



IBSC 2026

**10th Joint International PSU-UNS
Bioscience Conference**

28-29 September 2026, Novi Sad, Serbia

Book of Abstracts

**Bio4Future – Life Sciences
for a Sustainable and Smart Future**

Organised by:

Prince of Songkla University, Thailand

and

**University of Novi Sad,
Faculty of Sciences, Serbia**



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**10th Joint International PSU-UNS
Bioscience Conference**

28-29 September 2026, Novi Sad, Serbia

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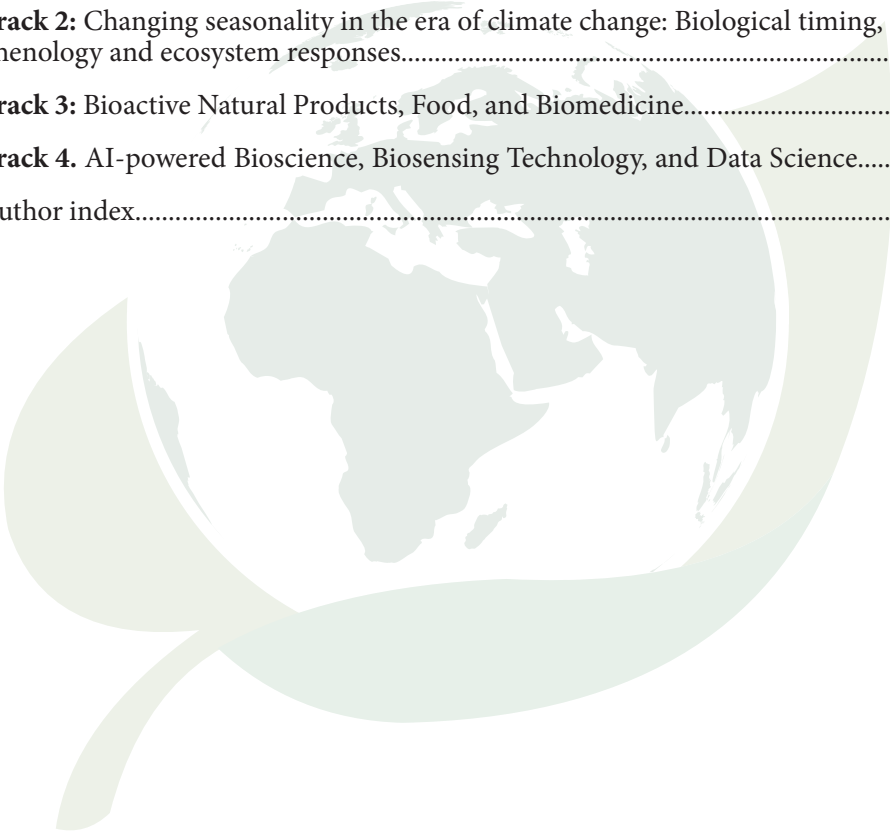
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Conference Report of IBSC 2026 Scientific Committee

On behalf of the Scientific and Organizing committees of *The International Bioscience Conference and the 10th Joint international PSU-UNS Bioscience Conference 2026* between the Prince of Songkla University, Thailand and the University of Novi Sad, Faculty of Sciences, Serbia, we are honored to host this Conference on 28 – 29 September, in Novi Sad, as a hybrid conference, in-person and on-line (via platform).

The International Bioscience Conferences are held every two years and represent the seal of a long-standing partnership between the Prince of Songkla University from Thailand and the University of Novi Sad from Serbia. The IBSC conferences are a joint endeavor to create a forum for networking, sharing ideas and achievements and hence contribute to the overall advancement in the complex and multifaceted field of bioscience. The chosen conference topics aim at providing knowledge, expertise, results and novel ideas in biosciences ranging from fundamental to applied research, advancement in industrial research and strengthening the ties between industry and academia.

IBSC 2026 has followed the tradition of the previous conferences and brought together experts to discuss and share state-of-the-art in the complex and multifaceted field of biosciences. Under the conference tagline: Bio4Future - Life Sciences for a Sustainable and Smart Future, international academic community led by PSU and UNS has been invited to present their results in four conference tracks that well reflect the topics which need urgent attention and viable solutions of the international research community:

Track 1. Life Science Frontiers: Systems Biology, Biodiversity, and Environmental Resilience

Track 2: Changing seasonality in the era of climate change: Biological timing, phenology and ecosystem responses

Track 3. Bioactive Natural Products, Food, and Biomedicine

Track 4. AI-powered Bioscience, Biosensing Technology, and Data Science.

The Scientific Program of the IBSC 2026 is greatly enriched by the participation and the presence of Prof. Dr. Young Hae Choi from the Natural Products Laboratory, Institute of Biology, Leiden University, The Netherlands; Asst. Prof. Dr. Itthipon Jeerapan, Faculty of Science, Prince of Songkla University, Hat Yai, Thailand; Prof. Dr. Antonio Jesus Meléndez-Martínez, from University of Seville, Spain; Prof. Dr. Vladimir Beškoski from Faculty of Chemistry, University of Belgrade, Serbia; Prof. Dr. Kosana Suvočarev from College of Agricultural and Environmental Sciences, UC Davis California, USA and Prof. Dr. Michel Chalot from Chrono-environment Laboratory, University of Marie and Louis Pasteur, Montbeliard, France, who will immensely contribute to the Conference as the plenary speakers.

We believe that together with the 6 plenary, 30 other top quality invited speakers from around the world, overall number of 24 oral presentations and around 86 posters, this Conference can enlighten and inspire all of us, especially the young scientists, to invest more in creating innovative approaches to solving the key challenges that society is facing. Additionally, one session, for all participants, is dedicated to capacity building in research and innovation support, development and management.

We look forward to welcoming around 120 international, regional and local scientists to Novi Sad, the city on the River Danube, the city of European history and hospitality, the cultural, economic, political and administrative center of the Autonomous Province of Vojvodina in the north of Serbia, a modern university city, multicultural and multilingual urban center, famous for its hospitality.

We wish to express sincere gratitude to all contributors, colleagues, sponsors and enthusiasts who provided selfless and generous support to make the Conference a success. The Conference IBSC 2026 is financially supported by The Ministry of Science, Technological Development and Innovation of the Republic of Serbia.

Prof. Dr. Srđan Rončević

The IBSC 2026 Chairperson - President of the IBSC 2026

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	Luka Vidović, Jelena Stojčević Maletić, Dejana Bajić, Milenko Vujkov, Marija Lesjak, Diandra Pintač Šarac, Department of Biochemistry, Faculty of Medicine, University of Novi Sad, Serbia Title: <i>In silico study of the main chemical forms of malvidin in red wine towards acetylcholinesterase</i>	T3-P-40
	Dajana Lazarević, Nada Ćujić Nikolić, Aleksandra Jovanović, Jelena Jovanović, Katarina Šavikin, Andrea Pirković, Gorana Ilić, Goran Vladislavljević, Tatjana Trtić-Petrović, Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia, University of Belgrade, Serbia Title: <i>Biological Potential of Spray-Dried Microparticles from Tanacetum parthenium L. extract</i>	T3-P-41
	Jelena Jovanović, Dajana Lazarević, Nada Ćujić Nikolić, Katarina Šavikin, Tatjana Trtić-Petrović, Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia, University of Belgrade, Serbia Title: <i>Factorial Design of Choline Acetate-Assisted Extraction of Ellagic Acid from Raspberry Pomace</i>	T3-P-42
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	Dušica J. Popović, Kosta J. Popović, Dejan Miljković, Dušan Lalošević, Zana Dolićanin, Ivan Čapo, Jovan K. Popović, State University of Novi Pazar, Serbia Title: <i>Novel Biophysical and Immunohistochemical Evidence Supporting the Repurposing of Combined Metformin and Diclofenac for Oncology</i>	T3-P-44
	Ivana Pašić, Maja Petrović, Kenan Preljević, Tatjana Stanojković, Ivana Z. Matić, Institute for Oncology and Radiology of Serbia, Belgrade, Serbia Title: <i>Phlomis fruticosa: Promising Multifunctional Agent in Biomedical Applications</i>	T3-P-45
	Praewa Chaiwoot, School of Life Science and Technology, Institute of Science Tokyo (Tokyo Institute of Technology), Yokohama, Japan Title: <i>Yeast-Derived β-Glucans Induce Dual Apoptosis and Ferroptosis (a "Double-Hit" Mechanism) in A549 Lung Cancer Cells: A Comparison of Four Yeast Species</i>	T3-P-46

Biological Potential of Spray-Dried Microparticles from *Tanacetum parthenium* L. extract

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Medicinal plants have traditionally been used as medicine due to their anti-inflammatory and analgesic properties. Among them, *Tanacetum parthenium* (L.) Sch. Bip. (feverfew) is a particularly important source of sesquiterpene lactones, which are considered major contributors to their therapeutic effects. Feverfew is rich in parthenolide (PAR), a sesquiterpene lactone associated with a broad range of biological activities. This study aimed to develop feverfew formulations using hydroxypropyl- β -cyclodextrin (HP β CD)-assisted extraction and spray-drying encapsulation, with particular emphasis on evaluating the biological activity of the resulting powders. Feverfew was extracted by conventional maceration (ME) and ultrasound-assisted extraction (UE) using ethanol-water mixtures with or without HP β CD as an extraction enhancer. Extraction efficiency was assessed based on PAR yield and total polyphenol and flavonoid contents. The optimized extract was subsequently spray-dried without a carrier (FWE) or with HP β CD (FWE+CD). The biological activity of the obtained powders was evaluated through complementary in vitro assays. Cytotoxicity was assessed in HaCaT human keratinocytes using the MTT assay. Intracellular reactive oxygen species (ROS) levels were determined using the H₂DCFDA assay to evaluate antioxidant activity, while anti-inflammatory potential was investigated using the red blood cell membrane stabilization assay. UE with 50% (v/v) ethanol containing 0.5% HP β CD provided the most efficient recovery of feverfew bioactives, achieving a PAR yield of approximately 6.3 mg/g dried biomass together with enhanced polyphenol and flavonoid contents. The MTT assay revealed a concentration-dependent reduction in HaCaT cell viability. The formulations also significantly reduced ROS levels at all tested concentrations, indicating pronounced antioxidant activity. Moreover, both the FWE and FWE+HP β CD spray-dried formulations showed membrane-stabilizing activity (inhibition of hemolysis amounted to ~47.2-55.9% at a concentration of 100 μ g/mL), suggesting potential anti-inflammatory activity. These findings demonstrate that the biological properties of the feverfew bioactives were successfully retained following spray-drying encapsulation. The combination of HP β CD-assisted extraction and spray-drying encapsulation represents a promising strategy for obtaining stable and biologically active feverfew formulations rich in PAR and polyphenols. The demonstrated antioxidant activity and anti-inflammatory potential support their further investigation for pharmaceutical applications.

Keywords: Parthenolide, Extraction, Spray drying, Antioxidant, Anti-inflammatory

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