



10 international PhD fellowships in the European Doctoral Network *BiocatCodeExpander* for a training on innovative biotechnological applications of non-canonical amino acids for biocatalysis, synthetic biology, organic chemistry and computational biology

## PhD fellow # 9

WP3: ENZYME ENGINEERING WITH NON-CANONICAL AMINO ACIDS

### IN SILICO DESIGN OF ARTIFICIAL ENZYMES WITH NON-CANONICAL AMINO ACIDS

#### Organization

Freie Universität Berlin, Germany

**Freie Universität Berlin** (FUB) owes its founding, in 1948, to international support, and international impulses have shaped the university's research activities and student life ever since. As an International Network University, FUB thrives on its many contacts with higher education institutions and organizations in Germany and abroad, which provide critical impetus for the university's research and teaching activities. Today, FUB maintains roughly 100 partnerships at the university-wide level, along with about 330 university partnerships within the Erasmus academic exchange network and ca. 45 institute partnerships, forming a wide-ranging and tight-knit global network. FUB performed successfully three times in the German government's Excellence competition for universities. FUB was the only university in Berlin and one of six universities nationwide to be recognized as an excellent university in both rounds of the previous competition, the German Excellence Initiative, in 2006/2007 and 2012. The main features of FUB's research activities include the broad variety of global academic and scientific cooperation arrangements in place as part of alliance projects and networks with other entities active in research, alongside the university's innovative support concepts for junior scholars and scientists and the scope of the external funding the university raises. The various areas of focus in the research conducted at FUB are organized into various structures, including interdisciplinary focus areas, excellence clusters, collaborative research centers, and research centers.

#### Doctoral Supervisor

Dr. Bernhard Loll



## **Enrolment in Doctoral degree**

Freie Universität Berlin (FUB)

## **Secondments**

At Georgia Institute of Technology (Atlanta, United States of America) with Prof. Lynn Kamerlin

## **Objectives**

- Identification of suitable scaffolds for non-canonical amino acids (NCAA) incorporation through computational and bioinformatic tools
- Structure elucidation of predicted scaffolds containing NCAA as a catalytic residue
- *In silico* optimization of positive candidates using computational tools
- Stabilization of chosen scaffolds

## **Fields related to the project**

- (1) Computational biology
- (2) Structural biology
- (3) Biochemistry

## **Qualifications**

- Researchers can be of any nationality
- The researcher must not have carried out his/her main activity (work, studies, etc.) in the country of his/her host organization for more than 12 months in the 3 years immediately prior to recruitment.
- The researcher should not have obtained a PhD degree and should not have more than 4 year full-time or equivalent research experience since obtaining the degree which makes them eligible for starting the PhD degree
- Applicants must demonstrate excellent proficiency in English language to be eligible
- Researchers must demonstrate an excellent academic record. Hold a master's degree (or equivalent) relevant to the project (chemistry, biochemistry, biotechnology, molecular sciences or related disciplines)



## We offer

- Full-time contract (36 months) with the recruiting institution, enrolled in a PhD programme
- Salary and benefits are in accordance with the MSCA regulations for PhD students
- *BiocatCodeExpander* promotes gender equality, open science practices and cutting-edge training.
- PhD students will be trained in an international, inter-disciplinary academic and industrial environment through state-of-the-art research
- Two secondments per PhD position and exciting summer schools

## Application

The application, in English, must be submitted electronically by email to the *BiocatCodeExpander* email address [biocatcodeexpander.beta@vu.nl](mailto:biocatcodeexpander.beta@vu.nl) before the 22/01/2023 (only applications that are complete, in English and submitted before the deadline will be considered eligible)

The preferred starting date is between April-September 2023

Please, submit the following documents in one PDF document:

- A cover letter, stating your motivation to join the doctoral network, and mentioning the choice of project you would prefer to apply for (max. 3 projects)
- CV: a one- to two page synopsis of yourself, your scientific interests, experience, current research work and list of publications
- Two letters of recommendation from former advisors/professors

## More information

Web site for additional job details: <http://www.biocatcodeexpander.com/>