



2022  
**Belgrade**

# **FEMS Conference on Microbiology**

in association with  
Serbian Society of Microbiology

**30 June - 2 July**

**2022 • Serbia**

**ELECTRONIC  
ABSTRACT BOOK**

We thank the pharmaceutical, lab and biomedical industry partners from Serbia, the South East Europe region and worldwide for their recognition of the importance of the event, their participation and their support.

We hope that you enjoyed the content and all the other aspects of the Conference. If you missed anything, you can catch up by watching the recordings, presentations or have a detailed look at the posters.

We warmly wish you health, love and happiness and are looking forward to the new encounters, coming up next: FEMS 2023 Congress in Hamburg, FEMS 2024 Conference in Tallinn and numerous events of the SSM in Serbia and South East Europe region.

**Sincerely** .....



*Hilary Lappin-Scott*

.....

**Prof. Hilary Lappin-Scott**  
Scientific Committee Chairperson,  
FEMS President



*Vaso Taleski*

.....

**Prof. Vaso Taleski**  
Organizing Committee Chairperson,  
FEMS Director of Events and Internationalization



*Dragojlo Obradović*

.....

**Prof. Dragojlo Obradović**  
Scientific Committee Co-Chairperson,  
President of Serbian Society of Microbiology



*Lazar Ranin*

.....

**Prof. Lazar Ranin**  
Organizing Committee Co-Chairperson,  
Vice-President of Serbian Society of Microbiology

---

## Scientific Committee

**Hilary Lappin-Scott** / *United Kingdom*  
**Scientific Committee Chairperson, FEMS President**

---

**Dragojlo Obradovic** / *Serbia*  
**Scientific Committee Co-Chairperson, President of Serbian Society of Microbiology**

---

**Roberto Antolovic** / *Croatia*

---

**Dejan Baskić** / *Serbia*

---

**Jelena Begović** / *Serbia*

---

**Helena Bujdáková** / *Slovakia*

---

**Carianne Buurmeijer** / *The Netherlands*

---

**Ivana Dakic** / *Serbia*

---

**Ivica Dimkić** / *Serbia*

---

**Ana Kaftandjieva** / *North Macedonia*

---

**Aleksandra Knezevic** / *Serbia*

---

**Branislava Kocić** / *Serbia*

---

**Konstantinos Kormas** / *Greece*

---

**Özgür Kurt** / *Turkey*

---

**Daniela Marchetti** / *Italy*

---

**Sinisa Markov** / *Serbia*

**Gordana Mijovic** / *Montenegro*

---

**Alexandra-Maria Nășcuțiu** / *Romania*

---

**Jakov Nišavić** / *Serbia*

---

**Dragoslava Radin** / *Serbia*

---

**Galina Satchanska** / *Bulgaria*

---

**Marjanca Starčić Erjavec** / *Slovenia*

---

**Carsten Suhr Jacobsen** / *Denmark*

---

**Nijaz Tihić** / *Bosnia & Herzegovina*

---

**Stefan Tyski** / *Poland*

---

**Antonio Ventosa** / *Spain*

---

**James Williamson** / *United Kingdom*

---

**Ken-ichi Yoshida** / *Japan*

---

**Lixin Zhang** / *China*



## Organizing Committee

**Vaso Taleski** / *North Macedonia*

**Organizing Committee Chairperson, FEMS Director of Events and Internationalization**

**Lazar Ranin** / *Serbia*

**Organizing Committee Co-Chairperson, Vice-President Serbian Society of Microbiology**

**Ivan M. Jekić** / *Serbia*

**Malin Inzinger** / *The Netherlands*

**Heather Lawrence** / *United Kingdom*

**Ina Gajic** / *Serbia*

**Srdjan Miletic** / *Serbia*

## Conference Grants Committee

**Jozef Anné** / *Belgium*

**Conference Grants Committee Chairperson, FEMS Grants Director**

**Victor Cid** / *Spain*

**Trafny Elżbieta** / *Poland*

**Alexander Netrusov** / *Russian Federation*

**1008 / APPLE PECTIN AS A POTENTIAL PREBIOTIC IN INFANT NUTRITION****07****Keywords:** *pectin, infant, nutrition***Nikoleta Lugonja** / University of Belgrade, *Serbia***Branka Loncarevic** / University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Belgrade, *Serbia***Dalibor Stankovic** / University of Belgrade, Faculty of Chemistry, Belgrade, *Serbia***Marija Ljesevic** / University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Belgrade, *Serbia***Jelena Avdalovic** / University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Belgrade, *Serbia***Snezana Spasic** / University of Belgrade, Institute of Chemistry, Technology and Metallurgy, Belgrade, *Serbia***Vladimir Beskoski** / University of Belgrade, Faculty of Chemistry, Belgrade, *Serbia*

During early life of infants, the gastrointestinal tract with its microbiota is a complex ecosystem which plays an important role in their growth and development. Pectin is a prebiotic dietary fiber which affects the gut microbiota and shows local intestinal and systemic effects.

The aim of this study was to research the influence of apple pectin in infant nutrition, its impact on selected bacteria of the infant's gastrointestinal tract, gas production and total antioxidant capacity by electrochemical determination of changes in redox potential.

In vitro influence of pectin on selected *Bifidobacterium* and *Lactobacillus* was anaerobically tested during 72h. Selected bacteria, isolated from infant's feces, collected from term vaginally delivered infants, as well as standard strains, were incubated in the selective medium with 0.5 % apple pectin. The changes in redox capacity of media were measured before and after fermentation by voltammetry and pH. Additionally, production of gases by microorganisms was measured using the MicroOxymax respirometer.

Apple pectin had a positive effect on the growth of *Bifidobacterium* and *Lactobacillus* of the infant's gastrointestinal tract as well as the standard strains, while there was a slight reduction in the pH of the media. In vitro fermentation of pectin by selected bacteria showed increase in redox capacity of media. The cumulative production of CO<sub>2</sub> also slightly increased during fermentation. These results indicate that pectin could be effective prebiotic in infant nutrition.

**ACKNOWLEDGEMENTS/REFERENCES**

The authors would like to thank the Ministry of Education, Science and Technological Development of Republic of Serbia (Grant No: 451-03-9/2021-14/200026) for financial support.



[www.nb.rs](http://www.nb.rs) | НБ.СРБ



## International Standard Book Number (ISBN)

~~~~~  
**Assigned number**  
~~~~~

ISBN-978-86-914897-8-6  
~~~~~

---