

PhD position

Bioprocess design for gas fermentations of H₂ oxidising bacteria
within EU Innovative Training Network (ITN)

ConCO₂rde

(ESR position 11, recruiting institution: acib GmbH, Graz/Austria)

YOU WILL BE PART OF THE CONCO₂RDE PROJECT, an EU H2020 Marie Skłodowska-Curie Actions (MSCA) – Innovative Training Network (ITN)

Within the pioneering research program of ConCO₂rde, 11 early stage researchers (ESR) together will develop efficient microbial CO₂-fixation processes for the production of materials and chemicals. The integration of molecular biology, biocatalysis and process intensification will provide a comprehensive education in the field of biotechnology.

The project will be carried out by a consortium of one transnational institute, six universities, eight industrial partners and one cluster.

Your research is part of ConCO₂rde Work Package 3 “Process intensification of gas-driven processes” The aim of your PhD research is to decipher the bottlenecks in the cultivation of Knallgasbacteria (hydrogen oxidizing bacteria) in order to run gas fermentations at high cell densities within bioreactors. Your research will speed up the development of future bioprocesses from CO₂ as unique Carbon source.

Your PhD research will especially focus on:

- (i) Characterization of microbial strains under autotrophic conditions.
- (ii) Bioprocess design for lithoautotrophic (H₂/O₂/CO₂) fermentation at different scales.
- (iii) Intensification of lithoautotrophic fermentation processes (academic secondment).
- (iv) Implementation strategy with industry partner.

YOUR SPECIAL CONCO₂RDE TRAINING PROGRAM will offer a balanced mix of training in scientific (synthetic biology, enzyme catalysis, process analytics and engineering etc.) and transferable skills (entrepreneurship, diversity awareness, management skills, digitalization in science etc.) presented in eight dedicated network-wide workshops-

YOUR PHD RESEARCH ORGANISATIONS AND LOCATIONS:

- The main part of your PhD research (3 years in total) will be carried out at acib GmbH in Graz, Austria (23 months) under the supervision of **Assoc. Prof. Regina Kratzer**.
- The PhD project includes an academic research stay of 9 months at **Toulouse Biotechnology Institute (INSA Toulouse, France)** under the supervision of **Prof. Stéphane Guillouet**.
- The PhD research also includes 4 months of **industrial secondment at the company Zeta GmbH** (Lieboch near Graz, Austria).

Your PhD degree will be awarded based on successful completion of the research work from two universities in the framework of the ITN-European Joint Doctorates (EJD) program.

Double degree awarding institutions: **Graz University of Technology (Austria), INSA de Toulouse (France)**.

YOUR RECRUITING ORGANIZATION IS ACIB GMBH (www.acib.at)

The Austrian Centre of Industrial Biotechnology (acib) is one of the leading research centres in the field of industrial biotechnology. acib bridges the gap between academic research and producing industry and connects 180+ international scientific and industrial partners. Around 200 acib employees develop new, environmentally friendly, economically and technically advanced processes for the biotechnological, pharmaceutical and chemical industry. Acib is tightly connected to and mainly located at leading Austrian universities in Graz, Vienna, Tulln, Innsbruck.

REQUIREMENTS AND RESPONSIBILITIES

- An outstanding M.Sc. degree in Chemical Engineering, Bioprocess Engineering, Process Engineering or related field
- Eligible as a graduate student at Graz University of Technology
- Research experience in (bio)process design, (bio)reaction performance evaluation (reaction kinetics, growth kinetics), analytical methods (HPLC, GC, MS, NMR etc.), biotechnology (e.g. protein expression and characterization)
- 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.

As a Marie Skłodowska-Curie Actions (MSCA) fellow, you are expected to disseminate your PhD project's findings in peer-reviewed journals and through public engagement and other scientific platforms. ConCO₂rde will train 11 ESRs.

ELIGIBILITY CRITERIA

The following eligibility rules apply for participation in a Marie Skłodowska Curie Innovative Training Network:

- ESRs **must not have resided in the country of the recruiting beneficiary for more than 12 months in the 3 years immediately before the recruitment date** (and not have carried out their main activity (work, studies, etc.) in that country) – unless as part of a procedure for obtaining refugee status under the Geneva Convention 1.
- ESRs must be at the date of recruitment an **'early stage researcher'** (i.e. in the **first four years (full-time equivalent research experience) of his or her research career**)
- ESRs **must not hold a doctoral degree**

CONDITIONS OF YOUR EMPLOYMENT

The date of recruitment and start of the PhD project is planned for May 2021 and latest on December 2021.

- Full time position (40 h/week)
- The 1.0 FTE appointment is fully financed for 26 months out of 36 months PhD time from the ConCO₂rde project. Further financing will be strived to be provided. The preferred starting date is between 1st November 2022 and 1st January 2023.
- **a salary according to the rules of Marie Curie-Skłodowska innovative training networks** which equals a yearly gross payment of EUR 31,700 (living allowance) + EUR 7,200 (mobility allowance)
 - an additional family allowance is due if the researcher has a family (linked by marriage or equivalent and dependent children) upon recruitment

APPLICATION PROCEDURE

To apply for the position, kindly provide:

- (i) A letter of motivation including a statement of your research interests, relevant skills and experience;
- (ii) A CV including publication list;
- (iii) Names and contact details of three references willing to write confidential letters of recommendation.

Please upload applications according to instructions at www.conco2rde.eu. Of course, we welcome applicants of all sexes (f/m/x), backgrounds and ages.

For further details on the recruitment process selection criteria see www.conco2rde.eu.

We are an equal opportunity employer and value diversity. We are committed to building a diverse project team so you are encouraged to apply. Our selection procedure follows the guidelines on recruitment of the European Charter for Researchers and the European Code of Conduct for recruitment of researchers.

APPLICATION DEADLINE

15 August 2022 11:59pm Central European Time



Innovative Training Network – European Joint Doctorates

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