NSTC 國家科學及技術委員會
National Science and Technology Council

MINISTRY OF EDUCATION, SCIENCE AND SPORT OF THE REPUBLIC OF LITHUANIA

Protocol of the 24th Meeting of the Steering Committee of Mutual Funds for Scientific Cooperation among Taiwan, Latvia and Lithuania

Date & Time: *23 October 2025; 10:30 a.m. ~ 15:30 p.m.*
Venue: *Ministry of Education and Science (Latvia)*

Participants (delegations from):

- National Science and Technology Council of the Republic of China (Taiwan) (NSTC)
- Ministry of Education and Science of the Republic of Latvia (MoES)
- Latvian Council of Science (LCS)
- Ministry of Education, Science and Sport of the Republic of Lithuania (MoESS)
- Research Council of Lithuania (RCL)
- Taiwanese Representative Office in Lithuania

Steering Committee members:

Taiwan: Prof. Bing-Yu Chen (NSTC), Prof. Wang-Long Li (NSTC), Ms. Hwey-Ying Lee (NSTC), Ms. Ya-Hsuan Liao (NSTC), Prof. Shun-Fen Tzeng (Taiwanese Representative Office in Lithuania).
Latvia: Ms. Lauma Sīka (MoES), Dr. Uldis Berķis (MoES), Ms. Baiba Švāne-Upmale (MoES), Dr.Maija Bundule (LCS), Dr. Līva Grineviča (LCS).
Lithuania: Dr. Laima Taparauskienė (MoESS), Ms. Aušra Gribauskienė (MoESS), Ms. Vaida Peciukonienė (MoESS), Prof. habil. dr. Limas Kupčinskas (RCL), Ms. Kornelija Bacvinkienė (RCL).

Other participants:

Representative Mr. Winston Wen-Yi Chen, Secretary Yuri J.J. Li, Dr. Jānis Spīgulis, Ms. Kristīne Bērziņa-Cunska, Dr. Alons Lends (online), Dr. Vita Rovīte (online).

1. The meeting commenced with welcoming remarks by Ms. Lauma Sīka, Deputy Director of the Department of Higher Education, Science and Innovation of the Ministry of Education and Science (MoES), followed by the introduction of the Latvian delegation. Prof. Bing-Yu Chen, Deputy Minister of the National Science and Technology Council (NSTC), and Dr. Laima Taparauskienė, Director of the Department of Higher Education, Science and Technology, Ministry of Education, Science and Sport of the Republic of Lithuania (MoESS), delivered their opening remarks and introduced the Taiwanese and Lithuanian delegations, respectively. Representative Mr. Winston Wen-Yi Chen of the Taipei Mission in the Republic of Latvia also delivered opening remarks.

2. After the opening remarks made by chairpersons and a short presentation of the agenda and consensus on the working order and the progress of the meeting, presentations on the 3rd year research projects were made by Latvian Principal Investigators of the projects. Steering Committee (hereafter – Committee) members commented on the results of joint research projects and exchanged their opinions.

3. It was concluded that four (4) following projects (2023-2025) are being implemented successfully:

   3.1. **"Exploring Early Events in the Cold Denatured Apoptotic Bid Protein Using Sensitivity-Enhanced EPR and NMR",** Yun-Wei Chiang (National Tsing Hua University, Taiwan), Vidmantas Kalendra (Vilnius University, Lithuania), Alons Lends (Latvian Institute of Organic Synthesis, Latvia).

3.2. **"Role of ryanodine receptors in neuroendocrine tumour development: implications in electrophysiological and molecular tumorigenesis mechanisms",** Sheng-Nan Wu (National Cheng Kung University, Taiwan), Arimantas Tamašauskas (Lithuanian University of Health Sciences, Lithuania), Vita Rovīte (Latvian Biomedical Research and Study Centre, Latvia).

3.3. **"Development of A3B5-Bi nanostructure based double-wavelength microlaser technology for NIR sensing applications",** Yi-Jen Chiu (National Sun Yat-Sen University, Taiwan), Renata Butkutė (State Research Institute Centre for Physical Sciences and Technology, Lithuania), Janis Spigulis (University of Latvia, Latvia).

3.4. **"Dynamic Managerial Capabilities and Organizational Resilience in Family Firms: A Comparative Study of Taiwan, Latvia and Lithuania",** Shyh-Jer CHEN (National Sun Yat-Sen University, Taiwan), Monika Petraitė (Kaunas University of Technology, Lithuania), Ilona Baumane-Vītoliņa (University of Latvia, Latvia).

4. Considering the reports on the ongoing projects, the Committee decided to continue funding the eight (8) following projects (four (4) projects in the second year (2024-2026)** of implementation, and four (4) projects in the first year (2025-2027)* of implementation):

4.1. ***"Structure determination of transthyretin amyloid fibrils",** Tsyr-Yan Yu (Academia Sinica, Taiwan), Vytautas Smirnovas (Vilnius University, Lithuania), Alons Lends (Latvian Institute of Organic Synthesis, Latvia).

4.2. ***"Microplastics and related persistent organic pollutants in post-glacial Arctic ecosystems and adjacent areas",** Ta-Kang Liu (National Cheng Kung University, Taiwan), Dzmitry Lukashanets (Klaipėda University, Lithuania), Marta Barone (Latvian Institute of Aquatic Ecology, Latvia).

4.3. ***"Synthesis and characterization of new organic emitters exhibiting long-lived emission for brain imaging (SYNERGISM)",** Shi-Wei Chu (National Taiwan University, Taiwan), Rasa Keruckienė (Kaunas University of Technology, Lithuania), Edgars Sūna (Latvian Institute of Organic Synthesis, Latvia).

4.4. ***"Patterns of Penetration to Democratic Systems from Authoritarian Regimes: comparative analysis of local representation in Lithuania, Latvia, and Taiwan",** Shiau-Chi Shen (Soochow University, Taiwan), Jurga Bučaitė-Vilkė (Vytautas Magnus University, Lithuania), Ina Druviete & Iveta Reinholde (University of Latvia, Latvia).

4.5. *"Exploring the Organellar Homeostasis in Senescent Yeast Model: Mechanisms and Implications for Geriatric Health",** Chuang-Rung Chang (Institute of Biotechnology, National Tsing Hua University Taiwan), Rimantas Daugelavičius (Research Institute of Natural and Technological Sciences, Vytautas Magnus University, Lithuania), Alexander Rapoport (Institute of Microbiology and Biotechnology, University of Latvia, Latvia).

4.6. *"Biopolymer based green thermoplastic foams with improved biodegradability for sustainable material technologies",** Sku-Kai Yeh (National Taiwan University of Science and Technology, Taiwan), Ramunė Rutkaitė (Kaunas University of Technology, Lithuania), Remo Merijs-Meri (Riga Technical University, Latvia).

4.7. *"Bio-based Polymer NanoPhotonics for Sensors",** Yeo-Wan Chiang (Department of Materials and Optoelectronic Science, National Sun Yat-sen University, Taiwan), Ričardas Makuška (Vilnius University, Lithuania), Sergejs Gaidukovs (Institute of Chemistry and Chemical Technologies, Riga Technical University, Latvia).

4.8. *"Development of Advanced NIR-OLED for 3D Sensing Applications",** Chih-Hao Chang (Department of Electrical Engineering, Taiwan), Gintarė Kručaitė (Kaunas University of Tecnology, Lithuania), Kaspars Traskovskis (Riga Technical University, Latvia).

5. After a short presentation on the 27 eligible applications submitted from the three countries for Joint Research Projects during 2026-2028, the three Parties exchanged information on the evaluation procedures and criteria that were applied to evaluate the quality of the projects on national level.

6. According to the score table with unification into maximum of 15, considering the better scored projects as well as the balance of research fields, the Committee reached the consensus that the following four new projects were approved for implementation starting from 2026:
   6.1. **"PFAS-free electromechanically responsive materials based on metal-organic-frameworks and electrospun polymer nanofibers",** Fa-Kuen Shieh (National Central University, Taiwan), Darya Meisak (Vilnius University, Lithuania), Anna Šutka (Riga Technical University, Latvia).
   6.2. **"AI-integrated Triboelectric Nanosensor for Rapid and Label-Free Detection of C-Reactive Protein",** Zong-Hong Lin (National Taiwan University, Taiwan), Ieva Plikusienė (Vilnius University, Lithuania), Linards Lapčinskis (Riga Technical University, Latvia).
   6.3. **"Data-Driven Conservation of Botrychium simplex: Integrating Genomics, Stable Isotopes and Habitat Modeling for Species Restoration",** Li-Yaung Kuo (National Tsing Hua University, Taiwan), Radvilė Rimgailė-Voicik (Vilnius University, Lithuania), Liene Auniņa (University of Latvia, Latvia).
   6.4. **"From Monitoring to Action: A Longitudinal and Cross-Cultural Approach to Athletes' Psychological Adaptation Throughout the Sports Season",** Lung-Hung Chen (National College of Physical Education and Sports, Taiwan), Brigita Miežienė (Lithuanian Sports University, Lithuania), Katrīna Volgemute (Riga Stradins University, Latvia).

7. The 2025 Call results will be published on the **19th of November 2025.**

8. The Call for Proposals of 2026 shall be launched on **the 2nd of February 2026.** The deadline for project proposal submission in **2026 will be April 28th.** The Parties agreed to exchange information on the results of project eligibility check by the **20th of May 2026,** and the scientific evaluation results shall be exchanged by the **15th of September 2026.**

9. Three presentations of the latest science and technology overview were given respectively by the representatives of the 3 delegations:
   9.1. NSTC (Taiwan): "10 New AI Infrastructure Initiatives" presented by Prof. Wang-Long Li.
   9.2. MoESS (Lithuania): "R&D policies in Lithuania" presented by Dr. Laima Taparauskienė.
   9.3. MoES (Latvia): "Science and Technology Policy in Latvia" presented by Ms. Baiba Švāne-Upmale.

10. The next Steering Committee meeting is expected to be held in Vilnius in **October 2026.** The date will be agreed due course.

Signatures of the Steering Committee Members:

Prof. Bing-Yu Chen

Ms. Lauma Sīka

Dr. Laima Taparauskienė

Prof. Wang-Long Li

Ms. Baiba Švāne-Upmale

Prof. habil. Dr. Limas Kupčinskas

Prof. Shun-Fen Tzeng

Dr. Maija Bundule

Ms. Kornelija Bacvinkienė