

PERSONAL INFORMATION

Anđela Franich



 Faculty of Science, University of Kragujevac,
 Radoja Domanovića 12, 34000 Kragujevac, Serbia

 andjela.franich@pmf.kg.ac.rs;

Sex Female | Date of birth 10/05/1991 | Nationality Serbian

WORK EXPERIENCE

(2018- currently)

University teaching assistant

Faculty of Science, University of Kragujevac, Department of Chemistry, Inorganic Chemistry, Kragujevac, Serbia

<https://www.pmf.kg.ac.rs/?id=569>

Research interests: Bioinorganic and Medicinal Inorganic Chemistry - Synthesis, structural characterization and biological activity testing of dinuclear complexes of platinum(II) and palladium(II) with heterocyclic ligands containing nitrogen in the ring.

Educational work: Researching and educational performance of exercises with students of chemistry on courses: General Chemistry, Inorganic Chemistry 1, Selected chapters of Inorganic Chemistry, Structural Inorganic Chemistry, Solution Chemistry, Industrial chemistry 1.

Work with kids in primary and high school: Performing chemical experiments for kids from primary and high schools, teaching them to love chemistry and how they can better learning chemistry alone.

Professional societies: Member of the Serbian Chemical Society

EDUCATION

(2017- currently)

PhD student of Chemistry– Inorganic chemistry

Department of Chemistry, Faculty of Science, University of Kragujevac, Serbia

Supervisor: Prof. dr. Snežana Rajković

(2016-2017)

MSc degree in chemistry

Department of Chemistry, Faculty of Science, University of Kragujevac, Serbia

(2010-2016)

BSc degree in chemistry

Department of Chemistry, Faculty of Science, University of Kragujevac, Serbia

PERSONAL SKILLS

Communication skills

- Communicative, willing to teamwork, friendly, sociable, responsible, excellent organizational skills, persistent, always ready for further development and learning

Job-related skills

- Excellent command of Microsoft Office™ tools
- Good command of Chemistry software
- Good command of spectroscopic techniques: UV-Vis, IR spectroscopy, NMR spectroscopy, MS spectroscopy, Fluorescence spectroscopy

Mother tongue(s)

Serbian

Other language(s)

English

ADDITIONAL INFORMATIONS

Papers:

- B. Konovalov, M. D. Živković, J. Z. Milovanović, D. B. Djordjević, A. N. Arsenijević, I. R. Vasić, G. V. Janjić, **A. Franich**, D. Manojlović, S. Skrivanj, M. Z. Milovanović, M. I. Djuran, S. Rajković, Synthesis, cytotoxic activity and DNA interaction studies of new dinuclear platinum(II) complexes with an aromatic 1,5-naphthyridine bridging ligand: DNA binding mode of polynuclear platinum(II) complexes in relation to the complex structure, *Dalton Transactions*, **47** (2018) 15091-15102.

<https://doi.org/10.1039/C8DT01946K>

- **A. A. Франић**, С. Рајковић, М. И. Ђуран
Антитуморска активност комплекса платине(II). Полинуклеарни комплекси платине као нова класа потенцијалних антитуморских агенаса, *Хемијски преглед*, **3** (2018) 64-71; 0440-6826.
- **A.A. Franich**, M.D. Živković, D. Čočić, B. Petrović, M. Milovanović, A. Arsenijević, J. Milovanović, D. Arsenijević, B. Stojanović, M.I. Djuran, S. Rajković, New dinuclear palladium(II) complexes with benzodiazines as bridging ligands: interactions with CT-DNA and BSA, and cytotoxic activity, *Journal of Biological Inorganic Chemistry* **24** (2019) 1009-1022. <https://doi.org/10.1007/s00775-019-01695-w>
- **A.A. Franich**, M.D. Živković, T. Ilić-Tomić, I.S. Đorđević, J. Nikodinović-Runić, A. Pavić, G.V. Janjić, S. Rajković, New minor groove covering DNA binding mode of dinuclear Pt(II) complexes with various pyridine-linked bridging ligands and dual anticancer-antiangiogenic activities, *Journal of Biological Inorganic Chemistry* **25** (2020) 395-409. <https://doi.org/10.1007/s00775-020-01770-7>
- **A.A. Franich**, M.D. Živković, J. Milovanović, D. Arsenijević, A. Arsenijević, M. Milovanović, M.I. Djuran, S. Rajković, *In vitro* cytotoxic activities, DNA- and BSA-binding studies of dinuclear palladium(II) complexes with different pyridine-based bridging ligands, *Journal of Inorganic Biochemistry*, **210** (2020), 111158. <https://doi.org/10.1016/j.jinorgbio.2020.111158>
- M.D. Živković, **A.A. Franich**, D.P. Ašanin, N.S. Drašković, S. Rajković, M.I. Djuran, Hydrolysis of the Amide Bond in L-Methionine- and L-Histidine-Containing Dipeptides in the Presence of Dinuclear Palladium(II) Complexes with Benzodiazines Bridging Ligands, *Journal of Solution Chemistry*, **49**, (2020) 1082-1093. <https://doi.org/10.1007/s10953-020-01012-z>
- M. Bošković, **A.A. Franich**, S. Rajković, M. Jovanović, M. Jurisević, N. Gajović, M. Jovanović, N. Arsenijević, I. Jovanović, M.D. Živković, Potential Antitumor Effect of Newly Synthesized Dinuclear 1,5-Naphthyridine-Bridging Palladium(II) Complexes, *Chemistry Select*, **5** (2020), 10549-10555. <https://doi.org/10.1002/slct.202002350>
- B. Konovalov, A.A. Franich, M. Jovanović, M. Jurisević, N. Gajović, M. Jovanović, N. Arsenijević, V. Marić, I. Jovanović, M.D. Živković, S. Rajković, Synthesis, DNA-/bovine serum albumin-binding affinity, and cytotoxicity of dinuclear platinum(II) complexes with 1,6-naphthyridine-bridging ligand, *Applied Organometallic Chemistry* **35**(3) 2020 e6112. <https://doi.org/10.1002/aoc.6112>
- S. Rajković, **A.A. Franich**, V. Čupurdija, M.D. Živković, DNA- and BSA-binding studies of dinuclear palladium(II) complexes with 1,5-naphthyridine bridging ligands, *Serbian Journal of Experimental and Clinical Research* **25**(2) 2021, 113-125. <https://doi.org/10.2478/sjccr-2021-0030>
- M.N. Dimitrijević, **A.A. Franich**, M.M. Jurišević, N.M. Gajović, N.N. Arsenijević, I.P. Jovanović, B.S. Stojanović, S. Lj. Mitrović, J. Kljun, S. Rajković, M.D. Živković, Platinum(II) complexes with malonic acids: Synthesis, characterization, *in vitro* and *in vivo* antitumor activity and interaction with biomolecules, *Journal of Inorganic Biochemistry*, **231** (2022) 111773. <https://doi.org/10.1016/j.jinorgbio.2022.111773>
- **A.A. Franich**, I.S. Đorđević, M.D. Živković, S. Rajković, G.V. Janjić, M.I. Djuran, Dinuclear platinum(II) complexes as the pattern for phosphate backbone binding: a new perspective for recognition of binding modes to DNA, *Journal of Biological Inorganic Chemistry*, **27** (2022) 65-79. <https://doi.org/10.1007/s00775-021-01911-6>
- B. Konovalov, I.S. Đorđević, **A.A. Franich**, B. Šmit, M.D. Živković, M.I. Djuran, G.V. Janjić, S. Rajković, Dinuclear platinum(II) complexes with 1,5-nphe bridging ligand: Spectroscopic and molecular docking study of the interactions with N-acetylated L-methionylglycine and human serum albumin, *Journal of Molecular Structure*, **1288** (2023) 135810. <https://doi.org/10.1016/j.molstruc.2023.135810>
- S. Zornić, B. Marković, **A.A. Franich**, G. Janjić, M. Jadranin, J. Avdalović, S. Rajković, M.D. Živković, N. Arsenijević, G. Radosavljević, J. Pantić, Characterization, modes of interactions with DNA/BSA biomolecules and anti-tumor activity of newly synthesized dinuclear platinum(II) complexes with pyridazine bridging ligand, *Journal of Biological Inorganic Chemistry*, **29** (2024) 51-73. <https://doi.org/10.1007/s00775-023-02030-0>
- S. Zornić, B. Simović, A.A. Franich, M.D. Živković, B. Luković, N. Arsenijević, G. Radosavljević, S. Rajković, J. Pantić, Synthesis, Characterization, DNA/BSA-Binding Affinity and Biological Activity of Dinuclear Palladium(II) Complexes with Aromatic N-Heterocyclic Bridging Ligand, *Journal of Coordination Chemistry*, **77**(7-8) (2024) 710-729. <https://doi.org/10.1080/00958972.2023.2301402>
- M. Glišić, P.P. Čanović, M.M. Zarić, R.S. Živković Zarić, A.A. Franich, S. Rajković, M. D. Živković, The cytotoxicity of palladium(II) complexes containing 1,2- or 1,4-diazine bridging ligands on squamous cell carcinoma cells in vitro: Insights in the mechanisms of action, *Applied Organometallic Chemistry*, **38**(6) (2024) e7449. <https://doi.org/10.1002/aoc.7449>
- D. Luković, A.A. Franich, M.D. Živković, S. Rajković, B. Stojanović, N. Gajović, M. Jurišević, S. Pavlović, B. Simović Marković, M. Jovanović, B.S. Stojanović, R. Pavlović, I. Jovanović, Biological Evaluation of Dinuclear Platinum(II) Complexes with Aromatic N-Heterocycles as Bridging Ligands, *International Journal of Molecular Sciences*, **25**(15) (2024) 8525. <https://doi.org/10.3390/ijms25158525>

- Conferences:
1. **A. A. Franich**, M. D. Živković, S. Rajković, M. I. Djuran
Reactions of dinuclear platinum(II) complexes with biomolecules containing nitrogen and sulfur donor atoms
Supramolecular chemistry in Medicine and in Technology: Advances and Challenges
August 30-September 03, 2018, Albene, Bulgaria, P2
 2. M. D. Živković, **A. A. Franich**, S. Rajković, M. I. Djuran
Interactions of benzodiazine-bridged dinuclear palladium(II) complexes with DNA and bovine serum albumin
Supramolecular chemistry in Medicine and in Technology: Advances and Challenges
August 30-September 03, 2018, Albene, Bulgaria, P7
 3. **A. A. Franich**, M. D. Živković, S. Rajković, M. I. Djuran
¹H NMR study of the reactions between dinuclear platinum(II) complexes and nitrogen-containing biomolecules
25th Congress of Chemists and Technologists of Macedonia
Ohrid, Macedonia, September 19-22, 2018, p.29, ICTM P-6 ISBN 978-9989-760-16-7
 4. M. D. Živković, **A. A. Franich**, S. Rajković, M. I. Djuran
Hydrolysis of the amide bond in L-methionine-containing peptides catalyzed by new dinuclear Pt(II) complexes with aromatic 1,5-naphthyridine bridging ligand
25th Congress of Chemists and Technologists of Macedonia
Ohrid, Macedonia, September 19-22, 2018, p.29, ICTM P-7 ISBN 978-9989-760-16-7
 5. **A. A. Franich**, M. D. Živković, S. Rajković
Hydrolysis of the amide bond in N-acetylated L-methionylglycine catalyzed by new dinuclear palladium(II) complexes
6. conference young chemists of Serbia
Belgrade; Serbia, October 27, 2018, HS08 PE 6
 6. **A. A. Franich**, D. P. Ašanin, M. D. Živković, S. Rajković, M. I. Djuran
Synthesis, characterization and catalytic properties of dinuclear palladium(II) complexes with benzodiazines as bridging ligands
55th Meeting of the Serbian Chemical Society
Novi Sad, Serbia, June 8-9, 2018, NH P 05
 7. **A. A. Franich**, M. D. Živković, G. V. Janjić, T. Ilic-Tomic, M. I. Djuran, J. Nikodinovic-Runic, S. Rajković
Synthesis, DNA interaction and In vitro cytotoxic activity of dinuclear platinum(II) complexes with different N-heterocyclic bridging ligands
9th International Conference of the Chemical Societies of the South-East European Countries, May 8 – 11, 2019, Targoviste, Romania, S2_P_01
 8. N. Drašković, M. Živković, **A. Franich**, A. Arsenijević, D. Djordjević, S. Rajković, M. Djuran
Synthesis and cytotoxic activity of benzodiazine-bridged dinuclear palladium(II) complexes
9th International Conference of the Chemical Societies of the South-East European Countries, May 8 – 11, 2019, Targoviste, Romania, S2_P_05
 9. **Andjela A. Franich**, Marija Živković, Miloš I. Djuran, Snežana Rajković
Synthesis, characterization and study of the interactions of new mononuclear platinum(II) complexes with DNA
56th Meeting of the Serbian Chemical Society
Niš, Serbia, June 7-8, 2019, NH P 10
 10. S. Rajković, M. D. Živković, **A. A. Franich**, J. Milovanović, D. Djordjević, M. Milovanović, M. I. Djuran
CYTOTOXIC ACTIVITY OF NEW DINUCLEAR PALLADIUM(II) COMPLEXES
XXI Mendeleev Congress on General and Applied Chemistry
9 – 13 September, Saint Petersburg, Russia, Vol. 5. Section 10, P 223
 11. M. D. Živković, S. Rajković, **A. A. Franich**, M. Zarić, P. Čanović, N. Marković, M. I. Djuran
IN VITRO CYTOTOXIC ACTIVITY OF PHENANTHROLINE-BRIDGED DINUCLEAR PLATINUM(II) COMPLEXES
XXI Mendeleev Congress on General and Applied Chemistry
9 – 13 September, Saint Petersburg, Russia, Vol. 5. Section 10, P 265
 12. G. V. Janjic, B. Konovalov, M. D. Živković, J. Z. Milovanović, D.B. Djordjević, A. N. Arsenijević, I. Vasić, **A. Franich**, S. Rajković, and M. I. Djuran
STRUCTURAL CHARACTERIZATION OF BINUCLEAR PLATINUM(II) COMPLEX ADUCTS WITH DNA AND ANTITUMOR ACTIVITY
14th International Conference on Fundamental and Applied Aspects of Physical Chemistry
September 24-28, 2018 Belgrade, Serbia B-20-P
 13. **A. A. Franich**, M. D. Živković, M. I. Djuran, S. Rajković
Platinum(II) complexes with malonic acid: Synthesis, characterization and interactions with DNA
57th Meeting of the Serbian Chemical Society
Kragujevac, Serbia, June 18-19, 2021, NH-P-2
 14. **Andela A. Franich**, Marija D. Živković, Sanja Zornić, Bojana Simović Marković,

Nebojša N. Arsenijević, Gordana D. Radosavljević, Jelena Pantić, Snežana Rajković
Cytotoxic effects and interaction of dinuclear palladium(II) complexes with DNA and BSA
59th Meeting of the Serbian Chemical Society
Novi Sad, Serbia, June 1-2, 2023, NH-3

15. Anđela A. Franich, Marija D. Živković, Snežana Rajković
Platinum(II) complexes with epoxide derivative of 1,10-phenanthroline in interaction with human serum albumin
2nd International Conference on Chemo and Bioinformatics, September 28-29, 2023. Kragujevac, Serbia
DOI: 10.46793/ICCB123.483F

16. Anđela A. Franich, Marija D. Živković, Snežana Rajković,
INTERACTION OF DINUCLEAR PLATINUM(II) COMPLEXES WITH PHENANTHROLINE AS A
BRIDGING LIGANDS WITH HUMAN SERUM ALBUMINE,
*III INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND TECHNOLOGY, COAST
2024*

29. May-01. Jun 2024. Herceg-Novi, Montenegro.