

11th International Doctoral Students' Conference in Life Sciences

THURSDAY 14.05.2026

8:00-10:30

Registration

9:00-10:00

Opening of the Conference

Plenary Lecture: Genetic diversity at the extremes: what the most polymorphic vertebrate genes reveal about host-parasite interactions

Piotr Minias, Prof.

Department of Biodiversity Studies and Bioeducation, University of Lodz, Poland

SESSION: Microbiology, Immunology and Biotechnology

10:00-10:45

Lecture: Health 4.0: Digital Transformation of Healthcare Systems and Real-World Use Cases

Begoña García-Zapirain, Prof.

Faculty of Engineering of the University of Deusto, Spain

10:45-11:00

Isolation and characterization of plant growth-promoting bacteria with bisphenol-degrading potential

Julia Borówka

Faculty of Natural Sciences, Institute of Biology, Biotechnology and Environmental Protection, University of Silesia in Katowice, Poland

11:00-11:15

Microbial competition as a factor determining the efficacy of bacterial-assisted phytoremediation

Agata Kumor

Institute of Biology, Biotechnology and Environmental Protection, University of Silesia in Katowice, Jagiellońska 28, 40-032 Katowice, Poland



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11:15–11:30

IFN-g induces genes are involved in the pyroptotic death of human cells upon bacterial infection

Aleksandra Bajger

*Laboratory of Intracellular Immunity, Institute of Biochemistry and Biophysics of the Polish Academy of Sciences, Warsaw, Poland
Doctoral School of Molecular Biology and Biological Chemistry, Institute of Biochemistry and Biophysics of the Polish Academy of Sciences, Warsaw, Poland*

11:30–12:00

I Coffee break

12:00–12:15

Antifungal activity of Volatile Organic Compounds (VOCs) of *Trichoderma atroviride* in the presence of heavy metal ions

Anastasiia Kubera

Doctoral School of Exact and Natural Sciences, Faculty of Biology and Environmental Protection, University of Lodz, Banacha Street 12/16, 90-237 Lodz, Poland

12:15–12:30

Phenotype and genotype characteristics of *Listeria monocytogenes* strains isolated from wastewater treatment plants

Aleksandra Czastka

Department of Microbiology, Nicolaus Copernicus University in Toruń, L. Rydygier Collegium Medicum in Bydgoszcz, 9 M. Skłodowska-Curie St., 85-094 Bydgoszcz, Poland

12:30–12:45

Prevalence of antibiotic-resistant *Enterococcus* spp. and *Staphylococcus aureus* strains in wastewater treatment plant environments

Julia Czuba

Department of Microbiology, Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, Bydgoszcz, Poland

12:45–13:00

Sponsor Presentation: Symbios Ltd.

13:00–14:00

Lunch



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Session: Biomedical Engineering and Molecular Medicine

14:00–14:45

Lecture: Development and preclinical evaluation of novel theranostics for imaging and treatment of cancers

Yann Seimbille, Assoc. Prof.
Department of Radiology and Nuclear Medicine
Erasmus MC, Rotterdam, Netherlands

14:45–15:00

Sponsor Presentation: Altium International Ltd.

15:00–15:15

Impact of surface enhanced flake graphite properties on a cathode performance in MFCs

Tymoteusz Brasuń
Laboratory of Microbial Electrochemical Systems, Department of Process Engineering and Technology of Polymer and Carbon Materials, Faculty of Chemistry, Wrocław University of Science and Technology, Wrocław, 50-370, Poland

15:15–15:30

Asynchronous Processing Architecture and Microservices for High-Fidelity Sleep Quality Monitoring

Juliam Dario Guerrero Diaz
Faculty of Engineering, University of Deusto, Bilbao, Spain

15:30–15:45

Glycolipids as factors modulating the virulence and biofilm of pathogens – a new approach to infection control

Kinga Hyla
Department of Biotechnology and Food Microbiology, Wrocław University of Environmental and Life Sciences, Chelmońskiego 37, 51-630 Wrocław, Poland

15:45–16:00

Chemopreventive potential of *Aronia melanocarpa* leaf extract and its flaxseed polysaccharide-based encapsulated form in colorectal cancer

Zuzanna Senkowska
Department of Biochemistry, Medical University of Lodz, Mazowiecka 5, 92-215 Lodz

16:00–17:45

Poster session: Biomedical Engineering and Molecular Medicine and Microbiology, Immunology and Biotechnology and **II coffee break**

19:00

Gala Dinner (Centrum Szkoleniowo-Konferencyjne UŁ, Kopcińskiego 16/18, Lodz, Poland)



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FRIDAY 15.05.2026

Session: Ecology and Environmental Biology

9:00–9:45

Lecture: What Makes an Invader Successful? Insights from the Signal Crayfish

Sandra Hudina, Assist. Prof.
*University of Zagreb, Faculty of Science,
Division of Zoology, Croatia*

9:45–10:00

When Nature-based Solutions meet intermittent flow: case study of small urban river

Patrycja Chamczak
*BioMedChem Doctoral School of University
of Lodz and Lodz Institutes of the Polish
Academy of Sciences, European Regional
Centre for Ecohydrology Polish Academy of
Sciences*

10:00–10:15

Visualization of silver nanoparticles and microplastics in *Allium cepa* using two-photon confocal microscopy

Dorian Loknar
*University of Zagreb, Faculty of Science,
Department of Biology, Horvatovac 102a,
Zagreb, Croatia*

10:15–10:30

Back-breaking life of medieval people – investigating occurrence of Schmorl's nodes in two medieval Polish populations

Katarzyna Muzyka
*BioMedChem Doctoral School of the
University of Lodz and Lodz Institutes of the
Polish Academy of Sciences, 21/23 Matejki
Street, 90-237, Lodz, Poland*
*Department of Anthropology, Institute of
Ecology and Environmental Protection,
Faculty of Biology and Environmental
Protection, University of Lodz, 12/16
Banacha Street, 90-237, Lodz, Poland*

10:30–11:00

I Coffee break

11:00–11:15

Micromorphology of seeds and morphology of calcium oxalate crystals as taxonomic features of selected species of *Impatiens* L.

Katarzyna Sanek
*Department of Geobotany and Plant
Ecology, University of Łódź, Banacha 12/16,
90-237 Łódź*

11:15–11:30

Fungal community structure in Norway spruce forest soils: eDNA sequencing results from Lithuania

Eglė Vabuolė
*Vilnius University, Life Sciences Centre,
Institute of Biosciences, Vilnius, Lithuania*



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11:30–11:45

Novel genomic resources and de-novo gene identification in two key ecosystem-shaping polychaetes: *Sabellaria spinulosa* and *Hypania invalida*

Shrikant Vichare

Bio-Med-Chem Doctoral School, University of Lodz and Lodz Institutes of the Polish Academy of Sciences, Banacha 12/16, 90-237 Lodz, Poland

11:45–12:00

Preliminary development of a reticulocyte staining methodology in blood samples from tits (Paridae)

Jarema Wódka

University of Łódź, Doctoral School of Exact and Natural Sciences, Matejki 21/23, 90-237 Lodz, Poland

12:00–12:15

Sponsor Presentation: Bionovo

12:15–12:35

II coffee break

Session: Molecular and Medical Biology

12:35–13:20

Lecture: Mitochondrial Pathobiology is the α and ω of cancer and an open door for non-toxic therapies?

Gabriel Arismendi Morillo,
Assist. Prof.

Biological Research Institute, Faculty of Medicine, University of Zulia, Maracaibo, Venezuela.

Department of Medicine, Faculty of Health Sciences. DeustoMED. University of Deusto, Bilbao (Bizkaia), Spain

13:20–13:35

Glial-to-Mesenchymal Transition of Müller Cells in Proliferative Vitreoretinopathy: A Preliminary *In Vitro* Study

Zuzanna Granek

Department of Medical Chemistry and Biochemistry, Medical University of Lodz Faculty of Medicine, Medical University of Lodz

13:35–13:50

Ketogenic diet induces metabolic and myogenic remodeling of skeletal muscle in a DMM-induced osteoarthritis model

Karolina Górecka

Department of Oncobiology and Epigenetics, Faculty of Biology and Environmental Protection, University of Lodz, Lodz, Poland The Bio-Med-Chem Doctoral School of the University of Lodz and Lodz Institutes of the Polish Academy of Sciences, University of Lodz, Lodz, Poland



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FRIDAY 15.05.2026

13:50–15:00

Lunch

15:00–15:15

Homocysteine and homocysteine thiolactone contribute to Alzheimer's disease via TAU modifications in N2A-APPswe cells

Gabriela Zeidler

Department of Biochemistry and Biotechnology, Poznań University of Life Sciences, Poznań, Poland

Operon Scientific Club, Poznań University of Life Sciences, Poznań, Poland

15:15–15:30

Effects of surgically induced estrogen deprivation on intestinal function and morphology in mature and immature NRF2 knockout female mice

Zuzanna Tomaszewska

Department of Cell Cultures and Genomic Analysis, Medical University of Lodz, 90-752 Lodz, Poland

15:30–15:45

Prognostic Significance of YY1AP1 in Colorectal Cancer

Martyna Szachniewicz

Department of Clinical Pathomorphology, Faculty of Medicine, Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University in Toruń, ul. Curie Skłodowskiej 9, 85-094 Bydgoszcz, Poland

15:45–16:00

Sponsor Presentation: I.C.Lab Ltd.

16:00–17:30

Poster session: Ecology and Environmental Biology and Molecular and Medical Biology

17:45

Awarding prizes for the best oral presentations and posters and closing of the Conference



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