

15th International Scientific Conference "The Vital Nature Sign" Program

Thursday, 20th of May 2021

9.00-9.15 **Opening of the conference** *Prof. Habil. Dr. Audrius Maruška (chairman of the conference)*
(time zone GMT+3)

Oral presentations. Chairpersons: *Prof. Ona Ragažinskienė; Prof. Audrius Maruška*

9.15-9.30 **New Functional Aspects of Enzyme-Assisted Extraction of Plant Material**
K. Rafińska, A. Krakowska-Sieprawska, J. Walczak-Skierska, A. Kielbasa, P. Pomastowski, B. Buszewski

9.30-9.45 **Ecotoxicological and Genotoxic Assessment in *Lemna minor* L. and *Spirodela polyrhiza* L. Plants Exposed to Dimethyl Phthalate (DMP)**
Fabrizio Pietrini, Valentina Iannilli, Laura Passatore, Serena Carloni, Giulia Sciacca, Massimo Zacchini

9.45-10.00 **Combined Enzyme Assisted - Supercritical Fluid Extraction with Flash Chromatography**
Aneta Krakowska-Sieprawska, Katarzyna Rafińska, Madalena Ligor, Justyna Walczak-Skierska, Bogusław Buszewski

10.00-10.15 **Developing Mass Spectrometry Based Single Cell Proteomics**
Ákos Végvári

10.15-10.30 **Baltic Sea Macro-Algae Characteristics Including Microbial Profile and Trace Elements Content**
Ernesta Tolpeznikaite, Modestas Ruzauskas, Renata Pilkaityte, Vadims Bartkevics, Paulina Zavistanaviciute, Vytaute Starkute, Vita Lele, Egle Zokaityte, Erika Mozurienne, Romas Ruibys, Dovile Klupsaite, Elena Bartkiene

10.30-10.50 **Coffee break**

10.50-11.05 **ZnO Tetrapod Synthesis and Application in Electrochemistry: Effect of Morphology**
Mindaugas Ilickas, Agnė Šulčiūtė, Simas Račkauskas

11.05-11.20 **Statistical Analysis of Characteristics of Thermoluminescent Dosimeters**
Lijana Lileikyte, Benas Gabrielis Urbonavicius

11.20-11.35 **Investigation of Dose Sensitivity in Irradiated Polymer Gels Containing Water Co-solvents**
Ignas Pikas, Mantvydas Merkis, Diana Adlienė

11.35-11.50 **Biological Activity of Trivalent Chromium**
Sylvia Terpilowska

11.50-12.05 **Integration of Ultrasound Treatment into Valorization of Flaxseed Press Cake to Produce Functionalized Hydrogels**
K. Trakšelytė-Rupšienė, J. Arūnaite, G. Juodeikienė, D. Žadeikė, V. Jakštas, J. Bernatoniene, L. Ivanauskas, E. Bartkienė, V. Lėlė, P. Viškelis

12.05-12.35 **Lunch break**

Poster session I. Chairpersons: *Dr. Mantas Stankevičius, MSc. Kristina Bimbraitė-Surviliene*

12.35 **Endophytic *Bacillus Cereus* Group Bacteria Isolates Promote *Nicotiana Tabacum* L. Shoot Growth In Vitro**
Elena Andriūnaitė, Inga Tamošiūnė, Monika Aleksandravičiūtė, Danas Baniulis

12.42 **Recovery of Total Phenolic Content of the Flower Extract of *Opuntia ficus***
Fatiha Brahmi, Redha Sellami, Sabrina Mehdi, Hayette Haddadi-Ghemghar, Khodir Madani, Lila Boulekbache

12.50 **Evaluation of Antibacterial Activity and pH Change in Herbal Drinks Fermented by Kombucha Culture**
Milda Bulotaitė, Vilma Kaškonienė, Rūta Mickienė, Audrius Maruška

- 12.57** **Anthocyanin Profiles in Fruits of Lithuanian Heirloom Apple Cultivars**
(time zone GMT+3)
Aurita Butkevičiūtė, Mindaugas Liaudanskas, Darius Kviklys, Dalia Gelvonauskienė, Valdimaras Janulis
- 13.05** **Enhancement of Transungual Delivery of Amorolfine *ex vivo***
Moonsun Choi, Indrė Šveikauskaitė-Radučienė
- 13.12** **Correlations Between the Different Chocolate Samples Overall Acceptability and Emotions Induced by Chocolate Samples Taste, Smell and Package**
Mantvydas Dapšas, Aiste Valionyte, Gabija Sutkute, Rusne Janulyte, Greta Kotinskaite, Simonas Trunce, Karolina Siriakovaite, Alma Baltrusaityte, Juste Alisauskaite, Aura Kaminskaite, Konstancija Vaiginyte, Agne Stankaityte, Dominyka Baltutyte, Vita Lele, Vytaute Starkute, Paulina Zavistanaviciute, Egle Zokaityte, Elena Bartkiene
- 13.20** **Chemical Properties of Biologically Active Compounds of The Medicinal Plant *Potentilla fruticosa* L.**
Patricija Dieninytė, Ona Ragažinskienė, Liudas Ivanauskas, Elena Juodkienė
- 13.27** **Activity of New Sunitinib Derivatives on Colon Cancer Cell Migration in Normoxia and Hypoxia**
Ugnė Endriulaitytė, Elias Maccioni, Vilma Petrikaitė
- 13.35** **Investigation on Intracellular Compounds and Glutathione Effect on Cell Viability Post Electroporation**
Gintarė Gerbenytė, Baltramiejus Jakštys, Saulius Šatkauskas
- 13.42** **Development of Blue Phosphorescent Organic Light-Emitting Diodes Using Novel Exciton-Blocking/Hole Transporting Materials**
Ghasemi Melika, Dmytro Volyniuk, Monika Cekaviciute, Jonas Keruckas, Ronit Sebastine Bernard, Viktorija Andruleviciene, Oleksandr Bezykonnyi, Juozas Vidas Grazulevicius
- 13.50** **SDS-PAGE Gel Electrophoresis of Proteins Extracted from *Glycyrrhiza glabra* (L.) Roots**
G. Gražulytė, N. Savickienė, O. Ragažinskienė, G. Balčiūnaitė-Murzienė
- 13.57** **Optimisation of Extraction Conditions for Phenolic Compounds from *Cirsium vulgare* Leaves**
U. Griškevičienė, M. Marksa, A. Ževžikovienė, A. Ževžikovas, L. Ivanauskas

14.05-14.20 **Coffee break**

Poster session II. Chairpersons: *Dr. Rūta Mickienė, Dr. Vilma Kaškonienė*

- 14.20** **Characterization of Bioactive Compounds Extracted from By-products of *Matricaria Recutita* Essential Oil Distillation Processes with Potential Use as Cosmetics Ingredients**
Ilva Nakurte, Marta Berga, Liene Kienkas, Laura Pastare, Mārtiņš Borodušķis, Anna Ramata-Stunda
- 14.27** **Quality Evaluation of the Semisolid Formulations with Bee Products**
Matas Inkėnas, Kristina Ramanauskiene, Asta M. Inkeniene, Monika Stanciauskaite, Aurimas Galkontas
- 14.35** **Influence of Culture Conditions and Methods of Sample Preparation on the Level of Bacterial Identification Using MALDI-TOF MS Technique**
Daria Janiszewska, Małgorzata Szultka-Młyńska, Michał Zloch, Paweł Pomastowski, Bogusław Buszewski
- 14.42** **Tetrahydrocarbazolyl- and 2-Phenylindolyl-Substituted Benzophenone Compounds for Optoelectronic Devices**
Lukas Graibus, Rasa Keruckiene, Jonas Keruckas, Ronit Sebastine Bernard, Egle Jatautiene, Jurate Simokaitiene, Dmytro Volyniuk, Juozas Vidas Grazulevicius
- 14.50** **Effect of Caffeic Acid Phenethyl Ester on Lactate Dehydrogenase Activity After Rat Kidney Ischemia/reperfusion in Vivo**
Justina Kamarauskaite, Rasa Baniene, Sonata Trumbeckaite

- 14.57** **Chemical Composition of Nanovesicles Produced by Fruit Cells of Lingonberries (*Vaccinium vitis-idaea* L.)**
(time zone GMT+3)
Greta Kanapeckaitė, Lina Raudonė
- 15.05** **The Expression of SR Protein Kinases in Brain Cell Lines**
Ignė Kanopaitė, Aušrinė Bajoriūnaitė, Eglė Jakubauskienė
- 15.05-15.15** **Coffee break**
- 15.15** **Functionality of Oak (*Quercus* spp.) Parts and Possible Prospects for Their Usage: a Review**
Aurelija Kondratavičiūtė, Vilma Kaškonienė, Audrius Maruška
- 15.22** **Natural Anti-Estrogens Augment Proline Oxidase-Dependent Apoptosis in Breast Cancer Cells**
Sylvia Lewoniewska, Lukasz Szoka, Jerzy Palka
- 15.30** **Amperometric Glucose Biosensor Based on Reduced Graphene Oxide and Polyaniline Nanofibers**
Viktorija Lisyte, Gabija Agasarjanaite, Anton Popov, Asta Kausaite-Minkstimiene, Almira Ramanaviciene
- 15.37** **Synthesis and Studies of Thioxanthone Based Derivatives Exhibiting TADF for New Generation OLED's**
Simas Macionis, Nasiri Sohrab, Dalius Gudeika, Dmytro Volyniuk, Juozas V. Grazulevicius
- 15.45** **LC-MS-based Quantitative Analysis of the Selected Metabolites in Aqueous Humor from Patients with Rhegmatogenous Retinal Detachment.**
Magdalena Misiura, Diana A. Dmuchowska, Karolina Pietrowska, Emil T. Grochowski, Pawel Kraśnicki, Zofia Mariak, Adam Krętowski, Michał Ciborowski, Wojciech Milyk
- 15.52** **Synthesis and Properties of Derivatives of 3,6-Disubstituted Naphthlimide**
Naveen Masimukku, Dalius Gudeika, Melika Ghasemi, Malek Mahmoudi Sharabiani, Dmytro Volyniuk, Juozas V. Grazulevicius
- 16.00** **The Microbiome Identification of Urine Samples Using the MALDI Technique**
Ewelina Maślak, Michał Zloch, Fernanda Monedeiro, Pawel Pomastowski, Bogusław Buszewski
- 16.07** **Production of Cyclodextrins and Their Application in Enantiomer Separations**
Ernesta Lisauskaitė, Robertas Sičiovas, Audrius S. Maruška
- 16.15** **Biological Degradation of Creosote Contaminated Soil from a Phytoremediation and Mycoremediation**
Goda Kolkatovaitė, Rūta Mickienė, Vilma Kaškonienė, Audrius S. Maruška
- 16.22** **An Impact of Drying and Freezing to Biological Activity of Medicinal Plants and Spices**
Rugilė Karklytė, Paulius Kaškonas, Vilma Kaškonienė, Audrius S. Maruška
- 16.30** **The Technology and Quality Evaluation of Low pH Value Gel with Glycolic Acid and Cellulose Polymers**
Viktorija Juozapaitytė, Gailutė Drakšienė
- 16.37** **Fluctuations in Concentrations of N and P Compounds in Marvelė River: a Case Study of Urban Pollution**
Giedrė Kacienė, Daria Hordina
- 16.45** **Rab14 Endosome Targeting to the Intercellular Bridge Regulates Cytokinesis**
Paulius Gibieža, Rytis Prekeris
- 16.52** **Interfacing the Rachets to the Fluidic System for the Separation of Macromolecules**
Audrius Maruška, Tomas Drevinskas, Mantas Stankevičius, Kristina Bimbiraitė-Survilienė, Vilma Kaškonienė, Olga Kornyšova, Linas Jonušauskas, Jonas Artūras Jagelavičius, Staffan Nilsson

15th International Scientific Conference "The Vital Nature Sign" Program

Friday, 21st of May 2021

Oral presentations. *Chairpersons: Dr. Nicola Tiso; Dr. Paulius Ruzgys*

- 9.00-9.15** **Evaluation of Antibacterial and Antioxidant Activities of Enzymatically Hydrolyzed Bee Pollen**
(time zone GMT+3)
Vaida Adaškevičiūtė, Vilma Kaškonienė, Lukas Asanavičius, Audrius S. Maruška
- 9.15-9.30** **Olive Tree Pruning as a Renewable Source of Natural Bioactive Compounds**
Enrica Donati, Marco Mazzonna, Zeineb Aturki, Isabella Nicoletti, Anatoly P. Sobolev
- 9.30-9.45** **Influence of Genetic Origin on the Early Development of Scots Pine (*Pinus sylvestris*) Seedlings and their Interaction with Bacteria from the Genera *Paenibacillus* and *Pseudomonas***
Milana Augustauskaitė, Jonas Žiauka
- 9.45-10.00** **In Vitro Investigation of Probiotic Properties of Strains Belonging to *Lactobacillus* and *Bifidobacterium* Genera**
Jolita Jagelavičiūtė, Dalia Čižeikienė
- 10.00-10.15** **New Combination of Antimicrobial Lactic Acid Bacteria Strains for More Sustainable Livestock Production**
Laurynas Vadopalas, Modestas Ruzauskas, Vita Lele, Vytaute Starkute, Paulina Zavistanaviciute, Egle Zokaityte, Vadims Bartkevics, Sarunas Badaras, Dovile Klupsaite, Erika Mozuriene, Agila Dauksiene, Sonata Sidlauskiene, Romas Gruzauskas, Elena Bartkiene
- 10.15-10.30** **Influence of *Fusarium* Fungi Residing in Dicotyledonous Weeds on the Wheat Diseases**
Neringa Matelionienė, Skaidrė Supronienė, Gražina Kadžienė, Evelina Zavtrikovienė
- 10.30-10.45** *Coffee break*
- 10.45-11.00** **The Use of Food Industry By-products for Technological Microorganisms Biomass Production**
Paulina Zavistanaviciute, Vytaute Starkute, Egle Zokaityte, Vita Lele, Vita Lele, Pranas Viskelis, Jurga Bernatoniene, Elena Bartkiene
- 11.00-11.15** **Additional Value Beverages Developed from Technological Functionalized Dairy, Cereal, and Fruit/Berry Industries By-Products**
Egle Zokaityte, Vita Lele, Vytaute Starkute, Paulina Zavistanaviciute, Darius Cernauskas, Dovile Klupsaite, Modestas Ruzauskas, Juste Alisauskaite, Alma Baltrusaityte, Mantvydas Dapsas, Karolina Siriakovaite, Simonas Trunce, Raquel P. F. Guiné, Pranas Viskelis, Vesta Steibliene, Elena Bartkiene
- 11.15-11.30** **IFN- β Enhances Cell Death in HCT116 and SW620 Cells and Their Chemoresistant Sublines**
L. Sudeikis, I. Juškaitė
- 11.30-11.45** **Serpin B5 Localization in the Chemoresistant Colorectal Carcinoma Cells**
B. Aleksandravičiūtė, V. Žitkutė
- 12.00-12.15** **The Role of Phospholipids in Prostate Cancer Development**
Magdalena Buszewska-Forajta, Paweł Pomastowski, Justyna Walczak-Skierska, Marcin Markuszewski, Marcin Matuszewski, Michał J. Markuszewski, Bogusław Buszewski
- 12.15-12.30** **Ozone Biomonitoring Using Vascular Plants in Cities**
Valentinas Černiauskas, Valda Araminienė

12.30-13.00 *Lunch break*

Poster session I. *Chairpersons: Dr. Mantas Stankevičius, MSc. Kristina Bimbiraitė-Survilienė*

- 13.00** **MALDI Imaging of Honeybee Larvae**
Eliza Matuszewska, Szymon Plewa, Dagmara Pietkiewicz, Jan Matysiak



- 13.07** **Biologically Active Compounds of *Salvia officinalis* L. and Their Practical Application in Cosmetic Practice**
(time zone GMT+3) *Laura Mažuolytė, Ona Ragažinskienė*
- 13.14** **Hemagglutinating Activity of Proteins from *Kirchneriella* Sp. Schmidle Biomass**
Evelina Noreikaitė, Gabrielė Balčiūnaitė-Murzienė, Judita Koreivienė, Zoja Miknienė, Nijolė Savickienė
- 13.21** **Acridan Derivatives Exhibiting Aggregation Induced Enhancement of Thermally Activated Delayed Fluorescence for Organic Light Emitting Diodes**
Saimonas Pakstys, Viktorija Andrulėvičienė, Monika Cekaviciute, Jonas Keruckas, Ronit Sebastine Bernard, Juozas Vidas Grazulevicius
- 13.29** **Protein Quantification by Lowry Microassay and Haemagglutinating Activity Determination of Proteins from Cyanobacteria Biomass in Different Animal RBC Suspensions**
Neda Pašukonytė, Nijolė Savickienė, Jūratė Kasperovičienė, Zoja Miknienė, Gabrielė Balčiūnaitė-Murzienė
- 13.36** **Comparison of Hemagglutination with blood Samples from Different Species of Animals**
Agata Paurytė, Jūratė Karosienė, Zoja Mikniene, Nijolė Savickienė, Gabrielė Balčiūnaitė-Murzienė
- 13.43** **Influence of Antibiotics on Bacterial Biofilm Formation**
Katarzyna Pauter, Viorica Railean-Plugaru, Paweł Pomastowski, Małgorzata Szultka-Młyńska, Bogusław Buszewski
- 13.50** **Investigation of Dependence of Phenolic and Volatile Compounds Composition, Antioxidant Activity and Energetic Properties of *Artemisia dubia* WALL. on Nitrogen Fertilization**
Vilmantas Pedišius, Audrius Maruška, Mantas Stankevičius, Irena Vaškevičienė
- 13.57** **Matrix-assisted Laser Desorption/Ionization Mass Spectrometry Imaging of Lipids in Ovarian Tumor Tissue – A Pilot Study**
Szymon Plewa, Dagmara Pietkiewicz, Agnieszka Horala, Piotr Jasiński, Ewa Nowak-Markwitz, Jan Matysiak
- 14.04** **The Influence of Different Conditions on The Formation of Zn-Lactoferrin Complexes.**
Oleksandra Pryshchepa, Gulyaim Sagandykova, Katarzyna Rafińska, Joanna Rudnicka, Paweł Pomastowski, Myroslav Sprynskyy, Bogusław Buszewski
- 14.11** **Investigation of Intracellular Protein Release After Electroporation**
Leta Remeikytė, Baltramiejus Jakštys, Saulius Šatkauskas
- 14.18** **New Approaches in Functionalization of Cow's Milk Proteins**
Agnieszka Rodzik, Paweł Pomastowski, Viorica Railean-Plugaru, Bogusław Buszewski
- 14.25** ***Leonurus* L. Genus and Its Biologically Active Compounds for Therapeutical Purpose**
Ingrida Romaškaitė, Ona Ragažinskienė

14.25-14.35 *Coffee break*

Poster session II. Chairpersons: *Dr. Vilma Kaškonienė, Dr. Benas G. Urbonavičius*

- 14.35** **Investigation of Phenolic Compounds and Antioxidant Activity of Brazilian Green and Red Propolis Preparations**
Raminta Rupeikaitė, Mindaugas Liaudanskas, Vaidotas Žvikas, Sonata Trumbeckaitė
- 14.42** **Influence of Short-Term Hypoxia on Alternative Pre-mRNA Splicing**
Karina Šapovalovaitė, Aistė Semionovaitė, Laurynas Vilys, Arvydas Kanopka
- 14.49** **Evaluation of the Composition of Phenolic Compounds in *Artemisia abrotanum* L. During Different Vegetation Stages**
Sandra Saunoriūtė, Ona Ragažinskienė, Liudas Ivanauskas, Lina Raudonė, Mindaugas Marksa

- 14.56** **The Impact of PTBP1 on Alternative Splicing of MAPT Pre-mRNA Under Normoxic and Hypoxic Conditions**
(time zone GMT+3) *Justas Šidiškis, Kostas Sivickis, Laurynas Vilys, Eglė Jakubauskienė*
- 15.03** **New Organic Materials Exhibiting Thermally Activated Delayed Fluorescence and their Application in Organic Light-Emitting Diodes**
Uliana Tsiko, Saimonas Pakštys, Dmytro Volyniuk, Jonas Keruckas, Ronit Sebastine Bernard, Viktorija Andrulevičienė, Juozas Vidas Grazulevičius
- 15.10** **Antimicrobial Activity of Lactic Acid Bacteria Immobilised in the Rice Bran-Lingonberry-Based Gel-Type Food Matrix**
Ruta Vaitkevičienė, Daiva Zadeike, Elena Bartkiene, Vita Lele, Grazina Juodeikiene, Valdas Jakstas
- 15.17** **Formation and Investigation of Fuchsine and Malachite Green Films and It's Possible Use for Low Dose Dosimetry Application**
Džiugilė Valiukevičiūtė, Judita Puišo
- 15.25** **Sacubitril/Valsartan Metabolism in HUVEC Cells**
Ugnė Venckytė, Ieva Eitminavičiūtė, Vaiva Lesauskaitė, Diana Žaliaduonytė, Audrius Pukalskas, Vaidotas Žvikas, Valdas Jakštas, Agnė Giedraitienė, Vacis Tatarūnas
- 15.25-15.40** **Coffee break**
- 15.40** **Antiradical, Reducing, and Chelating Activities of Phenolic Fractions from *Vaccinium vitis-idaea* L. Fruits**
Gabrielė Vilkickytė, Lina Raudonė
- 15.47** **Evaluation of Hemagglutination Activity of Proteins Isolated from *Helianthus tuberosus* (L.) Tubers**
Živilė Zagorajevaitė, Ona Ragažinskienė, Gabrielė Balčiūnaitė-Murzienė, Zoja Miknienė, Nijolė Savickienė
- 15.52** **Synthesis and Properties Investigation of New Organic Semiconductors with Efficient Hole Transfer**
Emilija Zdanavičiūtė, Audrius Bučinskas, Jūratė Simokaitienė, Juozas V. Gražulevičius
- 16.00** **The Morphology of Laminated Cellulose/Alginate Biocomposites**
Aušrinė Žiūkaitė, Monika Strykaitė and Jonas Damašius
- 16.07** **Fermentation Possibilities of Biodegradable Organic Waste by *Saccharomyces bayanus***
Radvilė Žizytė, Vilma Kaškonienė, Lukas Asanavičius, Mantas Stankevičius, Audrius Maruška
- 16.15** **The Comparison of Surface Structures and Chemical Composition in Cocoons of Leeches (*Hirudinea*) and Planarias (*Turbellaria*)**
J. Rutkauskaitė-Sucilienė, I. Šatkauskienė
- 16.22** **The Influence of Bystander Effect on Viability of Untreated Cells After pDNA Electrotransfer, Irreversible Electroporation or Electrotransfer of Anticancer Drug Bleomycin**
Neringa Barauskaitė, Paulius Ruzgys, Saulius Šatkauskas
- 16.30** **Phytochemical Composition of Black Pepper (*Piper nigrum* L.), White Pepper (*Piper album* L.) and Fragrant Pepper (*Pimenta dioica* L.) Essential Oils**
Rugilė Narbutaitė, Mantas Stankevičius, Audrius Maruška
- 16.37** **Technology and Evaluation of Orally Disintegrating Granules**
Ieva Baškytė, Gailutė Drakšienė
- 16.44** **Biotechnologies for the Microbe-Mediated Remediation of Expended Railway Crossies: an Integrative Approach**
A. Maruška, N. Tiso, J. Mikašauskaitė-Tiso, T. Drevinskas, M. Stankevičius, R. Mickienė, V. Kaškonienė, K. Bimbiraitė-Survilienė, G. Dūda, V. Tumosaitė, O. Ragažinskienė, V. Snieškienė, A. Stankevičienė, D. Levišauskas, T. Tekorius, P. Kaškonas, C. Polcaro, E. Galli, E. Donati, M. Zacchini, O. Kornyšova, S. Grigiškis, I. Kiminaitė, A. Baliasnyj
- 16.50** **Closing of conference**