016).

Scientific knowledge and skills

- Ability to rigorously design and perform experiments in a result-oriented and thorough manner.
- Ability to perform in-depth and critical data analysis.
- Ability to communicate through high-quality scientific channels, e.g. peer reviewed publications (A1) and international conferences.
- Potential to contribute to research program development.

Personal knowledge and skills

- Creative, out-of-the-box thinker.
- Excellent interpersonal skills to work effectively and closely with scientific team members and BSc/MSc students.
- Excellent skills for time and budget management and the ability to meet objectives within strictly set deadlines.
- Outstanding oral and written communication skills in English.
- Demonstrated ability to work efficiently and with minimum supervision.
- Outcome focused, hands-on mentality.
- Willingness to travel internationally for conferences, workshops and/or research stays.

ABOUT THE UNIVERSITY AND THE RESEARCH GROUP

The **University of Antwerp** is a young, dynamic and forward-thinking university which ranked 14th in the “Top 50 Universities Under 50 years” in 2014. The European Commission has awarded the University the “HR Excellence in Research” quality label. Within the Faculty of Science, the University created in 2006 the Department of Bioscience Engineering, recognizing a strong societal demand for research and education in the field of applied biological sciences. In this young Department, prof. Lenaerts founded the Research Group of **Sustainable Energy, Air and Water Technology**, and was later joined by prof. Denys (2013), and recently by prof. Vlaeminck (2015). The educational programme of bio-engineering has rapidly increased in volume, up to almost 100 students subscribing for the first bachelor bio-engineering in 2015.

The central research theme of prof. Vlaeminck’s team is ‘**microbial technology for resource-efficient nutrient management**’. Technologies encompass biological nutrient recovery (micro-algae, photoheterotrophs, single cell protein,...), short-cut nitrogen removal (partial nitrification/anammox and nitrification/denitrification), novel applications for nitrification/denitrification, the reuse of recovered products,... The influent scope ranges from domestic over industrial to agricultural or aquacultural streams, be it in end-of-pipe collection systems or in source separation schemes (e.g. black, brown, grey, yellow water). Besides the terrestrial context, a dedicated focus is oriented toward biological life support systems for Space. The group’s methodology spans from lab- to full-scale reactors and from microbial analyses to process control and microbiome management. Despite of being an early-career scientist, the research of prof. Vlaeminck has resulted in above 50 publications in ISI indexed journals.

APPLICATION PROCESS

Submission and closing date

Application files must be sent via email to Siegfried.Vlaeminck@UAntwerpen.be as pdf documents, with in the mail's subject line: "**First name Last name – Job Application – MicroNOD PhD position**". The closing date is **July 1st 2016**, however, **applications will be regularly reviewed**, and excellent candidates might be contacted for an interview before the closing date.

Two application files are needed:

1. Cover Letter (max. 2 pages). This should include at least:

- A personal introduction highlighting your key motivation for this position;
- **Selection Criteria:** show how each of the selection criteria has been met is required to assist the Selection Committee determine whether you have the relevant qualifications, knowledge/skills, experience and personal qualities.
- A confirmation of availability by 1/9/2016 and of **commitment to submit a proposal for the FWO SB doctoral grant** (deadline 15/9/2016);
- Your unavailability (if any) over the course of June/July 2016 for an interview.

2. Curriculum Vitae. This should include at least:

- Your contact address and telephone number;
- **Educational qualifications** and **professional affiliations** that detail the full title of the qualification, the year awarded and the title of the institution attended;
- **Employment history** in chronological order, starting with current position and specifying dates of employment, title of each position, name of employer, main duties or accountabilities and achievements;
- Research fields and current interests, **publications** if any (full list as attachment with three most significant marked with an asterisk), **presentations** at workshops/conferences;
- The names and contact details (address, telephone, fax and e-mail) of **two referees**, including if possible a senior person (preferably your supervisor, manager or head of organisational unit) closely associated with some recent work relevant for this position. A referee must be able to comment on your work experience, skills and performance with respect to the selection criteria.

Selection process

An appointed HR Selection Committee will review applications within days after their submission, and will invite excellent candidates for an interview. Please note that interviews may be conducted by teleconference in the first instance.

An invitation to attend an interview presents an opportunity to provide further information to the Selection Committee to substantiate your claims against the selection criteria and demonstrate your capabilities.

The Selection Committee will subsequently seek referee reports, if not sought prior to interview, before making a decision to make an offer of appointment to the preferred candidate. The purpose of referee checks is to obtain, in confidence, factual information about your past work history, as well as opinions regarding the quality of your work, behaviour in the work place and suitability for the position. Referee reports may be sought orally, or for academic staff, in writing by post or e-mail.

If you are the preferred candidate, you will receive a written offer of appointment to the position. Do not take any action, such as resigning from your current position, before you receive a written offer of appointment.

CONTACT FOR MORE INFORMATION

Prof. dr. ir. Siegfried E. Vlaeminck, Siegfried.Vlaeminck@UAntwerpen.be