



**UNFOOD
CONFERENCE**
University of Belgrade
210th Anniversary
OCTOBER 5-6 2018

**PROGRAM
I
ZBORNIK RADOVA**

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&
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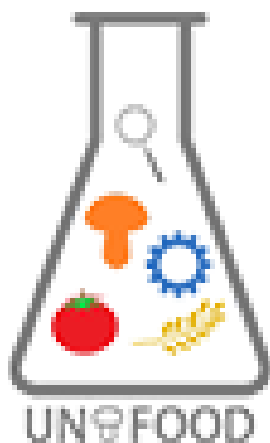
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UNIFood Conference

October 5-6 2018 University of Belgrade **210th Anniversary**



PLENARNA I PREDAVANJA PO POZIVU

Datum (Date): Petak (Friday), 5.10.2018.

Mesto (Place): Rektorat BU, svečana sala, Studentski trg 1, (Rectory building, Congress hall)

8.30-9.00	Registracija (Registration)	
9:00-9:30	Pozdravne reči i otvaranje Welcome speech and opening	Prof. Dr. Ivanka Popović Rektor/Rector Prof. Dr. Vladimir Bumbaširević Predhodni Rektor/ Previous Rector Predstavnici Ministarstva za obrazovanje, nauku i tehnološki razvoj RS/Representatives of the Ministry of Education, Science and Technological Development RS Dr Marina Soković predsednik naučnog odbora UNIFood konferencije/President of the Scientific Committee
9:30-12:50	Plenarna predavanja i predavanja po pozivu (Plenary and inviting lectures)	Moderatori/Moderators: Prof. Dr Živoslav Tešić, Dr Marina Soković
9:30-10:10	Suštinska uloga prirodnih resursa na putu otkrivanja novog bio-baziranog aditiva za hranu The essential role of natural resources on novel bio-based food additives discovery pathway <i>PLENEARNO PREDAVANJE</i> <i>PLENARY LECTURE</i>	Prof. Dr. Isabel C.F.R. Ferreira Politehnički institut Braganca i direktor Centra za istraživanje (CIMO), Braganca, Portugal. Direktor Mountain Research Centra (CIMO), Bragança, Portugalija Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal
10:10-10:30	Nedigestibilne komponente hrane i njihov značaj za stimulaciju simbiotske aktivnosti crevne mikrobiote	Dr. Mirjana Rajilić-Stojanović Tehnološko metalurški fakultet, Univerzitet u Beogradu, Srbija Department for Biochemical Engineering and Biotechnology,



UNIFood Conference

Plenarna Predavanja/ Plenary Lectures



PP1 / PL1

The essential role of natural resources on novel bio-based food additives discovery pathway

Isabel C.F.R. Ferreira

Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

Natural resources are invaluable sources of bio-based molecules with numerous applications in food industry. Some of these compounds have been explored to serve particular purposes such as substituting artificial food additives. In fact, the increasing consumers' awareness and resistance to artificial compounds often used as additives in many foodstuffs has led to renewed strategies to overcome possible safety issues, while guaranteeing effectiveness. Food additives have long been used to enhance foodstuff properties and are of great value to maintain their quality, which justifies the exploitation of safer bio-based compounds to be used as natural substitutes. Plants and mushrooms seem to be a potential source of such compounds, given their unique richness in colouring, preservative, and bioactive molecules.

In this context, several matrices have been studied and certain compounds such as betalains (e.g. gomphrenin II, gomphrenin III, isogomphrenin II, and isogomphrenin III) and anthocyanins (e.g. cyanidin, delphinidin, and malvidin derivatives) were extracted from purple globe amaranth, rose, dahlia, centaurea, strawberry-tree, roselle, and blueberry and were further introduced in ice-cream, yogurt, and waffles for colouring purposes.

On the other hand, preservative molecules such as flavonoids (e.g. catechin, and quercetin and luteolin derivatives), phenolic acids (e.g. rosmarinic, chicoric, lithospermic, caffeic, and caffeoylquinic acids), and hydrolysable tannins (e.g. trigalloyl-HHDP-glucoside) were obtained from strawberry-tree, basil, lemon balm, sweet chestnut flowers, fennel, and German chamomile, and were tested in loaf bread, cupcakes, yogurt, cheese, and cottage cheese, namely. Moreover, phenolic acids (e.g. rosmarinic acid), flavonoids (e.g. quercetin derivatives), and ellagitannins (e.g. sanguin H-10 and lambertianin) from mushrooms, wild strawberry, rosemary, mountain sandwort, and flowers of *Silva brava* conferred bioactive properties to gelatin, yogurt, and cottage cheese.

The proven efficacy of distinct natural food additives in several foodstuffs highlights the importance of natural resources such as plants and mushrooms in these novel additives discovery journey.

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