

# EURAXESS

## Job offer

# RWTHAACHEN UNIVERSITY

JOB

GERMANY

[RWTH Aachen University](#) | Posted on: 5 December 2025

**Research Assistant (f/m/d) - PhD - Modeling microbial metabolism - V000010424**

Apply now [✉ \(mailto:tobias.alter@iamb.rwth-aachen.de?subject=Research Assistant \(f/m/d\) - PhD - Modeling microbial metabolism - V000010424\)](mailto:tobias.alter@iamb.rwth-aachen.de?subject=Research%20Assistant%20(f/m/d)%20-%20PhD%20-%20Modeling%20microbial%20metabolism%20-%20V000010424)

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5 Dec 2025

## Job Information

Organisation/Company	Chair of Applied Microbiology
Research Field	Technology
Researcher Profile	First Stage Researcher (R1)
Application Deadline	28 Mar 2026 - 22:59 (UTC)
Country	Germany
Type of Contract	Temporary
Job Status	Full-time
Hours Per Week	39,83 hours/week
Offer Starting Date	1 May 2026
Is the job funded through the EU Research Framework Programme?	Not funded by a EU programme
Is the Job related to staff position within a Research Infrastructure?	No

## Offer Description

### Our Profile

At the Institute of Applied Microbiology, RWTH Aachen University, **we develop next-generation biotechnological processes to convert sustainable resources into valuable products**, using synthetic biology, fermentation, data analysis, and modeling to address global environmental challenges and advance an industrial-scale, sustainable bioeconomy.

To support our aims, we are searching for a **PhD student in computational biotechnology** as a new member for our recent **project FrameBio** (Multiscale Frameworks for BioSolutions) funded by the European Union through the Horizon Europe, Marie Skłodowska-Curie Actions (MSCA) grant. FrameBio's goal is to revolutionize biotechnology by developing **comprehensive computational modules that simulate microbial behavior** of bioproducts (for food applications, such as Single Cell Proteins) and quantifying its resource dependencies across various scales: Microorganism Design and Engineering - Fermentation Design of Experiments coupled with High Throughput Screening - Commercial Production Scheme Simulations - Supply Chain Design - Planetary Resource Utilization and its Impact on Earths Geophysical Synergies, to predict the broad sustainability impacts of BioSolutions.

This PhD position is part of a **Doctoral Network (DN)** that will train 13 PhDs in genomics, metabolomics, fermentation and process optimization, and data science and sustainability assessments in a unique venture. A **secondment at the Institute for Integrative Systems Biology (I2SysBio) in Valencia**, Spain, lasting a total of six months, is an integral part of the PhD program.

## Your duties and responsibilities

This position is an exciting opportunity to work on a seminal topic and use cutting-edge technologies towards our vision of a sustainable bioeconomy. Your specific tasks will be:

- Validation and curation of constraint-based metabolic models.
- Model microbial stresses encountered in bioreactors to predict and quantify their impact on growth.
- Assisting in the interpretation of experimental data for model parametrization and strain engineering.
- Use state-of-the-art, metabolic model-based algorithms and workflows to compute and evaluate strain and fermentation process designs.
- Participate in scientific conferences, write scientific manuscripts, and supervise student projects and internships.

## Where to apply

E-mail

tobias.alter@iamb.rwth-aachen.de

## Requirements

### Skills/Qualifications

The successful applicant has

- University degree (Master's or equivalent) in bioinformatics, biotechnology, biology, systems biology, or equivalent programs
- **At the time of hiring, applicants must not have lived in Germany for more than 12 months in the last 3 years or have carried out their main activity (work, studies, etc.) there.**
- Good programming skills (foremostly Python)
- Experience in constraint-based metabolic modeling techniques (e.g., COBRA, CellNetAnalyzer, ReFramed)
- Basic biological knowledge of microbial metabolism
- Good written and spoken English as well as presentation skills
- Excellent interpersonal, and organizational skills with an ability to work efficiently both independently and in a team
- a creative, open, and resilient mind

Languages

ENGLISH

Level

Basic

Research Field

Technology

Years of Research Experience

None

## Additional Information

## Additional comments

### What we offer

The successful candidate will be employed under a regular employment contract. The position is to be filled by 5/1/2026 and offered for a fixed term of three years. The fixed-term employment is possible as it constitutes one of the fixed-term options of the Wissenschaftszeitvertragsgesetz (German Act on Fixed-term Scientific Contracts). This is a full-time position. The successful candidate has the opportunity to pursue a doctoral degree in this position. The salary is based on the German public service salary scale (TV-L). The position corresponds to a pay grade of EG 13 TV-L.

### About us

RWTH is a certified family-friendly University. We support our employees in maintaining a good work-life balance with a wide range of health, advising, and prevention services, for example university sports. Employees who are covered by collective bargaining agreements and civil servants have access to an extensive range of further training courses and the opportunity to purchase a job ticket.

RWTH is an equal opportunities employer. We therefore welcome and encourage applications from all suitably qualified candidates, particularly from groups that are underrepresented at the University. All qualified applicants will receive consideration for employment and will not be discriminated against on the basis of national or ethnic origin, sex, sexual orientation, gender identity, religion, disability or age. RWTH is strongly committed to encouraging women in their careers. Female applicants are given preference if they are equally suitable, competent, and professionally qualified, unless a fellow candidate is favored for a specific reason.

As RWTH is committed to equality of opportunity, we ask you not to include a photo in your application.

You can find information on the personal data we collect from applicants in accordance with Articles 13 and 14 of the European Union's General Data Protection Regulation (GDPR) at <http://www.rwth-aachen.de/dsgvo-information-bewerbung>.

Website for additional job details <https://jobs.rwth-aachen.de/?ac=jobad&id=10911&view=external>

## Work Location(s)

Number of offers available	1
Company/Institute	Chair of Applied Microbiology
Country	Germany
City	Aachen
Postal Code	52074
Street	Worringerweg 1
Geofield	








## Contact

City	Aachen
Website	<a href="https://jobs.rwth-aachen.de">https://jobs.rwth-aachen.de</a>
Street	Worringerweg 1
Postal Code	52074
E-Mail	tobias.alter@iamb.rwth-aachen.de
Phone	+49 241 80 40094

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