Serbian Biochemical Society

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Serbian Biochemical Society
Eleventh Conference

Scientific meeting of an international character

September 22nd and 23rd, 2022, Novi Sad, Serbia

"***Amazing Biochemistry"***

PROGRAMME

Day 1 – Thursday, September 22nd 2022

9:00 – 10:00	Participants registration and posters posting
10:00 – 10:15	Opening ceremony
10:15 – 11:00	István Zupkó University of Szeged **PL1: Cancer metastasis: methodological challenges and pharmacological possibilities** FEBS3+ Lecture
11:00 – 12:15	Poster Session 1 & Coffee Break
12:15 – 12:45	Andrej Veljković University of Niš - Faculty of Medicine **IL1: Mechanisms of oxidative stress and antioxidant protection in carcinogenesis**
12:45 – 13:00	Marija Maksimović MDPI - Multidisciplinary Digital Publishing Institute **SL1: Open Access publishing: Trends and perspectives**
13:00 – 13:15	Yaraslau Dzichenka Insitute of Bioorganic Chemistry of National Academy of Sciences of Belarus **OP1: Novel promising fluorescent ligands of human CYP17A1**

13:15 – 13:30	Dragana Pap Students Health Protection Institute Novi Sad **OP2: Antioxidant defense, obesity, type 2 diabetes in students**
13:30 – 13:45	Tamara Antonić Faculty of Pharmacy, University of Belgrade **OP3: HDL functionality in women with preeclampsia**
13:45 – 14:00	Mirjana Radomirović University of Belgrade - Faculty of Chemistry **OP4: Development and comparison of Western blot, dot blot and ELISA for mussels tropomyosin quantification**
14:00 – 15:00	Cocktail / Lunch break
15:00 – 15:30	Roman Jerala National Institute of Chemistry, Slovenia **IL2: Coiled-coil modules for designed protein folds and cellular logic circuits**
15:30 – 16:00	Jelena Danilović Luković University of Belgrade - Institute for the Application of Nuclear Energy **IL3: Extracellular vesicles in a maze of glycomic complexity**
16:00 – 23:00	Social events (guided tour and Conference dinner)

Day 2 – Friday, September 23rd 2022

9:00 – 10:00	Participants registration and posters posting
10:00 – 10:45	Brankica Janković University of Zurich **PL2: Design of proteins whose structure and function can be controlled by light** Diaspora Lecture
10:45 – 12:00	Poster Session 2 & Coffee Break
12:00 – 12:30	Sonja Milić Komić University of Belgrade - Institute for Multidisciplinary Research **IL4: Late Embryogenesis abundant proteins: Structural characterization and interaction with α-synuclein**
12:30 – 13:00	Miloš Matić University of Kragujevac - Faculty of Science **IL5: The role of interleukin-6 in placenta and possible pregnancy risks in patients with COVID-19**
13:00 – 13:15	Aleksandra Milenković University of Niš, Faculty of Technology, Leskovac **OP5: Chemical composition and antioxidant activity of Frankincense essential oil**
13:15 – 13:30	Filip Štrbac Faculty of Agriculture, University of Novi Sad **OP6: Chemical composition of sage (*Salvia officinalis* L.) essential oil and its anthelmintic properties against sheep gastrointestinal nematodes**

13:30 – 13:45	Dragica Mićanović Institute for Biological Research "Siniša Stanković, University of Belgrade **OP7: Effects of chokeberry fruit water extract on immune system in mouse models of infection and melanoma**
13:45 – 14:45	Cocktail / Lunch break
14:45 – 15:15	Miron Sopić University of Belgrade, Faculty of Pharmacy **IL6: Change of transcriptomic signature in subcutaneous adipose tissue induced by weight loss**
15:15 – 15:45	Dejan Orčić University of Novi Sad - Faculty of Sciences **IL7: Phytochemical and biochemical studies of wild chervil (*Anthriscus sylvestris*)**
15:45 – 16:00	Poster and oral presentation awards and closing ceremony

Effects of chokeberry fruit water extract on immune system in mouse models of infection and melanoma

Dragica Mićanović[1*], Ivan Koprivica[1], Katarina Šavikin[2], Lidija Šenerović[3], Sanja Despotović[4], Nada Pejnović[1], Ivana Stojanović[1], Tamara Saksida[1]

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Chokeberry (*Aronia melanocarpa*) fruit extracts (CE) are rich in polyphenols and usually exhibit cardioprotective, anti-viral and anti-bacterial properties[1]. Our aim was to investigate the effects of CE on the immune response *in vivo* and *in vitro*, which have been only sporadically assessed. CE, administered orally to healthy mice, exerted immunomodulatory effects in the gut, evidenced by the altered proportion of macrophages (Mφ), dendritic cells (DC) and T cells. CE-pretreated BALB/c mice readily eradicated orally ingested *Listeria monocytogenes* due to higher proportions of Mφ and CD8 T cells both in the gut and spleen. Additionally, phagocytosis, ROS production and the proportions of activated Mφ and DC, as well as perforin$^+$ cells were enhanced in CE-pretreated infected mice. Also, CE pretreatment of C57BL/6 mice inoculated with B16 cells delayed melanoma appearance and increased infiltration of immune cells in the tumor microenvironment (TME). The TME of CE-treated mice contained more IFN-γ^+ cells and a less of tumor-promoting CCR5$^+$ MDSC. *In vitro*, CE displayed no direct cytotoxicity to B16 cells. Splenocytes isolated from CE-treated animals exerted strong cytotoxic effect on B16 cells and this effect was diminished by neutralization of IFN-γ. In conclusion, the CE exhibits strong immunomodulatory properties and should be consumed with care.

Acknowledgements

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References

1. Kulling SE, Rawel HM. Chokeberry (*Aronia melanocarpa*) - A review on the characteristic components and potential health effects. Planta Med 2008;74:1625-34.


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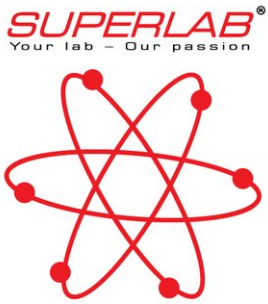
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