Vilnius University
Students' Representation
in Life Sciences Center

COINS

International conference
of Life sciences

INFOBOOK

2019

FOREWORD

Dear participants of The COINS 2019,

It is my great pleasure to welcome all of you to The COINS 2019 conference! Raising from the initiative of students, this conference offers incredible opportunities for all of its participants.

The COINS 2019 is the 14th international conference of life sciences organised by the Vilnius University Students' Representation. The event gathers not only students and scholars, but also various people working in the life sciences field.

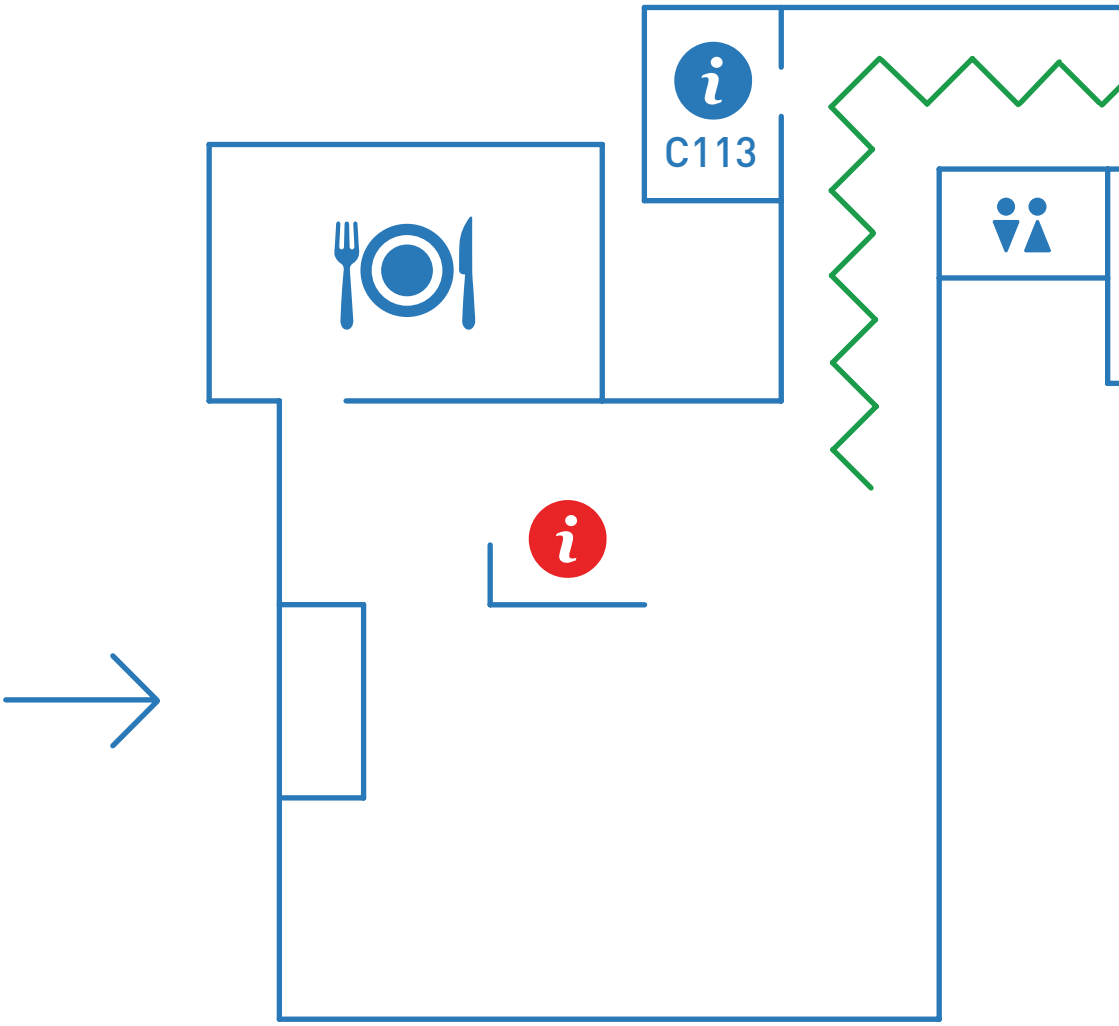
In the following three days, keynote speakers, scientists and students will address various important topics in life sciences, structured in lectures, discussions and networking sessions.

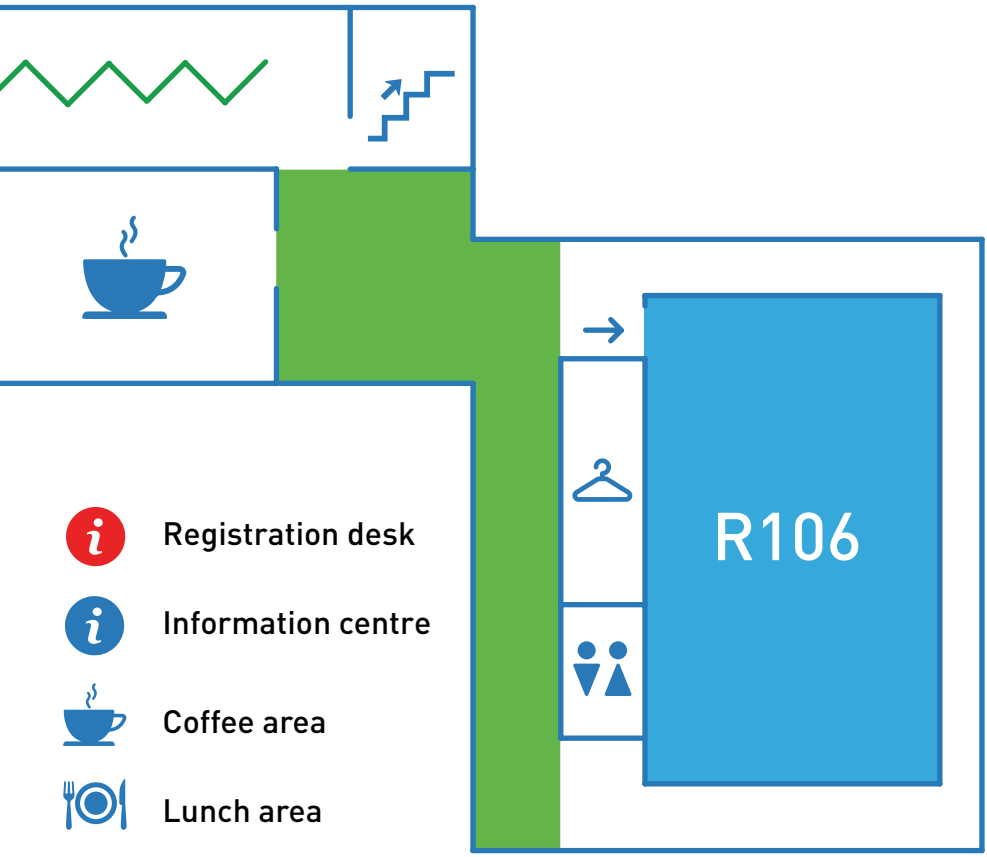
I am glad that our conference gives the possibility to share your knowledge and skills along with new approaches and best practices becoming more passionate in science, expanding our horizons and making The COINS 2019 more relevant, inclusive and accessible to all.

So let's go deeper and reach higher during the conference!

Sincerely,
Coordinator of The COINS 2019
Ugnė Čėplaitė

MAP OF THE CONFERENCE





Registration desk

Information centre

Coffee area

Lunch area

Wardrobe

Toilets

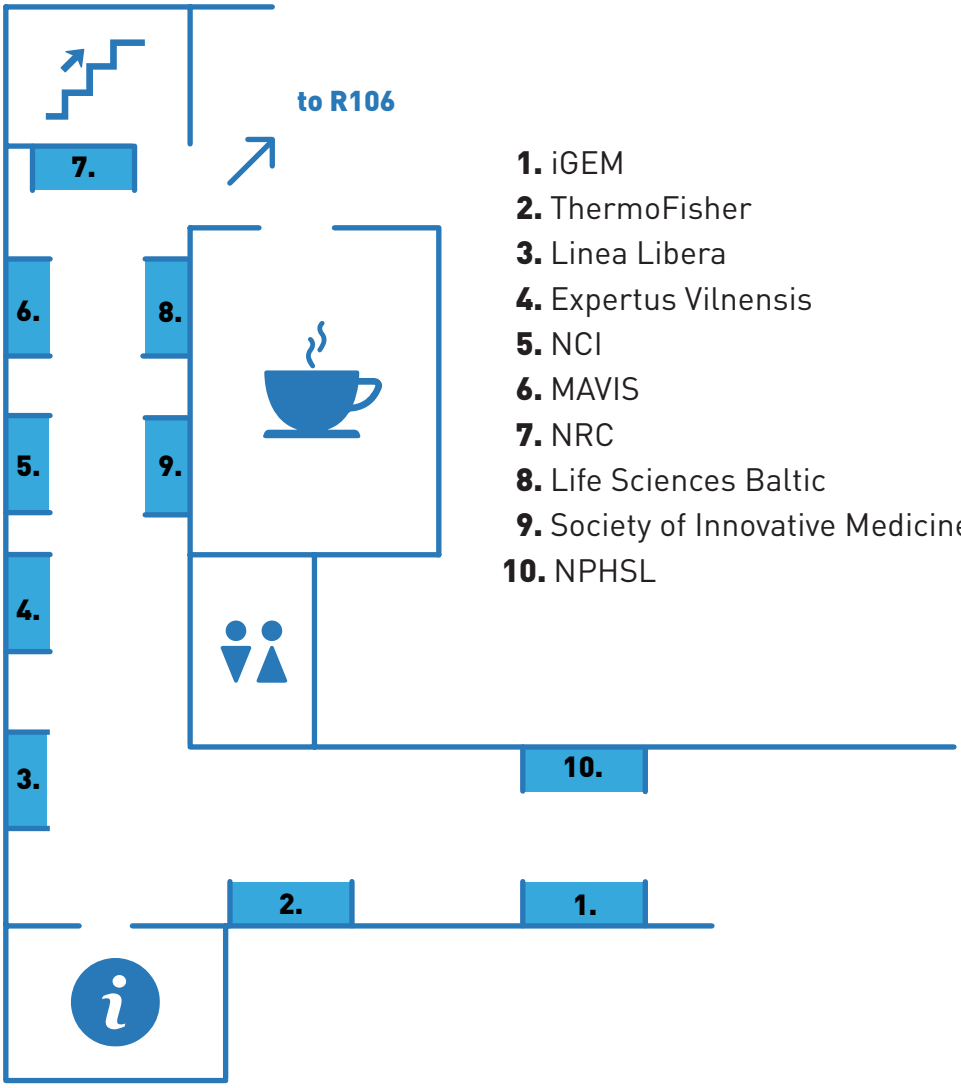
Stairs

Conference hall

Lounge area

Poster session
(on 28th of February)

MAP OF COMPANY FAIR (on 27th of February)



1. iGEM
2. ThermoFisher
3. Linea Libera
4. Expertus Vilnensis
5. NCI
6. MAVIS
7. NRC
8. Life Sciences Baltic
9. Society of Innovative Medicine
10. NPHSL

ThermoFisher SCIENTIFIC

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Thermo Fisher Scientific is the world leader in serving science, with revenues of 24 billion dollars and 70,000 employees. The company's mission is to enable their customers to make the world healthier, cleaner and safer. Thermo Fisher Scientific helps to accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics and increase laboratory productivity.

The company has world-class capabilities in manufacturing products for the life science market, specifically in molecular, protein, and cellular biology, and has an outstanding research and development (R&D) center, focused on the development of new products in all aspects of molecular, protein, and cellular biology. These products are broadly used worldwide to study gene structure, expression and variety, to create new diagnostics methods for innate, hereditary and infectious diseases.

Currently Thermo Fisher Scientific Baltics employs 890 people in a variety of roles including 125 researchers making this one of the largest private R&D centers in the whole region.

PARTICIPANTS OF COMPANY FAIR

iGEM

iGEM is the largest global competition for synthetic biology enthusiasts. Each year interdisciplinary teams from over 300 world-class universities develop biological solutions for real-world problems and compete in Boston (USA) to win the Grand Prize Trophy.

Vilnius-Lithuania iGEM teams have the distinction of being especially innovative and professional each year. In 2015 they created bacteria with an integrated "count-down timer" for self-destruction, in 2016 a treatment option for inherited disease - phenylketonuria was proposed, in 2017 they won the Grand Prize suggesting a way to control the number of plasmids inside the cell. Last year Lithuanian team created a synthetic system for protein synthesis which was nominated for one of the best projects in fundamental sciences and won the Bronze medal.

This year Vilnius-Lithuania iGEM team started to generate new ideas to make a positive impact on society again!

Society of Innovative Medicine

Society of Innovative Medicine is a non-profit organisation which brings all science (biomedical, IT, physics, etc.) enthusiasts, students and researchers, as well as medical experts and entrepreneurs together.

The society creates an open community where they promote science and innovations, aid to refine personal competencies and teach relevant occupational knowledge. Through their community the society mediates the process of establishing connections between students, doctors, researchers and entrepreneurs. The society aims to form an effective infrastructure and connect active members, national and foreign research facilities, entrepreneurs, medical specialists.

Life Sciences Baltic

Life Sciences Baltics is the only and finest Baltics' life sciences forum gathering global biotechnology, pharmaceutical and medical devices leaders. The forum provides a unique programme that features a variety of opportunities to get insights and seek process of life sciences through the conference, plenary and educational sessions, potential one-on-one meetings and scientific posters area. Life Sciences Baltic helps to discover Lithuania and the Baltics as a potential gateway to emerging markets in a global life sciences' landscape.

National public health surveillance laboratory (NPHSL)

On the request of government institutions, municipalities, private and public legal and natural persons, NPHSL tests air at households and work places, wastewater, bathing-places and drinking water, food and non-food products, cosmetics and personal hygiene products, materials and products, which are in direct contact with food, biocides, detergents, chemical products for household. Also, the laboratory performs public healthcare laboratory tests.

NVSPL
NACIONALINĖ VISUOMENĖS SVEIKATOS PRIEŽIŪROS LABORATORIJA

The State Scientific Research Institute Nature Research Centre (NRC)

NRC was established to create an up-to-date scientific research infrastructure for investigations into present-day and past ecosystems, as well as studies and development of environmental protection technologies. The NRC not only pursues and co-ordinates long-term scientific research in various fields of biotic and abiotic nature, but also takes an active role in the development and implementation of a conceptual framework for the protection of the living environment and its sustainable development, as well as disseminating scientific knowledge of biotic and abiotic environment.

Of no less significance is the research conducted in other areas of natural sciences covering a wide range of issues. Only some of the most important areas are the state, change and prognosis of Lithuanian nature and its biological resources, their preservation and restoration and the scientific justification for their sustainable use; climate change and prognosis.

NATURE RESEARCH CENTRE

National Cancer Institute (NCI)

NCI is the only specialized oncology institution in Lithuania, which is accredited by Organisation of European Cancer Institutes. The aim of the National Cancer Institute is to carry out the scientific research of international level in the field of oncology. The research is focused to decrease the mortality caused by cancer, prepare the scientists and highly educated specialists, strengthen the potential of science in Lithuania and competitiveness among other European countries in the field of scientific research.

The institute provides advanced methods of treatment and research of complex cancer, as well as innovative treatment to ensure the quality of life for patients with oncological diseases. The National Cancer Institute maintains close links between science and clinical practice.

NCI | NACIONALINIS VĖŽIO INSTITUTAS

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UAB „Mavis“

UAB “Mavis” – the team which has a quality experience in chemicals trading. They supply high quality products for bounded industries:

- Pharmacy;
- Medical;
- Food;
- Industrial Chemistry;
- Microelectronics;
- Autochemistry;
- Household;
- Agriculture;

as well as reagents for laboratories:

- Fluka™ Analitical Standards;
- Hydranal;
- Chromasolv;
- Trace Select;
- Riedel – de Haën.

Mavis

Linea Libera

“Linea Libera” offers everything that you might need working in the field of life sciences - from equipment selection to technological service. The company has knowledge and experience in creating value and achieving your success.

Linea libera
SPARNAI ATRADIMAMS

Expertus Vilnensis

Expertus Vilnensis is a company which specialises in imaging, pathology anatomy, forensic research and general laboratory technology.

The experts working there will obviously help you to complete your tasks and achieve aims effectively and efficiently. Your needs are the solutions for Expertus Vilnensis!

Artimi Jums, atviri pažangai.

EX VII
expertus Vilnensis

BIOCHEMISTRY

1.	**Vaida Paketurytė**	"Intrinsic affinity of N-substituted benzenesulfonamides to carbonic anhydrases"
2.	**Vilmantas Pupkis**	"Cs^{+} and Ba^{2+} as blockers of ion channels of the tonoplast of Nitellopsis obtusa"
3.	**Justina Jurgelevičiūtė, Andrius Sakalauskas**	"The Effect of Epigallocatechin Gallate on Sup35p Aggregation in vitro and in vivo"
4.	**Gytis Druteika**	"Identification of Amino Acids Responsible for Difference in Activity of Geobacillus spp. Lipases"
5.	**Edvardas Golovinas**	"Specificity of the argonaute protein from archaeoglobus fulgidus to the 5'-end of the guide"
6.	**Aivaras Vaškevičius**	"Synthesis of 3,4,5-trisubstituted-2,6-difluorobenzene-sulfonamides as selective inhibitors of human carbonic anhydrase IX"
7.	**Barbora Aid**	"Electric field impact on NF-kB reporter system expression"
8.	**Miglė Valikonytė**	"Synthesis and Anti-Cancer Activity of 1,2,3,4-Tetrahydroquinoline-Based Hydroxamic Acids"
9.	**Aistė Kveselytė, Karolina Dzedulionytė**	"Synthesis of Enantiopure Heterocyclic Amino Acids Possessing 2-Amino-1,3-Thiazole Structural Unit"
10.	**Agnietė Jurgelėnaitė**	"Synthesis of Heterocyclic Amino Acids for Application as Building Blocks"
11.	**Austėja Diktanaitė**	"Sol- gel synthesis and thermoanalytical study of Li–Al–Mo–O tartrate gel precursors"
12.	**Deimantė Narauskaitė**	"Antibacterial calcium alginate-based bandages"
13.	**Justinas Babinskas**	"Synthesis and investigation of N-substituted aromatic amine for laccase activity assay"

14.	**Urtė Šachlevičiūtė, Rokas Jankauskas**	"Synthesis of novel 2-substituted-6,7-dihydro-5H-pyrrolo[3,4-b]pyridine-3-carboxylates"
15.	**Vaida Milišiūnaitė**	"Synthesis of novel 2H-pyrazolo[4,3-c]pyridines with anti-mitotic activity"

CANCER RESEARCH

16.	**Agnė Šeštokaitė**	"Urinary miRNA analysis in castration-resistant prostate cancer patients"
17.	**Aušra Šumskaitė**	"Promoter DNA Methylation Analysis of BMP7, PCDH8 and TFAP2B Genes in Clear Cell Renal Carcinoma"
18.	**Rūta Maleckaitė**	"DNA methylation of metallothionein genes as a potential diagnostic biomarker of renal cell carcinoma"
19.	**Eglė Zalytė**	"Integrative Proteomic, Bioinformatic and Primary Cell Culture Approach Facilitates the Prediction of Anticancer Drugs"
20.	**Ieva Golubickaitė**	"Glioblastoma subtyping based on target-genes expression profile"
21.	**Ieva Vaicekauskaitė**	"Urinary Prostate-Specific Membrane Antigen (PSMA): a novel biomarker for early prostate cancer detection"
22.	**Kamilė Narmontaitė**	"Molecular mechanisms of cancer metastasis"
23.	**Raimonda Kubiliūtė**	"DNA Methylation Biomarkers of Clear Cell Renal Carcinoma"
24.	**Rytis Stakaitis**	"Prognostic potential of microRNAs expression levels in different grade glioma:
25.	**Rimvilė Prokarenkaitė**	"Functional analysis of miR-376 family miRNAs in murine Lewis lung carcinoma LLC1 cells"

CELL BIOLOGY AND TISSUE ENGEENERING

26.	**Miglė Paškevičiūtė**	"Proton pump inhibitors as doxorubicin transport modulators in 2D and 3D cancer cell cultures"
27.	**Giedrė Gudiškytė**	"Chondrocyte Cultures and Chondrogenic Differentiation of Human Mesenchymal Stem Cells in Chondrocyte Cultures and Chondrogenic Differentiation of Human Mesenchymal Stem Cells in Chondroitin-Sulphate-Based Three-Dimensional Scaffolds"
28.	**Giedrė Urbonaitė**	"Regulation of Mesenchymal Stem Cells and Their Chondrogenic Differentiation Potential via Voltage-Operated Calcium Channels"
29.	**Jolanta Bukauskaitė**	"Modified methods of chondrogenic differentiation for human dermal fibroblast-derived induced pluripotent stem cells (hDF-hiPSCs)"
30.	**Milda Vitosytė, Eglė Marija Jonaitytė**	"Effect of 3D PLA scaffolds on new bone formation"
31.	**Gabrielė Jundaite-Mourad**	"Regulation of inflammatory responses in synovial mesenchymal stem cell populations of patients with rheumatoid arthritis"
32.	**Agnieška Jevtuch**	"3D Cell Culture Engineering by Using Natural, Biologically Compatible Hydrogels and Recombinant Morphogens"
33.	**Kamilija Adlytė**	"Modern-Day Air Pollution Effects on Lung Tissue Structure"
34.	**Povilas Maldūnas**	"Study on zona pellucida's and whole envelope's thickness to oocytes fertilization"
35.	**Ernesta Pocevičiūtė**	"Research of receptor and its ligand interaction on cell surface"

POSTER PRESENTATIONS

36.	**Elona Jankauskaitė**	"Effects of testosterone on apoptosis and mitophagy in Leber's hereditary optic neuropathy"
37.	**Andrius Jasinevičius**	"The impact of Wnt signaling for autophagy in chemoresistant colorectal cancer cells HCT116"
38.	**Vilmantė Žitkutė**	"The effects of 5-Fluorouracil and Oxaliplatin on Autophagy in Chemoresistant Colorectal Carcinoma Cells HCT116"
39.	**Indrė Januškevičienė**	"Characterization of phenotypic sub-populations of triple negative breast cancer cell line MDA-MB-231"

MICROBIOLOGY AND BIOLOGY

40.	**Gabrielė Juknevičiūtė**	"Genome Mining for Nonribosomal Peptide Synthetase and Polyketide Synthase Genes in Two Paenibacillus sp. Strains from Krubera-Voronja Cave"
41.	**Inga Burneikienė**	"Antibacterial effect of antimicrobial peptides derived from lactic acid bacteria"
42.	**Jokūbas Krutkevičius**	"Degradation of Polyether Polyurethane by Soil Bacteria"
43.	**Kristina Grigaitytė**	"The search of collagen-like endospore surface proteins in bacteria of the genus Geobacillus"
44.	**Mantas Baliukynas**	"Development of expression systems for ß-carbonic anhydrase from Bacillus mojavensis"
45.	**Marius Petkus**	"Conversion of lignocellulosic waste into the 2nd generation bioethanol"
46.	**Rimvydė Čepaitė**	"In silico screening and analysis of bacteriocins in two Paenibacillus sp. strains from Krubera-Voronja Cave"
47.	**Roberta Statkevičiūtė**	"Biocatalytic Synthesis of Indigo Dimethanols and Indigo Dicarboxaldehydes"
48.	**Vilius Malūnavičius**	"Analysis into the possible biomineralization using Staphylococcus sp. H6 and Arthrobacter sp. G7 strains"

49.	**Augustė Ona Jančauskaitė**	"Metagenomic analysis of the microbiota in urban river sediments to evaluate the impact of anthropogenic city pollution"
50.	**Emilija Petrauskaitė**	"Pantoea sp. infecting phage vB_PagS_MED16 - a putative representative of a new genus within the family Siphoviridae"
51.	**Kamilė Jonynaitė**	"Identification of Certain Major Groups of Bacterial Community Composition in Microalgae Unialgal Culture"
52.	**Manta Vaičikauskaitė**	"A Novel High Molecular Weight Bacteriocin produced by a Thermophilic Bacterium"
53.	**Ieva Daškevič**	"Pulsed Electric Field Effects on the Expression of Cell Wall Components in Yeast Saccharomyces Pulsed Electric Field Effects on the Expression of Cell Wall Components in Yeast Saccharomyces"
54.	**Monika Šimoliūnienė**	"Bacteriophage vB_PagS_AAS23: a new Pantoea spp. infecting representative within the family Siphoviridae"
55.	**Šarūnas Streckis**	"Endotoxin removal from biological solutions"
56.	**Ignas Ragaišis**	"The screening for antibiotic resistance genes in Stenotrophomonas maltophilia and Chryseobacterium spp. of soil origin"
57.	**Nina Urbelienė**	"Application of E. coli auxotrophic host and synthetic nucleosides for a selection of hydrolases from metagenomic libraries"
58.	**Dominykas Aleknavičius**	"Are insects nutritious? Comparison of insect/meat nutritional values"
59.	**Aušra Kamarauskaitė**	"Interaction between top predator and mesopredator estimated by diet analysis and field experiment"
60.	**Robertas Stankevič**	"Analysis of Silurian Graptolite Extinction Pattern in Four Lithuanian Core Sections Using Optimal Linear Estimation Method"

POSTER PRESENTATIONS

MOLECULAR BIOLOGY

61.	**Dovilė Mažuknaitė**	"Assessment of genetic diversity of Lithuanian summer barley cultivars using conserved DNA-derived polymorphism markers"
62.	**Stela Pervenytė**	"The Study of Long-Term Technogenic Soil Genotoxicity by RAPD Molecular Markers Using Trad 4430 Clone"
63.	**Vėjūnė Pukenytė**	"Investigation of the impact of technogenically contaminated soil using the test-system of Vicia faba chlorophyll morphosis"
64.	**Justina Gaiževska**	"Vitamin D Receptor Gene Polymorphism Distribution and Methylation Analysis of Vitamin D Metabolic Pathway Genes in Lithuanian Rheumatoid Arthritis Patients."
65.	**Emilija Karazijaitė**	"Isolation and Characterization of Outer-Membrane Vesicles from Opportunistic Pathogen Acinetobacter baumannii"
66.	**Gabija Šakalytė**	"The antibacterial activity of silvel nanoparticles"
67.	**Joana Smirnovienė**	"Picomolar inhibitors of carbonic anhydrase: importance of inhibition and binding assays"
68.	**Šarūnas Streckis**	"Endotoxin removal from biological solutions"
69.	**Julius Martinkus**	"Functional Screen for the Antimicrobial Resistance Genes in the Soil from Intensive and Ecological Agriculture Farms"
70.	**Laurita Klimkaitė**	"Identification of the Toxin-Antitoxin Systems in the Opportunistic Pathogen Stenotrophomonas maltophilia"
71.	**Mantas Žiaunys**	"Temperature Dependent Changes in Structure and Seeding Potential of Amyloid Fibrils"
72.	**Shubo Saiful**	"Immunological Biomarkers for Diabetes Management"

73.	**Lidia Żukowska**	"IP-10 and sCD14 in urine as potential biomarkers of childhood tuberculosis"
74.	**Dovilė Tamoliūnaitė**	"Molecular identification of vector-borne pathogens in domestic dogs"
75.	**Gabija Lauciūtė**	"Functional characterization of septicolysin from the opportunistic pathogen Acinetobacter baumannii"
76.	**Miglė Razgūnaitė**	"Prevalence of Mycoplasma haemofelis and Candidatus Mycoplasma haemominutum Pathogens in Shelter and Pet Cats in Lithuania"
77.	**Vytautas Rudokas**	"Development, Characterization and Application of Monoclonal Antibodies against Phleum pratense Allergens"
78.	**Simas Jasiūnas**	"Characterization of novel toxin-antitoxin systems in the cyanobacterium Aphanizomenon flos-aquae"
79.	**Tautvydas Žalnierius**	"Impact of exogenous GA3 and TIBA treatment on Heracleum sosnowskyi seed vigour"

PROGRAMME

FEBRUARY 26th, TUESDAY

08:30 - 09:30	Registration
09:30 - 10:00	**OPENING CEREMONY**
10:00 - 11:00	**THE JOURNEY TO SUCCESS** Dr. Urtė Neniškytė and habil. dr. prof. Viktoras Butkus discussion moderated by Povilas Marma
11:00 - 11:30	Coffee break

SESSION 1 - MOLECULAR BIOLOGY

11:30 - 12:15	**Single cell RNAseq as a tool for cell type discovery** Rapolas Žilionis (LT)
12:15 - 12:45	**"Vilnius-Lithuania iGEM" team**
12:45 - 13:00	**Antifungal Activities of Silver Nanoparticles Obtained by Geobacillus spp. Induced Biosynthesis** Kotryna Čekuolytė (LT) - student presentation
13:00 - 14:00	Lunch
13:00 - 13:45	**VIDEO LECTURE** **Next generation antibiotics** Prof. Ada Yonath (IL) The Nobel Prize in Chemistry 2009

14:00 - 14:45	The impact of DNA damage, transcription stress and nutrition on aging Prof. Jan H.J. Hoeijmakers (NL)
14:45 - 15:00	A comparative analysis of natural and experimental Plasmodium relictum infection in Eurasian siskins (Carduelis spinus) Elena Platonova (LT) - student presentation
11:00 - 11:30	Coffee break
15:15 - 16:00	Novel computational methods for the analysis of protein structures Dr. Kliment Olechnovic (LT)
16:00 - 16:15	Hydration and swelling of amorphous cross-linked starch microspheres studied using Raman Spectroscopy Jekaterina Borzova (LT) - student presentation

PROGRAMME

FEBRUARY 27th, WEDNESDAY

08:30 - 09:30 Registration

09:30 - 10:50 **PANEL DISCUSSION**
Personalized medicine - an unattainable goal or tomorrow's reality?

Participants:

Jevgenija Vienažindytė - Senior Associate at Ellex Valiunas law firm;
Eimantas Peičius - Associate Professor at the Department of Bioethics and a head of the Bioethics Centre and in Lithuanian University of Health Sciences (LUHS);
Agnė Vaitkevičienė – Member of Lithuanian Biotechnology Association (LBTA);
Rasa Sabaliauskaitė – Head of Genetic Diagnostic Laboratory at National Cancer Institute.

Moderated by **Giedrė Armalytė** – Health News Editor at Delfi Lietuva

10:50 - 11:20 Coffee break

SESSION 2 - CELL BIOLOGY

11:20 - 12:05 Microparticles in Disease
Dr. Naomi Martin (UK)

11:30 - 13:20 **COMPANY FAIR**

12:05 - 12:20	**The Effect of Stearoyl-CoA-Desaturase 1 Inhibition on Pancreatic Cancer Cells in vitro** Amon Hackney (UK) - student presentation
12:20 - 13:20	**Lunch**
13:20 - 14:05	**Electroporation as a tool for selective pasterization** Dr. Arūnas Stirkė (LT)
14:05 - 14:20	**Ethnic Differences in the Role of Microparticles on Endothelial Cell Dysfunction** Christopher Pritchard (UK) - student presentation
14:20 - 15:05	**Pluripotent stem cells: ready for clinical applications in diabetes?** Prof. Tor Henrik Semb (DK)
15:05 - 15:20	**Coffee break**

SESSION 3 - NEUROBIOLOGY

15:20 - 16:05	**Normal aging in population-based imaging cohorts** Dr. rer. medic. Christiane Jockwitz (DE)

PROGRAMME

FEBRUARY 28th, THURSDAY

08:30 - 09:30	Registration

SESSION 3 - NEUROBIOLOGY

09:30 - 10:30	The Hippocampal Cognitive Map Theory, An Update Prof. John O'Keefe (UK) The Nobel Prize in Physiology or Medicine 2014
10:30 - 11:00	Coffee break
11:00 - 11:45	Processing of periodic sounds: benefits and practical application of auditory steady-state responses Dr. Inga Griškova - Bulanova (LT)
11:45 - 12:15	„Experimentica“
12:15 - 13:15	Lunch
12:15 - 14:30	**POSTER SESSION**
14:30 - 15:00	**CLOSING CEREMONY AND AWARDS**

NOTES

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Frozen cell therapies

CONFERENCE COFFEE

G'day coffee roasters

During the **Poster Presentation Session**, every poster will be assigned a number, according to the infobook.

If you have any questions during the conference, you can visit the information centre. Also, you can write to info@thecoins.eu, or message us at facebook.com/thecoinsconference