

9th Conference of Young Chemists of Serbia

Book of Abstracts

4th November 2023

University of Novi Sad - Faculty of Sciences

CIP – Kategorizacija u publikaciji
Narodna biblioteka Srbije, Beograd

9th Conference of Young Chemists of Serbia

Novi Sad, 4th November 2023

Book of Abstracts

Published and organized by

Serbian Chemical Society and Serbian Young Chemists' Club

Karnegijeva 4/III, 11000 Belgrade, Serbia

Tel./fax: +381 11 3370 467; www.shd.org.rs; office@shd.org.rs

Publisher

Dušan **SLADIĆ**, president of Serbian Chemical Society

Editors

Jelena **MILOVANOVIĆ**

Vuk **FILIPOVIĆ**

Života **SELAKOVIĆ**

Snežana **PAPOVIĆ**

Branko **KORDIĆ**

Jelena **KESIĆ**

Mila **LAZOVIĆ**

Mihajlo **JAKANOVSKI**

Page Layout and Design

Jelena **KESIĆ**

Mila **LAZOVIĆ**

Mihajlo **JAKANOVSKI**

Circulation

20 copies

ISBN 978-86-7132-084-9

Printing

Development and Research Centre of Graphic Engineering

Faculty of Technology and Metallurgy, Karnegijeva 4, Belgrade, Serbia

Scientific Committee

Dr. Jelena Milovanović - University of Belgrade - Institute of Molecular Genetics and Genetic Engineering, Belgrade, Serbia

Dr. Vuk Filipović - University of Belgrade - Institute of Molecular Genetics and Genetic Engineering, Belgrade, Serbia

Dr. Života Selaković - University of Belgrade, Faculty of Chemistry

Dr. Snežana Papović - University of Novi Sad, Faculty of Sciences

Dr. Branko Kordić - University of Novi Sad, Faculty of Sciences

Organizing Committee

Jelena Kesić - University of Novi Sad, Faculty of Sciences

Mila Lazović - Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia

Mihajlo Jakanovski - Innovation Centre of Faculty of Chemistry Ltd., Belgrade, Serbia

European Young Chemists' Network

Gaia De Angelis, Global Connection Team Leader

Sponsorship

The organizing committee is grateful for the donations of the selected sponsor participants:

European Young Chemists' Network



Analysis doo



Ministry of Science, Technological Development and Innovation



Република Србија
МИНИСТАРСТВО НАУКЕ,
ТЕХНОЛОШКОГ РАЗВОЈА И
ИНОВАЦИЈА

Acknowledgement

Acknowledgement to the University of Novi Sad - Faculty of Sciences for the use of the space of the faculty during the 9th Conference of Young Chemists' of Serbia.

Thanks to the Board of the Serbian Chemical Society for the supporting during organization of the Conference.

Deeply acknowledgments to the European Young Chemists' Network for the financial support of the best oral and poster presentations.

Thanks to the Analysis doo for confidence and the promoting material.

***In vitro* antioxidant activity evaluation of selected xanthene derivatives**

Anita M. Lazić¹, Aleksandra D. Mašulović¹, Jelena M. Lađarević², Nataša V. Valentić²

¹ Innovation Center of the Faculty of Technology and Metallurgy in Belgrade Ltd., Belgrade, Serbia

² University of Belgrade - Faculty of Technology and Metallurgy, Belgrade, Serbia

Xanthendiones (1,8-dioxooctahydroxanthenes) are a special class of oxygen-incorporating tricyclic compounds bearing as a basic feature a pyran nucleus fused on either side with cyclohex-2-enone rings. They are often found as a structural motif in natural products with a wide range of biological activities, such as: antioxidant, antimicrobial, trypanocidal, antiinflammatory, antiproliferative and anticancer. A convenient and efficient approach toward the synthesis of seven aromatically substituted xanthendiones 1–7 and one structurally-related xanthenone 8 through condensation of dimedone and the appropriate aromatic aldehyde is reported. The relationship between the chemical structure and pharmacological activity was determined empirically using appropriate software packages and *in vitro* using the 2,2'-azinobis-(3-ethylbenzothiazoline-6-sulfonic acid (ABTS) method. The results of the ABTS assay indicate that five compounds possess the ability to scavenge the ABTS•+ radical cation. Based on the comparison of the IC₅₀ values, the activity of the compounds was found to be as follows: 6 > 1 > 7 > 2 > 8.

References

1. A. Lazić, A. Mašulović, J. Lađarević, N. Valentić, *J. Serb. Chem. Soc.* **2023**, 88 (9) 811.

Acknowledgments

This work was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia (Contracts No. 451-03-47/2023- 01/200135 and 451-03-47/2023-01/200287).