

DC 11 | Biocatalytic cascades involving non-heme iron-dependent halogenases towards functionalised *N*-heterocycles

ORGANISATION

Since its founding in 1614, the **University of Groningen** has enjoyed an international reputation as a dynamic and innovative centre of higher education offering high-quality teaching and research. We encourage the 31,000 students and researchers to develop their own individual talents. Among the best research universities in Europe, we join forces with prestigious partner universities and networks around the world, the University of Groningen is truly an international place of knowledge. The position we offer will be embedded in the Groningen Research Institute of Pharmacy (GRIP) within the Department of Chemical and Pharmaceutical Biology (CBP, <https://www.rug.nl/research/grip/cpb/>). Researchers at GRIP strive to find new and innovative drugs and therapies and wish to improve the use of existing drugs. Bridging the gap between the fundamental natural sciences (such as chemistry and physics) and the medical/clinical sciences in the field of medicinal products is the one of the core activities of the institute. The CPB Department is represented by an enthusiastic group of researchers from different parts of the world. The cell as producer and target for pharmaceuticals is the main part of the research at CBP. Prof. Dr. Schmidt's research group (<http://schmidt-researchgroup.com>) offers a multicultural, inclusive and interdisciplinary research environment that integrates synthetic biology with protein engineering and biocatalysis. The team maintains strong national and international collaborations (both academic and industrial) focusing on translational research and industrially relevant applications. Their work centers on gaining fundamental insights into enzyme mechanisms and functions, with the ultimate goal of using biocatalysts to produce active pharmaceutical ingredients through scalable and sustainable enzymatic synthesis.

ROLES AND RESPONSIBILITIES

The main part of your PhD research (4 years in total) will be carried out at **the University of Groningen** (RUG, the Netherlands) under the supervision of **Prof. Dr. Sandy Schmidt** in the Department of Chemical and Pharmaceutical Biology at the Groningen Research Institute of Pharmacy. Within these four years, an academic research stay (of 12 months) will take place at the **University of Bern** (UniBe, Switzerland) under the supervision of **Prof. Francesca Paradisi**. Additionally, an industrial secondment at the company **AstraZeneca** (SE) is foreseen. The Horizon Europe Marie Skłodowska-Curie Actions (MSCA) – Doctoral Network (DN) project starts in January 2026. The date of recruitment and start of the PhD project is planned for April 2026 and latest in December 2026. Your **PhD degree** (so-called double degree) will be awarded based on successful completion of the research work from **two universities (RUG, the Netherlands and University of Bern, Switzerland)**. You will also be required to participate in the training events and workshops organized by the DN- Joint Doctorates (JD) program. As a MSCA fellow, you are also expected to **contribute your time in the dissemination of your PhD project's result** through public engagement and other scientific platforms.

The PhD research will focus on:

- (i) Interdisciplinary project on enzyme engineering, (flow)biocatalysis, and chemistry
- (ii) Identification and characterization of enzymes for cascade towards functionalised *N*-heterocycles,
- (iii) Investigation of different cascade modes
- (iv) Enzyme engineering of biocatalysts for higher activity and stability,
- (v) Enzyme immobilization, scale-up and demonstration studies in a bioreactor (academic secondment)
- (vi) Application of functionalised *N*-heterocycles in drug discovery platform (industrial secondment)

Primary supervisor: Prof. Dr. Sandy Schmidt (s.schmidt@rug.nl)

Secondary supervisor: Prof. Dr. Francesca Paradisi (francesca.paradisi@unibe.ch)

Recruiting institution: University of Groningen (Groningen, the Netherlands)

Double degree awarding institution: University of Bern (Bern, Switzerland)

QUALIFICATIONS

- An outstanding M.Sc. degree in Chemistry, Biological chemistry, Biochemistry, or related field
- Eligible as a graduate student at the University of Groningen (the Netherlands) and the University of Bern (Switzerland),

- Research experience in organic chemistry, analytical methods (HPLC, GC, MS, NMR etc.), enzyme purification and assays, experience in bioreactor use is a plus
- Ability to work in an international team,
- Inter- and multidisciplinary thinking,
- High motivation,
- An integrative and cooperative personality with excellent communication and social skills,
- Fluency in English – written and oral.

CONDITIONS OF EMPLOYMENT

We offer you in accordance with the Collective Labour Agreement for Dutch Universities

- a salary of € 3.059,00 gross per month in the first year, up to a maximum of € 3.881,00 gross per month in the fourth and final year
- a holiday allowance of 8% gross annual income
- an 8.3% end-of-year bonus and participation in a pension scheme for employees
- first, a temporary position of one year with the option of renewal for another three years. Prolongation of the contract is contingent on sufficient progress in the first year to indicate that a successful completion of the PhD thesis within the next three years is to be expected. A PhD training programme is part of the agreement and the successful candidate will be enrolled in the Graduate School of Science and Engineering.

The 1.0 FTE appointment is temporary for a specified period of four years. The preferred starting date is between April 1st and July 1st 2026. The conditions of employment: <https://www.rug.nl/about-us/work-with-us/>.

APPLICATION PROCEDURE

To apply for the position, kindly provide:

- A letter of motivation including a statement of your research interests, relevant skills and experience and an explanation for the choice of position(s);
- A CV including publication list (if applicable);
- Names and contact details of up to three referees willing to write confidential letters of recommendation;
- Copies of relevant diplomas including explanation of international grades.

Please upload applications only according to instructions at <https://haloverse.eu/recruitment/>.

Address applications to: Prof. Dr. Sandy Schmidt

The University of Groningen strives to be a university in which students and staff are respected and feel at home, regardless of differences in background, experiences, perspectives, and identities. We believe that working on our core values of inclusion and equality are a joint responsibility and we are constructively working on creating a socially safe environment. Diversity among students and staff members enriches academic debate and contributes to the quality of our teaching and research. We therefore invite applicants from underrepresented groups in particular to apply. For more information, see also our diversity policy webpage: <https://www.rug.nl/iversity-and-inclusion/>. Our selection procedure follows the guidelines of the Recruitment code (NVP), <https://www.nvp-hrnetwork.nl/sollicitatiecode/> and the [European Commission's European Code of Conduct for recruitment of researchers](#).

Unsolicited marketing is not appreciated.

APPLICATION DEADLINE

You may apply until 31st of December 2025 11:59pm / before 1st of January 2026 Dutch local time (CET) for this position by means of the online application form (click on "Apply" below on the advertisement on the HaloVerse website).

MARIE SKŁODOWSKA-CURIE ACTIONS
Doctoral Networks (DN)



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