Postdoctoral Fellows to Decode and Engineer Metabolism (m/f/d)

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The Superti-Furga Lab | CeMM, Vienna and The Cori Institute, Graz | Austrian Academy of Sciences

Metabolism is the organizing logic of life. We are building the right place to decipher and engineer it. The Superti-Furga laboratory invites applications for two postdoctoral-level positions at the interface of metabolism, membrane transport, cellular regulation, structural systems biology, machine learning and disease mechanisms. These positions are embedded in the transition from CeMM in Vienna to the newly founded Cori Institute of Molecular and Computational Metabolism of the Austrian Academy of Sciences in Graz.

Both opportunities address central questions in modern biology: how cells coordinate transport, metabolism, protein interactions, mitochondrial function, translation and adaptive responses; and how these mechanisms can be understood, modelled and ultimately perturbed for biomedical discovery.

Two scientific tracks

Track 1: Computational Biology / Machine Learning for membrane protein interactions (Graz, with travel to Vienna) (CeMM/Cori)

This position is part of mIDIAMANT, an ongoing WWTF-supported collaboration with the group of Peter Sykacek at BOKU, Vienna. The project uses artificial intelligence and machine learning to decode interaction archetypes of membrane proteins and predict the effect of genetic variants. While the Superti-Furga Lab will be based in Graz, regular travel to Vienna will be required for project meetings.

The work builds on large affinity-purification mass spectrometry datasets of membrane transporter interactomes generated through the SLC-focused IMI consortia RESOLUTE and REsolution, coordinated by the Superti-Furga laboratory. The project has entered a phase focused on the interpretation of a large-scale structural systems biology dataset.

The successful candidate will help classify structural modes of protein-protein interaction, identify recurring interface motifs, and contribute to a structural catalogue of interaction archetypes. The broader goal is to understand how membrane proteins and their partners cooperate, and how disease-associated variants may perturb these interactions.

This track is particularly suited for candidates with a PhD in bioinformatics, structural biology, computational biology or a related field, and experience in computational structural biology, protein structure modelling,

AlphaFold/multimer-based analyses, statistics, data visualization, and interdisciplinary work at the interface of proteomics, structures and machine learning.

Track 2: Metabolism, mitochondrial signalling and translational control (Graz) (Cori)

This experimental postdoctoral project will investigate how cells coordinate metabolic state, mitochondrial function, nutrient availability and small-molecule perturbations with protein synthesis, adaptive stress responses and disease-relevant cellular phenotypes.

The project combines molecular and cellular biology, mitochondrial biology, chemical biology, nutrient sensing, pharmacology, CRISPR genetics, quantitative biochemical and imaging-based readouts, and omics-based profiling, potentially including metabolomics, proteomics or transcriptomics.

Depending on background and interest, the work may emphasize metabolic regulation of translation, mitochondrial stress responses, small-molecule mechanisms of action, polyamine and amino-acid-related metabolism, functional genomics, quantitative assay development, or integration of metabolic, proteomic and phenotypic data.

This track is particularly suited for candidates with a PhD in cell biology, molecular biology, biochemistry, metabolism, mitochondrial biology, chemical biology, translational control, functional genomics, proteomics or metabolomics. Experience with mammalian cell culture, biochemical assays, Western blotting, CRISPR/shRNA/siRNA, reporter systems, mitochondrial assays, imaging, metabolomics or proteomics would be advantageous.

Who should apply

We seek driven, curious, rigorous and collaborative scientists who want to work across disciplinary boundaries. Candidates do not need to have worked on these exact topics before. More important are mechanistic thinking, careful experimentation or computation, willingness to learn, intellectual independence, generosity, and the ability to connect molecular detail with broader biological questions.

What you will find

You will join an experienced, international and interdisciplinary environment with strong expertise in membrane transport, metabolism, chemical biology, functional genomics, proteomics, structural analysis, bioinformatics, imaging and physiology, machine learning, drug discovery. The work for Track1 will initially be connected to CeMM in Vienna and will develop toward the Cori Institute in Graz, where the Superti-Furga laboratory will start a laboratory in September 2026 . Track 2 will start already in Graz.

Cori is a new institute of the Austrian Academy of Sciences dedicated to metabolism as a dynamic system connecting molecules, cells, organisms and environments. Joining during its founding phase means entering an environment that is still being built, but also one in which scientific culture, experimental platforms and collaborative practices can still be shaped.

Why join

- Work on ambitious questions at the interface of metabolism, transport, computation, mitochondrial biology, translation, disease mechanisms and chemical biology.
- Contribute to projects with strong potential for high-impact publications and a distinctive scientific profile.

- Develop skills relevant for future independent scientific leadership, including the preparation for competitive fellowship and ERC-style grant applications.
- Learn how to exploit insights to invent new drugs and tools to modulate and engineer metabolism.
- Become part of the founding phase of a new Austrian Academy of Sciences institute dedicated to molecular and computational metabolism.
- Benefit from an international research environment, strong team spirit, excellent scientific networks and support for relocation where applicable.
- Competitive salary in the range of €5.014,30-5.499,10 EUR gross per month paid 14 times, based on the recommendations of the FWF, and benefits package
- Support for relocation to Graz is provided (relocation reimbursement, visa support)

Application

The Cori Institute and the Austrian Academy of Sciences are committed to equality of opportunity, diversity and an inclusive working environment. Applications from qualified candidates of all backgrounds are welcome. We especially encourage applications from candidates who will contribute to the diversity of the institute.

Applications should be written in English and include a curriculum vitae with publication list, a short motivation letter, a brief statement of relevant scientific experience and interests, and the names and contact details of two or three referees. Please indicate clearly whether you are primarily applying for Track 1, Track 2, or would like to be considered for both.

Please apply using the following link: https://cori-institute.onlyfy.jobs/job/i4nba2mh

Application received before July 31 will be accepted.

Additional information

City	**Graz**
Position type	**Full-time employee**
Start of work	**01.09.2026**

Responsible

Memo Mokhles

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