



Milena Jovanović

Work experience

Research Assistant

2019 - Present

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Serbia, Kragujevac

Education and Qualifications

BSc in Biology

2015

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Serbia

MSc in Biology

2016

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Serbia

PhD in Biology

2024 - 2024

Department of Biology and Ecology, Faculty of Science, University of Kragujevac, Serbia

Animal and human physiology and molecular biology

Publications

Publications

- Šeklić D, Đukić T, Milenković D, **Jovanović M**, Živanović M, Marković Z, Filipović N. Numerical modelling of WNT/ β -catenin signal pathway in characterization of EMT of colorectal carcinoma cell lines after treatment with Pt(IV) complexes. *Computer Methods and Programs in Biomedicine* 2022, 226(46): 107158. doi: 10.1016/j.cmpb.2022.107158
- Šeklić DS, **Jovanović MM**, Virijević KD, Grujić JN, Živanović M, Marković SD. *Pseudevernia furfuracea* inhibits migration and invasion of colorectal carcinoma cell lines. *Journal of Ethnopharmacology* 2022, 284: 114758. doi: 10.1016/j.jep.2021.114758
- Jovanović M**, Virijević K, Grujović M, Ćirić A, Petrović I, Arsenijević D, Živanović M, Ljujić B, Šeklić D. *Armillaria ostoyae* extracts inhibit EMT of cancer cell lines via TGF- β and Wnt/ β -catenin signaling components. *Food Bioscience* 2024, 57: 103250. doi: 10.1016/j.fbio.2023.103250
- Arsenijević D, **Jovanović M**, Pecić K, Jurišić V, Virijević K, Mitić M, Nikolić J, Grujović M, Marković K, Šeklić D. *Laetiporus sulphureus* mushroom extract strongly enhances proapoptotic effect of probiotics *Bifidobacterium lactis* on HCT-116 cells in a co-culture system. *Food Bioscience* 2024, 58: 103700. doi: 10.1016/j.fbio.2024.103700
- Živanović M, Gazdić Janković M, Ramović Hamzagić A, Virijević K, Milivojević N, Pecić K, Šeklić D, **Jovanović M**, Kastratović N, Mirić A, Đukić T, Petrović I, Jurišić V, Ljujić B, Filipović N. Combined biological and numerical modeling approach for better understanding of the cancer viability and apoptosis. *Pharmaceutics* 2023, 15(6): 1628. doi: 10.3390/pharmaceutics15061628
- Jovanović MM**, Šeklić DS, Rakobradović JD, Planojević NS, Vuković NL, Vukić MD, Marković SD. Royal jelly and trans-10-hydroxy-2-decenoic acid inhibit migration and invasion of colorectal carcinoma cells. *Food Technology and Biotechnology* 2022, 60(2): 213-224. doi: 10.17113/ftb.60.02.22
- Soldatović T, Selimović E, Milivojević N, **Jovanović M**, Šmit B. Novel heteronuclear Pt(II)-L-Zn(II) complexes: synthesis, interactions with biomolecules, cytotoxic properties. Two metals give promising antitumor activity? *Applied Organometallic Chemistry* 2020, 34(19): e5864. doi: 10.1002/aoc.5864

Personal

Name

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Languages

English

Advanced

Czech

Beginner

8. Kosanić M, Seklić D, **Jovanović M**, Petrović N, Marković S. *Hygrophorus eburneus*, edible mushroom, a promising natural bioactive agent. *EXCLI Journal* 2020, 19: 442-457. doi: 10.17179/excli2019-2056

9. Nikodijević D, Milutinović M, Cvetković D, Čupurdija M, **Jovanović M**, Mrkić I, Jankulović-Gavrović M, Marković S. Impact of bee venom and melittin on apoptosis and biotransformation in colorectal carcinoma cell lines. *Toxin Reviews* 2019, 40(4): 1272-1279. doi: 10.1080/15569543.2019.1680564

10. **Jovanović MM**, Marković KG, Grujović MŽ, Pavić J, Mitić M, Nikolić J, Šeklić D. Anticancer assessment and antibiofilm potential of *Laetiporus sulphureus* mushroom originated from Serbia. *Food Science & Nutrition* 2023, 11(10): 6393-6402. doi: 10.1002/fsn3.3577

11. Šeklić D, **Jovanović M**. *Platismatia glauca*—Lichen species with suppressive properties on migration and invasiveness of two different colorectal carcinoma cell lines. *Journal of Food Biochemistry* 2022, 46(7): e14096 doi: 10.1111/jfbc.14096

12. Ramović Hamzagić A, Cvetković D, Gazdić Janković M, Milivojević Dimitrijević N, Nikolić D, Živanović M, Kastratović N, Petrović I, Nikolić S, **Jovanović M**, Šeklić D, Filipović N, Ljujić B. Modeling 5-FU-induced chemotherapy selection of a drug-resistant cancer stem cell subpopulation. *Current Oncology* 2024, 31: 1221-1234. doi: 10.3390/currncol31030091

13. Milutinović M, Vasić S, Obradović A, Zuher A, **Jovanović M**, Radovanović M, Čomić LJ, Marković S. Phytochemical evaluation, antimicrobial and anticancer properties of new "Oligo Grapes" supplement. *Natural Product Communications* 2019, 14(6): 1934578X1986037. doi: 10.1177/1934578X19860371

14. **Jovanović M**, Čupurdija M, Nikodijević D, Milutinović M, Cvetković D, Rakobradović J, Marković S. Effects of royal jelly on energy status and expression of apoptosis and biotransformation genes in normal fibroblast and colon cancer cells. *Kragujevac Journal of Science* 2018, 40: 175-192. doi: 10.5937/KgJSci1840175J

Conferences

1. Đukić T, Šeklić D, **Jovanović M**, Živanović M, Filipović N. Using numerical modeling to analyze the behavior of cancer cells after diverse co-treatments. 2nd International Conference on Chemo and Bioinformatics. Kragujevac, Serbia, 2023, pp. 355-358. doi: 10.46793/ICCBI23.355DJ

2. **Jovanović M**, Virijević K, Arsenijević D, Pecić K, Šeklić D. Bee product royal jelly suppress EMT and invasiveness of HCT-116 cells. 4th International Electronic Conference on Foods. Online, 2023, 26(1): 80. doi: 10.3390/Foods2023-15064

3. Arsenijević D, **Jovanović M**, Pecić K, Šeklić D. *Laetiporus sulphureus* mushroom enhances cytotoxic effect of *Bifidobacterium animalis* spp. *lactis* on HCT-116 cells in a co-culture system. 4th International Electronic Conference on Applied Sciences. Online, 2023, 56(1): 302. doi: 10.3390/ASEC2023-16608

4. Arsenijević D, **Jovanović M**, Pecić K, Mladenović K, Šeklić D. *Bifidobacterium animalis* and *Laetiporus sulphureus* extract induce a strong increase in GSH levels in MRC-5 cells in response to oxidative stress. 3rd International Electronic Conference on Nutrients. Online, 2023, 29(1): 3. doi: 10.3390/IECN2023-16259

5. **Jovanović M**, Virijević K, Arsenijević D, Pecić K, Šeklić D. Royal jelly suppresses invasive potential of colorectal cancer cells by attenuating Vimentin and Snail. 4th International Electronic Conference on Applied Sciences. Online, 2023, 56(1): 186. doi: 10.3390/ASEC2023-15961

6. **Jovanović M**, Virijević K, Arsenijević D, Pecić K, Šeklić D. Expression of β -catenin marker in colorectal cancer cells after treatment with royal jelly. 26th International Electronic Conference on Synthetic Organic Chemistry. Online, 2022, 12(1): 23. doi: 10.3390/ecsoc-26-13531

7. **Jovanović M**, Virijević K, Grujić J, Arsenijević D, Pecić K, Kastratović N, Živanović M, Šeklić D. Antimigratory activity of royal jelly on HCT-116 colorectal cancer cells. 3rd International Electronic Conference on Foods (Food, Microbiome, and Health-A Celebration of the 10th Anniversary of

8. Pecić K, **Jovanović M**, Arsenijević D, Pavić J, Grujović M, Mladenović K, Virijević K, Živanović M, Šeklić D. *Laetiporus sulphureus* affects migration and superoxide anion radical levels in HeLa cervical cancer cells. 3rd International Electronic Conference on Foods (Food, Microbiome, and Health—A Celebration of the 10th Anniversary of Foods' Impact on Our Wellbeing). Online, 2022, 18(1): 6. doi: 10.3390/Foods2022-12933
9. Arsenijević D, **Jovanović M**, Pecić K, Grujović M, Marković K, Šeklić D. Effects of *Laetiporus sulphureus* on viability of HeLa cells in co-culture system with *Saccharomyces boulardii*. 3rd International Electronic Conference on Foods (Food, Microbiome, and Health—A Celebration of the 10th Anniversary of Foods' Impact on Our Wellbeing). Online, 2022, 18(1): 69. doi: 10.3390/Foods2022-13028
10. **Jovanović MM**, Šeklić DS, Vukić MD, Vuković NL, Planojević NS, Marković SD. Unsaturated fatty acid 10H₂DA content in Serbian royal jelly and its effects on motility of colorectal carcinoma cell lines. 25th International Electronic Conference on Synthetic Organic Chemistry. Online, 2021, 8: 49. doi: 10.3390/ecsoc-25-11636
11. **Jovanović MM**, Virijević K, Grujić J, Živanović M, Šeklić DS. Extract of edible mushroom *Laetiporus sulphureus* affects redox status and motility of colorectal and cervical cancer cell lines. 2nd International Electronic Conference on Foods (Future Foods and Food Technologies for a Sustainable World). Online, 2021, 6(1): 82. doi: 10.3390/Foods2021-11028
12. Šeklić DS, **Jovanović MM**, Virijević K, Grujić J, Živanović M, Marković SD. Effects of edible mushrooms *Phellinus linteus* and *Lentinus edodes* methanol extracts on colorectal cancer cell lines. 2nd International Electronic Conference on Foods (Future Foods and Food Technologies for a Sustainable World). Online, 2021, 6(1): 85. doi: 10.3390/Foods2021-11055
13. Šeklić DS, **Jovanović MM**, Milivojević NN, Živanović MN. Platinum(IV) complex and its corresponding ligand suppress cell motility and promote expression of Frizzled-7 receptor in colorectal cancer cells. 1st International Conference on Chemo and Bioinformatics. Kragujevac, Serbia, 2021, pp. 288-291. doi:10.46793/ICCBi21.288S
14. Virijević K, Grujić J, **Jovanović M**, Kastratović N, Mirić A, Nikolić D, Živanović M, Filipović N. Electrospun gelatin nanofibrous scaffolds – applications in tissue engineering. 1st International Conference on Chemo and Bioinformatics. Kragujevac, Serbia, 2021, pp. 251-254. doi: 10.46793/ICCBi21.251V
15. Šeklić D, Nikolić D, **Jovanović M**, Virijević K, Živanović M, Ljujić B, Saveljić I, Filipović N. The use of artificial intelligence in predicting the significance of markers related to cell movement. 3rd Serbian International Conference on Applied Artificial Intelligence (SICAAI). Kragujevac, 2024, pp. 108-109.
16. Virijević K, Živanović M, Gazdić Janković M, Ramović Hamzagić A, Milivojević N, Pecić K, Šeklić D, **Jovanović M**, Kastratović N, Mirić A, Đukić T, Petrović I, Jurišić V, Ljujić B, Filipović N. Numerical and biological modeling approach in the analysis of the cancer viability and apoptosis. 4th Belgrade Bioinformatics Conference (BelBi2023). Beograd, 2023, pp. 70.
17. Šeklić D, Đukić T, Živanović M, **Jovanović M**, Filipović N. Numerical modelling in assessment of different colorectal cancer cell lines behavior in treatment with cisplatin. 21st International Conference on Bioinformatics and BioEngineering (IEEE BIBE 2021). Kragujevac, Serbia, 2021, pp. 42-43.
18. Šeklić D, Glodović V, Stanković M, **Jovanović M**, Jovankić J, Marković S. The effects of newly synthesized platinum(IV) complex and *Phellinus linteus* extract in co-treatment on the migratory potential and redox status of colon cancer cell lines. 4th Congress of Serbian Society for Mitochondrial and Free Radical Physiology (Challenges in redox biology). Beograd, 2018, pp. 98.
19. Nikodijević D, **Jovanović M**, Milutinović M, Cvetković D, Čupurdija M, Jovankić J, Marković S. Effects of the bee products on energy status and relative expression of biotransformation and apoptosis genes in healthy and colon cancer cells. 7th Conference of Serbian Biochemical Society

(Biochemistry of Control in Life and Tehnology). Beograd, 2017, pp. 173-175.

20. Šeklić DS, **Jovanović MM**, Stanković MS, Topuzović MD, Marković SD. Proapoptotski i antimigratorni efekti *Cordyceps sinensis* i *Ganoderma lucidum* na HCT-116 ćelijama. XXIV savetovanje o biotehnologiji sa međunarodnim učešćem. Čačak, 2019, pp. 709-714.

21. Šeklić DS, **Jovanović MM**, Marković SD. Pro-apoptotic and anti-migratory effects of methanol extracts of *Phellinus linteus* and *Lentinus edodes* on colorectal cancer cell lines. V SePA symposium (Proteomics in the analysis of food, environmental protection and medical research). Novi Sad, 2019, pp. P6.

Courses

“Proteomics: From sample preparation to practical aspects” 2020
Faculty of Chemistry, Belgrade, Serbia

“1st FoodEnTwin Workshop “Food and Environmental - Omics” 2019
Faculty of Chemistry, Belgrade, Serbia

“Metallomics: Food, feed and environmental applications with practical training” 2019
Faculty of Chemistry, Belgrade, Serbia

Projects

Participant of the project entitled “Preclinical Testing of Bioactive Substances (PIBAS)” funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia