



POSTDOCTORAL FELLOWSHIP OPPORTUNITY

MSCA Postdoctoral Fellowship & EMBO Postdoctoral Fellowship

Metabolomic data analyst / Molecular Biologist (m/f/d)

Laboratory of Cardiometabolism

Institute of Physiology of the Czech Academy of Sciences, Prague

About the Position

We are seeking a highly motivated postdoctoral researcher with strong experimental and omics data analysis expertise in metabolomics and transcriptomics to join our newly established Laboratory of Cardiometabolism. Our research aims to uncover the molecular mechanisms driving sex differences in cardiac physiology that underlie pronounced sex biases in heart disease. We focus on biological sex—the combined effects of sex chromosomes and sex hormones—and how it shapes cardiac energy metabolism. The successful candidate will lead an independent experimental project investigating the molecular basis of sex-specific cardiometabolic regulation, with opportunities to work with human tissues, cell culture systems, and advanced genetically engineered mouse models.

The selected candidate will be supported to apply for a **Marie Skłodowska-Curie Postdoctoral Fellowship (MSCA PF)** and/or an **EMBO Postdoctoral Fellowship**, with full institutional support for proposal preparation.

Research Focus

Our newly established lab is dedicated to uncovering the molecular basis of sex differences in cardiac metabolism and mitochondrial biology, both in health and disease. Our work focuses on the role of sex chromosomes, whose contribution remains largely unexplored – presenting exciting opportunities for novel scientific insights. To address this challenge, we take an integrative approach that combines systems biology, advanced omics technologies. More about our work: chmatallab.com, <https://fgu.cas.cz/en/research-and-laboratories/research-departments/laboratory-of-cardiometabolism/>

Key Responsibilities

You will lead experimental research combining *in vivo* and *in vitro* models to uncover the molecular mechanisms underlying sex differences in cardiometabolic regulation. Your work will involve genetically engineered mouse models, mitochondrial and metabolic analyses, cell culture systems, and integrative omics data analysis. You will have the autonomy to shape and lead your own research direction within the lab's overarching vision.

What We Are Looking For

- PhD in molecular biology, biochemistry, omics data analysis, or a related field
- Hands-on experience with mouse models and cell culture
- Solid molecular biology and computer programming skills
- Excellent communication skills in English

Additional experience in ChIP/epigenomics, NGS library preparation, or microscopy is a plus.

What We Offer

- A dynamic research environment at the Bio-Medical Campus, offering strong international and interdisciplinary collaborations
- Work in a young, international team of experts in a completely renovated, state-of-the-art laboratory space (chmatallab.com)
- Access to excellent infrastructure, including metabolomics, proteomics, metabolic cages, sequencing, and advanced imaging facilities
- Scientific and strategic mentoring, including guidance in project management and individual consultations
- Dedicated support for fellowship applications, with help on proposal structure, funding requirements, and feedback on key sections
- Opportunities for independent project development, international conference attendance, and long-term career advancement
- Competitive MSCA allowance or EMBO stipend upon successful external funding
- Comprehensive employee benefits, including 5 weeks of vacation, Multisport/Edenred, on-site gym and squash court, parking, and access to an on-site kindergarten

Eligibility

MSCA Postdoctoral Fellowship: PhD awarded by call deadline (September 2026); no more than 8 years of postdoctoral experience; must not have resided in Czech Republic for more than 12 months in the past 36 months.

EMBO Postdoctoral Fellowship: PhD awarded by application deadline; no more than 2 years of postdoctoral experience; must not have resided in Czech Republic for more than 12 months in the past 36 months.

The position is contingent on successful fellowship award. Applicants of any nationality are welcome.

Timeline

Applications will be accepted until the position is filled. The MSCA PF deadline is September 2026; EMBO Postdoctoral Fellowship deadlines are in January and July each year. Early contact is encouraged to allow time for joint proposal development.

How to Apply

Please send your CV (with publication list), a brief statement of research interests (max 2 pages), and contact details for 2–3 referees to personalni@fgu.cas.cz.

Dr. Lukas Chmatal, Ph.D.

Head, Laboratory of Cardiometabolism

Institute of Physiology of the CAS, v.v.i.

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The Institute of Physiology of the Czech Academy of Sciences is an equal opportunity employer.