XXII euro FOOD chem

PROGRAM BOOK

XXII Congress

EuroFoodChem

June 14-16, 2023 | Belgrade, Serbia

https://xxiieurofoodchem.com
congress2023@xxiieurofoodchem.com

Serbian Academy of Sciences and Arts
Knez Mihailova 35
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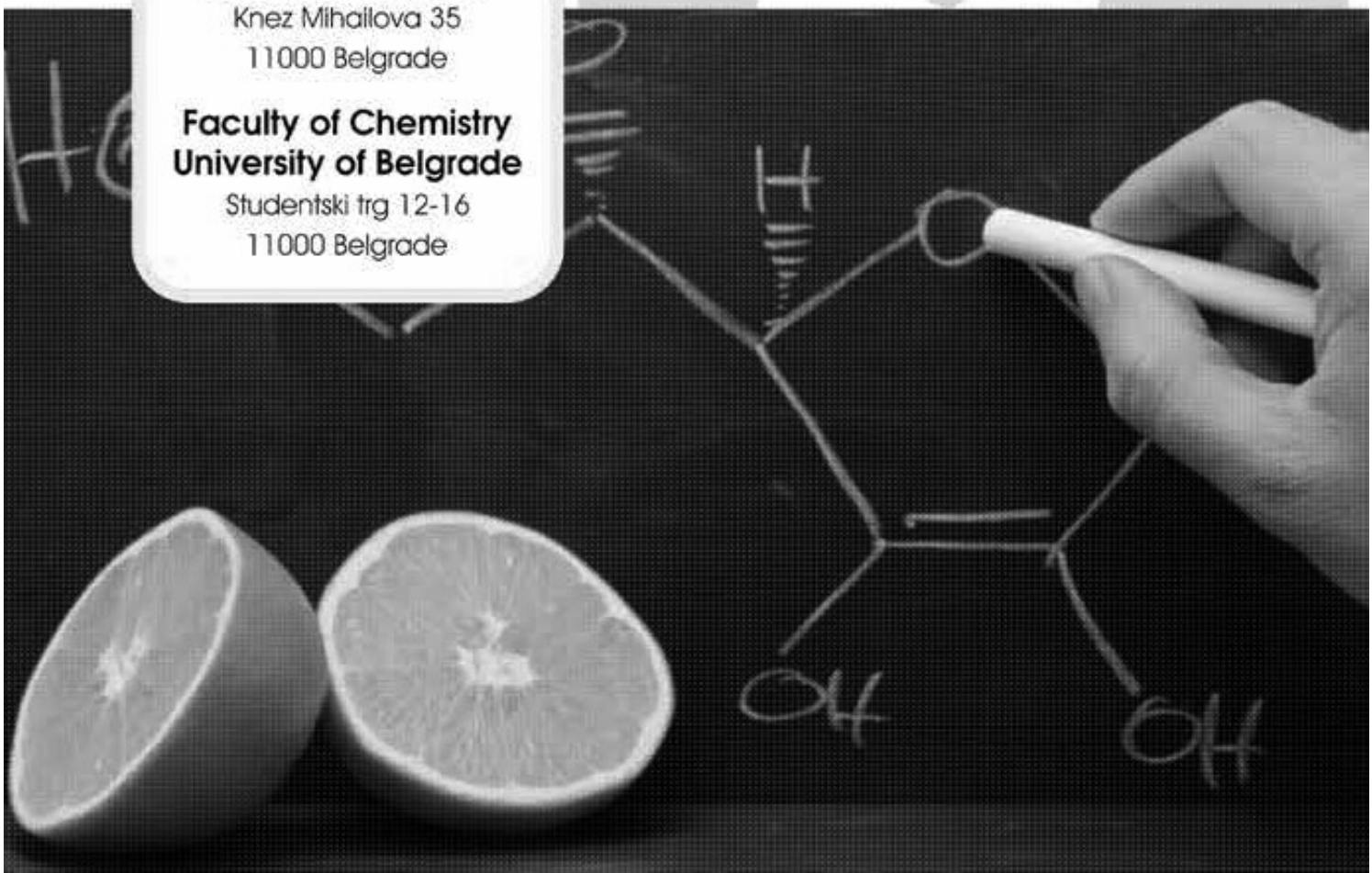
11000 Belgrade



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Under the auspices

Ministry of Science, Technological Development and Innovations, Republic of Serbia

Serbian Academy of Sciences and Arts

Organizers

EuChemS, Division of Food Chemistry

Serbian Chemical Society

WELCOME ADDRESSES

Dear Colleagues and Friends,

On behalf of the Food Chemistry Division of EuChemS and Serbian Chemical Society with support of the Serbian Academy of Sciences and Arts, I am delighted to welcome all the experts from different countries to Belgrade, Serbia to XXII EuroFoodChem.

Following the previous successful meetings of EuroFoodChem since 1981, Belgrade is for the first time honored to host this important international gathering in the field of food chemistry.

After a very successful virtual edition in 2021, we are thrilled to organize a face-to-face meeting again.

The Congress program offers both exciting recent trends in food chemistry research and engaging networking opportunities that we all have missed over the last couple of years. In addition to abstract presentations and lectures by world renowned speakers, we will be offering a variety of networking options. The EuroFoodChem is an excellent opportunity for initiating or strengthening cooperations and knowledge.

For centuries Serbia has been strategically the most important region in the Balkans; many conquerors fought for this piece of land and left their own traces in time and space. We can only hope that the rich and tightly packed scientific program will allow you to explore the capital of Serbia and historical places nearby.

Serbia is a country of diversities and the city of Belgrade, as a place of intersection of different cultures and history, is the most beautiful example of it. Wine making has a long tradition in Serbia and it is now experiencing its renaissance. Vineyards have been a part of the diverse Serbian landscape since before the times of Romans. Belgrade is also a new hot spot on the European gastronomical map. In a city with so many historical influences, tradition intertwines with innovation.

I would also like to thank all of you who have worked with devotion on putting up this meeting together. On behalf of all of us involved in the event preparation, I wish you a great time at EuroFoodChem, and thank you for your participation and contribution to the high scientific quality of the event.

Hope that you will find the Congress and your stay in Belgrade valuable, enjoyable, and memorable!

Congress Chairman

Tanja Ćirković Veličković

COMMITTEES

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CONGRESS TOPICS

- **Food composition, quality, and safety**
- **Food sustainability, including byproducts valorization**
- **Novel foods**
- **Food and health, functional foods, and ingredients**
- **Chemical reactions and interactions of food components**
- **Chemical changes in food under processing and storage**
- **Food adulteration, authenticity, and traceability**
- **Novel methods for food chemistry**
- **Food contaminants**

GENERAL INFORMATION

Official Language:
English. No simultaneous translation will be provided:

Registration Desk opening times.

Day 1: June 14, 2023, 8:30-10:30h
Day 2: June 15, 2023, 8:30-10:30h
Day 3: June 16, 2023, 8:30-10:30h

The Registration Desk is situated in Serbian Academy of Sciences and Arts
Knez Mihailova 35, 11000 Belgrade

LOCAL ORGANIZER

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Liability and Insurance: Neither the Food Chemistry Division of EuChemS nor the local organizers will assume any responsibility whatsoever for damage or injury to persons or property during the Congress. Participants are recommended to arrange for their personal travel and health insurance.
Certificate of Attendance: Will be given at the registration desk and sent by email after the end of the Congress.

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Highly active endo-pectinase from *Aspergillus tubingensis*: A novel enzyme for fruit processing

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Pectinases are a type of enzymes frequently used in the food industry to clarify, liquefy, and stabilize fruit juices [1]. The main challenge in fruit juice production is the cloudiness of the juice, which is largely caused by the presence of pectic polysaccharides. Endo-pectinases are enzymes that hydrolyze the glycosidic bonds in pectic polymers [2]. Commercial pectinolytic enzymes are typically produced by fungi, with *Aspergillus* spp. being the most commonly used [3].

The aim of this research was the production and characterization of a novel endo-pectinase from the *Aspergillus tubingensis* strain for use in liquefying and clarifying different types of fruit juice. To accomplish this, solid-state fermentation was conducted on agricultural waste, such as sugar beet pulp and wheat bran, to produce pectinolytic enzymes. The resulting crude extract was concentrated *via* ultrafiltration and used to isolate the endo-pectinase *via* ammonium sulfate and ethanol precipitation methods. Ion-exchange chromatography technique on DEAE Sephadex A-25 matrix was used for further purification of the endo-pectinase.

The purified enzyme was characterized by the determination of total pectinolytic activity, specific pectinolytic activity, and SDS-PAA gel electrophoresis. The activity of the endo-pectinase was confirmed by a diffusion test and zymography with Ruthenium Red visualization. The resulting enzyme was used to liquefy apricot, banana, apple, quince, strawberry, and orange pulp, with juice yields ranging from 71% to 83%, depending on the fruit used. The juices treated with endo-pectinase showed much higher clarification compared to untreated juices. Additionally, the treated juices demonstrated more pronounced antioxidant properties, as determined through the DPPH assay.

Acknowledgments: This work was financially supported by The Ministry of Education, Science and Technological Development of the Republic of Serbia (Contract numbers: 451-03-47/2023-01/200017, 451-03-68/2023-14/200168, 451-03-9/2023-14/200017).

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