

Call for Expression of Interest

ERA Chair in Integrative metabolic physiology and bioenergetics

Faculty of Science, Charles University, Prague

Pre-proposal phase for HORIZON-WIDERA-2027-02-WIDENING-01: ERA Chairs

The Faculty of Science at Charles University invites an outstanding senior researcher to explore a unique leadership opportunity: to lead the creation of a new research group and drive excellence in **Integrative metabolic physiology and bioenergetics at the Department of Physiology**.

We invite expression of interests from researchers ready to collaborate on an ERA Chair proposal under Horizon Europe WIDERA and, if successful, to build and lead this group in Prague.

Who We Are Looking For

We are seeking a highly qualified and internationally recognized scholar (R3/R4 level) with:

- A strong track record in integrative metabolic physiology, with emphasis on cellular bioenergetics, mitochondrial function, and metabolic regulation at tissue, organ, or whole-organism level
- Experience in leading research teams and securing competitive funding
- Proven ability to develop and integrate advanced approaches for the analysis of cellular and mitochondrial bioenergetics, metabolic fluxes, and metabolic phenotyping in physiologically relevant models
- The motivation and capacity to build a high-impact research group at a leading Central European university

Candidates of all nationalities are eligible. ERA Chair holders may not have an existing contractual relationship with Charles University.

Key parameters

Funding scheme	Horizon Europe, WIDERA, topic HORIZON-WIDERA-2027-02-WIDENING-01
Project duration	5 years
Project budget	approx. 2.5 million €
Proposal deadline	14 September 2027
Working language	English

Why This Position Matters

Unique Role, European Impact

Founded in 1348, Charles University is the oldest and most prestigious university in Central Europe, consistently ranked among the top regional institutions. The Department of Physiology at the Faculty of Science has a strong tradition in integrative and adaptive physiology, neurobiology, chronobiology, cardiovascular physiology and behavioural neuroscience. These areas provide a strong foundation for developing a new research direction focused on metabolic regulation, bioenergetics and physiological resilience across cellular, tissue and organismal levels.

Metabolic regulation and cellular bioenergetics are central to physiological adaptation, resilience and long-term health. They shape how cells, tissues and organisms respond to metabolic, developmental, environmental and neuroendocrine challenges. The ERA Chair will strengthen the Department's capacity to study these processes by linking molecular and cellular mechanisms with tissue, organ and whole-organism function.

From Cellular Bioenergetics to Physiological Resilience

Metabolic regulation and bioenergetics are essential for understanding how cells, tissues and organisms maintain function under physiological and pathological conditions. Analysis of mitochondrial function, metabolic fluxes and organismal adaptation supports research into metabolic disease, ageing, neurodegeneration and responses to environmental stress. Advancing this field at the European level will strengthen the link between molecular mechanisms and integrative physiology, and this is precisely the contribution the ERA Chair is positioned to make.

Methodological Ambition

The ERA Chair will drive the development and integration of advanced approaches in metabolic physiology and bioenergetics, including:

- Functional analysis of mitochondrial respiration and cellular bioenergetics
- Metabolic flux analysis, metabolomics and molecular phenotyping
- Physiologically relevant models of metabolic stress, ageing and environmental adaptation
- Integration of cellular, endocrine, behavioural and whole-organism physiological readouts, including temporal aspects of metabolic regulation where relevant

Expected Impact of the ERA Chair

ERA Chairs are among the most prestigious individual research grants under Horizon Europe. The successful candidate will drive a transformative step forward in metabolic physiology and bioenergetics at Charles University. The ERA Chair holder will build a permanent, high-performing research group fully integrated within the Department with direct impact on both research output and institutional culture:

- Publication of results in leading international journals and participation in prestigious European research consortia
- Strengthened interdisciplinary collaboration across the Faculty of Science (physiology, neuroscience, biochemistry, molecular biology, developmental biology, immunology)
- Integration of cutting-edge research into teaching at all levels, and mentorship of PhD students and postdoctoral researchers
- Improved capacity to compete successfully for further EU and international funding
- Lasting institutional reforms aligned with ERA priorities as open science, transparent recruitment, and researcher career development

Get In Touch

Interested candidates are invited to send us a short email with their CV to get in touch and start the conversation. We are happy to discuss the opportunity informally before any commitment.

Contact person:

Kateřina Chmelíková
Head of the Department of International Projects

Charles University in Prague
Faculty of Science
Albertov 6, 128 43 Prague 2
katerina.chmelikova@natur.cuni.cz
www.natur.cuni.cz/en

phone: +420 776 577 447

Call for Expression of Interest

ERA Chair in Advanced Population Projections and Modelling

Faculty of Science, Charles University, Prague

Pre-proposal phase for HORIZON-WIDERA-2027-02-WIDENING-01: ERA Chairs

The Faculty of Science at Charles University invites an outstanding senior researcher to explore a unique leadership opportunity: to lead the creation of a new research group and drive excellence in **Advanced Population Projections and Modelling** and to shape the future of demographic research in the Czech Republic.

We invite expression of interests from researchers ready to collaborate on an ERA Chair proposal under Horizon Europe WIDERA and, if successful, to build and lead this group in Prague.

Who We Are Looking For

We are seeking a highly qualified and internationally recognized scholar (R3/R4 level) with:

- A strong track record in demographic modelling, population statistics, or related quantitative fields
- Experience in leading research teams and securing competitive funding
- An interest in advancing methodologies such as stochastic forecasting, Bayesian approaches, microsimulation, or mortality modelling
- The motivation and capacity to build a high-impact research group at a leading Central European university

Candidates of all nationalities are eligible. ERA Chair holders may not have an existing contractual relationship with Charles University.

Key parameters

Funding scheme	Horizon Europe, WIDERA, topic HORIZON-WIDERA-2027-02-WIDENING-01
Project duration	5 years
Project budget	approx. 2.5 million €
Proposal deadline	14 September 2027
Working language	English

Why This Position Matters

Unique Role, European Impact

Founded in 1348, Charles University is the oldest and most prestigious university in Central Europe, consistently ranked among the top regional institutions. The Department of Demography and Geodemography is the only specialized demography department in the Czech Republic, providing comprehensive education at Bachelor's, Master's, and Doctoral levels.

Demographic challenges as ageing populations, shifting migration patterns, declining fertility and others are among the defining policy questions of 21st-century Europe. The ERA Chair will place Prague at the centre of that conversation, producing research with direct relevance for pension systems, healthcare planning, and public policy across the continent.

Science That Shapes Society

Population projections are essential for evidence-based policymaking and have far-reaching

implications for both society and scientific research. Robust demographic modelling underpins effective planning of pension systems, healthcare, education, and infrastructure. Advancing this field at the European level is critical for the long-term functioning of our societies and that is precisely the contribution the ERA Chair is positioned to make.

Methodological Ambition

Demographic forecasting in the Czech Republic offers significant scope for methodological advancement building on approaches already established at leading international institutions. The ERA Chair will drive the integration of:

- Stochastic and multi-dimensional forecasting approaches
- Mortality modelling (e.g., Lee–Carter, Cairns–Blake–Dowd models)
- Bayesian methods and hierarchical population models
- Multi-state models and microsimulation techniques
- Scenario-based and Monte Carlo simulations

Expected Impact of the ERA Chair

ERA Chairs are among the most prestigious individual research grants under Horizon Europe. The successful candidate will drive a transformative step forward in demographic research in the Czech Republic. The ERA Chair holder will build a permanent, high-performing research group fully integrated within the Department with direct impact on both research output and institutional culture:

- Publication of results in leading international journals and participation in prestigious European research consortia
- Strengthened interdisciplinary collaboration across the Faculty of Science (epidemiology, environmental sciences, ecology, population genetics)
- Integration of cutting-edge research into teaching at all levels, and mentorship of PhD students and postdoctoral researchers
- Improved capacity to compete successfully for further EU and international funding
- Lasting institutional reforms aligned with ERA priorities as open science, transparent recruitment, and researcher career development

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phone: +420 776 577 447