

# Bioenergy Technologies and Biotechnologies

## SECTION CHAIR

Assoc. Prof. **LINDA MEZULE**,  
Riga Technical University,  
Latvia

## SCIENTIFIC COMMITTEE

Prof. **TALIS JUHNA**, Riga  
Technical University, Latvia

Assoc. Prof. **LINDA MEZULE**,  
Riga Technical University,  
Latvia

### PRE-REGISTRATION REQUIRED

9.00–9.30 **REGISTRATION**

9.30–9.40 **OPENING AND WELCOME ADDRESSES**

Linda Mezule, *Riga Technical University, Latvia*

## FIRST SESSION. Waste Management and Bioenergy

9.40–10.00 **OBSERVATIONAL ANALYSIS OF REGIONAL WIND ENERGY POTENTIAL IN LATVIA**

Kishore Ragi, *SIA "EPIC Prognostics", Latvia*

10.00–10.20 **TOWARDS OPTIMAL WATER BALANCE IN STORMWATER BIORETENTION FEATURES**

Jurijs Kondratenko, *Riga Technical University, Latvia*

10.20–10.40 **POTENTIAL FOR LEGIONELLA CONTROL THROUGH PHOSPHORUS LIMITATION MEASURES IN MULTISTOREY RESIDENTIAL BUILDINGS**

Marta Zemite, *Riga Technical University, Latvia*

10.40–11.00 **PFAS RISK ASSESSMENT IN MUNICIPALITIES**

Kamila Gruskevica, *City of Riga, Latvia*

11.00–11.20 **UTILIZATION OF HAZELNUT WASTE IN PLANT STRESS TOLERANCE**

Deniz Ekinci, *University of Oxford, United Kingdom*

11.20–11.40 **COFFEE BREAK**

## SECOND SESSION. Biotechnology and Bioengineering

11.40–12.00 **METABOLOMICS IN BIOTECHNOLOGY**

Kristaps Klavins, *Riga Technical University, Latvia*

12.00–12.15 **WOOD-DECAYING FUNGI FOR LIGNOCELLULOLYTIC ENZYME PRODUCTION AND BIOREMEDIATION PROCESSES**

Anna Civzele, *Riga Technical University, Latvia*

12.15–12.30 **PLATELET RICH FIBRIN MATRICES AS CARRIERS FOR DRUGS AND BIOACTIVE MOLECULES**

Karina Egle, *Riga Technical University, Latvia*

12.30–12.45 **CALCIUM PHOSPHATE BONE CEMENTS FOR ANTICANCER DRUG DELIVERY**

Estere Oselska, *Riga Technical University, Latvia*

12.45–13.00 **EXPLORING BIOFILM BEHAVIOUR ON MODIFIED MEMBRANES: ROLE OF ZNO IN BIOFILM FORMATION**

Ralfs Vevers, *Riga Technical University, Latvia*

13.00–13.20 **MICROBIAL COMMUNITY DYNAMICS IN THE MESOPHILIC AND THERMOPHILIC PHASES OF TEXTILE WASTE COMPOSTING IDENTIFIED THROUGH NEXT-GENERATION SEQUENCING**

Saloua Biyada, *Vilnius Gediminas Technical University, Lithuania*

13.20–13.40 **ECTOPIC EXPRESSION OF MORPHOGENIC REGULATORS LEADS TO INCREASED PLURIPOTENCY OF PERENNIAL RYEGRASS *L.PERENNE***

Anete Boroduske, *University of Latvia, Latvia*

13.40–14.00 **COFFEE BREAK**

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14.00–14.20 **APPLICATION OF NANOBUBBLE TECHNOLOGY IN WASTEWATER TREATMENT**

Janis Zviedris, SIA "VNK serviss", Latvia

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14.20–14.35 **ENZYMATIC HYDROLYSIS OF WASTE STREAMS ORIGINATING FROM WASTEWATER TREATMENT PLANTS**

Ruta Zarina, Riga Technical University, Latvia

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14.35–14.50 **COST EVALUATION OF FUNGAL-BASED WASTEWATER TREATMENT**

Brigita Dejus, Riga Technical University, Latvia

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14.50–15.10 **HARNESSING MIXED METAL OXIDE ELECTRODES FOR ENHANCED ELECTROCHEMICAL DEGRADATION OF DAIRY WASTEWATER**

Basanti Ekka, Riga Technical University, Latvia

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15.10–16.00 **POSTER PRESENTATIONS, DISCUSSION AND COFFEE**

**INVESTIGATING THE IMPACT OF CURCUMIN, COUMARIN, AND CAFFEINE ON PSEUDOMONAS AERUGINOSA BIOFILM FORMATION IN MICROFLUIDIC CHANNELS**

Elizabete Beta Esenalde

**ANTIMICROBIAL BIOCOMPOSITES WITH CHITOSAN**

Aleksandrs Ivanickins

**PRODUCTION OF POLYHYDROXYALKANOATES (PHA) IN MICROALGAE BOTRYOCOCCUS BRAUNII AND EVALUATION OF THEIR ANTIBACTERIAL PROPERTIES**

Jānis Naglis

**THE COMPOSITION OF STORMWATER RUNOFF AT GAS STATIONS, THE EFFICIENCY OF EXISTING WASTEWATER TREATMENT SYSTEMS, AND SOLUTIONS**

Mikš Mezvevers

**HYPOSENSE – A HYPOXIA-RESPONSIVE BIOSENSOR FOR PRECISION TISSUE MICROENVIRONMENT PROFILING**

Alise Anna Stipniece-Jekimova

**OPTIMIZATION OF MYCELIUM COMPOSITE MATERIAL PRODUCTION**

Karlis Zarins

**PRODUCTION OF ANTIMICROBIAL MESOPOROUS BIOACTIVE GLASS AND CALCIUM PHOSPHATE COMPOSITES AND THEIR PROPERTIES**

Anna Marija Vaisla

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16.00 **CLOSURE**

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