

Dr. Nezrina Kurtanović

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PERSONAL DATA

Address	University of Kragujevac Faculty of Science, Chemistry Radoja Domanovića 12, 34 000 Kragujevac, Republic of Serbia
Phone	034 336 223, extension 256, Cabinet for Biochemistry 060 0 311 572
Fax	+ 381(0)34-335-040
Date of birth	30. July 1990.
Citizenship	Serbian
Foreign languages	English, Italian
Computer skills	MS Office, Spartan 10, Gaussian 09, ChemOffice, Python, MestReNova, MarvinSketch UCSF Chimera, Linux, Windows DOCK6
Driver's license	B category

2015-2022

Doctoral academic studies

Study program: Biochemistry
Faculty of Science and Mathematics, University of Kragujevac
Phd thesis:

2014–2015

Master of academic studies

Study program: Teacher chemistry, Faculty of Science and
Mathematics, University of Kragujevac
Master thesis: "Synthesis and characterization of dinuclear
complexes of platinum (II) with nitrogen-donor ligands"

2010–2014	<p>Basic academic studies</p> <p>Department: Chemical Technology, State Faculty, University of Novi Pazar</p> <p><i>Diploma thesis:</i> "Antibacterial effect of complex compounds of transition metals that contain antibiotics in their composition"</p>
2005–2009	<p>High school</p> <p>Medical school, Novi Pazar, Republic of Serbia, gynecological-obstetrical nurse major</p>
1997–2005	<p>Elementary school</p> <p>Elementary school "Stefan Nemanja", Novi Pazar, Republic of Serbia</p>

PROFESSIONAL CAREER

Scientific title	<p>29.06.2016 - 29.05.2019.</p> <p>Trainee researcher</p> <p>29.05.2019-23.05.2023.</p> <p>Associate researcher</p> <p>23.05.2023.-данас</p> <p>Scientific associate</p>
Scientific fields	Biochemistry; Medicinal chemistry; Chemistry of natural products;
Engaging in projects	<p>2017-2020</p> <p>The project of the Ministry of Education, Science and Technological Development of the Republic of Serbia entitled "Simultaneous bioremediation and soilification of degraded areas, for the preservation of natural resources of biologically active substances and the development and production of biomaterials and dietary products" (III 43004)</p> <p>2020 Project of the Ministry of Education, Science and Technological Development of the Republic of Serbia entitled "Bilingual STEM Scientists" (Citizens' Association "ruSTEM", Russian Krstur)</p>

Engagement in performing laboratory exercises	School year 2016/2017 Applied biochemistry of microorganisms Basic studies in chemistry, Faculty of Science and Mathematics in Kragujevac
Promotion of PMF in Kragujevac	21.11.2016. at the Science Festival in the Plaza Shopping Center, Kragujevac
Work at school	2014-2015. ES „Mur“, Novi Pazar, Serbia 2014-2015. ES „Vuk Karadžić“, Novi Pazar, Serbia 2015-2016. ES „Ćamil Sijarić“, Novi Pazar, Serbia 2015-2017. ES „Avdo Međedović“, Novi Pazar, Serbia
Textbook reviews	Agreement on the author's work on the assessment of four textbooks, namely: Chemistry for the seventh grade of elementary school (Bigz) - textbook Chemistry for the seventh grade of elementary school (Bigz) - workbook Chemistry for the eighth grade of elementary school (Klett) - textbook Chemistry for the eighth grade of elementary school (Klett) - workbook, in the Bosnian language with the Bosniak National Council based in Novi Pazar, February 13, 2016. year.
Membership in national and foreign chemical organizations	Serbian Biological Society Serbian Chemical Society Serbian Biochemical Society Society of geneticists of Serbia
Scientific skills	Antimicrobial activity <i>in vitro</i> <i>Disc-diffusion method</i> <i>Microdilution method</i>

Antioxidant activity *in vitro*

- Ability to neutralize free DPPH. radicals
- Total antioxidant capacity
- Ability to neutralize hydroxy radicals
- Inhibition of lipid peroxidation in linoleic acid emulsion
- Ability to neutralize ABTS +. radical cation
- Ability to neutralize super-oxide radicals
- Chelation capacity
- Reduction activity

Antioxidant activity *in vivo*

Determination of oxidative stress markers in kidney and liver tissue homogenates

- Determination of the amount of total proteins
- Determination of reduced glutathione (GSH) content
- Determination of catalase activity (CAT)
- Determination of superoxide dismutase (SOD) activity

Enzyme immunoassays *in vitro* (Enzyme-linked immunosorbent assay, ELISA)

- Direct ELISA
- Indirect ELISA
- Sandwich ELISA

Molecular modeling

- Spartan

Molecular docking

- AutoDock
- AutoDock Vina
- DOCK6

Scientific field of research

Biochemistry and medicinal chemistry

Rational design of new breast cancer suppressants based on 3-D QSAR, COMBINER and 3-D pharmacophore studies, their subsequent synthesis and evaluation in *in vitro* and *in vivo* conditions from the aspects of pharmacology and toxicology

Published textbooks

1 University textbook

1 printed textbook for elementary education (Chemistry 7)

2 digital textbooks for primary education (Chemistry 7 and Chemistry 8)

1 collection of tasks with laboratory exercises for elementary education (Chemistry 7)

2 manuals for teachers in chemistry for the seventh and eighth grade of elementary school

2 Tests in chemistry for the seventh and eighth grade of elementary school

1 Master thesis monograph

Published scientific papers and announcements 5 scientific papers in journals from the SCI list, category **M21**, **M21a**, and **M22**

10 scientific announcements at international conferences, category **M34**

6 scientific announcements of national importance, category **M64**

Certificates

✚ First Congress of Molecular Biologists of Serbia with international participation, September 20-22, 2017.

✚ A1 English language level, Ibis Creative Education Center 03/06/2018. Kragujevac, Serbia

✚ 3rd International Conference on Plant Biology 22nd SPPS Meeting, June 9-12, 2018. Belgrade, Serbia

✚ A2 English language level, Ibis Creative Education Center 06/28/2018. Kragujevac, Serbia

✚ School of practical application of high performance liquid chromatography, 09.07.2018. Faculty of Science and Mathematics, Kragujevac, Serbia

✚ School of gas chromatography/mass spectrometry, 02.07.-03.07.2018. Faculty of Science and Mathematics, Kragujevac, Serbia

✚ School of mass spectrometry of primary and secondary metabolites, 20.09.2018. Faculty of Science and Mathematics, Kragujevac, Serbia

✚ Media literacy within the "Find out and discern" program, 13-16 September 2021. year, IREX with the support of the US Embassy in Serbia

✚ Ethics and integrity, 04.06.2022. year. Agency for Prevention of Corruption, Belgrade, Republic of Serbia

- ✚ Presentation of the NOVI LOGOS IC textbook, 2015, Novi Pazar, Serbia
- ✚ "Peculiarities and openness of Bosniak culture", February 20, 2016, Society for Bosnian Language and Literature, Novi Pazar, Serbia
- ✚ "Teaching in Bosnian language in Sandžak - previous experiences and challenges", 21.02.2016. Bosniak National Council, Novi Pazar, Serbia

Textbook promotions

Promotions of the Chemistry 7 textbook set, Publishing house "Klett" Belgrade in the following cities:

- 24.01.2020. "Vuk Karadžić" Primary School, Vranje, Serbia;
- 29.01.2020. year, "First Elementary School of King Peter II", Užice, Serbia;
- 31.01.2020. year, Primary School "Meša Selimović", Novi Pazar, Serbia;
- 20.02.2020. year, Elementary School "Vuk Karadžić", Kruševac, Serbia;
- 21.02.2020. year, Faculty of Law, Niš, Serbia;
- 24.02.2020. year, Elementary School "IV Kraljevac Battalion", Kraljevo, Serbia;
- 26.02.2020. year, Faculty of Science and Mathematics, Kragujevac, Serbia;
- 28.02.2020. year, Primary School "Ljubica Radosavljević Nada", Zaječar, Serbia.
- 23.11.2021. and 24.11.2021. as a lecturer at the Webinar as part of the promotion of the textbook and teacher's set Chemistry 8, "Klett" Publishing House Belgrade as a lecturer on the following topics:
 - advantages and specificities of textbooks;
 - how plans, daily preparations and materials for online classes facilitate the work of Chemistry;
 - what the comprehensive teacher's kit brings;
 - answers to the questions of those present.

Webinar

26.12.2021. In the framework of the project "Europe is with us - promotion of EU values in southwestern Serbia in the context of the recovery process from COVID-19" of the Sandžak TV Network and the Cultural Center DAMAD Novi Pazar, a show was realized on the topic: Education, of which I was a guest.

Visits

06.05.2023. Cases of violence in schools with reference to the last tragic events in the elementary school "Vladislav Ribnikar" in Belgrade, as well as ways to solve and prevent similar occurrences. Other problems in the education system, Sandžak TV Novi Pazar.

19.04.2023. Awarded for a successfully defended doctoral dissertation at the Ceremonial Academy on the occasion of the Day of the Faculty of Science and Mathematics in Kragujevac.

BIBLIOGRAPHY

1. Scientific papers published in top journals of international importance (M21)

- 1.1. D. Simijonović, E.-E. Vlachou, Z. D. Petrović, D. J. Hadjipavlou-Litina, K. E. Litinas, N. Stanković, **N. Mihović**, M. P. Mladenović, Dicoumarol derivatives: Green synthesis and molecular modelling studies of their anti-LOX activity, *Bioorganic Chemistry* 80 (2018) 741–752.

ISSN 0045-2068

doi: 10.1016/j.bioorg.2018.07.021

Категорија: **M21**

(IF₂₀₁₇ = 3.929; област: Biochemistry & Molecular Biology; 78/292)

- 1.2. **N. Mihović**, N. Tomašević, S. Matić, M. M. Mitrović, D. A. Kostić, M. Sabatino, L. Antonini, R. Ragno, and M. Mladenović, Human Estrogen Receptor α Antagonists. Part 1: 3-D QSAR-Driven Rational Design of Innovative Coumarin-Related Antiestrogens as Breast Cancer Suppressants through Structure-Based and Ligand-Based Studies, *Journal of Chemical Information and Modeling* 61 (2021).

ISSN 1549-9596

doi: 10.1021/acs.jcim.1c00530

Категорија: **M21**

(IF₂₀₂₀ = 4.956; област: Chemistry, Medicinal; 15/63)

- 1.3. **N. Kurtanović**, N. Tomašević, S. Matić, M. M. Mitrović, D. A. Kostić, M. Sabatino, L. Antonini, R. Ragno, and M. Mladenović, Human estrogen receptor α antagonists, part 2: Synthesis driven by rational design, in vitro antiproliferative, and in vivo anticancer evaluation of innovative coumarin-related antiestrogens as breast cancer suppressants, *European Journal of Medicinal Chemistry* 227 (2021).

ISSN 0223-5234

doi: 10.1016/j.ejmech.2021.113869

Категорија: **M21a**

(IF₂₀₂₀ = 6.514; област: Chemistry, Medicinal; 5/63)

2. Scientific works published in journals of international importance (M22)

- 2.1. M. Mladenović, B. B. Arsić, N. Stanković, **N. Mihović**, R. Ragno, A. Regan, J. S. Milićević, T. M. Trtić-Petrović, R. Micić, The targeted pesticides as Acetylcholinesterase inhibitors: comprehensive cross-organism molecular modelling studies performed to anticipate the pharmacology of harmfulness to humans *in vitro*, *Molecules*, 23 (2018) 2192.

ISSN 1420-3049

doi: 10.3390/molecules23092192

Категорија: **M22**

(IF₂₀₁₇ = 3.098; област: Biochemistry & Molecular Biology; 131/293)

- 2.2. **N. Kurtanović**, N. Tomasević, S. Matić, E. Proia, M. Sabatino, L. Antonini, M. Mladenović, R. Ragno, Human Estrogen Receptor Alpha Antagonists, Part 3: 3-D Pharmacophore and 3-D QSAR Guided Brefeldin A Hit-to-Lead Optimization toward New Breast Cancer Suppressants, *Molecules*, 27 (2022) 2823.

ISSN 1420-3049

doi: 10.3390/molecules27092823

Категорија: **M22**

(IF₂₀₂₁ = 4.412; област: Biochemistry & Molecular Biology; 115/296)

3. Announcements from international meetings printed in the extract (M34)

- 3.1. J. Katanić, T. Boroja, V. Mihailović, S. Matić, N. Stanković, **N. Mihović**, M. Mladenović, V. Stanković, Protective effects of *Filipendula ulmaria* extracts on cisplatin-induced nephrotoxicity in rats, The International Bioscience Conference and the 6th International PSU-UNS Conference-IBSC 2016, 19-21 September 2016, Novi Sad, Serbia, p. 256-257.

Нема ISBN броја

- 3.2. T. Boroja, V. Mihailović, J. Katanić, G. Rosić, D. Selaković, J. Joksimović, V. Stanković, M. Mladenović, N. Stanković, **N. Mihović**, Nephroprotective effects of *Satureja hortensis* L. against cisplatin-induced toxicity, The International Bioscience Conference and the 6th International PSU-UNS Conference-IBSC 2016, 19-21 September 2016, Novi Sad, Serbia, p. 268-269.

Нема ISBN броја

- 3.3. J. Katanić, T. Boroja, San-Po Pan, S. Nikles, R. Bauer, V. Mihailović, M. Mladenović, N. Stanković, **N. Mihović**, *Lunnaria annua* L. (annual honesty) as a new antioxidant and anti-inflammatory agent, XXIV Congress of Chemists and Technologists of Macedonia, 11-14 September 2016, Ohrid, Republic of Macedonia, p. 82.

ISBN 978-9989-760-13-6

- 3.4. T. Boroja, V. Mihailović, J. Katanić, G. Rosić, D. Selaković, J. Joksimović, M. Mladenović, N. Stanković, **N. Mihović**, Hepatoprotective efficacy of summer savory against cisplatin-induced oxidative damage in rats, XXIV Congress of Chemists and Technologists of Macedonia, 11-14 September 2016, Ohrid, Republic of Macedonia, p. 84.

ISBN 978-9989-760-13-6

- 3.5. **N. Mihović**, S. Matić, S. Stanić, N. Stanković, M. Mladenović, DNA conservation by hesteretin: the mechanism of inhibition of EMS-induced alkylation, 1st Congress of Molecular Biologist of Serbia (CoMBoS), Belgrade 2017, p. 59.

ISBN 978-86-7078-136-8

- 3.6. **N. Mihović**, S. Matić, M. Mladenović, N. Stanković, S. Stanić, Rino Ragno, *Salvia sclarea* L. essential oil as possible natural antimicrobial and antigenotoxic agent, 3rd International Conference on Plant Biology (22nd SPPS Meeting), 9-12 June 2018, Belgrade, Serbia, PP4-21.

ISBN 978-86-912591-4-3

- 3.7. **N. Mihović**, S. Matić, M. Mladenović, N. Stanković, S. Stanić, Rino Ragno, Antimicrobial and antigenotoxic activity of *Ocimum basilicum* L. essential oil, 3rd International Conference on Plant Biology (22nd SPPS Meeting), 9-12 June 2018, Belgrade, Serbia, PP4-22.

ISBN 978-86-912591-4-3

- 3.8. B. B. Arsić, M. Mladenović, N. Stanković, **N. Mihović**, R. Ragno, A. Regan, J. Milićević, T. M. Trtić Petrović, R. Micić, Selected pesticides as acetylcholine esterase inhibitors: theoretical and experimental studies, 6th Edition of International Conference and Exhibition on Organic Chemistry, 16-17 August 2018, Dublin, Ireland, p 23. Biljana B Arsić et al., J Org Inorg Chem 2018, Volume 4 DOI: 10.21767/2472-1123-C4-011

ISSN 2472-1123

- 3.9. **N. Mihović**, S. Matić, J. Muškinja, A. Burmudzija, Z. Ratković, M. Mladenović, N. Stanković, S. Stanić, *In vitro* DNA protective activity of selected pyrazolines. 6th Congress of the Serbian Genetic Society, 13-17 October 2019, Vrnjačka banja, Serbia, 03-07.

ISBN 978-86-87109-15-5

- 3.10. **N. Mihović**, S. Matić, J. Muškinja, A. Burmudzija, Z. Ratković, M. Mladenović, N. Stanković, S. Stanić, DNA damage induced by selected pyrazolines in rat liver using comet assay. 6th Congress of the Serbian Genetic Society, 13-17 October 2019, Vrnjačka banja, Serbia, 03-08.

ISBN 978-86-87109-15-5

4. Announcements from gatherings of national importance printed in the extract (M64)

4.1. **N. Mihović**, S. Matić, M. Mladenović, N. Stanković, S. Stanić, Rino Ragno, Antimicrobial and antigenotoxic activity of the essential oil of *Anthemis mixta* L., Second Congress of Biologists of Serbia (IIKBS), 25-30 September 2018, Kladovo, Serbia, Book of Abstracts, p. 74. ISBN 978-86-81413-08-1

4.2. **N. Mihović**, S. Matić, M. Mladenović, N. Stanković, S. Stanić, Rino Ragno, *In vitro* antimicrobial and antigenotoxic activity of the essential oil of the plant *Thymus vulgaris* L., Second Congress of Biologists of Serbia (IIKBS), 25-30 September 2018, Kladovo, Serbia, Knjiga sažetaka, p. 75.

ISBN 978-86-81413-08-1

4.3. **N. Mihović**, N. Stanković, M. Mladenović, R. Ragno, 3-D QSAR-driven design of novel coumarin ER α antagonists, Sixth Conference of the Young Chemists of Serbia, Belgrade, 27th October 2018, Book of Abstracts, p. 76.

ISBN 978-86-7132-072-6

4.4. N. Stanković, **N. Mihović**, M. Mladenović, R. Ragno, hDHFR inhibitors: Molecular determinants seen through the structure-based 3-D QSAR, Sixth Conference of the Young Chemists of Serbia, Belgrade, 27th October 2018, Book of Abstracts, p. 89.

ISBN 978-86-7132-072-6

4.5. **N. Kurtanović**, J. J. Ajduković, Andjela A. Franich, Snežana Rajković, DNA interactions of 17-substituted A-modified androstane derivatives, 57th Meeting of the Serbian Chemical Society (SHD) 18-19 June 2021, Kragujevac, Serbia, Knjiga sažetaka, p. 92.

ISBN 978-86-7132-077-1

4.6. **N. Kurtanović**, J. J. Ajduković, Andjela A. Franich, Snežana Rajković, Fluorescence and UV-Vis investigation of the interaction of A/B-modified androstane derivatives with DNA, 59th Meeting of the Serbian Chemical Society (SHD) 1-2 June 2023, Novi Sad, Serbia, Knjiga sažetaka, p. 102.

ISBN 978-86-7132-081-8

5. University textbook

- 5.1. Dr Milan Mladenović, prof. Rino Ragno, dr Nevena Stanković, **Nezrina Mihović**, grease. chem., RATIONAL DESIGN OF BIOACTIVE COMPOUNDS: From a theoretical to a practical approach, 2018, Faculty of Science, University of Kragujevac, Kragujevac.

ISBN 978-86-6009-054-8
COBISS.SR-ID 267565580

6. Textbook for elementary education

- 6.1. **Nezrina Mihović**, Miloš Kozić, Nevena Tomašević, Dragica Krvavac, Milan Mladenović, Chemistry 7, Textbook for the seventh grade of elementary school, 2020, "Klett" Publishing House, Belgrade.

ISBN 978-86-533-0396-9

- 6.2. Miloš Kozić, Nevena Tomašević, Dragica Krvavac, **Nezrina Mihović**, Milan Mladenović, Chemistry 7, Laboratory exercises with tasks for the seventh grade of elementary school, 2020, "Klett" Publishing House, Belgrade.

ISBN 978-86-533-0395-2

- 6.3. **Nezrina Mihović**, Chemistry 7, digital textbook for the seventh grade of elementary school, 2020, "Klett" Publishing House, Belgrade.

- 6.4. **Nezrina Mihović**, Chemistry 7, tests for the seventh grade of elementary school, 2020, "Klett" Publishing House, Belgrade.

- 6.5. **Nezrina Mihović**, Handbook for teachers for the seventh grade of elementary school, 2020, "Klett" Publishing House, Belgrade.

- 6.6. **Nezrina Kurtanović**, Chemistry 8, digital textbook for the seventh grade of elementary school, 2021, "Klett" Publishing House, Belgrade.

- 6.7. **Nezrina Kurtanović**, Chemistry 8, tests for the eighth grade of elementary school, year 2021, "Klett" Publishing House, Belgrade.

- 6.8. **Nezrina Kurtanović**, Handbook for teachers for the eighth grade of elementary school, 2021, "Klett" Publishing House, Belgrade.

7. Monographs

- 7.1. **Nezrina Mihović**, Dinuclear complexes of platinum(II) with nitrogen-donor ligands, 2020, "Zadužbina Andrejević", Belgrade.

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ISBN 978-86-525-0395-7