Institute for Gifted and Talented Children and Youth, Belgrade
Institute of Molecular Genetics and Genetic Engineering, University of Belgrade
Regional Center for Talented Youth Belgrade II

2nd Belgrade International Molecular Life Science Conference for Students

ABSTRACT BOOK & PROGRAM

Belgrade, Serbia
10-13 February 201

Institute for Gifted and Talented Children and Youth, Belgrade, Serbia

http://instgcy.com/

Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Serbia

http://www.imgge.bg.ac.rs/

Regional Center for Talented Youth Belgrade II, Belgrade, Serbia

http://www.centarzatalente.com/

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Jovan Traparic
1st year student, Faculty of Biology, University of Belgrade

DAY 2 — Thursday, February 11th

9:15 – 11:00 **ORAL PRESENTATION SESSION I**
Moderator: **Aleksandra Divac Rankov**

9:30 – 9:45 **NikolinaBabic**
The effects of long-term intermittent feeding on behavior and PSD-95 protein level in female 5xFAD mice

9:45 – 10:00 **JovanaDespotovic**
The overexpression of Sox3 gene: effects on viability and Wnt signaling pathway activity of U87 and U251 glioblastoma cell lines

10:00 – 10:15 **Irena Jovanovic-Macura**
Cholesterol metabolism changes during aging in mouse retina

10:15 – 10:30 **Marina Vlajnic**
Quantitative analysis of cell-free DNA in serum samples of patients with systemic lupus erythematosus

10:30 – 10:45 **Aleksandra Djuric**
Characterization of Klebsiellavariicola, environmental isolate which can reduce concentration of perfluoroalkyl compounds in laboratory tests

10:45 – 11:00 **Ivana Milenkovic**
The methods of nanoceria'a coating for improving their biomedical application

11:00 – 11:30 Coffee Break

11:30 – 13:30 **CSI: CELL**

11:30 – 12:30 **Aleksandra Korac**
Seeing is Believing: Microscopy vs. Molecules

12:30 – 13:30 **Ana Djordevic**
A complex answer to a simple sugar question: Should we blame fructose for the obesity epidemic?

13:30 – 14:30 Lunch Break

14:30 – 15:00 **BUSINESS IN SCIENCE**
Maja ManasijevicJegarac
Molecular biologist in Serbia today: Between the reality and the dream

15:00 – 16:30 **PANEL DISCUSSION**
Moderator: **Dragica Radojkovic**
The emerging prenatal genetic testing technologies: benefits and concerns
Guests: **Goran Cuturilo, Katarina Zeljic, Danijela Radivojevic**

DAY 3 — Friday, February 12th

OP6

THE METHODS OF NANOCERIA'A COATING FOR IMPROVING THEIR BIOMEDICAL APPLICATION

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Due to coexistence of Ce^{3+} and Ce^{4+} ions and formation of oxygen vacancies on its surface, CeO_2 (nanoceria) is the most important rare-earth oxide and potent free radical scavenger. These nanoparticles can collect reactive oxygen species (ROS) and protect healthy cells from oxidative stress, but they also show cytotoxicityafter prolonged exposure of cells to higher concentrations. This dual behavior of nanoceria represents a great pharmacological potential, such as improving the treatment of cancers, drug delivery and catalysis. The aim of this study was to develop of appropriate methods for synthesizing these nanoparticles, which was particularly challenging because of their low solubility. To facilitate nanoparticle's entry into the cells, we further coated these nanoparticles with the addition of carbohydrate (glucose, levan or pullulan) in the reaction mixture during and after the synthesis of nanoceria. We investigated which of two applied methods of synthesis gave more soluble ceria nanoparticles in order to improve their biomedical application.