

TRAINING PROGRAM OF NATURAL PRODUCTS AND DRUG DISCOVERY



**24–25 May, 2023
Belgrade, Serbia**

**Institute for Biological Research “Siniša Stanković”
National Institute of Republic of Serbia (IBISS)
University of Belgrade**

TRAINING PROGRAM OF NATURAL PRODUCTS AND DRUG DISCOVERY



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SUPPORTED BY

The Training Project of the Alliance of International Science Organizations (ANSO)

CO ORGANIZER BY

Shanghai Institute of Materia Medica, Chinese Academy of Sciences (SIMM)

Institute for Biological Research "Siniša Stanković", National Institute of Republic of Serbia (IBISS), University of Belgrade

China-Serbia Natural Products and Drug Discovery "Belt and Road" Joint Laboratory

CO-SPONSORED BY

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PROGRAMME

Wednesday 24th May

OPENING CEREMONY

09:00-09:30	1. Introduction of guests
	2. Organizer's speech
	3. Group photo

SECTION 1: TRAINING COURSES

09:30-10:15	Machine Learning Integrated Natural Products Chemistry Research	Prof. Yang Ye
10:15-11:00	From TCM to PCSK9 modulator, a way chasing for hypolipidemic candidate	Prof. Lijiang Xuan
11:00-11:15	Coffee break	
11:15-12:00	Discovery and optimization of lead compounds based on new targets	Prof. Bing Zhou
12:00-12:30	Optical Methods for Noninvasive Plant Health Assessment	Dr. Katarina Miletić
12:30-13:30	Lunch	
13:30-14:15	A look back on the emergency drug discovery and development during the COVID-19 pandemic	Prof. Jingshan Shen
14:15-15:00	Preclinical pharmacodynamic evaluation of active compounds against central nervous system diseases	Prof. Haiyan Zhang
15:00-15:15	Coffee break	
15:15-16:00	Pharmacodynamic evaluation of antiviral drugs	Prof. Wei Tang
16:00-16:45	Nonclinical safety evaluation of innovative medicines	Prof. Likun Gong
16:45-17:15	Natural medicinal products: a critical analysis of current and emerging regulatory status in Serbia and Europe	Prof. Miroslav Savić
17:15-17:45	PANDA Council meeting	Council Members

Thursday 25th May

09:00-09:45	Pharmacokinetic evaluation in early drug discovery stage	Prof. Jia Liu
09:45-10:30	Advanced drug delivery technology for natural product compounds for cancer therapy	Prof. Yongzhuo Huang
10:30-10:45	Coffee break	
10:45-11:15	Bioactive Compounds with Food and Cosmeceutical Applications Derived from Mushrooms and Plant	Dr. Dejan Stojković

SECTION 2: ORAL PRESENTATIONS

11:15-11:30	Pharmacokinetics and metabolism of natural products. The case of oleocanthal, a natural anti-inflammatory agent of olive oil	Dr. Theodora Nikou
11:30-11:45	Natural products: chemistry, bioactivity and application	Dr. Jelena Kukić-Marković
11:45-12:00	Optimizing cordycepin extraction from <i>Cordyceps militaris</i> and its determination using high-performance liquid chromatography	Mateja Zotler
12:00-12:15	<i>Cucumis metuliferus</i> E. Mey. fruit peel hydro-ethanolic extracts: chemical composition and antibacterial properties	Mladen Rajaković
12:15-12:30	<i>Foeniculum vulgare</i> Miller, a New Chemotype from Montenegro	Svetlana Vujović
12:30-13:30	Lunch	
13:30-13:45	The Impact of cytokinins and auxins on biomass and cannabinoid production in callus cultures of cannabis (<i>Cannabis sativa</i> L.)	Ana Trajkovska
13:45-14:00	Antioxidant capacity of <i>Sorbus torminalis</i> (L.) Crantz and <i>Viscum album</i> L.	Toda Ignjatović
14:00-14:15	Comparison of vibrational spectroscopic techniques for determination of phytocannabinoid content in medicinal Cannabis sativa flowers	Olga Gigopulu
14:15-14:45	The Chinese National Compound Library – An open innovation platform	Prof. Dehua Yang
14:45-15:00	Coffee break	

15:00-15:15	General Introduction of SIMM	Prof. Yang Ye
15:15-15:45	Introduction to the international graduate education of SIMM	Prof. Min He
15:45-16:00	Introduction of IBISS	Dr. Mirjana Mihailović
16:00-16:30	Transformation of R&D landscape in Serbia	Prof. Viktor Nedović

GRADUATION CEREMONY

16:30-17:00	1. Speeches by attendee representative
	2. Organizer's speech
	3. Issuing certificates of completion
17:00-17:30	B&R joint laboratory annual meeting



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Natural products: chemistry, bioactivity and application

Research Field: Pharmacognosy; Phytotherapy

Abstract: The focus of research group from Department of Pharmacognosy at the Faculty of Pharmacy in Belgrade is on natural products, their chemistry and application. Main subjects of research are analysis of composition and bioactivities of various plant isolates (extracts, essential oils), isolation and structural analysis of active specialized plant metabolites, optimization of extraction procedures involving new techniques, and green chemistry principles. Since the Balkan Peninsula is one of the centers of plant biodiversity, our main objective is to explore the autochthonous taxa, especially endemic and rare ones, in terms of their distribution, conservation, morphology, chemistry, pharmacology and potential utilization. The main outcomes of these studies are the identification of new herbal raw materials and isolates, their pharmacognostic and pharmacological characterization, and the development of methods of quality assessment and evaluation of safe use of natural products, along with exploring other ways of their use. Important segment of research focuses on identifying natural principles and influences on secondary plant metabolism and studying the chemotaxonomic potential of certain plant metabolites. Basic research interest of this group is constantly upgraded through scientific collaboration with colleagues from other research institution from Serbia, neighboring regions and abroad, resulting in many scientific and professional publications, and PhD theses.

Keywords: Natural products, plant isolates, chemistry, bioactivity