



Protocol of the 19th Meeting (video conference format) of the Steering Committee of Mutual Funds for Scientific Cooperation between Latvia, Lithuania and Taiwan

Date & Time: November 17, 2020; Tuesday

9.00 a.m. ~ 13.00 p.m. (Vilnius/Riga time),

8.00 a.m. ~ 12 00 p.m. (Bonn time),

15 00 p.m. ~ 19 00 p.m. (Taipei time)

Venue: Vilnius, Ministry of Education, Science and Sport of the Republic of Lithuania

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

Steering Committee members:

Latvia: Dr. Dmitrijs Stepanovs, Dr. Maija Bundule, Dr. Lana Frančeska Dreimane, Mr. Jānis Paiders, Dr. Linda Vecbiškēna;

Taiwan: Prof. Chih-Peng CHU, Ms. Ching KUO, Ms. Shou-Ling CHEN, Ms. Hwey-Ying LEE, Prof. Yian TAI;

Lithuania: Dr. Albertas Žalys, Prof. Limas Kupčinskas, Dr. Vilma Popovienė, Mrs. Kornelija Bacvinkienė, Mrs. Rūta Jacinavičienė;

Others participants: Prof. Valdemaras Razumas (LT), Prof. Minn-Tsong LIN (TW), Prof. Ming-Jen LIN (TW), Mr. Andy CHIN (TW), Mr. Derick LIU (TW), Ms. Peiyu LEE (TW), Mr. Ming-Sen LAI (TW), Dr. Roma Jusienė (LT), Dr. Sigitas Tamulevičius (LT), Dr. Eiva Bernotienė (LT), Dr. Patrik Ščajev (LT).

1. The meeting began with Prof. Valdemaras Razumas, Vice-Minister of MESS, welcome words. The welcome word was also said by Taiwan's MOST Deputy-Minister Prof. Minn-Tsong LIN and Mr. Andy Chin, Representative of Taipei Mission in the Republic of Latvia. Dr. Albertas Žalys gave his opening remarks as chair of the meeting and the introduction of

the Lithuanian delegation, Prof. Chih-Peng Chu and Mr. Jānis Paiders also gave their opening remarks and the introduction of the Taiwanese and Latvian delegations, respectively, as co-chairpersons.

2. Presentations on the 3rd year (2018-2020) projects were made by Lithuanian Principal Investigators of the projects (in ppt or another format, received in advance). Steering Committee (hereafter – Committee) members asked questions to Lithuanian 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 three (3) projects (2018-2020) were completed successfully:

3.1. **“2D structures of noble metal nanoparticles for biosensor applications”**, Dr. Donāts Erts (University of Latvia, Latvia), Prof. Yesong Gu (Tunghai University, Taiwan), Dr. Sigitas Tamulevičius (Kaunas University of Technology, Lithuania);

3.2. **“Development of injectable biomimetic hydrogel system for engineering of cartilage tissue”**, Dr. Arkādijs Soboļevs (Latvian Institute of Organic Synthesis, Latvia), Prof. Wei-Bor Tsai (National Taiwan University, Taiwan), Dr. Eiva Bernotiene (State Research Institute Centre for Innovative Medicine, Lithuania);

3.3. **“GeSn-based photo sensor-from basic research to applications”**, Dr. Arturs Medvids (Riga Technical University, Latvia), Prof. Hung Hsiang Cheng (National Taiwan University, Taiwan), Dr. Patrik Ščajev (Vilnius University, Lithuania).

4. 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 by the end of 2021.

5. 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 (2019-2021)** and four (4) first year projects (2020-2022)*) from January 1, 2021 to December 31, 2021:

****5.1. “Novel TADF materials and device architectures to enhance the performance of OLED”**, Dr. Aivars Vembris (Institute of Solid State Physics, Latvia), Prof. Jwo-Huei Jou (National Tsing Hua University, Taiwan), Dr. Saulius Grigalevičius (Kaunas University of Technology, Lithuania);

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

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

****5.4. “Polymeric Emitters with Controllable Thermally Activated Delayed Fluorescence for Solution-processable OLEDs” (PolyTADFer)**, Dr. Mārtiņš Rutkis (Institute of Solid State Physics, Latvia), Prof. Yu-Chiang Chao (National Taiwan Normal University, Taiwan), Dr. Dmytro Volyniuk (Kaunas University of Technology, Lithuania);

***5.5. “Investigation and optimization of cutting-edge lead-free PMUT platform: from materials to devices”**, Dr. Andris Šternbergs (Institute of Solid State Synthesis, Latvia), Dr. Chih-Hsien Huang (National Cheng Kung University, Taiwan), Dr. Šarūnas Svirskas (Vilnius University, Lithuania);

***5.6. “Development of Lead Inhibitor of Carbonic Anhydrase IX as Anticancer Drug”**, Dr. Kirills Šubins (Latvian Institute of Organic Synthesis, Latvia), Dr. Wen-Yih Chen (National Central University, Taiwan), Dr. Daumantas Matulis (Vilnius University, Lithuania);

***5.7. “Comparative study of vitamin D and its receptor gene polymorphism in Lithuanian, Latvian, and Taiwanese children and adults with atopic dermatitis and asthma”**, Dr. Nikolajs Sjakste (University of Latvia, Latvia), Dr. Jiu-Yao Wang (National Cheng Kung University, Taiwan), Dr. Brigita Sitkauskiene (Lithuanian University of Health Sciences, Lithuania);

***5.8. “Up-to-date Information Systems in Urban Regeneration” (UISUR)”**, Dr. Sandra Treija (Riga Technical University, Latvia), Dr. Chin-Ming Shih (National Taiwan University of Science and Technology, Taiwan), Dr. Kęstutis Zaleckis (Kaunas University of Technology, Lithuania).

6. After a short presentation on the applications submitted from three countries for Joint Research Projects for 2021-2023, the three Parties exchanged information on the evaluation procedures and criteria that were applied to evaluate the quality of the projects on national level. The Parties concluded that the eligibility of 14 projects was assessed considering the national rules and conditions of each Party.

7. 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 (4) new projects were approved for implementation in 2021-2023:

7.1. “Flow-Through System Based Immunoanalytical Devices for the Diagnosis of Viral-Infections”, Roman Viter (University of Latvia, Latvia), Chien-Fu Chen (Institute of Applied Mechanics, National Taiwan University, Taiwan), Arūnas Ramanavičius (Department of Physical Chemistry, Faculty of Chemistry and Geosciences, Vilnius University, Lithuania);

7.2. **“Innovative Catalysis for Sustainable Energy (ICatSE)”**, Gaļina Dobeļe (Latvian State Institute of Wood Chemistry, Latvia), Yu-Chuan Lin (Department of Chemical Engineering, National Cheng Kung University, Taiwan), Eugenijus Norkus (State research institute Center for Physical Sciences and Technology Department of Catalysis, Lithuania);

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

7.4. **“Development of microrobot based on visual recognition and machine learning for manipulation of individual living cells”**, Modris Greitāns (Institute of Electronics and Computer Science, Latvia), Po-Ting Lin (Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan), Vytautas Bučinskis (Vilnius Gediminas Technical University, Lithuania).

8. The Call results will be announced on 3rd December 2020.

9. During the briefing session Dr. Yian TAI, Director of Science and Technology Division of the Representative Office in Germany gave a presentation on the perspective of “Taiwan 2030 - Towards a Smart Country”, that Taiwan aims to enhance the development of internet infrastructure, information security, forward-looking semiconductor infrastructure, precise medicine, and digital transformation in 2030. Hence, the goal is for Taiwan to become the key piece in global economy by building six core strategic industries, including information technology, cybersecurity, biotech and medical technology, national defense, green technology and renewable energy, as well as strategic stockpiled industries.

10. Mr. Jānis Paiders, Head of RIS3 unit of the Ministry of Education and Science 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, emphasizing the Latvia's accession to CERN.

11. Dr. Vilma Popovienė, Head of Science Division of the Ministry of Education, Science and Sport presented the current situation of research and innovation system in Lithuania, highlighted the main priorities, aims and challenges focusing on HE and research reforms, new smart specialisation strategy, mission oriented R&I policy, research funding and remaining bottlenecks.

12. During the discussion about the future development of Mutual Funds and on drafting a new Mutual Funds agreement the need to renew the outdated and 20-year-old agreement was mentioned by Latvian Party. In order to introduce in Mutual Funds new measures aimed at supporting applied research and promoting academia-industry cooperation and attract additional financial resources makes it necessary to start to work on a new agreement between

the Mutual Funds Parties. The Parties agreed to set up a joint working group for preparation of proposals for expanding and diversifying the activities of the Mutual Funds.

13. The Call for proposals in 2021 shall be launched on 15th February 2021. The deadline for project proposal submission will be on 14th May 2021.

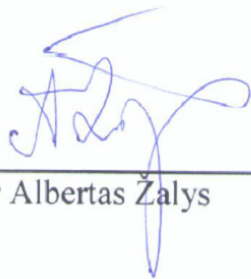
14. The Parties agreed to exchange information on the results of project eligibility check until 31st May 2021.

15. The scientific evaluation results shall be exchanged by 27th September 2021.

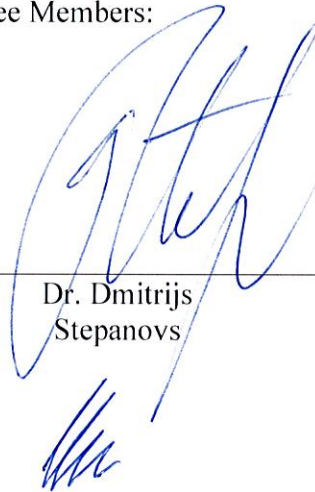
16. The next Committee meeting is foreseen to take place in Taipei, in October/November 2021.

17. In 2021 Parties will celebrate the Mutual Fund's 20th Anniversary in Taiwan.

Signature of the Steering Committee Members:



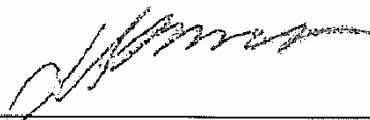
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