



Pan-European Network For Neuroscience Research Infrastructure and
Strengthening of Support Capacities (PANERIS)

PANERIS Summer School

Neurodevelopment

At the **Life Sciences Center, Vilnius University**

25th-29th August 2025

Vilnius, Lithuania



Instytut Farmakologii
im. Jerzego Maja
Polskiej Akademii Nauk



Instituto de Medicina
Molecular

João Lobo
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Vilniaus
universitetas



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Welcome to Life Sciences Center of Vilnius University



The Life Sciences Center (LSC) is a leading hub for education and research in biochemistry, biosciences, and biotechnology. It brings together three academic institutes under one roof to foster interdisciplinary collaboration and scientific innovation. LSC conducts cutting-edge research in molecular biology, genetics, neurobiology, synthetic biology, and biotechnology, addressing challenges in health, bioengineering, and environmental sustainability. It also supports technology development, academic-industry collaboration, and science communication.

Key Highlights:

- Home to over 800 researchers, students, and staff
- Expertise in genomics, proteomics, neuroscience, bioinformatics
- Advanced core facilities in microscopy, proteomics, and structural biology
- Active in national and international research projects
- Offers Bachelor's, Master's, and PhD programs

The Center plays a vital role in advancing research excellence and training future leaders in the life sciences.

PANERIS: Pan-European Neuroscience Research Network

PANERIS (Project N° 101160180) is a Horizon Europe initiative aimed at strengthening neuroscience research infrastructure and institutional capacity across Europe. The project promotes excellence through interdisciplinary training, knowledge exchange, and the development of research support services.

Key Highlights:


- Builds integrated neuroscience research infrastructure
- Provides specialized training, seasonal schools, and collaboration opportunities
- Facilitates knowledge sharing in open science, research management, and innovation
- Coordinated by a consortium of leading European neuroscience institutions


PANERIS contributes to the growth and competitiveness of European neuroscience by supporting researcher development and cross-institutional collaboration.


PANERIS Summer School

The PANERIS Summer School, organized by the Life Sciences Center (LSC) in Vilnius, offers a unique opportunity to explore the latest advancements in neurodevelopment research. The program features four scientific lectures delivered by distinguished experts from leading European institutions, providing participants with up-to-date insights into current research trends and emerging challenges in the field.

The theoretical sessions will be complemented by hands-on workshops focused on key experimental techniques, including:

 **Gene editing** – Introduction to gene editing methods for neuroscience research

 **Microglia isolation** – Techniques for isolating microglial cells

 **Functional assays** – Practical tests for assessing microglial activity using fluorescent microscopy

In addition to scientific training, participants will engage in transferable skills sessions focused on fellowship writing, aimed at strengthening their ability to effectively communicate research proposals and secure funding for academic and professional development.

Location and general information

Life Science Center

Saulėtekio avenue 7

LT-10257 Vilnius, Lithuania

 Google Maps

Kairėnai botanical garden

Kairėnų str. 43

LT-10239 Vilnius, Lithuania

 Google Maps

Lukiškės prison

Lukiškių skg. 6,

LT-01108 Vilnius, Lithuania

 Google Maps

Kyblynar

Karaimų str. 29

LT-21104 Trakai, Lithuania

 Google Maps

Hotel

M. K. Čiurlionio str. 1

LT-03104 Vilnius, Lithuania

 Google Maps

VU old ensemble

Universiteto str. 3

LT-01513 Vilnius

 Google Maps

Bernelių užėiga

Pilies g. 10,

LT-01124 Vilnius, Lithuania

 Google Maps

Summer School Program

	Monday		Tuesday		Wednesday	Thursday		Friday	
8:30-9:00	Coffee		Coffee		Coffee	Coffee		Coffee	
9:00-12:00	Course intro		Lecture Catarina Miranda Lourenco, PhD “Synaptogenesis and Synaptopathies: From Mechanisms to Disease”		Lecture Leonardo Beccari, PhD “Decoding human neurodevelopment gene regulation through rain organoid models”	Transferable skills Gavin Lucas, PhD Fellowship writing III		Lecture Ainhua Plaza Zabala, PhD “Glial Cells in Brain Development: Timing, Plasticity, and Pathological Vulnerability”	
	Lecture Giulia Quattrocchio, PhD “Building the Hippocampal Circuit: From Growth Cones to Place Cells”								
12:00-13:30	Lunch		Lunch		Lunch	Lunch		Lunch	
13:30-15:00	Practical I Neringa Daugelavičienė, PhD Experimental design	Practical II Monika Iešmantaitė, PhD student Experimental design and microglia isolation	Practical I Neringa Daugelavičienė, PhD Cell transfection	Practical II Monika Iešmantaitė, PhD student Cell plating	Transferable skills Gavin Lucas, PhD Fellowship writing I	Practical I Neringa Daugelavičienė, PhD Cell imaging	Practical II Monika Iešmantaitė, PhD student Microglia functional essays	Practical I Neringa Daugelavičienė, PhD Data analysis and discussion	Practical II Monika Iešmantaitė, PhD student Data analysis and discussion
15:00-15:30	Coffee break		Coffee break		Coffee break	Coffee break		Coffee break	
15:30-17:00	Practical I Neringa Daugelavičienė, PhD Cell plating	Practical II Monika Iešmantaitė, PhD student Microglia isolation	Social event Visit to old VU ensemble + Lithuanian dinner at Bernelių užėiga		Transferable skills Gavin Lucas, PhD and Juan Abolařia, PhD Fellowship writing II	Transferable skills Gavin Lucas, PhD and Juan Abolařia, PhD Fellowship writing IV		Social event Visit to Trakai and gala dinner at Kybynlar	
17:00-evening	Poster session in Kairėnai					Social event Lukiškės prison tour (from 7 pm)			

About Vilnius



Vilnius, the capital of Lithuania, is a city of deep historical roots, cultural diversity, and growing academic significance. Recognized as a UNESCO World Heritage Site, Vilnius is celebrated for its beautifully preserved Old Town—one of the largest in Europe—where Gothic, Renaissance, Baroque, and Neoclassical architecture coexist harmoniously. As Lithuania’s political and intellectual center, Vilnius combines a rich past with a dynamic present, making it an ideal location for academic exchange and international collaboration.

The city offers a variety of landmarks and modern conveniences that make it especially welcoming to visitors. Key attractions include **Gediminas Tower**, the **Cathedral Square**, the **Presidential Palace**, and the **Gates of Dawn**. The Old Town, with its winding streets and architectural gems such as **St. Anne’s Church** and **Vilnius University’s historic courtyard**, provides a picturesque and inspiring environment. **Pilies Street**, a lively thoroughfare in the heart of the city, connects many of these sites and is a hub for local life, cafes, and bookstores.

Just across the Vilnia River lies **Užupis**, an artistic and unconventional neighborhood often compared to Montmartre in Paris. Declared an “independent republic” by its artists in 1997, Užupis reflects the city’s creative spirit, with its own constitution, vibrant street art, and a welcoming atmosphere.

Vilnius is also a key academic and research center in the Baltic region. **Vilnius University**, founded in 1579, is one of the oldest in Eastern Europe and plays a central role in the city’s educational and scientific life. The city hosts a number of other universities and research institutions, as well as technology parks and innovation hubs, which contribute to its reputation as a forward-thinking European capital.

With its combination of intellectual energy, cultural richness, and historic charm, Vilnius provides an inspiring setting for academic events. Participants can expect not only meaningful scholarly exchange but

also a warm and engaging experience in a city that values knowledge, openness, and creativity.