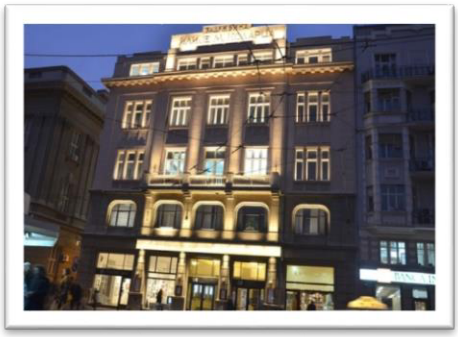
FoodEnTwin Symposium:

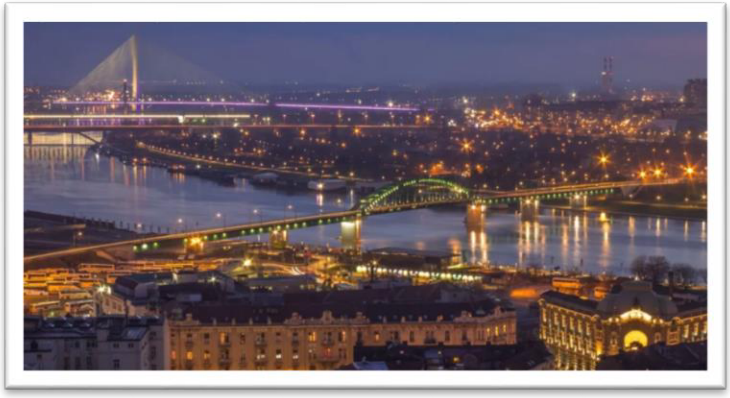
Novel analytical approaches in food and environmental sciences

Book of Abstracts

June 16-18, 2021

Belgrade, Serbia





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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810752

Session 2: Analytical methods development in food and environmental sciences

Invited lecture

RESVERATROL AND FIBRINOGEN INTERACTIONS

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The French paradox describes a lower incidence of cardiovascular problems despite a high intake of saturated fats. This phenomenon was associated with higher consumption of red wine, only to be later discovered that the presence of several antioxidants, including resveratrol, are responsible for it. We investigated if resveratrol has a more direct role in protection from harmful oxidation and development of thrombosis, presumably through binding to important proteins of the blood coagulation process. Spectrofluorimetric analysis demonstrated binding of resveratrol to fibrinogen, the main protein in the coagulation process, which also has an important application as a food additive in making of fibrin gels. Various spectroscopic methods have demonstrated that binding of resveratrol does not unfold or destabilize fibrinogen since both near and far-UV CD spectra as well as its melting temperature remained unchanged. A mutually protective effect against the free radical-induced oxidation of resveratrol and fibrinogen was found. The presence of fibrinogen caused a very small masking effect of the antioxidative potential of resveratrol, measured by a reduction of hexacyanoferrate (III), while greatly increasing its solubility in an aqueous environment, thus increasing potential bioavailability and activity of resveratrol in circulation. By direct interaction and protection of fibrinogen, resveratrol may serve as an important antioxidant for prevention of thrombosis. The antioxidative effect of resveratrol may also protect and thus keep the desired characteristics of fibrinogen during the application of this protein as a food additive.

Keywords: Resveratrol, Fibrinogen, Solubility, Interaction, Antioxidant

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КОЛАРЧЕВА ЗАДУЖБИНА

FoodEnTwin
-omics technologies bridging food and environmental sciences

Универзитет у Београду - Хемијски факултет

Twinning of research activities for the frontier research in the fields of food, nutrition and environmental 'omics' - FoodEnTwin

Certificate

This is to certify that

Nikola Gligorijević

was invited speaker at

FoodEnTwin Symposium

16th – 18th June 2021

Organized by the FoodEnTwin project at University of Belgrade-Faculty of Chemistry

Prsident of the Scientific committee

Prof. Tanja Ćirković Veličković

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810752

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FoodEnTwin
-omics technologies bridging food and environmental sciences

To: Nikola Gligorijevic
Institute for Application of Nuclear Energy, INEP
Belgrade, Serbia

Date: 29.04.2021.

Subject: Invitation letter

Dear Dr Gligorijevic,

On behalf of the organizers, with great pleasure I am inviting you to stay at the University of Belgrade – Faculty of Chemistry (UBFC) from 16th to 18th June 2021 and take part in the FoodEnTwin Symposium: Novel instrumental approaches in food science, as invited lecturer.

The final FoodEnTwin symposium will be organized in a dual format: both presentational and online via streaming. The workshop will be held at Ilija M. Kolarac building, Studentski trg 5, Belgrade, and University of Belgrade – Faculty of Chemistry, Studentski trg 16, Belgrade.

The symposium will focus on food and agricultural applications of modern instrumental analytical methods.

Preliminary program can be found here: http://horizon2020foodentwin.rs/symposium/

I am honored to welcome you to the Final FoodEnTwin Symposium as an invited expert to deliver a lecture entitled

"Resveratrol and fibrinogen interactions"

and bring your scientific expertise on this topic.

Your stay (up to 4 nights in Belgrade) and travel will be funded through the European project, Horizon 2020, Twinning of research activities for the frontier research in the fields of food, nutrition and environmental omics - FoodEnTwin, No. 810752.

Kindly confirm your participation to the event by May 15, 2021 by replying to this message. Your decision regarding type of participation should be communicated to us by June 02, 2021, with the exact dates of the arrival and departure in order to organize hotel accommodation.

With regards to the Covid-19 situation, we would like to inform you that travelling to Serbia is possible, there are no quarantine measures in case negative PCR result is presented.

We are looking forward to meeting you in Belgrade.

Yours sincerely,

Prof. Tanja Cirkovic Velickovic
FoodEnTwin project coordinator
University of Belgrade – Faculty of Chemistry
On behalf of the Organizing Committee of the Foodentwin Final symposium
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 810752

Београд, 30. децембар 2021.

Др Тања Ћирковић-Величковић
Хемијски факултет
Универзитет у Београду

Разматран је захтев за категоризацију поглавља, који је достављен 6. септембра 2021., електронским путем Матичном одбору за хемију.

Одбор је донео одлуку да према критеријумима из важећег Правилник о стицању истраживачких и научних звања, FoodEnTwin Симпозијум „Нови Аналитички приступи у храни и науке о животној средини“, захтев је упућен од стране Тање Ћирковић Величковић

FoodEnTwin Симпозијум „Нови Аналитички приступи у храни и науке о животној средини“, одржан од 16. до 18. јуна 2021. године у Задужбини Илије М. Коларца

јесте скуп међународног карактера.

С поштовањем,

Проф. др Живослав Тешић
Председник Матичног научног одбора за хемију