



**Protocol of the 20th Meeting (video conference format)
of the Steering Committee of Mutual Funds for Scientific Cooperation
between Latvia, Lithuania and Taiwan**

Date & Time: November 16, 2021; Tuesday
14.30 p.m. – 18.00 p.m. (Taipei time)
07.30 a.m. – 11.00 a.m. (Bonn time)
08.30 a.m. – 12.00 p.m. (Vilnius/Riga time)

Venue: Shangri-La Far Eastern Hotel, Taipei, Taiwan

Participants: delegations from
Ministry of Science and Technology, Taiwan (MOST) and Research teams
Ministry of Education and Science, Latvia (MoES);
Ministry of Education, Science and Sport, Lithuania (MESS)

Steering Committee members:

Taiwan: Mr. Kuang-Hung(James) Lin, Mr. Eric Huang, Prof. Chih-Peng Li, Prof. Hong-Chen Chen, Prof. Ming-Jen Lin, Dr. Suang-Jing Pong;

Latvia: Dr. Jānis Paiders, Dr. Linda Vecbiškēna, Dr. Līva Griņēviča;

Lithuania: Dr. Laima Taparauskienė, Prof. Limas Kupčinskas, Mrs. Aušra Gribauskienė, Mrs. Kornelija Bacvinkienė, Mrs. Rūta Jacinavičienė;

Others participants: Prof. I-Jong Wang (TW), Associate Prof. Yuan-Pin Lin (TW), Associate Prof. Yu-Chiang Chao (TW), Prof. Jwo-Huei Jou (TW), Ms. Yu-Chen Huang (TW), Mr. Richard Huang(TW), Ms. Peiyu Lee (TW), Dr. Hui-Chuan Cheng (TW), Dr. Wen-Chang Hsu (TW), Dr. Chu-Chun Kang (TW), Ms. Chui-Yi Kuo (TW), Ms. Hui-Chen Lin (TW).

1. The meeting began with welcome words from Mr. Kuang-Hung(James) Lin, Secretary General of Taiwan MOST, and the introduction of the Taiwanese delegation. Mr. Eric

Huang, Representative of Taipei Mission in the Republic of Latvia, and Mr. Richard Huang, Assistant Director-General of Taiwan MOFA were invited to remark in the beginning session. Dr. Jānis Paiders and Dr. Laima Taparauskienė also gave their opening remarks and the introduction of the Latvian and Lithuanian delegations, respectively, as co-chairpersons.

2. Presentations on the 3rd year (2019-2021) projects were made by the PIs from Taiwan of the projects. Steering Committee (hereafter – Committee) members asked questions to Principal Investigators, listened to their answers, commented on the results of joint research projects and exchanged their opinions.

3. It was concluded that the following four (4) projects (2019-2021) were completed successfully:

3.1. **“Novel biomarkers of diabetic retinopathy: epigenetic modifications of genes of ubiquitine-proteasome system, telomere length and proteasome concentration”**, Prof. I-Jong Wang(王一中)(National Taiwan University Hospital, Taiwan), Dr. Rasa Verkauskiene (Lithuanian University of Health Sciences Hospital Kauno Klinikos, Lithuania), Dr. Jelizaveta Sokolovska (University of Latvia, Latvia);

3.2. **“Brain-Computer Music Interfacing for Embodied Musical Interaction ”**, Associate Prof. Yuan-Pin Lin(林遠彬), (National Sun Yat-Sen University, Taiwan), Prof. Inga Griškova-Bulanova, (Vilnius University, Lithuania), Prof. Valdis Bernhofs, (Jāzeps Vītols Latvian Academy of Music, Latvia);

3.3. **“Polymeric Emitters with Controllable Thermally Activated Delayed Fluorescence for Solution-processable OLEDs ”**, Associate Prof. Yu-Chiang Chao(趙宇強), (National Taiwan Normal University, Taiwan), Researcher Dmytro Volyniuk (Kaunas University of Technology, Lithuania), Dr. Martins Rutkis (University of Latvia, Latvia);

3.4 **“Novel TADF materials and device architectures to enhance the performance of OLED”**, Jwo-Huei Jou(周卓輝) (National Tsing Hua University, Taiwan), Prof. Saulius Grigalevicius (Kaunas University of Technology, Lithuania), Dr. Aivars Vembris (University of Latvia, Latvia).

4. Taking into account the reports on the ongoing projects the Committee decided to continue financing of the following eight (8) projects (four (4) second year projects (2020-2022)** and four (4) first year projects (2021-2023)*) from January 1, 2022 to December 31, 2022:

****4.1. “Comparative study of vitamin D and its receptor gene polymorphism in Lithuanian, Latvian, and Taiwanese children and adults with atopic dermatitis and asthma ”**, Prof. Jiu-Yao Wang(王志堯)(China Medical University, Taiwan), Prof. Brigita Sitkauskiene, (Lithuanian University of Health Sciences, Lithuania), Prof. Nikolajs Sjakste (UL Institute of Biology, Latvia);

****4.2. “ Investigation and optimization of cutting-edge lead-free PMUT platform:**

from materials to devices”, Assistant Prof. Chih-Hsien Huang(黃致憲)(National Chen Kung University, Taiwan), Associate Prof. Šarūnas Svirskas (Vilnius University, Lithuania), Senior Researcher Andris Sternberg, (Latvia University, Latvia);

****4.3. “Development of Lead Inhibitor of Carbonic Anhydrase IX as Anticancer Drug”**, Prof. Wen-Yih Chen(陳文逸)(National Central University, Taiwan), Prof. Daumantas Matulis (Vilnius University, Lithuania), Prof. Kirill Shubin (Latvian Institute of Organic Synthesis, Latvia);

****4.4. “Up-to-date Information Systems in Urban Regeneration”**, Prof. Chih-Ming Shih(施植明)(National Taiwan University of Science and Technology, Taiwan), Prof. Kęstutis Zaleckis (Kaunas University of Technology, Lithuania), Prof. Sandra Treija (Riga Technical University, Lithuania);

***4.5. “Flow-Through System Based Immunoanalytical Devices for the Diagnosis of Viral-Infections”**, Prof. Chien-Fu Chen(陳建甫)(National Taiwan University, Taiwan) Arūnas Ramanavičius (Vilnius University, Lithuania), Roman Viter, (University of Latvia, Latvia);

***4.6. “Innovative Catalysis for Sustainable Energy (ICatSE)”**, Associate Prof. Yu-Chuan Lin(林裕川)(National Cheng-Kung University, Taiwan), Prof. Eugenijus Norkus (Center for Physical Sciences and Technology, Lithuania), Dr. Galina Dobeles (Latvian State Institute of Wood Chemistry, Latvia);

***4.7. “Environmentally friendly synthesis of metal-organic frameworks for enzyme encapsulation and energy harvesting”**, Prof. Fa-Kuen Shieh(謝發坤)(National Central University), Dr. Martynas Kinka (Vilnius University, Lithuania), Prof. Andris Šutka (Riga Technical University, Latvia);

***4.8. “Development of microrobot based on visual recognition and machine learning for manipulation of individual living cells”**, Associate Prof. Po Ting Lin(林柏廷)(National Taiwan University of Science and Technology, Taiwan), Prof. Vytautas Bučinskas, (Vilnius Gediminas Technical University, Lithuania), Dr. Modris Greitans (Institute of Electronics and Computer Science, Latvia).

5. For the project **“School-aged Children’s Internet Use in Relation to Socioemotional Development and Parenting Practices in Latvia, Lithuania and Taiwan: A Longitudinal Study”**(participants: Dr. Sandra B. Sebre (University of Latvia, Latvia), Assoc. prof. Jennifer Chun-Li Wu (National Taipei University of Education, Taiwan), Dr. Roma Jusienė (Vilnius University, Lithuania)) taking into account the constraints of the COVID 19 pandemic and in order to achieve the project objectives Parties agreed to support the request of the project participants to extend the project implementation period or the deadline for submission of project reports in accordance with national regulations no later than the end of 2021. The project is completed successfully.
6. After a short presentation on the applications submitted from three countries for Joint Research Projects for 2022-2024, the three Parties exchanged information on the evaluation procedures that were applied to evaluate the quality of the projects on

national level. A total of 26 project applications have been received for 2022-2024, and 23 of them have been preliminarily assessed as qualified applications and had been submitted for further review by three Parties respectively.

7. Among the top 5 high-score projects in the scoring table, which are all unanimously recommended by the three Parties, the Committee, with the consideration of the rankings as well as the balance of research fields, reached the consensus that the following four (4) new projects were approved for implementation in 2022-2024:

- 7.1. "Coherent Optical Control of Atomic Systems", Wen-Te Liao (National Central University, Taiwan), Gediminas Juzeliūnas (Vilnius University, Lithuania), Marcis Auzinsh (University of Latvia, Latvia);

- 7.2. "Molecular Electronics in functionalized Purines: fundamental Study and applications (MEPS)", Huan-Tsung Chang (National Taiwan University, Taiwan), Saulius Juršėnas (Vilnius University, Lithuania), Māris Turks (Riga Technical University, Latvia);

- 7.3. "Synthesis and study of deep-blue TTF fluorescent emitters to exceed theoretical OLED external quantum efficiency reaching 15%", Tien-Lung Chiu (Yuan Ze University, Taiwan), Audrius Bučinskas (Kaunas University of Technology, Lithuania), Pavel Arsenyan (Latvian Institute of Organic Synthesis, Latvia);

- 7.4. "Factors and Actors Contributing to the Willingness to Defend One's Own Country: the Case of Latvia, Lithuania and Taiwan", Nick Lin (Academia Sinica, Taiwan), Ainē Ramonaitė (Vilnius University, Lithuania), Māris Andžāns (Rīga Stradiņš University, Latvia).

8. The Call results will be announced on 3rd December 2021.

9. During the briefing session, Dr. Suang-Jing Pong, Director of Science and Technology Division of the Representative Office in Germany gave a presentation on the perspective of "New R&D Policies in Taiwan", that Taiwan will develop Science and Technology based on the six core strategical industries proposed by President. Hence, Taiwan MOST has enacted Space Development Act and initiated Semiconductor Industry Graduate School Programs to enhance the key infrastructure of the space and semiconductor industry.

10. Dr. Jānis Paiders, Deputy Director for Science of the Department for Higher Education, Research and Innovation, Ministry of Education and Science (MoES), characterized the research and development system in Latvia, highlighted the National Innovation Strategy for Smart Specialization, its priorities and specialization areas. He presented the Ministry's future intentions for the improvement of the science and higher education system, which are related to the change of the higher education governance model, the reform of academic career model and development of a new doctoral education system. He presented the key facts of research and higher education in Latvia and emphasized the importance of international cooperation.

11. Dr. Laima Taparauskienė, Director of Higher Education, Science and Technologies Department of the Ministry of Education, Science and Sport of Lithuania presented the current situation of research and innovation system in Lithuania, highlighted the main goals of Lithuanian Science & Research policy, objectives of the main strategic planning documents for 2030.
12. The three Parties unanimously agreed to change funding currency from the US dollar to the Euro for new approved joint research projects and maintain the same amount, starting from 1st January 2023.
13. The three Parties unanimously agreed to encourage the joint research on laser and biomedical areas from now on.
14. The Call for proposals in 2022 shall be launched on 15th February 2022. The deadline for project proposal submission will be on 2nd May 2022.
15. The Parties agreed to exchange information on the results of project eligibility check until 17th May 2022.
16. The scientific evaluation results shall be exchanged before the end of September 2022.
17. The next Committee meeting is foreseen to take place in Latvia, in October/November 2022.

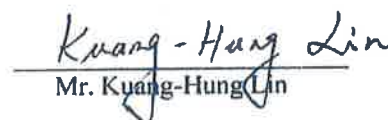
Signature of the Steering Committee Members:



Dr. Laima Taparauskienė



Dr. Jānis Paiders



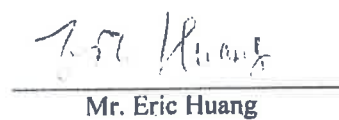
Mr. Kuang-Hung Lin



Prof. Linas Kupčinskas



Dr. Linda Vecbiškēna



Mr. Eric Huang



Mrs. Aušra Gribauskienė



Dr. Līva Griņēviča



Dr. Suang-Jing Pong