ACIB - the Austrian Centre of Industrial Biotechnology - is one of the leading research centres in the field of industrial biotechnology. ACIB is dedicated to joint research at the industrial-academic interface. Seven Austrian Universities and more than 50 leading industry partners are working together within the ACIB research program.

CODOBIO - Continuous Downstream Processing of Biologics - is a recently granted Marie Skłodowska Curie European Training Network. CODOBIO is implemented by a European Consortium of universities, research institutions and companies in the field of bioprocess engineering. Main objectives of CODOBIO are (i) process control and modelling of continuous downstream processes, (ii) miniaturization, scale-up and -down of continuous downstream processes and (iii) process design and development of integrated continuous downstream processes. Find out more on www.codobio.eu.

acib GmbH offers in Vienna, Austria, a

**PhD position in**

**Power input in miniaturized systems for continuous operation**

**Starting date May 1, 2019**

**Project description**

**Objectives:**
- Establishment of methods to determine the crucial parameter for mixing on microscale such as specific power input, maximum power input and related dimensionless number Re´, Ne´;
- Development of an experimental set up for temperature measurement applicable for diverse shaker types and reactors to determine specific power consumption;
- Establishment of model particle systems to determine maximum power consumption;
- Visualization of hydrodynamic flow in microtiter plates;
- CFD of hydrodynamic flow in microtiter plates as orthogonal method to established measurements;
- Mathematical model for prediction of mixing from shaken microtiter plates to stirred tank reactors;
- Comparison to lab and pilot scale reactors;

**Expected Results:**
- Fundamental understanding of mixing on microscale for prediction of large scale processes;
- Methods for determination / visualization of power input and energy dissipation in miniaturized systems

**Your benefits**
- Be part of a highly interacting interdisciplinary project team - structured secondments to other project partners are planned
- Start to build up your scientific network - meet and exchange regularly with 15 other PhD students working in the same project
- Join an embedded and customized education program - gain scientific/technical skills as well as transferable skills to complement your qualification

**Your profile**
- **Specific Eligibility Criteria** valid at time of recruitment on the H2020 Marie Skłodowska Curie programme:
  - The applicant has to be within the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.
  - Mobility rule: The applicants may not have resided or carried out main activity (studies, work, etc.) in Austria for more than 12 months in the 3 years prior to the recruitment date.
- **Excellent skills** in spoken and written English
- **Master’s degree** or equivalent in biotechnology, bioprocess engineering, (bio)chemical engineering
- Interpersonal skills conducive to team work and group research efforts
- **Travel** abroad for training purposes is part of the training programme

*Please submit the application via our application portal application.acib.at (ref. 12_2018).*

**Application deadline:** February, 28 2019

Further information may be obtained from astrid.duerauer@boku.ac.at.

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This job advertisement addresses qualified male and female persons equally. ACIB is not part of any collective agreement under Austrian law. It is intended to offer a minimum yearly gross payment of EUR 31,700.-- for the PhD-Position advertised. According to the ITN rules a Mobility and, if eligible, Family Allowance are scheduled in addition.