



**SOUTH-EAST
TRANSNATIONAL CONGRESS
OF MICROBIAL SCIENCES**

June 10-13, 2026 | Belgrade, Serbia

Book of Abstracts

MicroFusion, Big impact

microbiology, health
& environment in harmony

“**26** SETCoMS & **66** MIKROMED
REGIO



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ORGANIZER:



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TECHNOLOGICAL DEVELOPMENT AND INNOVATION

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TECHNOLOGICAL DEVELOPMENT
AND INNOVATION



**SOUTH-EAST
TRANSNATIONAL CONGRESS
OF MICROBIAL SCIENCES**

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**MIKROMED
REGIO**

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**1ST SOUTH-EAST TRANSNATIONAL CONGRESS OF MICROBIAL SCIENCES
(SETCOMS 2026 & MIKROMED REGIO 6)
"MicroFusion, Big Impact – Microbiology, Health & Environment in Harmony"
June 10-13, 2026, Belgrade, Serbia**

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Union of Microbiological Societies

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MINISTRY OF SCIENCE,
TECHNOLOGICAL DEVELOPMENT AND INNOVATION

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SOUTH-EAST TRANSNATIONAL CONGRESS OF MICROBIAL SCIENCES

June 10-13, 2026 | Belgrade, Serbia



SETCoMS



**MIKROMED
REGIO**

**MicroFusion,
Big Impact**

microbiology, health
& environment in harmony

Book of Abstracts

June 10 – 13, 2026

Belgrade, Serbia

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Message from the scientific organizers

Dear colleagues and friends,

It was our great pleasure to welcome you to the **1st South-East Transnational Congress of Microbial Sciences (SETCoMS 2026 & MIKROMED REGIO 6)**, held under the inspiring theme *"MicroFusion, Big Impact — Microbiology, Health & Environment in Harmony."* This inaugural Congress represented the beginning of a new scientific platform designed to strengthen regional and international cooperation, encourage interdisciplinary research, and promote scientific excellence across Southeast Europe and beyond.

Microbiology has become one of the most dynamic scientific disciplines of our time, offering innovative solutions to many of the global challenges affecting human, animal, plant, and environmental health. Rapid advances in molecular biology, genomics, bioinformatics, artificial intelligence, and other omics technologies have continued to transform our understanding of microorganisms and their immense potential in medicine, biotechnology, agriculture, industry, environmental protection, and the circular bioeconomy. Addressing these complex challenges has required collaboration across disciplines, institutions, and national borders, making scientific integration - the true essence of „*MicroFusion*“ - more important than ever before.

The scientific programme of SETCoMS 2026 was carefully designed to reflect the broad scope of contemporary microbial sciences through four complementary pillars. The Congress addressed current advances in clinical microbiology, infectious diseases, vaccines, antimicrobial resistance, microbiome research, molecular diagnostics, and One Health approaches. At the same time, particular emphasis was placed on environmental microbiology, microbial ecology, phytobiomes, climate change, biodiversity, and sustainable management of natural resources. Industrial microbiology, biotechnology, synthetic biology, metabolic engineering, bioinformatics, computational genomics, and artificial intelligence further demonstrated how microbial sciences continue to drive innovation across numerous sectors. Finally, the programme highlighted the growing importance of microbiology in education, public engagement, science communication, policy development, and international regulatory frameworks.

Over the course of the Congress, participants exchanged ideas, presented novel discoveries, discussed emerging technologies, and established collaborations that will contribute to future scientific progress. Through keynote lectures, integrated plenary sessions, in-depth symposia, panel discussions, workshop, flash talks, offered presentations, and poster sessions, the Congress provided an outstanding environment for interdisciplinary

dialogue and scientific networking. We strongly believe that these interactions laid the foundation for new partnerships, collaborative projects, and innovative solutions capable of addressing some of the most pressing challenges facing society today.

We were proud that our call received broad recognition from the international scientific community, resulting in the participation of more than 250 researchers and professionals from 30 countries. The scientific programme brought together 87 lecturers from 22 countries, complemented by 24 offered talks, 16 flash talks, and 78 poster presentations. Furthermore, 45 PhD students and early-career researchers were supported through congress grants, reflecting our strong commitment to encouraging the next generation of scientists. We were especially grateful for the remarkable response from the scientific community, with more than 190 submitted abstracts, which greatly contributed to the quality and diversity of the programme. The Congress was accredited by the Health Council of the Republic of Serbia under registration number A-1-1000/26.

We would like to express our sincere gratitude to all invited speakers, participants, members of the Scientific and Organizing Committees, partners, sponsors, reviewers, and volunteers whose dedication, enthusiasm, and professionalism made this Congress possible. Their collective efforts established a strong foundation for what we believe will become a leading international forum for microbial sciences in Southeast Europe.

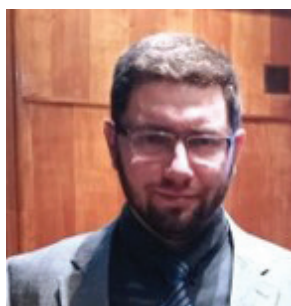
We hope you enjoyed the Congress programme and found it stimulating and informative. We also hope that you enjoyed the beauty of Belgrade and the Serbian hospitality. We sincerely wish you continued success in your scientific careers and look forward to meeting you again at future editions of SETCoMS.

Sincerely,

The Scientific & Organizing Committee



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University of Belgrade
- Faculty of Biology, Serbia
Scientific
& Organizing Committee
Chairperson



Dušan Kekić
University of Belgrade
- Faculty of Medicine, Serbia
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& Organizing Committee
Co-Chairperson



Lazar Ranin
President of the Serbian
Society for Microbiology
Honorary Scientific
& Organizing Committee
Co-Chairperson

Programme pillars and topics

PILLAR 1: FRONTIERS HEALTH & CLINICAL INNOVATIONS

TOPIC 1.1: Clinical Infections & Vaccines

Sub-topic 1.1a: Clinical Studies and Infection Biology of Diseases, including Epidemiology and Clinical Trials

Sub-topic 1.1b: Vaccines and Immunization Science

Sub-topic 1.1c: Infection Prevention and Control including Healthcare – Global Health

Sub-topic 1.1d: Clinical Virology

Sub-topic 1.1e: Phage Therapy and Biomarkers

Sub-topic 1.1f: Bacterial Toxins and Effectors

PILLAR 1: FRONTIERS HEALTH & CLINICAL INNOVATIONS

TOPIC 1.2: Antimicrobials & Resistance

Sub-topic 1.2a: Surveillance of Antimicrobial Resistance: Molecular Typing and Epidemiology

Sub-topic 1.2b: Antimicrobial Agents: Mechanisms of Action and Resistance

Sub-topic 1.2c: Fighting Drug Resistance: Novel Diagnostics and Therapies

Sub-topic 1.2d: New Antimicrobial Agents and Natural Products: in vitro and in vivo Studies

Sub-topic 1.2e: Impact of Environmental and Agricultural Practices on AMR Spread

Sub-topic 1.2f: Biofilms and Wound Healing

PILLAR 1: FRONTIERS HEALTH & CLINICAL INNOVATIONS

TOPIC 1.3: Clinical & Public Health Microbiology

Sub-topic 1.3a: Managing Clinical and Public Health Microbiology Laboratories

Sub-topic 1.3b: Antimicrobial Susceptibility Testing

Sub-topic 1.3c: Diagnostics: Bacteriology, Public Health Microbiology, Veterinary Microbiology and Parasitology

Sub-topic 1.3d: Molecular Diagnostic Microbiology and Laboratory Informatics

Sub-topic 1.3e: One Health Practices and its Impact: Microbial Innovations in Public Health Crises

PILLAR 1: FRONTIERS HEALTH & CLINICAL INNOVATIONS

TOPIC 1.4: Microbiome Breakthrough

Sub-topic 1.4a: Gut Microbiota and Human Diseases

Sub-topic 1.4b: Microbiota–Gut–Brain Axis and Microbiome Profiling

Sub-topic 1.4c: Host-Pathogen Interactions and Microbial Pathogenesis in Human and Animal Systems

Sub-topic 1.4d: Basic Research of Pathogens in Humans

PILLAR 2: ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS

TOPIC 2.1: Applied & Environmental Science

- Sub-topic 2.1a: Shifts in Microbial Diversity and Activity Driven by Climate Change, Urbanization and Pollution
- Sub-topic 2.1b: Agricultural Systems Microbiology and Phytobiome Management
- Sub-topic 2.1c: Freshwater, Terrestrial & Extreme Environments Microbiology
- Sub-topic 2.1d: Wastewater & Non-Clinical Microbiology: AMR Detection and Monitoring
- Sub-topic 2.1e: Toward understanding plant - pathogen – microbiome interactions & Next generation pathogen detection
- Sub-topic 2.1f: From Ancient to Innovative: Microbial Solutions for Sustainability of Cultural Heritage
- Sub-topic 2.1g: Plastics and Microbes: Emerging Challenges and Solutions
- Sub-topic 2.1h: Aeromicrobiology and Built Environments

PILLAR 2: ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS

TOPIC 2.2: Ecology & Evolution of Host-Associated Microorganisms

- Sub-topic 2.2a: Microbial Evolution and Comparative Genomics
- Sub-topic 2.2b: Microbial Biodiversity and Taxonomy – How Can Microbiomes Be Fun?
- Sub-topic 2.2c: Microbial Ecology
- Sub-topic 2.2d: Evolution of Host-Microbe Interactions and Symbioses
- Sub-topic 2.2e: Biodiversity and Systematics: Phages and Viruses

PILLAR 3: INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS

TOPIC 3.1: Industrial & Environmental Biotechnology

- Sub-topic 3.1a: Food Microbiology: Products, Preservation, and Security
- Sub-topic 3.1b: Advanced Industrial Microbiology: Bioproductions, Bioconversions and Fermentations
- Sub-topic 3.1c: Biotransformations: Bioremediation, Biodegradation, Biofouling & Bio-corrosion
- Sub-topic 3.1d: Biotechnological innovations in sustainable disease management
- Sub-topic 3.1e: Biocontrol Agents & Biofertilizers: From Lab to Market
- Sub-topic 3.1f: Colloid Biology of Microbial Systems

PILLAR 3: INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS

TOPIC 3.2: Synthetic Biology, Molecular Microbiology & Bioinformatics

- Sub-topic 3.2a: Bioengineering: Synthetic Biology, Metabolic Engineering, Bioproducts and Biofuels
- Sub-topic 3.2b: Gene Expression, Regulation & Cell-Cell Signaling
- Sub-topic 3.2c: Synthetic Microbial Communities (SynComs): Prospects and Constraints
- Sub-topic 3.2d: Biofilms and Collective Microbial Strategies
- Sub-topic 3.2e: New Microbiological Techniques
- Sub-topic 3.2f: Computational Genomics, Omics, Databases, Bioinformatics, Artificial Intelligence and Modeling

PILLAR 4: MICROBES IN SOCIETY AND THE MICROBIOLOGY PROFESSION

TOPIC 4.1: Society & Profession

Sub-topic 4.1a: Cross-Sector Careers: Academia, Industry, and Government

Sub-topic 4.1b: Microbiology Communication and Outreach: Microbiology Citizen Science

Sub-topic 4.1c: Microbiology Education, Career and Professional Development

Sub-topic 4.1d: Bridging Microbiology and Society Through Community-Engaged Environmental Microbiome Research

Sub-topic 4.1e: Advancing Microbiology Education by Aligning Service-Learning with Societal Needs

PILLAR 4: MICROBES IN SOCIETY AND THE MICROBIOLOGY PROFESSION

TOPIC 4.2: Regulatory Aspects

Sub-topic 4.2a: Microbiology Policy Science & Regulatory Compliance

Sub-topic 4.2b: A Stable Regulatory Foundation for the Circular Bioeconomy: Let's Make It Happen

Sub-topic 4.2c: From Data to Action: Opportunities for European Collaboration



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Scientific Programme

Day 1

 **Wednesday, 10 June 2026**

Belgrade Youth Center (Dom omladine Beograda) · Makedonska 22

 **14:00–15:30**  **REGISTRATION of Participants & Sponsor Exhibition Visit**

 **15:30–16:15** **GREAT HALL**
WELCOME NOTES BY ORGANIZERS AND DISTINGUISHED GUESTS

- Lazar Ranin** — Honorary Scientific & Organizing Committee Co-Chairperson & President of UMS
- Dušan Kekić** — Scientific & Organizing Committee Co-Chairperson
- Ivica Dimkić** — Scientific & Organizing Committee Chairperson
- Branka Vasiljević & Branko Jovčić** — FEMS Secretary General & FEMS Serbian Delegate
- Vaso Taleski** — Former FEMS Director of Events & Internationalization
- HU (Milutin) Zhiyu & Wang Kang** — Embassy of the People's Republic of China in Serbia
- Luciano Catani** — Scientific Attaché of the Italian Embassy
- Amos Reichman** — Director of the French Institute in Serbia

 **16:15–17:00** **GREAT HALL**
KEYNOTE SESSION 1:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Microbiome Breakthrough
Introductory note: *Ivica Dimkić*

 **16:15–17:00** **Gabriele Berg** — Austria — Understanding and managing the plant microbiome for One Health

🕒 17:15–19:00 **GREAT HALL**
INTEGRATED PLENARY SESSION 1:
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS
Applied & Environmental Science
Chairs: *Monica Höfte & Jasmina Nikodinović Runić*

- 🕒 17:15–17:45 **Monica Höfte** — Belgium — Role and fate of cyclic lipopeptides in phytobiomes
- 🕒 17:50–18:20 **Jasmina Nikodinović Runić** — Serbia — Microbiological upcycling of plastic waste
- 🕒 18:25–18:55 **Masaki Shintani** — Japan — From *Pseudomonas* plasmids to a global plasmid database: Insights into mobility and emerging AMR

🕒 19:00–21:30 **MEDIUM HALL 'AMERIKANA'**
WELCOME RECEPTION WITH VIRTUOSO
SAŠA SMILJKOVIĆ



Day 2

 **Thursday, 11 June 2026**

Belgrade Youth Center (Dom omladine Beograda) · Makedonska 22, Belgrade, Serbia

 08:00–09:00  **REGISTRATION of Participants**

 09:00–10:45 **GREAT HALL**
**INTEGRATED PLENARY SESSION 2: FRONTIERS
HEALTH & CLINICAL INNOVATIONS**
Antimicrobials & Resistance / Clinical & Public Health Microbiology
Chairs: Paul Cos & Natasha Griffith

-  09:00–09:30 **Liang Yang** — China — Formation of *Pseudomonas aeruginosa* biofilms and microbial community remodeling
-  09:35–10:05 **Natasha Griffith** — The USA — A wild ride through ups and downs of successful clinical and public health laboratory leadership
-  10:10–10:40 **Paul Cos** — Belgium — Targeting *Mycobacterium tuberculosis* redox metabolism: A challenging path to inhibitor discovery

09:00–10:45 **MEDIUM HALL 'AMERIKANA'**
**INTEGRATED PLENARY SESSION 3:
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS**
*Applied & Environmental Science / Ecology & Evolution
of Host-Associated Microorganisms*
Chairs: Zhong Wei & Daniele Daffonchio

-  09:00–09:30 **Daniele Daffonchio** — Italy — The agroecosystem 'Microbial Terroir' promotes fruit quality and carbon sequestration
-  09:35–10:05 **Zhong Wei** — China — Harnessing rhizosphere phage for One Health
-  10:10–10:40 **Alexandre Jousset** — Switzerland — Democratizing biotechnology: Harnessing artificial intelligence to decode and engineer microbiomes

 10:45–11:30  **Coffee Break & Poster Viewing — Morning Session**

 10:50–11:25 **GREAT HALL**

-  10:50–11:05 **Institute of Molecular Genetics and Genetic Engineering (40 years)**
— A legacy of 40 years in science, discovery, and the people who redefine boundaries
-  11:10–11:25 **Institute for Microbiology and Immunology, Medical Faculty, University of Belgrade**
— A legacy of 100 years in science, teaching, and health practice

🕒 10:45–11:25 **MEDIUM HALL 'AMERIKANA'**
OFFERED FLASH TALKS SESSION
Chair: *Miloš Jovičević*

- 🕒 10:45–10:50 **Milica Gajić Bojić** — Bosnia & Herzegovina — Prevalence of urogenital infections and antimicrobial susceptibility in pregnant women with preeclampsia in the Republic of Srpska
- 🕒 10:50–10:55 **Nikola Plačič** — Serbia — Isolation, screening and characterization of bacteriophages targeting biofilm-forming *Acinetobacter baumannii*
- 🕒 10:55–11:00 **Marija Atanasković** — Serbia — GH130-BG31 β -1-mannosidase reduces biofilm formation and potentiates antibiotic activity in clinically relevant pathogens
- 🕒 11:00–11:05 **Dijana Hasić** — Bosnia & Herzegovina — Contamination of urine cultures at the primary health care level as indicator of quality
- 🕒 11:05–11:10 **Tea Ganić** — Serbia — Biofilm matrix of *Acinetobacter baumannii* wound isolate was affected by antibiofilm agents: cinnamon essential oil and its emulsion
- 🕒 11:10–11:15 **Vukašin Janković** — Serbia — *Streptomyces rubiginosohelvolus* NP10 as a platform strain for biodegradation of cellulose-based materials in composting systems
- 🕒 11:15–11:20 **Kristjan Gašpirc** — Slovenia — Real-time assessment of early-stage and mature biofilm formation and toxicity of chemical stressors using an integrated GenFade vaterite-based system and flow cytometric analysis
- 🕒 11:20–11:25 **Iva Vojtkuf** — Croatia — Methane-cycling prokaryotic communities in contrasting continental and Mediterranean lakes

🕒 11:25–11:30 **GREAT HALL**
A GROUP PHOTO

🕒 11:30–13:00 **GREAT HALL**
IN-DEPTH SYMPOSIA SESSION 1:
INNOVATIVE BIOTECH
& INDUSTRIAL APPLICATIONS
Industrial & Environmental Biotechnology
Chairs: *Aleš Lapanje & Marko Vinceković*

- 🕒 11:30–11:50 **Aleš Lapanje** — Slovenia — Microbial ecosystem engineering by electrostatic design
- 🕒 11:55–12:15 **Marko Vinceković** — Croatia — Encapsulation of probiotics in biopolymer microparticles
- 🕒 12:20–12:30 **Ealisha Jha** — Slovenia (offered talk) — Polyelectrolyte-driven surface engineering as a strategy for constructing compatible and multifunctional microbial consortia
- 🕒 12:30–12:40 **Igor Pavlovski** — North Macedonia (offered talk) — Donkey milk-derived probiotics as next-generation tools against antimicrobial resistance

- 🕒 12:40–12:50 **Dmitrii Deev** — Slovenia (offered talk)— Development of a microfluidic screening approach for isolation of bacterial consortia with phytotoxicity-reducing activity towards olive pomace phenolics

🕒 11:30–13:00 **MEDIUM HALL 'AMERIKANA'**
IN-DEPTH SYMPOSIA SESSION 2:
"FROM SCULPTURES TO SOURDOUGH:
MICROBIOLOGICAL LEGACIES IN CULTURAL HERITAGE"
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS
From Ancient to Innovative: Microbial Solutions
for Sustainability of Cultural Heritage
Chairs: Cecilia Flocco & Nikola Unković

- 🕒 11:30–11:50 **Cecilia Flocco** — Germany — Microbiomes of cultural heritage: Inferring human impact on collections in a changing environment
- 🕒 11:50–12:10 **Nikola Unković** — Serbia — The air we breathe, the heritage at risk: 20-year research toward air-quality guidelines
- 🕒 12:10–12:30 **Aleksandar Knežević** — Serbia — Fungal deterioration of an ancient monoxyle and a 15th-century shipwreck from the archaeological site Viminacium (Serbia)
- 🕒 12:30–12:40 **Ana-Marija Milisav** — Croatia (offered talk) — Microbial and fungal community diversity in glacial lake sediments of Durmitor National Park, Montenegro
- 🕒 12:40–12:50 **Ihab Malat** — Slovenia (offered talk) — From adhesion to function: multiscale imaging of *Aureobasidium pullulans* for living coating development

11:30–13:00 **CLUB DOB HALL**
IN-DEPTH SYMPOSIA SESSION 3:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Clinical Virology
Chairs: Biljana Popovska Jovičić & Ivana Gmizić

- 🕒 11:30–11:50 **Ivana Gmizić** — Serbia — Metabolic disorders in the Belgrade HIV cohort
- 🕒 11:55–12:15 **Biljana Popovska Jovičić** — Serbia — HIF-1α rs11549465 polymorphism and metabolic syndrome in people living with HIV
- 🕒 12:20–12:30 **Jovana Ranin** — Serbia (offered talk) — Cardiometabolic comorbidities in an aging person living with HIV: A case report from the Belgrade HIV cohort
- 🕒 12:30–12:40 **Marko Marković** — Serbia (offered talk) — Cardiovascular risk in people living with HIV in Belgrade
- 🕒 12:40–12:50 **Milan Tanasijević** — Serbia (offered talk) — Bone health assessment in people living with HIV: Real-world data from Serbia

🕒 13:00–14:00  **LUNCH BREAK**

🕒 14:00–15:00 **GREAT HALL**
PANEL DISCUSSION 1:
"CHALLENGES IN INFECTION MANAGEMENT IN THE ICU"
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Fighting Drug Resistance: Novel Diagnostics and Therapies
Moderator: Uroš Karić

Uroš Karić — Serbia — Common misconceptions about microbiology lab results
Marija Đukanović — Serbia — Treating MDR and XDR pathogens in the ICU: Real-world problems and solutions
Anika Trudić — Serbia — Clinical relevance of microbiological findings in drug-resistant infection management

🕒 15:15–16:15 **GREAT HALL**
PANEL DISCUSSION 2: "SHOWCASING THE CLINICAL VALUE OF POINT OF CARE TESTING IN INFECTIOUS DISEASES"
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Diagnostics: Bacteriology, Public Health Microbiology, Veterinary Microbiology, and Parasitology
Moderator: Vera Tešić & Nikolina Babić

Vera Tešić & Nikolina Babić — The USA
Uroš Karić — Serbia

🕒 14:00–16:15 **MEDIUM HALL 'AMERIKANA'**
IN-DEPTH SYMPOSIA SESSION 4:
INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Advanced Industrial Microbiology: Bioproductions, Bioconversions, and Fermentations
Chairs: Michael Sauer & Milica Mirković

🕒 14:00–14:20 **Michael Sauer** — Austria — Renewable resources and the fossil industry
🕒 14:25–14:45 **Steffen Lindner-Mehlich** — Germany — Towards carbon agnostic fermentation
🕒 14:50–15:10 **Milica Mirković** — Serbia — Lactic acid bacteria: Beyond fermentation - applications in health and probiotics
🕒 15:15–15:35 **Bojana Bogovič Matijašić** — Slovenia — Sustainable whey bioconversion into LAB-derived metabolites with emphasis on bacteriocin production and functionality
🕒 15:40–15:50 **Danka Matijašević** — Serbia — From antibacterial activity to virulence targeting: antibiofilm potential of medicinal mushroom extracts
🕒 15:50–16:00 **Veronika Lyamina** — Russia (offered talk) — Detection, isolation and characterization of the properties of the gluten-hydrolyzing proteolytic complex from the micromycete *Aspergillus parasiticus*

🕒 14:00–16:15 **CLUB DOB HALL**
IN-DEPTH SYMPOSIA SESSION 5:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Gut Microbiota and Human Diseases/ Host-Pathogen Interactions and Microbial Pathogenesis in Human and Animal Systems
Chairs: Mirjana Rajilić Stojanović & Aleksandar Pavić

- 🕒 14:00–14:20 **Aleksandar Pavić** — Serbia — Redefining the role of *Candida albicans* in cystic fibrosis lung disease
- 🕒 14:25–14:45 **Teresa Zelante** — Italy — Functional microbial cliques in the oral mucosa underline oral dysbiosis and host susceptibility to *Candida albicans* infection following radio mucositis: the relevance of in vitro 3D tongue organoids
- 🕒 14:50–15:10 **Mirjana Rajilić Stojanović** — Serbia — Probiotics and phytochemicals in gut ecosystem recovery
- 🕒 15:15–15:35 **Milena Radunović** — Serbia — *Candida* in the oral cavity: From commensal to opportunistic pathogen
- 🕒 15:35–15:45 **Katarina Jončić Savić** — Serbia (offered talk) — A translational strategy to enhance antifungal therapy for oral candidiasis using standardized Maqui berry extract: evidence from preclinical and clinical studies
- 🕒 15:45–15:55 **Ana Bačić** — Serbia (offered talk) — Differential gut microbiota responses to multi-strain probiotic supplementation in long COVID and convalescent individuals
- 🕒 15:55–16:05 **Alexander Osmolovskiy** — Russia (offered talk) — Key specific properties and effect on target proteins of bi-functional hemostatically active extracellular proteinase of *Aspergillus ochraceus*

🕒 16:30–18:15 **GREAT HALL**
IN-DEPTH SYMPOSIA SESSION 6:
"THE INTERACTION LANDSCAPES OF ANTIBIOTIC TREATMENT"
INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Computational Genomics, Omics, Databases, Bioinformatics, Artificial Intelligence, and Modeling
Chairs: Djordje Bajić & Jeronimo Rodriguez-Beltran

- 🕒 16:30–16:50 **Jeronimo Rodriguez-Beltran** — Spain — Identification of pervasive plasmid–chromosome interactions to combat antibiotic resistance
- 🕒 16:55–17:15 **Alejandro Couce** — Spain — Mutational biases and epistasis complicate collateral sensitivity predictions
- 🕒 17:20–17:40 **Djordje Bajić** — The Netherlands — Emergent interactions shape antibiotic efficacy landscapes
- 🕒 17:45–18:05 **Viktória Lázár** — Hungary — Context-dependent pathogen virulence under microbial and pharmacological perturbations

🕒 16:30–18:15

MEDIUM HALL 'AMERIKANA'
IN-DEPTH SYMPOSIA SESSION 7:
FRONTIERS HEALTH & CLINICAL INNOVATIONS

Basic Research of Pathogens in Humans/Host-Pathogen Interactions and Microbial Pathogenesis in Human and Animal Systems/Surveillance of Antimicrobial Resistance: Molecular Typing and Epidemiology

Chairs: Livia Leoni & Giordano Rampioni

🕒 16:30–16:50

Jose Alexander — The USA (online lecture) — Closing the gap of the clinical microbiology lab with next-generation sequencing

🕒 16:50–17:10

Livia Leoni — Italy — The evolving landscape of *Pseudomonas aeruginosa* virulence: Progress and open questions

🕒 17:10–17:30

Giordano Rampioni — Italy — Inside the host metabolic niche: From pathogen nutrition to therapeutic opportunities

🕒 17:30–17:50

Ina Gajić & Miloš Jovičević — Serbia — Carbapenem-resistant *Klebsiella pneumoniae* in healthcare settings: Genomic characterization and susceptibility to last-resort agents

🕒 17:50–18:00

Katarina Šapić — Serbia (offered talk) — The KL130 capsule balances complement resistance and adhesion in a mucoid clinical isolate of *Acinetobacter baumannii* 5112H

🕒 16:30–18:15

CLUB DOB HALL
IN-DEPTH SYMPOSIA SESSION 8:
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS

Ecology & Evolution of Host-Associated Microorganisms/Agricultural Systems Microbiology and Phytobiome Management

Chairs: Vittoria Catara & Sheridan L. Woo

🕒 16:30–16:50

Vittoria Catara — Italy — Vascular dwellers in tree hosts, insights from conventional and molecular-based analyses in citrus 'mal secco' disease

🕒 16:55–17:15

Sheridan L. Woo — Italy — What's App? Using plant-beneficial microbe interactions for eco-sustainable pathogen-pest crop protection

🕒 17:20–17:40

Kenji Yokota — Japan — *Bacillus* cyclic lipopeptides; their functions in biological control against plant diseases

🕒 17:45–17:55

Giulio Dimaria — Italy (offered talk) — Integrating genomic and microbiome analyses to investigate emerging soft rot of greenhouse tomato caused by *Pectobacterium* spp.

🕒 18:00–18:10

Marija Pavlović — Serbia (offered talk) — Validation of real-time PCR for the detection of *bla*TEM antibiotic resistance gene in agricultural soil

🕒 18:00–19:30



Poster Viewing – Afternoon Session
with the tasting of Serbian beverages

🕒 19:30–21:30

Belgrade Fortress Sightseeing or River Cruising (optional)



Day 3

 **Friday, 12 June 2026**

Belgrade Youth Center (Dom omladine Beograda) · Makedonska 22

 08:00–09:00  **REGISTRATION of Participants**

 09:00–10:45 **GREAT HALL**
INTEGRATED PLENARY SESSION 4:
INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Synthetic Biology, Molecular Microbiology & Bioinformatics
Chairs: *Ines Mandić Mulec & Ákos T. Kovács*

-  09:00–09:30 **Ákos T. Kovács** — The Netherlands — Understanding *Bacillus* ecology towards composing a symphony for the rhizosphere
-  09:35–10:05 **Edoardo Pasolli** — Italy — Strain-resolved metagenomics across human and food microbiomes
-  10:10–10:40 **Ines Mandić Mulec** — Slovenia — Lessons from microbial interactions for probiotic applications

 09:00–10:45 **MEDIUM HALL 'AMERIKANA'**
INTEGRATED PLENARY SESSION 5:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Microbiome Breakthrough
Chairs: *Nedjeljko Karabasil & Urška Jamnikar Ciglencečki*

-  09:00–09:30 **Andreja Rajković** — Belgium — From genome to gut: Understanding *Bacillus cereus* virulence through toxins, adaptation, and host response
-  09:35–10:05 **Aleksandra Martinović** — Montenegro — Food is information: How the microbiome decodes nutrition?
-  10:10–10:40 **Urška Jamnikar Ciglencečki** — Slovenia — From farm to fork: Emerging viral threats to food safety

 10:45–11:30  **Coffee Break & Sponsor Exhibition Visit**

 10:45–11:25 **GREAT HALL**
FLASH TALKS SESSION
Chair: *Aleksandra Jelušić*

-  10:45–10:50 **Ana Samardžić** — Serbia — Pollution-associated shifts in the microbiome of *Chironomus riparius* larvae revealed by shotgun metagenomics
-  10:50–10:55 **Kristina Kokotović** — Serbia — Diversity of microbial communities in diesel-contaminated soils under phytoremediation: A plot-scale experiment

- 🕒 10:55-11:00 **Magdalena Knežević** — Serbia — *Bacillus velezensis* enhances nitrogen content and stress resilience in wheat
- 🕒 11:00-11:05 **Roopa Patel** — India — Comparative multi-response optimization and economic evaluation of microbial consortium-based integrated nutrient management in cherry tomato and broccoli
- 🕒 11:05-11:10 **Ana Nikolovska** — North Macedonia — Isolation and technological characterization of acetic acid bacteria from rose hip for enhanced vinegar production
- 🕒 11:10-11:15 **Nikola Bajčetić** — Serbia — From brewing by-product to probiotic carrier: Characterization of plasmolyzed spent yeast cells
- 🕒 11:15-11:20 **Kristina Atlagić** — Serbia — The antagonistic effect of native *Trichoderma* species against fungal plant pathogen *Fusarium graminearum*
- 🕒 11:20-11:25 **Allwin Mabes Raj Antony Francis Paulraj** — Slovenia — Kinetic arrest: A new concept for developing highly specific sensors

🕒 11:30–13:00 **GREAT HALL**
IN-DEPTH SYMPOSIA SESSION 9:
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS
Wastewater & Non-Clinical Microbiology:
AMR Detection and Monitoring/Freshwater,
Terrestrial & Extreme Environments Microbiology
Chairs: Jessica Subirats & Gergely Maróti

- 🕒 11:30–11:50 **Jessica Subirats** — Spain — Which antibiotic resistance genes should we monitor in reclaimed water? A framework based on full-scale WWTP metagenomics
- 🕒 11:55–12:15 **Gergely Maróti** — Hungary — Functional resistomes within complex microbial communities in municipal wastewater treatment plants
- 🕒 12:20–12:40 **Prateek Shetty** — Hungary — Chlamy-leon: How cultivation strategies induce alternative algal states
- 🕒 12:45–12:55 **Olukunle Silas Fagbenro** — Nigeria (offered talk) — Integrated microbiological, genotoxic and oxidative stress assessment of contrasting lentic and lotic freshwater systems in a tropical university campus

🕒 11:30–13:00 **MEDIUM HALL 'AMERIKANA'**
IN-DEPTH SYMPOSIA SESSION 10:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Phage Therapy and Biomarkers
Chairs: Goran Vukotić & Nikita Zrelövs

- 🕒 11:30–11:50 **Goran Vukotić** — Serbia — Spreading the word - Phage therapy, yesterday, today, and tomorrow
- 🕒 11:55–12:15 **Hugo Alexandre Mendes de Oliveira** — Portugal — Advancing personalized phage therapy in Portugal: Clinical implementation and rational phage cocktail development

- 🕒 12:20–12:40 **Nikita Zrelavs** — Latvia — Fundamental and applied *Caudoviricetes* bacteriophage research in Latvia
- 🕒 12:45–12:55 **Mina Obradović** — Serbia (offered talk) — Functional validation of a recombinant capsule depolymerase from a non-sequenceable *Acinetobacter baumannii* bacteriophage ISTD

🕒 11:30–13:00 **CLUB DOB HALL**
IN-DEPTH SYMPOSIA SESSION 11:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Vaccines and Immunization Science
Chairs: Nataša Opavski & Alejandro Cabezas-Cruz

- 🕒 11:30–11:50 **Nataša Opavski** — Serbia — Impact of PCV introduction on the evolution of pediatric pneumococcal serotypes and clones
- 🕒 11:55–12:15 **Aleksandra Knežević** — Serbia — Cervical HPV type-specific prevalence in Serbia: vaccine-covered vs. non-vaccine-covered types
- 🕒 12:20–12:40 **Alejandro Cabezas-Cruz** — France — Antimicrobiota vaccines: Reprogramming vector microbiomes to block pathogen transmission
- 🕒 12:45–12:55 **Miloš Petrović** — Serbia (offered talk) — Optimization of UTR sequences for mRNA vaccines

🕒 13:00–14:00  **LUNCH BREAK**

🕒 14:00–15:30 **GREAT HALL**
WORKSHOP SESSION: “FROM MICROBIOMES TO BIOTECHNOLOGY: NEW FRONTIERS IN SUSTAINABLE CROP PRODUCTION AND PROTECTION” (PART I)
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS/ INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Agricultural Systems Microbiology and Phytobiome Management/Biocontrol Agents & Biofertilizers: From Lab to Market
Chairs: Ivica Dimkić & Nejc Stopnisek

- 🕒 14:00–14:25 **Nejc Stopnisek** — Slovenia — Rewilding the tomato holobiont: Microbiome assembly across domestication, ecology, and host genetics
- 🕒 14:30–14:45 **Ivica Dimkić** — Serbia — TERRA_MADRE: An overview of reshaping soil microbiota in Serbia
- 🕒 14:45–15:00 **Ken-ichi Yoshida** — Japan — *Bacillus velezensis* S141: a soybean growth-promoting rhizo-sphere bacterium
- 🕒 15:00–15:15 **Giuliano Degrassi** — Italy — Production and application of *Bacillus thuringiensis*-based products for sustainable control of insect pests
- 🕒 15:15–15:25 **Keming Yang** — China (offered talk) — Probiotic phage steering of disease suppressive rhizosphere microbiomes

🕒 14:00–15:30 **MEDIUM HALL 'AMERIKANA'**
**PANEL DISCUSSION 3: "WHERE INTENSIVE MEDICINE
AND ENDOSCOPY MEETS CLINICAL MICROBIOLOGY"**
FRONTIERS HEALTH & CLINICAL INNOVATIONS
*Infection Prevention and Control, including Healthcare
– Global Health/Dilemmas and Controversy*
Moderator: *Ivan Ranković*

Ivan Ranković — Serbia — Liver failure intensive care unit – points of clinical microbiology
Martina Jug — Serbia — Acute liver failure in chronic hepatitis C: Where does afe end and acif begin? An ICU perspective
Vladimir Milivojević — Serbia — Microbiology aspects of GI endoscopy: Are we setting the bar too low or too high?

🕒 14:00–15:30 **CLUB DOB HALL**
IN-DEPTH SYMPOSIA SESSION 12:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Antimicrobials & Resistance/Miscellaneous
Chairs: *Biljana Nikolić & Alexandra Nascutiu*

🕒 14:00–14:20 **Biljana Nikolić** — Serbia — Natural products and their nano-derivatives as biofilm-combating agents
🕒 14:25–14:45 **Alexandra Nascutiu** — Romania — Biobanking and public health strategies
🕒 14:50–15:10 **Aleksandra Šmitran** — Bosnia & Herzegovina — Comparative analysis of the gut microbiome composition between children with atopic dermatitis and their healthy siblings
🕒 15:10–15:20 **Ljiljana Božić** — Bosnia & Herzegovina (offered talk) — Detection of bacterial zoonotic pathogens in tonsil tissues from children and pets using PCR

🕒 15:30–16:15 **Sponsor Exhibition Visit**

🕒 16:15–17:15 **GREAT HALL**
**PANEL DISCUSSION 4: "WHEN VIRUSES TURN MALIGNANT:
PATHWAYS TO CANCER"**
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Clinical Virology
Moderator: *Ana Banko*

Ana Banko — Serbia — Viral crosstalk in cancer: The oncogenic interplay between EBV and HPV across multiple tumor sites
Danijela Miljanović — Serbia — The oncogenic pathway of HPV: From infection to cancer

Anđa Ćirković — Serbia — From association to causation: Evaluating levels of evidence linking EBV and HPV to human diseases

🕒 16:15–18:15 **MEDIUM HALL 'AMERIKANA'**
WORKSHOP SESSION: "FROM MICROBIOMES TO BIOTECHNOLOGY: NEW FRONTIERS IN SUSTAINABLE CROP PRODUCTION AND PROTECTION" (PART II)
ENVIRONMENTAL INNOVATIONS & SUSTAINABLE SOLUTIONS / INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Agricultural Systems Microbiology and Phytobiome Management/Biocontrol Agents & Biofertilizers: From Lab to Market
Chairs: *Cristina Bez & Vlad Stoian*

🕒 16:15–16:35 **Amitava Rakshit** — India (online lecture) — From stress moderation to sustainability: Biopriming mediation in crop species

🕒 16:35–16:55 **Cristina Bez** — Italy — Beyond canonical quorum sensing: the hidden chemistry of LuxR solos in plant microbiomes

🕒 16:55–17:15 **Vlad Stoian** — Romania — Microbial fusion for a sustainable future: Practical scenarios for agriculture and environmental protection in Romania

🕒 17:15–17:35 **Pramod Kumar** — India (online lecture) — Microbiome-driven soil fertility and crop physiological performance in multilayer fruit-based land use systems under natural farming

🕒 17:35–17:50 **Aleksandra Jelušić** — Serbia — *Bacillus velezensis*: A natural shield against black rot of cabbage cv. Futoški

🕒 17:50–18:05 **Milan Brankov** — Serbia — Implications of indigenous arbuscular mycorrhizal fungi as an agroecological tool in weed management

🕒 19:00–23:00  **Unforgettable night with live music in Panorama Hall of the Palace Hotel!**

Join us for engaging conversations and a celebration of outstanding Congress achievements

Day 4

Saturday, 13 June 2026

Faculty of Civil Engineering · Bulevar kralja Aleksandra 73, Belgrade

10:00–15:00 **Sponsors Exhibition**

10:00–11:00 **CEREMONIAL HALL 140 OF THE FACULTY OF CIVIL ENGINEERING**
KEYNOTE SESSION 2:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Microbiome Breakthrough
Introductory note: Dušan Kekić

10:00–10:45 **Irena Paštar** — The USA — Decoding the dialogue between microbes and skin: Pathways to precision therapeutics

11:00–11:30 **Coffee Break**

11:30–13:15 **CEREMONIAL HALL 140 OF THE FACULTY OF CIVIL ENGINEERING**
INTEGRATED PLENARY SESSION 6:
INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS
Industrial & Environmental Biotechnology/Synthetic Biology,
Molecular Microbiology & Bioinformatics
Chairs: Marc Ongena & Ken-ichi Yoshida

11:30–12:00 **Marc Ongena** — Belgium — Plant immune activation by bacterial lipopeptides
 12:05–12:35 **Ken-ichi Yoshida** — Japan — Atypical catabolite repression of *Geobacillus kaustophilus iol* genes in the presence of ribose
 12:40–13:10 **Jianwei Chen** — China — Systematic mining of bioactive enzymes and peptides from marine microbiomes

11:30–13:15 **MEDIUM HALL 113 OF THE FACULTY OF CIVIL ENGINEERING**
IN-DEPTH SYMPOSIA SESSION 13:
FRONTIERS HEALTH & CLINICAL INNOVATIONS
Clinical & Public Health Microbiology/Diagnostics: Bacteriology,
Public Health Microbiology, Veterinary Microbiology, and Parasitology
Chairs: Dušan Kekić & Vladimir Milivojević

11:30–11:50 **Vladimir Milivojević** — Serbia — Escalating *Helicobacter pylori* antibiotic resistance: Insights from PCR testing
 11:55–12:15 **Simona Grad** — Romania — *Helicobacter pylori* in Romania
 12:20–12:40 **Dušan Kekić** — Serbia — Challenges in current diagnostic tests for *Helicobacter pylori* in Serbia

🕒 13:30–15:15 **CEREMONIAL HALL 140 OF THE FACULTY OF CIVIL ENGINEERING
IN-DEPTH SYMPOSIA SESSION 14:**

**“EMERGING MICROFUNGI:
PATHOGENESIS, RESISTANCE AND TREATMENT”
FRONTIERS HEALTH & CLINICAL INNOVATIONS**

*Clinical & Public Health Microbiology/ Host-Pathogen
Interactions and Microbial Pathogenesis in Human and Animal Systems*

Chairs: Marina Soković & Aleksandra Barać

- 🕒 13:30–13:50 **Sameh Soliman** — The UAE (online lecture) — Metabo-phenotypic precision model for *C. auris* infection and target therapy
- 🕒 13:55–14:15 **Aleksandra Barać** — Serbia — The role of the lung microbiota in the development of pulmonary Aspergillosis: From symbiosis to infection
- 🕒 14:20–14:40 **Marija Ivanov** — Serbia — Impact of natural products on virulence and antifungal resistance of *Candida albicans*
- 🕒 14:45–14:55 **Tamara Carević Milićević** — Serbia (offered talk) — Targeting *Candida* infections: Antimicrobial activity of selected polyphenols
- 🕒 15:00–15:10 **Marina Kostić** — Serbia (offered talk) — Natural products targeting microfungus melanin and virulence

🕒 13:30–15:15 **MEDIUM HALL 113 OF THE FACULTY OF CIVIL ENGINEERING
IN-DEPTH SYMPOSIA SESSION 15:**

INNOVATIVE BIOTECH & INDUSTRIAL APPLICATIONS

*Computational Genomics, Omics, Databases,
Bioinformatics, Artificial Intelligence, and Modeling*

Chairs: João Pedro Saraiva & Alfonso Esposito

- 🕒 13:30–13:50 **Alfonso Esposito** — Italy — Integrating bioinformatics and experimental validation: Lessons from an *in vitro* evolution study of colistin resistance in *Pseudomonas aeruginosa*
- 🕒 13:55–14:15 **João Pedro Saraiva** — Germany — Whole Genome Shotgun-assisted risk assessment of biocontrols
- 🕒 14:20–14:40 **Daniel Julian** — Spain — SequentiaHub: A cloud-native ecosystem for automated and reproducible multi-omics bioinformatics
- 🕒 14:45–14:55 **Biljana Tanasković** — Serbia (offered talk) — Analysis of the precision of bioinformatic protocols for processing 16S rRNA sequences
- 🕒 15:00–15:10 **Stefan Hristov** — Germany (offered talk) — ForceYield2: Validating AI-assisted protein design with *in vivo* selection

🕒 15:30 **CEREMONIAL HALL 140 OF THE FACULTY OF CIVIL ENGINEERING
CLOSING DISCUSSION BY ORGANIZERS & FEMS DELEGATES**

GFL6_2.1.b

***Bacillus velezensis* enhances nitrogen content and stress resilience in wheat**

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Bacillus species, including *Bacillus velezensis*, are plant growth-promoting rhizobacteria (PGPR) that enhance crop performance by improving nutrient uptake and alleviating biotic stresses. Nitrogen (N) status is crucial for wheat growth, photosynthesis, and yield, particularly under pathogen pressure. Microbial inoculants can increase N uptake and assimilation, elevate photosynthetic capacity, and mitigate stress by mechanisms such as ACC deaminase production, antimicrobial compound synthesis, and induction of systemic resistance. This study investigated the effect of *B. velezensis* BHC 3.1 inoculation on N content in wheat (*Triticum aestivum*) under infection with *Fusarium poae*. A pot experiment was conducted in a semi-controlled greenhouse with four wheat seed treatments: i) uninoculated control (Ø), ii) bacterial inoculation (B), iii) fungal infection (F), and iv) combined fungal infection and bacterial inoculation (B+F). Leaf nitrogen content was measured at the early heading stage using a Dualex Scientific leaf clip meter device. In comparison to the uninoculated control (Ø), fungal infection (F) decreased N content for 17.95%. On the other hand, bacterial inoculation (B) increased N content by 17.76% relative to the uninoculated control. In infected plants, inoculation (B+F) enhanced N content by 30.22% compared to infected plants without inoculation (F). These results indicate that *B. velezensis* reduces the negative effects of *F. poae* infection on nitrogen accumulation, likely through improved nutrient uptake and stress alleviation mechanisms. In this way, inoculation with this strain strengthens plant physiological resilience and nutrient status under pathogen pressure. Overall, *B. velezensis* BHC 3.1 has the potential for improving wheat nitrogen status and stress tolerance, highlighting its role in biotic stress conditions.

KEYWORDS: *Bacillus velezensis*; *Fusarium poae*; *Triticum aestivum*; nitrogen status; microbial inoculants

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