20th International Scientific Conference "The Vital Nature Sign"
Program

Thursday, 14th of May 2026

Hybrid conference (in-person + online participation):

Venue: Vytautas Magnus University, Faculty of Natural Sciences, Universiteto St. 10, Room 154, Akademija, Kaunas District, Lithuania or **Microsoft Teams** *Link 1: HYBRID participation*

Online-only sessions

Microsoft Teams *Link 2: ONLINE sessions*

9.00-9.30 (Time zone GMT+3) **Opening of the conference:**

Founding Organizers Prof. Dr. Reda Dzingelevičienė and Assoc. Prof. Dr. Vykintas Baublys

Vice-Rector for Research and Innovations Dr. Rolandas Urbonas (Vytautas Magnus university)

Dean of the Faculty of Natural Sciences Assoc. Prof. Dr. Jūratė Žaltauskaitė

Chairman of the conference Prof. Habil. Dr. Audrius Maruška

Oral presentations (hybrid) *Link 1: HYBRID participation*

Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation science: Development & Applications

Chairpersons: Prof. Dr. Ákos Végvári; Prof. Habil. Dr. Audrius Maruška

9.30-9.45	*Invited Speaker* **Advancing Sustainable Liquid Chromatography: Green Solvents, Method Optimization, and CoreShell Innovations** Egidijus Machtejevas *Life Science, Chemistry, Analytical Chemistry, Merck Life Science KGaA, Darmstadt, Germany*
9.45-10.00	*Invited Speaker* **Water-Soluble Synthetic Polymers (WSSPs) as Emerging Concern for the Aquatic Environment: a Preliminary Study on the Effects of Polyvinylpyrrolidone (PVP) on Animal and Plant Bioindicators** Massimo Zacchini, Valentina Iannilli, Samuele Terranegra, Francesca Lecce, Laura Passatore, Serena Carloni, Anna Wyrwicka-Drewniak, Grazyna Chwatko, Fabrizio Pietrini *National Research Council of Italy*
10.00-10.15	*Invited Speaker* **Impact of Selenium Biofortification on the Glucosinolate Profile and Secondary Metabolism of Savoy and Tuscan Cabbage** Enrica Donati, Zeineb Aturki, Giovanni D'Orazio, Lázaro-Armando Pérez-Acosta, Mercè Llugany, María-Jesús Sánchez-Martín, Danilo Corradini *National Research Council of Italy*
10.15-10.30	*Invited Speaker* **Single Cell Proteomics – Quo Vadis?** Ákos Végvári *Karolinska Institute, Sweden*
10.30-10.45	**Assessment of Heavy Metal–Related Ecological Risks of Biochar Produced from Various Biowastes at Different Pyrolysis Temperatures** Algimanta Kundrotaitė, Karolina Barčauskaitė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*

10.45-11.00 ***Coffee break***

11.00 (time zone GMT+3) Oral presentations

Parallel session (hybrid): ***Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications*** *Link 1: HYBRID participation*		***Parallel session (only online):*** ***Special Session on Climate Change and Sustainable Construction organized by the EUKI project EU-REPAIR*** *Link 2: ONLINE sessions*	
Chairpersons: Dr. Vilma Ratautaitė; Assoc. Prof. Dr. Benas G. Urbonavičius		***Chairperson: Assoc. Prof. Dr. Jūratė Žaltauskaitė***	
11.00-11.15	**Regulatory Role of Phytocannabinoids in Relation to Melanocyte Lipid Metabolism** Michał Biernacki, Iwona Jarocka-Karpowicz, Audrius Maruska, Elżbieta Skrzydlewska *Medical University of Białystok, Białystok, Poland*	**11.00-11.15**	**Energy Efficiency and Heritage Preservation on Serbia's Valuable Built Environment** Marko Mančić, Milena Rajić, Miomir Vasov *University of Nis, Serbia*
11.15-11.30	**Skin Cancer Prevention and Treatment with Natural Compounds: Is It Real?** Sinemyiz Atalay Ekiner, Agnieszka Gęgotek, Elżbieta Skrzydlewska *Medical University of Bialystok, Bialystok, Poland*	**11.15-11.30**	**Frameworks and Challenges: Insights from the EU-REPAIR Estonian National Study** Triinu Väikmeri, Triin Reidla *Estonian Academy of Arts*
11.30-11.45	**Combined Effects of Cannabigerol and 3-O-ethyl Ascorbic Acid on Oxidative Stress In UVB-irradiated Keratinocytes** Iwona Jarocka-Karpowicz, Aleksandra Kacprowska, Audrius Maruska, Elżbieta Skrzydlewska *Medical University of Bialystok, Bialystok, Poland*	**11.30-11.45**	**Sustainable repair and refurbishment in VBE in North Macedonia (EU-REPAIR project)** Suzana Kasovska Georgieva, Slavica Trajkovska, Pande Pop Antoska *IECE*
11.45-12.00	**Effect of Marine Microalgae Lipid Extract on Skin Cells in in vitro Model of Healthy Cells, As Well As Psoriatic and Melanoma Cells. A Proteomic Insight** Agnieszka Gęgotek, Michał Biernacki, Adam Wroński, Pedro Domingues, Maria Rosário Domingues, Elżbieta Skrzydlewska *Medical University of Bialystok, Bialystok, Poland*	**11.45-12.00**	**Sustainable Refurbishment of Valuable Built Environment in Germany: Gaps, Barriers, and Lessons for Practice** Milica Mügge *Fraunhofer-Institut für Bauphysik IBP, Germany*
12.00-12.15	**Calcium-Driven Enhancement of Calcein Release in Electroporated Wild Type and ANXA4 Knockout MCF7 Cells** Subitha Mathiazhagan, Baltramiejus Jakštys, Saulius Šatkauskas Vytautas Magnus university Kaunas, Lithuania	**12.00-12.15**	**Stakeholder Insights on Sustainable Refurbishment of Valuable Built Environment in Lithuania** Gintarė Sujetovienė, Renata Dagiliūtė, Jūratė Žaltauskaitė *Vytautas Magnus University*
12.15-12.30	**Rethinking Nile Red: Can Sustainable Fluorescent Dyes Enable Greener Microplastic Detection?** Dovilė Motiejauskaitė, Karolina Barčauskaitė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*		

12.30- 13.30 Lunch break

13.30 (time zone GMT+3) ***Oral Presentations (hybrid)*** *Link 1: HYBRID participation*

Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications

Chairpersons: prof. dr. Arvydas Kanopka; dr. Egidijus Machtejevas

13.30-13.45	**Comparison of Fatty Acid Composition in Animal-Derived Fats, Assess their Compliance with Dietary Recommendations** Mikas Kristupas Juodelis *Lithuanian University of Health Sciences, Kaunas, Lithuania*
13.45-14.00	**Changes in Extractable Anthocyanin Content Stability in Anthocyanin-Rich Winter Wheat (*Triticum aestivum* L.) Breeding Lines** Jurinta Voišvilo, Žilvinas Liatukas, Jurgita Cesevičienė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*
14.00-14.15	**Valorization of Sugar Beet Pulp through Fungal Fermentation: Effects of Pretreatment on Protein and Nutritional Quality** Žydrūnė Gaižauskaitė, Daiva Žadeikė *Kaunas University of Technology, Kaunas, Lithuania*
14.15-14.30	**Antimicrobial Potential of Honey-Derived Bacteria Against Clinically Relevant and Antibiotic-Resistant Pathogens: the Prominent Role of *Bacillus pumilus*** Dominika Błońska, Michał Szumski, Bogusław Buszewski *Nicolaus Copernicus University, Toruń, Poland*
14.30-14.45	**The Simplified Method for The Determination of Toxic Alkaloids from Various Parts of *Datura* L. by Use of Chromatographic and Spectroscopic Techniques** Magdalena Ligor, Monika Dworakowska, Tomasz Ligor *Nicolaus Copernicus University, Toruń, Poland*
14.45-15.00	**Phytochemical Profile of Strawberries: The Role of Phenols and Antioxidants in Determining Micromycete Prevalence Across Maturity Stages** Jūratė Staveckienė, Rūta Mickienė, Gabrielė Vasiliauskienė, Jurgita Kulaitienė *Vytautas Magnus University Agricultural Academy, Kaunas, Lithuania*
15.00-15.15	**Analysis of Berry Superfruits for Total Thiol Content by LC-UV-Based Method** Marta Gawel, Rafal Głowacki, Justyna Piechocka *University of Lodz, Lodz, Poland*

15.15-15.30 Coffee break

15.30 (time zone GMT+3) **Flash presentations I.**

	Parallel session (hybrid): ***Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications*** *Link 1: HYBRID participation*		***Parallel session (only online):*** ***Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications*** *Link 2: ONLINE sessions*
	Chairpersons: Dr. Mantas Stankevičius; MSc. Kristina Bimbiraitė-Survilienė		***Chairpersons: Prof. Dr. Giedrė Samuolienė; Assoc. Prof. Dr. Vilma Kaškonienė***
15.30	**Determination of The Antiradical Activity In Vitro of *Chaenomeles japonica* (Thunb.) Lindl. Ex Spach Fruit Extracts Using the Spectrophotometric TFPH Assay** Kornelija Kondrotaitė, Mindaugas Liaudanskas, Rima Šedbarė, Jonas Viškelis, Pranas Viškelis, Valdimaras Janulis *Lithuanian University of Health Sciences, Kaunas, Lithuania*	**15.30**	**Survival of Foodborne Gram-Positive Bacteria in Lactoferin Powder and Solution** Zuzanna M. Kołodziejska, Klaudia K. Idzik, Ewelina Sibińska, Oleksandra Pryshchepa, Paweł P. Pomostowski *Nicolaus Copernicus University, Toruń, Poland*
15.37	**Controlled Environment Agriculture for High-Value Pharmaceutical Crop in Vertical Farms** Justinas Raginskis, Akvilė Viršilė, Giedrė Samuolienė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*	**15.37**	**Varietal Effects on The Quality and Rheological, Physical Properties of Oat Milk** Ernesta Trečiokienė, Jurgita Mikašauskaitė-Tiso, Ingrida Kraujutienė *Kauno kolegija Higher Education Institution*
15.44	**Bridging Molecular Targeting and Electrochemical Sensing with Polydopamine-Based Imprinted Sensors for Tetracycline Detection** Danish Khalid, Ernestas Brazys, Vilma Ratautaitė, Arūnas Ramanavičius *Vilnius University, Vilnius, Lithuania*	**15.44**	**Synthesis, Spectroscopic Characterization, and Biological Evaluation of a Lactoferrin-Oxaliplatin Complex for Targeted Oral Delivery** Paweł Fijałkowski, Oleksandra Pryshchepa, Justyna Walczak-Skierska, Paweł Pomastowski, Katarzyna Rafińska *Nicolaus Copernicus University, Toruń, Poland*
15.51	**Characterisation of Phytochemical Diversity in *Chrysanthemum morifolium* Residual Biomass** Ieva Karpavičienė, Akvilė Viršilė, Justinas Raginskis, Giedrė Samuolienė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*	**15.51**	**The Influence of Phospholipid Profile and Fatty Acid Composition on the Physicochemical Parameters of Natural Emulsion Systems** Dominika Przybysz, Oleksandra Pryshchepa, Paweł Pomastowski *Nicolaus Copernicus University, Toruń, Poland*
15.58	**Influence of Different Processing Methods on Bee Pollen Phytochemical Composition** Gabija Stragauskytė, Mindaugas Liaudanskas, Neringa Sutkevičienė, Žvikas Vaidotas, Sonata Trumbeckaitė *Lithuanian University of Health Sciences, Kaunas, Lithuania*	**15.58**	**Formation and Characterization of Whey Protein-Anthocyanin Complexes Obtained from Black Elderberry Juice: Binding Kinetics, Structural Interactions, Antioxidant Potential and Thermal Stability** Magdalena Królikowska, Jarosław Głogowski, Wioletta Jaruga, Paweł Pomastowski, Katarzyna Rafińska *Nicolaus Copernicus University, Toruń, Poland*
16.05	**Deactivation and Magnetization of *Trichoderma harzianum* Spores for Applications in Drug Delivery** Monika Juselytė, Nicola Tiso	**16.05**	***Coriolus versicolor* Extracts Restore Macrophage Responsiveness by Reversing Endotoxin Tolerance in RAW264.7 Cells** Kacper Roszak, Tomasz Jędrzejewski, Sylwia Wrotek *Nicolaus Copernicus University, Toruń, Poland*
16.12	**The Research and Application of Medicinal (Aromatic) Plants to Solve Human Health Problems in Various Scientific Fields** Abdellah Benamar Belarbi, Ona Ragažinskienė *Vytautas Magnus University, Kaunas, Lithuania*	**16.12**	**Novel PH-Responsive Poly(2-Oxazoline) Lipid Nanocapsules with Imidazole for Enhanced Photodynamic Antitumor Activity** Solomiya Paryzhak, Tetiana Dumych, Oksana Kharchenko, Oksana Krupka *Danylo Halytsky Lviv National Medical University, Lviv, Ukraine*

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	Parallel session (hybrid): ***Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications*** *Link 1: HYBRID participation*		***Parallel session (only online):*** ***Session on Biotechnology, Bioremediation, Biochemistry, and Bioanalysis; Natural Products; Separation Science: Development & Applications*** *Link 2: ONLINE sessions*
16.20	**Feeding Pressure-Dependent Transition in Critical Translation Speed for Melt Electrowriting of Tissue Engineering Scaffolds** Laura Kairytė, Karolis Gedvilas, Raminta Rodaitė, Arminas Girlevičius, Saulius Mickevičius, Darius Milčius *Vytautas Magnus University, Kaunas, Lithuania*	**16.20**	**Poly(2-Alkyl-2-Oxazoline)-Coated Gold Nanospheres as Novel Agents for Photothermal Antitumor Therapy** Tetiana Dumych, Solomiya Paryzhak, Lea Daoud, Oksana Krupka *Danylo Halytsky Lviv National Medical University, Lviv, Ukraine*
16.27	**Nisin Variants: Evaluating the Dual-Action Potential of Bacteriocins in Antimicrobial and Oncological Applications** Gabija Žiūraitė, Vilma Kaškonienė, Rūta Mickienė, Arūnas Kazlauskas *Vytautas Magnus University, Kaunas, Lithuania*	**16.27**	**Activity of Metal and Metal Oxide Nanoparticle-Enhanced Cotton Material Against Fungi of the *Malassezia pachydermatis*** Agnė Giedraitienė, Rita Šiugždinienė, Monika Šiugždinytė, Raminta Rodaitė, Darius Milčius *Lithuanian University of Health Sciences, Kaunas, Lithuania*
16.34	**Bioactive Pigment-Integrated Fungal Bio-Composites for Sustainable Material** Simran Dhull, Audrius Maruška, Adesh Kumar, Nicola Tiso, Rūta Mickienė, Kristina Bimbiraitė-Survilienė *Lovely Professional University, Punjab, India/ Vytautas Magnus university, Kaunas, Lithuania*	**16.34**	**Evaluation of Phenolic Compound Content and Antioxidant Activity of *Viburnum opulus* L. 'Leningradskaja Otbornaja' Leaves During Vegetation** Saida Palenčiūtė, Lina Raudonė, Laima Česonienė *Lithuanian University of Health Sciences, Kaunas, Lithuania*
16.41	**Potential of *Aegopodium podagraria* L. in Enhancing Antibiotic Efficacy Against Selected Bacterial Strains** Ugnė Gabrytė, Rūta Mickienė, Audrius Sigitas Maruška *Vytautas Magnus University, Kaunas, Lithuania*	**16.41**	**Effect of Gellan Gum Concentration on the Mechanical Properties of Edible Gels with Linden Honey and Chaga Powder** Ernesta Zaksaitė, Inga Matulytė, Mindaugas Liaudanskas, Sonata Trumbeckaitė *Lithuanian University of Health Science, Kaunas, Lithuania*
16.48	**Effect of Lactoferrin Powder and Solution on the Growth of Food-Associated Gram-negative Bacteria** Klaudia K. Idzik, Zuzanna M. Kołodziejska, Ewelina Sibińska, Oleksandra Pryshchepa, Paweł Pomostowski *Nicolaus Copernicus University, Toruń, Poland*	**16.48**	**Physiological and Biochemical Responses of *Betula pendula* to Heavy Metal Stress** Emilija Mukaitė, Dorotėja Vaitiekūnaitė, Greta Striganavičiūtė, Milana Šilanskienė, Vaida Sirgedaitė-Polikaitienė *Vilnius University, Lithuania*
16.55	**Supersaturated Complex of Bovine Lactoferrin – Does Its Therapeutic Potential Align with Its Safety Profile** Michał Maciejewski, Oleksandra Pryshchepa, Paweł Pomastowski *Nicolaus Copernicus University, Toruń, Poland*	**16.55**	**Practices of Antibiotic Use and Detection of Residues in Chicken Meat: Analysis of the Poultry Sector in Haut Katanga (DRC)** Bady Mulumba Theddy, Mwewa Kapopo Christelle *University of Liège, Belgium*
17.02	**Study The Effect of *Aspergillus niger* on Pinus Seeds** Loay Mohammed Ali Mohammed Saeed Aoun, Jonas Žiauka *Vytautas Magnus University, Kaunas, Lithuania*	**17.02**	**Investigation of Sugar Beet Pulp Utilization for Bioethanol Production** Daiva Žadeikė, Žydrūnė Gaižauskaitė, Radvilė Bagdonavičiūtė *Kaunas University of Technology, Kaunas, Lithuania*
17.09	**Effect of Different Time Intervals of Ultrasound-Assisted Extraction on Polyphenolic Content of Dandelion Leaves** Taisa Vashkevich, Vilma Kaškonienė, Audrius Sigitas Maruška *Vytautas Magnus University, Kaunas, Lithuania*	**17.09**	**Effects of Natural and Chemical Additives on Alcohol Profile, Volatile Compounds, and Antioxidant Activity in Red Wine** Liepa Mockutė, Vilma Kaškonienė *Vytautas Magnus university, Kaunas, Lithuania*
17.14	**Evaluation of the Hydrodynamic Properties of Synthetic Monolithic Sorbents** Emilė Maneiko, Kristina Bimbiraitė-Survilienė *Vytautas Magnus university, Kaunas, Lithuania*	**17.14**	**Evaluation of Bioethanol Production from Coffee Spent Grounds Using Solid-State and Submerged Fermentation Processes** Sunil Kumar, Vilma Kaškonienė *Vytautas Magnus university, Kaunas, Lithuania*
17.20	***Discussions, Acknowledgements and Closing of the Session (hybrid)*** *Link 1: HYBRID participation*		

Organizers: Lithuanian Academy of Sciences; Vytautas Magnus University, Faculty of Natural Sciences; NoSSS Nordic Separation Science Society
Sponsors: FNS Faculty of Natural Sciences; VMU, Instrumental Analysis Open Access Center; BIOTECHA; analyticalsolutions; ARMGATE

20th International Scientific Conference "The Vital Nature Sign"
Program

Friday, 15th of May 2026

Hybrid conference (in-person + online participation):

Venue: Vytautas Magnus University, Faculty of Natural Sciences, Universiteto St. 10, Room 154, Akademija, Kaunas District, Lithuania or **Microsoft Teams** *Link 1: HYBRID participation*

Online-only sessions

Microsoft Teams (Link 2) – *Link 2: ONLINE sessions*

Oral presentations *(hybrid)* *Link 1: HYBRID participation*

Session on Energy & Environment; Pharmaceutical and Chemical Technology; Synthetic, Medicinal and Pharmaceutical Chemistry; Biophysics and Biomedicine; Applied Physics

Chairpersons: Assoc. Prof. Dr. Nicola Tiso; Prof. Dr. Massimo Zacchini

8.45-9.00 (time zone GMT+3)	*Invited Speaker* **From Chemical Signatures to Life Detection: Analytical Instrumentation for Exploration** Tomas Drevinskas *NASA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, United States*
9.00-9.15	**Control of the IVF Embryo Microenvironment: Temperature, pH, Gas Conditions, and Time-Lapse Monitoring as a Scientific Challenge** Domantas Armonavičius *Esco Medical Technology, Kaunas, Lithuania*
9.15-9.30	*Invited Speaker* **Total Synthesis of Rhynchone A - Novel Lead for Male Contraceptives** Andrei V. Malkov, Jens Münchow, Louisa Temme *Loughborough University, UK*
9.30-9.45	**Microplastics in Organic Matter-Rich Soil Amendments: A Research Overview** Karolina Barčauskaitė, Dovilė Motiejauskaitė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*
9.45-10.00	**Controlled Environment Cultivation: An Appropriate Technique for Medicinal and Aromatic Plants Growing** Nasim Safari, Akvilė Viršilė *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*
10.00-10.15	**Polyploidy-Driven Modulation of Drought Stress Responses in *Hemerocallis* L.: Insights from Integrated Molecular and Physiological Analyses** Edvinas Misiukevičius, Ingrida Mažeikienė, Birutė Frercks, Vidmantas Stanys *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*
10.15-10.30	**Temporal Shifts in The Plasma Lipidome During the Subacute Phase of Recovery Following Myocardial Infarction** Wojciech Łuczaj, Marcin Myszko, Elżbieta Skrzydlewska, *Medical University of Białystok, Białystok, Poland*

10.30-10.45 ***Coffee break***

Session on Energy & Environment; Pharmaceutical and Chemical Technology; Synthetic, Medicinal and Pharmaceutical Chemistry; Biophysics and Biomedicine; Applied Physics

Chairpersons: Dr. Karolina Barčauskaitė; Assoc. Prof. Dr. Vilma Kaškonienė

Link 1: HYBRID participation

10.45-11.00	**The Imbalance of Selected Ions Concentration as a Mediator of Cell Death** Sylwia Terpilowska *Jan Kochanowski University, Kielce, Poland*
11.00-11.15	**Nettle (*Utrica dioica* L.) Slurry as a Plant Biostimulant: Interactions with Mineral Nitrogen and Effects on Growth Traits and Soil Dehydrogenase Activity in Spring Wheat** Sidra Tul Muntaha, Vita Tilvikienė, Modupe Olufemi Doyeni *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*

Organizers: Lithuanian Academy of Sciences, Vytautas Magnus University Faculty of Natural Sciences, NoSSS Nordic Separation Science Society
Sponsors: FNS Faculty of Natural Sciences, VMU Instrumental Analysis Open Access Center, BIOTECHA, analyticalsolutions, ARMGATE

11.15-11.30 (time zone GMT+3)	**Differences in the Meconium Microbiome Profile in Very Low-Birth Weight Preterm Newborns and Full-term Newborns** Milena Mirow, Darja Nikitina, Jurgita Gailiene, Vilma Ivanauskienė, Vaida Aleksejūnė, Ugnė Krunkaitytė, Ilona Aldakauskienė, Aušra Lukošiūtė-Urbonienė, Inga Dekerytė, Jurgita Skieceviciene, Rasa Tamelienė, Juozas Kupcinskas *Lithuanian University of Health Sciences, Kaunas, Lithuania*
11.30-11.45	**Development and Modeling of Nutraceutical Compositions Based on Technologically Functionalized Pea Proteins and Spirulina (*Arthrospira platensis*)** Emilis Radvila, Dovile Klupsaite, Ernestas Mockus, Vytaute Starkute, Elena Bartkiene *Lithuanian University of Health Sciences, Kaunas, Lithuania*
11.45-12.00	**Development of Protein-Enriched Crackers Incorporating Milk Protein Concentrate and Fermented Oat Milk By-Products** Nagoori Khadar Basha, Jūratė Malinauskienė, Loreta Šernienė *Lithuanian University of Health Sciences, Kaunas, Lithuania*
12.00-12.15	**Quality of Hunted Boar and Beaver Meat Applying Biological Treatment with Different Lactic Acid Bacteria** Vilija Buckiunienė, Austeja Gruzdaite, Vita Lele, Jolita Sarkauskiene, Dovile Klupsaite, Simas Grauzys, Elena Bartkiene *Lithuanian University of Health Sciences, Kaunas, Lithuania*
12.15-12.30	**Environmental Bioenergy Potential and Biomass Productivity of Hybrid Populus Clones under Northern European Conditions** Yanal Alkuddsi, Marius Aleinikovas, Benas Silinskas, Mohamad Alahmad, Abdul Monim Abdul Hafe, Ibrahim Alghoraibi, Mindaugas Skema, Lina Beniusiene, Valda Gudynaite, Yaser Thalji, Saeed Saado *Lithuanian Research Centre for Agriculture and Forestry, Kaunas, Lithuania*

12.30-13.30 ***Lunch break***

Oral presentations *(hybrid)* *Link 1: HYBRID participation*
Session on Energy & Environment; Pharmaceutical and Chemical Technology; Synthetic, Medicinal and Pharmaceutical Chemistry; Biophysics and Biomedicine; Applied Physics

Chairpersons: Dr. Baltramiejus Jakštys; Dr. Yanal Ahmad Alkuddsi

13.30-13.45	**Intracellular Macromolecule Loss as a Key Determinant of Cell Fate Following Irreversible Electroporation in CHO-K1 Cells** Anusiya Panneerselvam, Baltramiejus Jakštys, Saulius Šatkauskas *Vytautas Magnus university, Kaunas, Lithuania*
13.45-14.00	**Applying RSM and ANFIS Modeling with Machine Learning Algorithm Optimization Techniques to Extract Phenolic Compounds from the Olive Leaves of Chemlal Algerian Variety with Natural Deep Eutectic Solvent** Fatiha Brahmi, Lokesh Kumar Ramasamy, Selvaraj Kunjiappan, Hayate Guemghar-Haddadi, Kahina Djaoud, Lila Boulekbache-Makhlouf, Federica Blando *University of Bejaia, Algeria*
14.00-14.15	**Chronic Kidney Disease Early Prediction Using Machine Learning** Sarah Alnokta, Yanal Alkuddsi *Syrian Virtual University, Damascus, Syria*
14.15-14.30	**The Role of Bioinformatics in Determining the Genes Responsible for Certain Hereditary Dental Diseases** Karla Majed Ziade and Yanal Ahmad Alkuddsi *Syrian Virtual University, Damascus, Syria*
14.30-14.45	**Phylogenetic Analysis of *Leishmania infantum* Discovered in Syrian Coastal Province Using Bioinformatic Tools** Moayad Alresli, Yanal Alkuddsi, Chadi Soukkarieh, Ibrahim Alghoraibi, Abdul Monim Abdul Hafez, Ahmad Ismael and Issa Yusuf *Syrian Virtual University, Damascus, Syria*
14.45-15.00	**Prediction of Brain Stroke Using Machine Learning algorithms** Hala Abdullah Aboud and Yanal Ahmad Alkuddsi *Syrian Virtual University, Damascus, Syria*
15.00-15.15	**In vitro Cytotoxicity of Cellulose Nanocrystals Derived from *Greenwayodendron suaveolens*** Abolaji Abiodun Mafolasire, Raminta Rodaitė, Laura Kairytė, Karolis Gedvilas, Babatunde Oluwole Ogunsile *University of Ibadan, Ibadan, Nigeria.*

15.15-15.30 **Coffee break**

15.30 (time zone GMT+3) Flash presentations II.

Session on Energy & Environment; Pharmaceutical and Chemical Technology; Synthetic, Medicinal and Pharmaceutical Chemistry; Biophysics and Biomedicine; Applied Physics

	Parallel session (hybrid): *Link 1: HYBRID participation*		***Parallel session (only online):*** *Link 2: ONLINE sessions*
	Chairpersons: Dr. Paulius Ruzgys; Dr. Mantas Stankevičius		***Chairpersons: Assoc. Prof. Dr. Simona Sutkuvienė; Dr. Rūta Mickienė***
15.30	**From Extraction to Anticancer Potential: Phytochemical Profiling and Bioactivity Evaluation of Ellagic Acid-Rich Medicinal Plants** Domantas Armonavičius, Audrius Maruška, Kristina Bimbiraitė-Survilienė, Mantas Stankevičius, Baltramiejus Jakštys, Elžbieta Skrzydlewska, Ona Ragažinskienė, Vilma Kaškonienė, Saulius Šatkauskas, Arvydas Kanopka *Vytautas Magnus University, Kaunas, Lithuania*	**15.30**	**Efficient Red Phosphorescent OLEDs Enabled by Benzophenone–Carbazole Co-Host Materials** Gintare Krucaite, Dovydas Blazevicius, Raminta Beresneviciute, Saulius Grigalevicius, Yi-Qi Chao, Zih-Ru He, Kuan-Yu Su, Chih-Hao Chang *Kaunas University of Technology, Kaunas, Lithuania*
15.37	**Formulation and Biopharmaceutical Evaluation of Oleogels with Naftifine HCl** Faisal Habib Patel, Indrė Šveikauskaitė-Radučienė *Lithuanian University of Health Sciences, Kaunas Lithuania*	**15.37**	**Novel 3-Ethylcarbazole-Based Host Materials for High-Efficiency OLEDs** Saulius Grigalevicius, Dovydas Blazevicius, Mantas Kirstukas, Raminta Beresneviciute, Chih-Hung Ko, Cai-Fan Lo, Chih-Hao Chang *Kaunas University of Technology, Kaunas, Lithuania*
15.44	**Environmental and Physical Determinants of Climate-Induced Vulnerability: Situational Perspective of Kamalamai Municipality, Sindhuli, Nepal** Goma Sigdel, Chandra Lal Pandey, Reshma Shrestha, Vytis Cubrinskas, Pranjal Basnet, Karuna Kafle *Kathmandu University, Kathmandu, Nepal*	**15.44**	**Non-Destructive Detection of *Fusarium oxysporum* Using Infrared Thermography** Benas G. Urbonavičius, Titas Dobilevičius *Kaunas University of Technology, Kaunas, Lithuania*
15.51	**Durable PVB-Based Nanocomposite Coatings: The Role of Surface Free Energy in Sustained, Multi-Functional Antimicrobial Efficacy** Mindaugas Ilickas, Asta Guobienė, Brigita Abakevičienė *Kaunas University of Technology, Kaunas, Lithuania*	**15.51**	**Repurposing of Commercial Hydrogen Fuel Cells** Benas G. Urbonavičius, Matas Bašinskas *Kaunas University of Technology, Kaunas, Lithuania*
15.58	**Changes in Some Chlorophyll Fluorescence Indices of Barley Due to Exposure to Millimeter-Sized PET Particles** Sanmugavel Saravana, Irena Januškaitienė, *Vytautas Magnus University, Kaunas, Lithuania*	**15.58**	**Carbazole-Benzocarbazole Fragments Having Derivative as Very Efficient Host Material for TADF Based OLEDs** Daiva Tavgenienė, Sushanta Lenka, Hsuan-Min Wang, Jayachandran Jaykumar, Dovydas Blazevicius, Gintare Krucaite, Yu-Lin Chi, Saulius Grigalevicius, Jwo-Huei Jou *Kaunas University of Technology, Kaunas, Lithuania*
16.05	**Evaluation of Combined Electroporation, Chemotherapy, and Immunotherapy in a Triple-Negative Breast Cancer Murine Model** Diana Šiurnaitė, Greta Chlebopaševienė, Paulius Ruzgys, Saulius Šatkauskas *Vytautas Magnus University, Kaunas, Lithuania*	**16.05**	**Cyanopyridine-Based Compounds as Green TADF Emitters and Sensitizers for Efficient NIR Emission** Dovydas Blazevicius, Daiva Tavgeniene, Gintare Krucaite, Raminta Beresneviciute, Saulius Grigalevicius, Szu-Jung Wang, Zhi-Yu Yuan, Chen-Hao Chang, Chih-Hao Chang *Kaunas University of Technology, Kaunas, Lithuania*

	Parallel session (hybrid): *Link 1: HYBRID participation*		***Parallel session (only online):*** *Link 2: ONLINE sessions*
16.12	**Research on the Distribution of Electric Field in Tissues After Electric Field Application** Karthickeyan Kalimuthu Senthurvadivel, Baltramiejus Jakštys, Saulius Šatkauskas *Vytautas Magnus university, Kaunas, Lithuania*	**16.12**	**Novel 3-(Diphenylamino)carbazole Compounds for Green TADF OLEDs** Raminta Beresneviciute, Inesa Sasnauskaite, Zeyad Taher Abdou, Dovydas Blazevicius, Saulius Grigalevicius, Wanting Ju, Xiangqin Gan, Junqiao Ding, Kaspars Traskovskis *Kaunas University of Technology, Kaunas, Lithuania*
16.20	**Genetic Diversity of Lithuanian Populations of *Impatiens glandulifera* Royle** Rasa Rukuižaitė, Lina Jocienė, Eugenija Kupčinskienė Vytautas Magnus university, Kaunas, Lithuania	**16.20**	**Tailoring Non-Linear Optical Properties of Dicyanoisophorone Derivatives via Donor-Modulation** Khushdeep Kaur, Weizhen Liu, Yovan de Coene, Koen Clays, Kamaljit Singh, Asta Dabuliene, Juozas Vidas Grazulevicius *Kaunas University of Technology, Kaunas, Lithuania*
16.27	**Intraspecific Genetic Variation in Lithuanian Populations of *Impatiens noli-tangere* L. and Interspecific Comparison with Congeners** Rūta Budrevičiūtė, Lina Jocienė, Eugenija Kupčinskienė *Vytautas Magnus university, Kaunas, Lithuania*	**16.27**	**Functionalized *p*-Phenylenediamines as Efficient Hole-Transporting Materials for Optoelectronic Applications** Svetlana Sargsyan, Mariia Stanitska, Melika Ghasemi, Dmytro Volyniuk, Oleksandr Bezvikonnyi, Viktorija Andrulevičienė, Juozas Vidas Gražulevičius *Kaunas University of Technology, Kaunas, Lithuania*
16.34	**Genetic Diversity of *Anthemis trotzkiana* Claus Populations in Kazakhstan** Aida Šiupšinskaitė, Klara Izbastina, Lina Jocienė, Edvina Krokaitė, Eugenija Kupčinskienė *Vytautas Magnus university, Kaunas, Lithuania*	**16.34**	**Statistical and Technical Analysis for Human Activity Recognition using Smart Phone** Hala Issam Saraya, Yanal Ahmad Alkudsi *Syrian Virtual University, Damascus, Syria*
16.41	**Assessment of Genetic Variation in *Impatiens parviflora* DC. Populations** Vaida Jasionytė, Lina Jocienė, Eugenija Kupčinskienė *Vytautas Magnus university, Kaunas, Lithuania*	**16.41**	**Contamination of Fresh and Dried Lithuanian Apples with Micromycetes and Evaluation of Essential Oils Antifungal Activity** Kotryna Chramkovaitė, Rūta Mickienė, Audrius Sigitas Maruška *Vytautas Magnus University, Kaunas, Lithuania*
16.48	**Modulatory Effects of Calcium Electroporation and H-FIRE Waveforms on H9c2 Cell Viability and Membrane Permeabilization** Aras Rafanavičius, Saulius Šatkauskas *Vytautas Magnus University, Kaunas, Lithuania*	**16.48**	**Dynamics of Micromycete Distribution in Bread Products and Their Control Methods** Gabija Paškevičiūtė, Rūta Mickienė, Audrius Sigitas Maruška *Vytautas Magnus University, Kaunas, Lithuania*
16.55	**Effect of Cell Culture Additives on Aggregation of SARS-CoV-2 Nucleocapsid Protein with RNA.** Arnas Treimakas, Indrė Kučinskaitė-Kodzė *Vilnius University, Vilnius, Lithuania*	**16.55**	**Plant Secondary Metabolites – Protection Against Airborne Microorganisms** Jūratė Veršinskaitė, Rūta Mickienė, Audrius Sigitas Maruška *Vytautas Magnus university, Kaunas, Lithuania*
17.05	***Discussions, Acknowledgements and Closing of the Session (hybrid Link 1: HYBRID participation)***		