



**UN FOOD  
CONFERENCE**  
University of Belgrade  
**210<sup>th</sup> Anniversary**  
OCTOBER 5-6 2018

**PROGRAM  
I  
ZBORNIK RADOVA**

*Programme  
&  
Book of Abstracts*

Beograd, 5 i 6 oktobar 2018  
Belgrade, Octobre 5-6, 2018

CIP-Kategorizacija u publikaciji  
Narodna biblioteka Srbije, Beograd

Univerzitet u Beogradu  
UNIFOOD CONFERENCE (2018; Beograd)  
Program; i zbornik radova= Programme; & Book of Abstracts/  
Beograd, 5 i 6 oktobar 2018 = Belgrade, Octobre 5-6 2018  
[organizator] Univerzitet u Beogradu; [organized by] University of Belgrade  
[urednici, editors Marina Soković, Živoslav Tešić] Beograd, Univerzitet u Beogradu

Radovi na srp i engl. jeziku – Tekst ćir i lat- Tiraž

ISBN 978-86-7522-060-2

UNIFOOD Konferencija, Beograd, 5-6 oktobar 2018  
PROGRAM I ZBORNIK RADOVA

UNIFOOD Conference, Belgrade Octobre 5-6 2018  
Programme and Book of Abstracts

**Izdaje / Published by**

**Univerzitet u Beogradu / University of Belgrade**

Studentski trg 1, 11000 Beograd

Tel/fax ; [www.bg.ac.rs](http://www.bg.ac.rs), email

**Za izdavača / For Publisher**

**Vladimir Bumbaširević, rektor**

**Urednici / Editors**

**Marina Soković**

**Živoslav Tešić**

**Dizajn korica i kompjuterska obrada teksta / Cover Design Layout**

**Tomislav Tosti**

**Tiraž / Circulation**

ISBN 978-86-7522-060-2



HZP26 / FHP26

# UNIFood Conference

Posterska prezentacija u okviru sekcija / Poster presentation within sections  
HRANA I ZDRAVLJE / FOOD AND HEALTH



## Anti-kvorum aktivnost dopamina i srodnih jedinjenja

Stefan Pualić<sup>1</sup>, Marina Soković<sup>2</sup>, Ana Ćirić<sup>2</sup>, Dušan Dimić<sup>3</sup>, Jasmina Dimitrić Marković<sup>3</sup>, Boris Pejin<sup>4</sup>

<sup>1</sup>*Regionalni centar za talente Beograd 2, Beograd*

<sup>2</sup>*Institut za biološka istraživanja "Siniša Stanković" – IBISS,  
Univerzitet u Beogradu*

<sup>3</sup>*Fakultet za fizičku hemiju, Univerzitet u Beogradu*

<sup>4</sup>*Institut za multidisciplinarna istraživanja – IMSI, Univerzitet u Beogradu*

Cilj ovog rada bio je da se po prvi put ispita anti-kvorum aktivnost dopamina (sastojka hrane) i njemu srodnih jedinjenja u hemijskom smislu na bakterijski soj *Pseudomonas aeruginosa* PAO1, radi mogućeg otkrića nove vodeće strukture (eng. lead compound) u dizajnu efikasnog antibiotika. Na osnovu eksperimentalno dobijenih podataka može se zaključiti da bi, na prvom mestu, derivati homovanilinske kiseline i norepinefrina (koji, takođe, predstavljaju sastojke hrane) mogli da inspirišu dizajn novog leka (antibiotika) za ovu multirezistentnu bakteriju.

## Anti-quorum sensing activity of dopamine and related compounds

Stefan Pualic<sup>1</sup>, Marina Sokovic<sup>2</sup>, Ana Ciric<sup>2</sup>, Dusan Dimic<sup>3</sup>, Jasmina Dimitric Markovic<sup>3</sup>, Boris Pejin<sup>4</sup>

<sup>1</sup>*Regional Centre for Talented Youth Belgrade 2*

<sup>2</sup>*Institute for Biological Research "Sinisa Stankovic" – IBISS,  
University of Belgrade*

<sup>3</sup>*Faculty of Physical Chemistry, University of Belgrade*

<sup>4</sup>*Institute for Multidisciplinary Research – IMSI, University of Belgrade*

The aim of this work to screen for the first time anti-quorum sensing activity of dopamine (a food ingredient) and related compounds towards *Pseudomonas aeruginosa* PAO1, due to the possible discovery of a new lead compound for design of an effective antibiotic. The obtained experimental data suggest that derivatives of homovanillic acid and norepinephrine (compounds that also represent food ingredients) might be used as the platform of a new drug (antibiotic) for this multiresistant bacterium.