

# IZBORNOM VEĆU MEDICINSKOG FAKULTETA UNIVERZITETA U BEOGRADU

Komisija za pripremu izveštaja u sastavu:

1. **Prof. dr Ivanka Karadžić, redovni profesor Medicinskog fakulteta u Beogradu**
2. **Prof. dr Vesna Vujić, redovni profesor Medicinskog fakulteta u Beogradu**
3. **Prof. dr Tibor Sabo, redovni profesor Hemijskog fakulteta u Beogradu**

određena na sednici Izbornog veća Medicinskog fakulteta u Beogradu održanoj 03. 07. 2019. godine, analizirala je prijave na konkurs raspisan u oglasnim novinama „Poslovi”, objavljenom 04. 09. 2019. za izbor 1 nastavnika u zvanje **redovni profesor**, za užu naučnu oblast Hemija u medicini, podnosi sledeći

## R E F E R A T

Na raspisan konkurs javila se jedna kandidatkinja:

**Danijela Krstić**, doktor biohemijskih nauka, vanredni profesor za užu naučnu oblast Hemija u medicini na Medicinskom fakultetu u Beogradu.

### A. OSNOVNI BIOGRAFSKI PODACI

–Ime, srednje ime i prezime	Danijela (Zoran) Krstić
–Datum i mesto rođenja	31. 08. 1969. Vladičin Han
–Ustanova gde je zaposlen	Medicinski fakultet Univerziteta u Beogradu
–Zvanje / radno mesto	Vanredni profesor
–Naučna oblast	Hemija u medicini

### B. STRUČNA BIOGRAFIJA, DIPLOME I ZVANJA

#### Osnovne studije

Diplomirala na Hemijskom fakultetu (studijaska grupa biohemija) Univerziteta u Beogradu školske 1993/94. godine, sa prosečnom ocenom 8,31.

#### Magisterijum

Magistarski rad: “Uticaj jona Cu, Co, Zn i Fe na aktivnost plazma membranskih enzima  $\text{Na}^+/\text{K}^+$ -ATPaze i  $\text{Mg}^{2+}$  – ATPaze mozga pacova” odbranila je na Hemijskom fakultetu u Beogradu 2000. god, pred komisijom u sastavu:

1. Dr Jovan Vučetić, redovni profesor Hemijskog fakulteta u Beogradu
2. Dr Mihajlo Spasić, redovni profesor Hemijskog fakulteta u Beogradu
3. Dr Ivanka Karadžić, vanredni profesor Medicinskog fakulteta u Beogradu
4. Dr Vesna Vasić, naučni savetnik Instituta za nuklearne nauke Vinča
5. Dr Gordana Nikezić, naučni savetnik Instituta za nuklearne nauke Vinča.

–Uža naučna oblast: enzimologija

#### Doktorat

Doktorsku disertaciju: “Uticaj specifičnih i nespecifičnih inhibitora na aktivnost  $\text{Na}^+/\text{K}^+$ -ATPaze membrane humanih eritrocita” odbranila je na Hemijskom fakultetu u Beogradu 2004.god, pred komisijom u sastavu:

1. Dr Miroslav Vrvic, redovni profesor Hemijskog fakulteta u Beogradu
2. Dr Mihajlo Spasić, redovni profesor Hemijskog fakulteta u Beogradu
3. Dr Ljuba Mandić, vanredni profesor Hemijskog fakulteta u Beogradu
4. Dr Tanja Ćirković Veličković, docent Hemijskog fakulteta u Beogradu
5. Dr Vesna Vasić, naučni savetnik Instituta za nuklearne nauke Vinča.

–Uža naučna oblast: enzimologija

#### Dosadašnji izbori u nastavna i naučna zvanja

- 13.06 1996. - 15.06. 2000. istraživač Instituta za nuklearne nauke Vinča
- 15.06. 2000. asistent pripravnika, Medicinski fakultet u Beogradu;
- 23. 12. 2004. asistent, Medicinski fakultet u Beogradu
- 23. 05. 2005. naučni saradnik;
- 29. 09. 2008. docent, Medicinski fakultet u Beogradu
- 26. 09. 2013. vanredni profesor, Medicinski fakultet u Beogradu
- 29.11.2018. godine, ponovni izbor u zvanje vanrednog profesora

## OBAVEZNI USLOVI ZA IZBOR U ZVANJE REDOVNOG PROFESORA

### C. OCENA O REZULTATIMA PEDAGOŠKOG RADA

Dr sci. Danijela Krstić učestvuje u realizaciji teorijske, seminarske i praktične nastave u okviru Integriranih akademskih studija medicine, posle diplomске nastave i pripremne nastave za polaganje prijemnog ispita na Medicinskom fakultetu u Beogradu. U okviru obaveznog zajedničkog predmeta Medicinska biohemija i hemija na Integriranim akademskim studijama medicine u šk. 2018/19. godini održala je ukupno 79 časova nastave (24 časa predavanja, 28 časova seminara i 27 časova vežbi). Ovu nastavu dodatno prati priprema,

izvođenje i ocenjivanje rezultata testova za dva redovna i dva popravna kolokvijuma, kao i kolokvijume koji se realizuju u ispitnim rokovima. Kandidatkinja učestvuje u izvođenju svih navedenih vidova nastave iz istog predmeta na engleskom jeziku (4 časa predavanja, 9 časova seminara i 9 časova vežbi).

U izornoj nastavi (u okviru Integriranih akademskih studija) učestvuje u realizaciji 2 izborna predmeta: Medicinski značajne hemijske reakcije kroz ogleda i primere (2 časa) i Joni i niskomolekulska jedinjenja u biološkim procesima (odgovorni nastavnik, 30 časova).

Dr sci. Danijela Krstić učestvuje u seminarskoj nastavi na obaveznom predmetu Medicinska fiziologija sa 4 časa godišnje, a u okviru pripreme nastave za polaganje prijemnog ispita ima 9 časova teorijske nastave. U okviru specijalističke nastave iz Kliničke biohemije na predmetu Odabrana poglavlja hemije, fizičke hemije i instrumentalna analiza drži 2 časa predavanja i 2 časa vežbi godišnje. U izornoj nastavi (u okviru Doktorskih akademskih studija-smer fiziološke nauke) učestvuje u izvođenju u 2 izborna predmeta: Neurofiziologija i hiperekscitabilnost (2 časa teorijske nastave) i Fiziološka hemija (odgovorni nastavnik).

U studentskim anketama pedagoški rad dr sci. Danijele Krstić ocenjen je ocenom 5,0.

Pored angažovanja u svim vidovima nastave koje realizuje Katedra za hemiju u medicini, dr sci. Danijela Krstić je rukovodila (kao mentor i komentor) izradom 16 studentskih radova saopštenih na studentskim kongresima, od kojih su dva priznata kao završni (diplomski) rad:

- 1) Aleksandra Zdravković, Modulacija aktivnosti ATPaza sinaptičkih plazma membrane mozga pacova polioksometalatima, 2017.
- 2) Milan Lacković, Modulacija aktivnosti acetilholinesteraze polioksovolframata, 2017.

## **D. OCENA REZULTATA U OBEZBEĐIVANJU NAUČNO-NASTAVNOG PODMLATKA MENTORSTVA**

Dr sci. Danijela Krstić je bila **mentor pet završnih (diplomskih) radova**:

- 1) Milan Randjelović, Modulacija aktivnosti acetilholinesteraze organofosfatnim insekticidima, 2013.
- 2) Marija Panić, Acetilholinesteraza: farmakologija i toksikologija, 2015.
- 3) Milan Maoduš, Inhibitori acetilholinesteraze u terapiji neuroloških bolesti, 2017.
- 4) Jovana Milošević, Polioksometalati u biomedicini, 2017.
- 5) Marko Popović, Uloga aminokiselina sa sumporom u antioksidativnoj zaštiti, 2018.

## **ČLANSTVO U KOMISIJAMA ZA ODBRANU ZAVRŠNIH RADOVA**

Bila je član u **8 (osam) komisija za odbranu završnih (diplomskih) radova** na Katedri za hemiju u medicini Medicinskog fakulteta Univerziteta u Beogradu:

- 1) Nikola Pozojević, Matriks metaloproteinaze 2 i 9 u malignom tkivu karcinoma dojke, 2013.
- 2) Ivan Rilak, Uloga i značaj cinka u organizmu, 2015.
- 3) Danica Gaia Popović, Extracellular lipases from *Pseudomonas aeruginosa*, 2015.
- 4) Miloš Pešić, Oksidativni stres u karcinogenezi, 2015.
- 5) Milica Vučetić, Superoksid dizmutaza u odabranim patološkim stanjima, 2015.
- 6) Đorđe Krstić, Značaj određivanja magnezijuma kod akutnog infarkta miokarda, 2017.
- 7) Maja Đokić, Značaj magnezijuma kod neuroloških oboljenja, 2017.
- 8) Andrijana Grbić, Magnezijum i astma, 2018

Dr sci. Danijela Krstić je učestvovala u komisiji za ocenu i odbranu **2 (dve) doktorske disertacije**:

- 1) Mirjana Čolović, Bioanalitičke metode za detekciju i evaluaciju toksičnosti organo-tiofosfatnih insekticida i proizvoda njihove degradacije, Tehnološko-metalurški fakultet Univerziteta u Beogradu, datum odbrane 15. 04. 2014.
- 2) Branislava Medić, Farmakološka modulacija parametara akutnog ishemijsko-reperfuzijskog oštećenja bubrega u eksperimentalnim modelima *in vivo* i *in vitro*, Medicinski fakultet Univerziteta u Beogradu, datum odbrane 30. 05. 2016.

## **E. NAUČNI I STRUČNI RAD**

**Napomena:** \*pored imena označava da je dr sci. Danijela Krstić bila korespondirajući autor.

a) **Spisak radova:**

### **Originalni radovi *in extenso* u časopisima sa JCR liste**

(od izbora u zvanje vanrednog profesora 31-47)

1. Vasić V, Jovanović D, **Krstić D**, Nikezić G, Vujisić Lj, Nedeljković N. Prevention and recovery of CuSO<sub>4</sub> - induced inhibition of Na<sup>+</sup>/ K<sup>+</sup>-ATPase and Mg<sup>2+</sup>-ATPase in rat brain synaptosomes by EDTA, Toxicology Letters, (1999), 110, (1-2), 95-104. **M23 IF 0,773**

2. Vujisić Lj, **Krstić D**, Vučetić J. Chemical aspect of cobalt ion influence on ATPase activity, Journal of the Serbian Chemical Society, (2000), 65, 507-515. **M23 IF 0,277**

3. Vasić V, Krinulović K, **Krstić D**, Momić T, Horvat A. ATPases as multi-response sensing system for various organic and inorganic analytes, *Monatshefte für Chemie/Chemical Monthly*, (2004), 135, 605-614.  
**M22 IF 0,904**
4. Vujisić Lj, **Krstić D**, Krinulović K, Vasić V. Influence of transition and heavy metal ions on ATP-ases activity in rat synaptic plasma membrane, *Journal of Serbian Chemical Society* (2004), 69 (7), 541-547.  
**M23 IF 0,522**
5. **Krstić D**, Krinulović K, Spasojević-Tišma V, Joksić G, Momić T, Vasić V. Effects of digoxin and gitoxin on the enzymatic activity and kinetic parameters of  $\text{Na}^+/\text{K}^+$ -ATPase, *Journal of Enzyme Inhibition and Medicinal Chemistry*, (2004), 19 (5), 409 – 415.  
**M22 IF 1,423**
6. **Krstić D**, Krinulović K, Vasić V. Inhibition of  $\text{Na}^+/\text{K}^+$ -ATPase and  $\text{Mg}^{2+}$ -ATPase by metal ions and prevention and recovery of inhibited activities by chelators, *Journal of Enzyme Inhibition and Medicinal Chemistry*, (2005), 20 (5), 469 – 476.  
**M22 IF 1,667**
7. **Krstić D**, Tomić N, Krinulović K, Vasić V. The influence of potassium ion ( $\text{K}^+$ ) on digoxin-induced inhibition of porcine cerebral cortex  $\text{Na}^+/\text{K}^+$ -ATPase, *Journal of Enzyme Inhibition and Medicinal Chemistry*, (2006), 21 (4), 471-475.  
**M22 IF 1,636**
8. Krinulović K, Bugarčić Ž, Vrvic M, **Krstić D**, Vasić V. Prevention and recovery of ( $\mu^3$ -diethylentriamino)-chloro-palladium(II) chloride induced inhibition of  $\text{Na}^+/\text{K}^+$ -ATPase by SH containing ligand –L-cysteine and glutathione, *Toxicology in Vitro*, (2006), 20 (8), 1292-1299.  
**M22 IF 2,045**
9. **Krstić D\***, Čolović M, Krinulović K, Djurić D, Vasić V. Inhibition of AChE by single and simultaneous exposure to malathion and its degradation products, *General Physiology and Biophysics*, (2007), 26, 247-253.  
**M23 IF 1,286**
10. Rašić-Marković A, **Krstić D**, Vujović Z, Jakovljević V, Stanojlović O, Hrnčić D, Djurić D, Lončar-Stevanović H. Modulations of rabbit erythrocyte ATPase activities induced by *in vitro* and *in vivo* exposure to ethanol, *Molecular and Cellular Biochemistry*, (2008), 308 (1-2), 111-116.  
**M23 IF 1,764**
11. Lefranc F, Mijatović T, Kondo Y, Sauvage S, Roland I, **Krstić D**, Vasić V, Gailly P, Kondo S, Blanco G, Kiss R. Targeting the  $\alpha 1$  subunit of the sodium pump to combat glioblastoma cells, *Neurosurgery*, (2008), 62(1), 211-222.  
**M21a IF 3,398**
12. Pavelkić V, Gopčević K, **Krstić D**, Ilić M. The influence of  $\text{Al}^{3+}$  ion on porcine pepsin activity *in vitro*. *Journal of Enzyme Inhibition and Medicinal Chemistry*, (2008), 23(6), 1002-1010.  
**M23 IF 1,421**
13. **Krstić D**, Čolović M, Bavcon Kralj M, Trebše P, Krinulović K, Vasić V. The influence of malathion and its decomposition products on free and immobilized acetylcholinesterase, *Russian Journal of Physical Chemistry*, (2008), 82 (4), 663-668.  
**M23 IF 0,475**
14. **Krstić D**, Čolović M, Bavcon Kralj M, Franko M, Krinulović K, Trebše P, Vasić V. Inhibition of AChE by malathion and some structurally similar compounds, *Journal of Enzyme Inhibition and Medicinal Chemistry*, (2008), 23(4), 562-573.  
**M23 IF 1,421**
15. Vasić V, Momić T, Petković M, **Krstić D**.  $\text{Na}^+/\text{K}^+$ -ATPase as the Target Enzyme for Organic and Inorganic Compounds, *Sensors* (2008), 8(12), 8321-8360.  
**M21 IF 1,870**
16. Vasić D, Savić J, Bugarčić Ž, **Krstić D**, Tomić N, Čolović M, Petković M, Vasić V. Interaction of  $[\text{PtCl}_2(\text{DMSO})_2]$  complex with L-cysteine, *Zeitschrift für Naturforschung. Section C: Journal of Biosciences*, (2009), 64c, 103-108.  
**M23 IF 0,800**
17. Rašić-Marković A, Stanojlović O, Hrnčić D, **Krstić D**, Čolović M, Sušić V, Radosavljević T, Djurić D. The activity of erythrocyte and brain  $\text{Na}^+/\text{K}^+$  and  $\text{Mg}^{2+}$  -ATPases in rats subjected to acute homocysteine and homocysteine thiolactone administration, *Molecular and Cellular Biochemistry*, (2009), 327, 39-45.  
**M23 IF 1,896**
18. **Krstić D\***, Čolović M, Bošnjaković-Pavlović N, Spasojević-de Bire A, Vasić V. Influence of Decavanadate on Rat Synaptic Plasma Membrane ATPases Activity, *General Physiology and Biophysics*, (2009), 28, 302-308.  
**M23 IF 0,741**
19. Čolović M, **Krstić D**, Krinulović K, Momić T, Savić J, Vujačić A, Vasić V.  $\text{Na}^+/\text{K}^+$ -ATPase-Activity and Inhibition, *Russian Journal of Physical Chemistry A*, (2009), 83(9), 1778-1784.  
**M23 IF 0,438**
20. Vasić V, Čolović M, **Krstić D**. Mechanism of  $\text{Na}^+/\text{K}^+$ -ATPase and  $\text{Mg}^{2+}$ -ATPase inhibition by metal ions and complexes, *Hemijaska Industrija*, (2009), 63(5a), 499-509.  
**M23 IF 0,117**

21. Čolović M, **Krstić D**, Petrović S, Leskovac A, Joksić G, Savić J, Franko M, Trebše P, Vasić V, Toxic effects of diazinon and its photodegradation products, *Toxicology Letters*, (2010), 193(1), 9-18.  
**M21 IF 3,581**
22. Hrnčić D, Rašić-Marković A, **Krstić D**, Macut Dj, Djurić D, Stanojlović O. The role of nitric oxide in homocysteine thiolactone-induced seizures in adult rats, *Cellular and Molecular Neurobiology*, (2010), 30(2), 219-231.  
**M22 IF 2,423**
23. Čolović M, **Krstić D**, Ušćumlić S, Vasić V. Single and simultaneous exposure of acetylcholinesterase to diazinon, chlorpyrifos and their photodegradation products, *Pesticide Biochemistry and Physiology*, (2011), 100(1), 16-22.  
**M21 IF 1,713**
24. Čolović M, Bajuk-Bogdanović D, Avramović N, Holclajtner-Antunović I, Bošnjaković-Pavlović N, Vasić V, **Krstić D\***. Inhibition of rat synaptic membrane  $\text{Na}^+/\text{K}^+$ -ATPase and ecto-nucleoside triphosphate diphosphohydrolases by 12-tungstosilicic and 12-tungstophosphoric acid, *Bioorganic and Medicinal Chemistry* (2011), 19(23), 7063–7069.  
**M22 IF 2,921**
25. Hrnčić D, Rašić-Marković A, **Krstić D**, Macut Dj, Šušić V, Djurić D, Stanojlović O. Inhibition of the neuronal nitric oxide synthase potentiates homocysteine thiolactone-induced seizures in adult rats. *Medicinal Chemistry*, (2012), 8 (1), 59-64.  
**M23 IF 1,373**
26. Mladenović D, **Krstić D**, Čolović M, Radosavljević T, Rašić-Marković A, Hrnčić D, Macut Dj, P Stanojlović O. Different sensitivity of various brain structures to thioacetamide-induced lipid peroxidation. *Medicinal Chemistry*, (2012), 8(1), 52-58.  
**M23 IF 1,373**
27. Avramović N, Dragutinović V, **Krstić D**, Čolović M, Trbovic A, de Luka S, Milovanović I, Popović T. The effects of omega 3 fatty acid supplementation on brain tissue oxidative status in aged wistar rats. *Hippokratia*, (2012), 16(2), 241-245.  
**M23 IF 0,589**
28. Čolović M, **Krstić D**, Vasić V, Bondžić A, Ušćumlić G, Petrović S. Organophosphorus insecticides: toxic effects and bioanalytical tests for evaluating toxicity during degradation processes. *Hemijska industrija*, (2013), 67(2), 217–230.  
**M23 IF 0,562**
29. Čolović M, **Krstić D\***, Lazarević-Pašti T, Bondžić A, Vasić V. Acetylcholinesterase Inhibitors: Pharmacology and Toxicology. *Current Neuropharmacology*, (2013), 11(3), 315-335.  
**M22 IF 2,347**
30. Petrović V, Čolović M, **Krstić D**, Vujačić A, Petrović S, Joksić G, Bugarčić Ž, Vasić V. In vitro effects of some gold complexes on  $\text{Na}^+/\text{K}^+$  ATPase activity and cell proliferation. *Journal of Inorganic Biochemistry*, (2013), 124, 35–41.  
**M21 IF 3,274**
31. Hrnčić D, Rašić-Marković A, Leković J, **Krstić D**, Čolović M, Macut Dj, Šušić V, Djurić D, Stanojlović O. Exercise Decreases Susceptibility to Homocysteine Seizures: the Role of Oxidative Stress. *International Journal of Sports Medicine*, (2014), 35 (7), 544-550.  
**M21 IF 2,065**
32. Brkić P, Peković S, **Krstić D**, Jovanović T. Hyperbaric oxygenation as an adjuvant therapy for traumatic brain injury: a review of literature. *Periodicum Biologorum*, (2014), 116 (1), 29-36.  
**M23 IF 0,139**
33. Rašić-Marković A, Rankov-Petrović B, Hrnčić D, **Krstić D**, Čolovic M, Macut Dj, Djurić D, Stanojlović O. The effect of subchronic supplementation with folic acid on homocysteine induced seizures, *Acta Physiologica Hungarica*, (2015), 102 (2), 151-162.  
**M23 IF 0,814**
34. Čolović M, Vasić V, Avramović N, Gajić M, Djurić D, **Krstić D\***. *In vitro* evaluation of neurotoxicity potential and oxidative stress responses of diazinon and its degradation products in rat brain synaptosomes, *Toxicology Letters*, (2015), 233 (1), 29-37.  
**M21 IF 3,522**
35. **Krstić D\***, Tomić N, Radosavljević B, Avramović N, Dragutinović V, Radojević Škodrić S, Čolović M. Biochemical Markers of Renal Function. *Current Medicinal Chemistry* (2016), 23(19), 2018-2040.  
**M21 IF 3,249**
36. Xu X, Bošnjaković-Pavlović N, Čolović M, **Krstić D\***, Vasić V, Gillet JM, Wu P, Wei Y, Spasojević-de Biré A. A combined crystallographic analysis and *ab initio* calculations to interpret the reactivity of functionalized hexavanadates and their inhibitor potency toward  $\text{Na}^+/\text{K}^+$ -ATPase. *Journal of Inorganic Biochemistry* (2016), 161, 27–36.  
**M21 IF 3,348**
37. Rašić-Marković A, Hrnčić D, **Krstić D**, Čolović M, Djurić E, Rankov-Petrović B, Šušić V, Stanojlović O, Djurić D. The effect of subchronic supplementation with folic acid and L-arginine on homocysteine-induced

- seizures. *Canadian Journal of Physiology and Pharmacology*, (2016), 94 (10), 1083-1089.  
**M23 IF 1,822**
38. Bondžić A, Čolović M, Janjić G, Zarić B, Petrović S, **Krstić D**, Marzo T, Messori L, Vasić V. The influence of oxo-bridged binuclear gold(III) complexes on Na/K-ATPase activity: a joint experimental and theoretical approach. *Journal of Biological Inorganic Chemistry*, (2017), 22 (6), 819-832.  
**M21 IF 2,952**
39. Čolović M, Medić B, Četković M, Kravić Stevović T, Stojanović M, Ayass W, Mougharbel A, Radenković M, Prostran M, Kortz U, **Krstić D\***. Toxicity evaluation of two polyoxotungstates with anti-acetylcholinesterase activity. *Toxicology and Applied Pharmacology*, (2017), 333, 68-75.  
**M21 IF 3,616**
40. Čolović M, Vasić V, Djurić D, **Krstić D\***. Sulphur-containing amino acids: protective role against free radicals and heavy metals. *Current Medicinal Chemistry*, (2018), 25(3), 324-335.  
**M21 IF 3,894**
41. Uzelac JJ, Stanić M, **Krstić D**, Čolović M, Djurić D. Effects of homocysteine and its related compounds on oxygen consumption of the rat heart tissue homogenate: the role of different gasotransmitters. *Molecular and Cellular Biochemistry*, (2018), 444 (1-2), 143-148.  
**M23 IF 2,884**
42. Kornjača D, Živković V, **Krstić D**, Čolović M, Đurić M, Stanković S, Mutavdžin S, Jakovljević V, Đurić D. The effects of acute hyperhomocysteinemia induced by DL-homocysteine or DL-homocysteine thiolactone on serum biochemical parameters, plasma antioxidant enzyme and cardiac acetylcholinesterase activities in the rat. *Archives of Biological Sciences*, (2018), 70 (2), 241-248.  
**M23 IF 0,554**
43. Stojanović M, Todorović D, Šćepanović Lj, Mitrović D, Borožan S, Dragutinović V, Labudović-Borović M, **Krstić D**, Čolović M, Djurić D. Subchronic methionine load induces oxidative stress and provokes biochemical and histological changes in the rat liver tissue. *Molecular and Cellular Biochemistry*, (2018), 448 (1-2), 43-50.  
**M23 IF 2,884**
44. Dinčić M, **Krstić D\***, Čolović M, Nešović-Ostojić J, Kovačević S, de Luka S, Djordjević D, Ćirković S, Brkić P, Todorović J. Modulation of rat synaptosomal ATPases and acetylcholinesterase activities induced by chronic exposure to the static magnetic field. *International Journal of Radiation Biology*, (2018), 94 (11), 1062-1071.  
**M21a IF 2,266**
45. Medić B, Stojanović M, Štimatec B, Divac N, Savić Vujović K, Stojanović R, Čolović M, **Krstić D**, Prostran M. Lithium – pharmacological and toxicological aspects: the current state of the art. *Current Medicinal Chemistry* 2018. doi: 10.2174/0929867325666180904124733  
**M21 IF(2018) 3,894**
46. Bošnjaković-Pavlović N, Xu X, **Krstić D**, Gillet JM, Wei Y, Wu P, Čolović M, Spasojević-de Bire A. Experimental and theoretical insights of functionalized hexavanadates on Na<sup>+</sup>/K<sup>+</sup>-ATPase activity; molecular interaction field, *ab initio* calculations and *in vitro* assays. *Journal of Inorganic Biochemistry*, (2019), 198, Article number 110720  
**M21 IF(2018) 3,224**
47. Yang P, Ma T, Lang Z, Misirlic-Dencic S, Isakovic A, Benyei A, Čolović M, Markovic I, **Krstić D**, Poblet J, Lin Z, Kortz U. Tetravalent Metal Ion Guests in Polyoxopalladate Chemistry: Synthesis and Anticancer Activity of [MO<sub>8</sub>Pd<sub>12</sub>(PO<sub>4</sub>)<sub>8</sub>]<sup>12-</sup> (M = SnIV, PbIV). *Inorganic Chemistry*, (2019), 58 (17), 11294-11299.  
**M21a IF(2018) 4,850**

#### **Originalni radovi *in extenso* u časopisima koji nisu indeksirani u gore navedenim bazama podataka**

(od izbora u zvanje vanrednog profesora 3, 4)

1. Petrović M, Živković S, Velinović M, Čolović M, **Krstić D**, Djurić D. Uticaj folne kiseline na aktivnost acetilholinesteraze u različitim tkivima pacova, *Serbian Journal of Experimental and Clinical Research*, (2009), 10(3), 85-88.
2. Petrović M, Fufanović I, Elezović I, Čolović M, **Krstić D**, Jakovljević V, Djurić D. The effect of homocysteine thiolactone on acetylcholinesterase activity in rat brain, blood and heart, *Serbian Journal of Experimental and Clinical Research*, (2010), 11(1), 19-22.
3. Zdravković A, **Krstić D**. Uticaj heksavanadata na aktivnost Na<sup>+</sup>/K<sup>+</sup>-ATPaze, *Medicinski podmladak*, (2016), 67(4), 54-58.
4. Hadžibegović A, Ćuk J, **Krstić D**, Đurić D. Uticaj homocisteina i inhibitora sinteze ugljen-monoksida, administriranih pojedinačno i simultano, na aktivnost acetilholinesteraze u srcu pacova, *Medicinski podmladak*, (2016), 67(4), 31-35.

## Ceo rad u zborniku međunarodnog skupa

(od izbora u zvanje vanrednog profesora 21- 30)

1. Vasić V, Jovanović D, **Krstić D**, Vučković D, Horvat A, Nikezić G, Vujisić Lj, Radak B. The effect of  $\text{CuSO}_4$  on sodium/potassium activated and magnesium activated adenosine triphosphatase. Proceedings of the International Symposium on Pesticides in Public Health, Budva, Yugoslavia, June 2-6, 1997, p.279-283.
2. Vasić V, Horvat A, **Krstić D**, Jovanović D, Vujisić Lj, Nikezić G, Kopečni M. Chemical Aspect of Metal Ion Influence on ATPase Activity. I Copper. Physical Chemistry '98, 4<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 23-25,1998, p 334-336.
3. Vujisić Lj, **Krstić D**, Vučković D, Vasić V, Nikezić G, Horvat A, Kopečni M. Chemical Aspect of Metal Ion Influence on ATPase Activity. II Cobalt. Physical Chemistry '98, 4<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 23-25,1998, p 337-339.
4. Vasić V, Jovanović D, Horvat A, **Krstić D**, Vujisić Lj, Nikezić G. SPMs ATPases as possible biosensing system for water control. Physical Chemistry 2000, 5<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 27-29, 2000, p 297-299.
5. Vujisić Lj, **Krstić D**, Nikolić V, Vasić V. ATPases activity dependence on free activation energy of  $\text{Zn}^{2+}$ ,  $\text{Fe}^{2+}$  and  $\text{Co}^{2+}$  ions. Physical Chemistry 2000, 5<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 27-29, 2000, p.300-302.
6. Vasić V, **Krstić D**, Krinulović K, Joksić G, Spasojević-Tišma V. Effects of digoxin on Na,K-ATPase from human blood erythrocytes. Physical Chemistry 2002, Proceedings of the 6<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 26-28, 2002, Vol. I, p.332-334.
7. Joksić G, **Krstić D**, Krinulović K, Gopčević K. Metal ion effects on ATPases activity isolated from human lymphocytes. Physical Chemistry 2002, Proceedings of the 6<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 26-28, 2002, Vol. I, p.335-337.
8. Pavelkić V, Spasojević-Tišma V, **Krstić D**. N-methyl-indoxil acetate as a specific substrate for fluorimetric cholinesterase activity determination. Physical Chemistry 2002, Proceedings of the 6<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Yugoslavia, Sept. 26-28, 2002, p.353-355.
9. Vasić V, Horvat A, Momić T, **Krstić D**, Krinulović K, Kojić D. ATPases as multiresponse sensing system for environmental control. Proceedings of the 3<sup>rd</sup> Aegean Analytical Chemistry Days, Polihnitos, Lesvos, Greece, Sept.29-Oct.3., 2002, p. 255-257.
10. Krinulović K, Vasić V, **Krstić D**, Jovanović D. ATPases as the possible biosensor for simultaneous detection of organic compounds and metal ions, IFMBE Proceedings of 2<sup>nd</sup> European Medical and Biological Engineering Conference, Vienna, Austria, December 4<sup>th</sup>-8<sup>th</sup>, 2002, 3(1) p.326-327.
11. Krinulović K, **Krstić D**, Vasić V. Effects of some Pd (II) complexes on enzymatic activity and kinetic parameters of  $\text{Na}^+/\text{K}^+$ -ATPase, Proceedings of the 4<sup>th</sup>Aegean Analytical Chemistry Days, Kusadasi, Aydin, Turkey, Sept.29. - Oct. 3. 2004, p. 230-232.
12. Krinulović K, **Krstić D**, Vasić V, Kojić D. Influence of transition and heavy metal ions on ATPases, Proceedings of the 4<sup>th</sup> Aegean Analytical Chemistry Days, Kusadasi, Aydin, Turkey, Sept.29. - Oct. 3. 2004, p. 233-235.
13. **Krstić D**, Krinulović K, Vasić V. Effects of chelators on  $\text{Hg}^{2+}$ -induced inhibition of porcine cerebral cortex  $\text{Na}^+/\text{K}^+$ -ATPase, Proceedings of the 4<sup>th</sup> Aegean Analytical Chemistry Days, Kusadasi, Aydin, Turkey, Sept.29. - Oct. 3. 2004, p. 354-356.
14. Krinulović K, Vasić V, **Krstić D**. Detection of toxic metal ions in water based on  $\text{Na}^+/\text{K}^+$ -ATPase activity measurement. Proceedings of the 9<sup>th</sup> International Conference Environmental Science and Technology, Rhodes island, Greece, 1-3 September 2005, p. B-479-B-484.
15. **Krstić D**, Bavcon-Kralj M, Trebše P, Čolović M, Krinulović K, Vasić V. Inhibition of AchE by malathion and some structurally similar compounds, Physical Chemistry 2006, Proceedings of the 8<sup>th</sup> conference on fundamental and applied aspects of Physical Chemistry, Belgrade, Serbia, Sept. 26-29, 2006, p. 401-403.
16. Pavelkić V, Gopčević K, **Krstić D**, Ilić M. Temperature and  $\text{Al}^{3+}$  influence on electrophoretic mobility of porcine pepsin, Physical Chemistry 2006, Proceedings of the 8<sup>th</sup> International Conference on Fundamental and Applied Aspect of Physical Chemistry, September, Belgrade, Serbia, Sept. 26-29, 2006, p. 374-376.
17. **Krstić D**, Čolović M, Bošnjaković-Pavlović N, Spasojević-de Bire A, Vasić V. Influence of decavanadate on rat synaptic plasma membrane ATPases activity. Physical Chemistry 2008, Proceedings of the 9<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept.

24-26, 2008, p.364-366.

18. Čolović M, **Krstić D**. Time-dependent inhibition of electric eel AChE induced by chlorpyrifos. Physical Chemistry 2008, Proceedings of the 9<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 24-26, 2008, p.448-450.

19. Vasić V, Čolović M, **Krstić D**, Savić J, Franko M, Trebše P, Bavcon Kralj M, Biosensor for monitoring organophosphate and carbamate pesticides in water and fruit juice. Proceedings of workshop: specific methods for food safety and quality. Physical Chemistry 2008, 9<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Vinča Institute of Nuclear Sciences, Belgrade, Serbia, Sept. 23, 2008, p.101-109.

20. **Krstić D**, Čolović M, Bajuk-Bogdanović D, Bošnjaković-Pavlović N, Holclajtner-Antunović I, Vasić V. Influence of heteropoly acids on rat synaptic plasma membrane ATP-ase activity. Physical Chemistry 2010, Proceedings of the 10<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 21-24, 2010, p.325-327.

21. Čolović M, Vasić V, Avramović N, Djurić D, **Krstić D**. *In vitro* evaluation of diazinon and its degradation products neurotoxicity potential in rat brain synaptosomes. Physical Chemistry 2014, Proceedings of the 12<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 22-26, 2014, Vol II, p. 461–464.

22. Čolović M, Vasić V, Avramović N, Djurić D, **Krstić D**. The effects of diazinon and its degradation products on oxidative stress parameters in rat brain synaptosomes. Physical Chemistry 2014, Proceedings of the 12<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 22-26, 2014, Vol II, p. 538–541.

23. Čolović M, **Krstić D**, Bondžić A, Vasić V. Influence of malathion oxidation on acetylcholinesterase bioassay sensitivity. Physical Chemistry 2014, Proceedings of 4<sup>th</sup> workshop: specific methods for food safety and quality, 12<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Vinča Institute of Nuclear Sciences, Belgrade, Serbia, Sept. 23<sup>rd</sup>, 2014, p. 33-35.

24. Čolović M, **Krstić D**, Bondžić A, Vasić V. Diazinon and chlorpyrifos oxidation as a pre-step in acetylcholinesterase bioassay. Physical Chemistry 2014, Proceedings of 4<sup>th</sup> workshop: specific methods for food safety and quality, 12<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Vinča Institute of Nuclear Sciences, Belgrade, Serbia, Sept. 23<sup>rd</sup>, 2014, p. 36-38.

25. **Krstić D**, Bošnjaković-Pavlović N, Xu X, Spasojević-de Biré A, Vasić V, Čolović M. Influence of newly synthesized hexavanadates on Na<sup>+</sup>/K<sup>+</sup>-ATPase activity. Physical Chemistry 2016, Proceedings of the 13<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 26-30, 2016, Vol I, p. 243–246.

26. Čolović M, Bondžić A, Kortz U, Vasić V, **Krstić D**. Modulation of acetylcholinesterase activity induced by polyoxotungstates. Physical Chemistry 2016, Proceedings of the 13<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 26-30, 2016, Vol I, p. 451–454.

27. Čolović M, Čakar U, **Krstić D**, Pejin B, Đorđević B. The influence of sour cherrywine on first line defense antioxidants during hydrogen peroxide induced oxidative stress in rat synaptosomes. Proceedings of the 6<sup>th</sup> Workshop „Specific Methods for Food Safety and Quality”, Belgrade, Serbia, Sept. 27<sup>th</sup>, 2018, p. 17-20.

28. Čolović M, **Krstić D**, Luce M, Cricenti A. Effect of polyoxometalates on synaptic plasma membrane structure. Physical Chemistry 2018, Proceedings of 14<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 24-28, 2018, Vol I, p. 507-510.

29. Bondžić A, Parac Vogt T, Vujačić Nikezić A, **Krstić D**, Čolović M. Influence of 12-tungstosilicic acid and 12-tungstophosphoric acid on the activity and secondary structure of acetylcholinesterase. Physical Chemistry 2018, Proceedings of 14<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 24-28, 2018, Vol I, p. 503-506.

30. Čolović M, Bondžić A, Vujačić Nikezić A, **Krstić D**. Oxidative stress responses of 12-tungstosilicic acid and 12-tungstophosphoric acid. Physical Chemistry 2018, Proceedings of 14<sup>th</sup> International Conference on Fundamental and Applied Aspects of Physical Chemistry, Belgrade, Serbia, Sept. 24-28, 2018, Vol I, p. 511-514.

#### Ceo rad u zborniku nacionalnog skupa

1. Vujisić Lj, Vasić V, **Krstić D**, Jovanović D, Horvat A, Nikezić G. Brza analitička metoda za detekciju zagadjivača u vodi na osnovu reakcije hidrolize ATP u prisustvu ATPaze. Zaštita voda ‘ 97, Sombor, 3-6. jun 1997, p. 239-244.

2. Vujisić Lj, Vasić V, **Krstić D**, Jovanović D, Horvat A, Nikezić G, Kopečni M. Ispitivanje efekta simultanog izlaganja ATPaza smeša nekih metala prve prelazne serije u vodi. Zaštita voda '99, Soko Banja, 12-15. oktobar 1999, p. 171-176.
3. Vasić V, Krinulović K, **Krstić D**, Savić J, Čolović M. Biosenzor za detekciju organofosfata u proizvodima od voća i povrća, Proceedings, IV međunarodna eko-konferencija. Novi Sad, 20-23.septembar, 2006, p. 285-290.
4. Vasić V, Momić T, Čolović M, **Krstić D**. Modulation of ATPases activity by environmentally toxic compounds. Knjiga izvoda, 5. simpozijum Hemija i zaštita životne sredine sa međunarodnim učešćem, planina Tara, 27-30. maj 2008, p.32-33.

#### **Izvod u zborniku međunarodnog skupa**

(od izbora u zvanje vanrednog profesora 24 - 49)

1. Vasić V, Jovanović D, **Krstić D**, Nikezić G, Horvat A, Vujisić Lj, Kopečni M. Time effect on inhibition of  $\text{Na}^+/\text{K}^+$ -ATPase and  $\text{Mg}^{2+}$ -ATPase activities by simultaneous exposure to  $\text{Pb}(\text{NO}_3)_2$  and  $\text{Cd}(\text{NO}_3)_2$ . EUROANALYSIS 10, Basel, Switzerland, Sept. 8<sup>th</sup>, 1998, Abstrakt Book, p.400.
2. **Krstić D**, Vasić V, Nikolić V, Vujisić Lj. Effect of  $\text{Cu}^{2+}$ ,  $\text{Co}^{2+}$ ,  $\text{Zn}^{2+}$  and  $\text{Fe}^{2+}$  on the enzymatic activity of rat brain synaptosomal  $\text{Mg}^{2+}$ -ATPase. 2<sup>nd</sup> International Conference of the Chemical Societies of the South-Eastern European Countries on Chemical Sciences for Sustainable Development, Halkidiki, Greece, June 6-9, 2000, Book of abstracts, Volume I p. 161.
3. Vasić V, Krinulović K, **Krstić D**, Kojić D, Joksić G. Toxic effect of the organophosphate chlorpyrifos on the  $\text{Na}^+/\text{K}^+$ -ATPase activity, 3<sup>rd</sup> International Conference of the Societies of the South-Eastern European Countries on Chemistry in the New Millennium-an Endless Frontier, Bucharest, Romania, Sept. 22-25, 2002, Book of abstracts, Volume II p. 354.
4. Vasić V, Joksić G, **Krstić D**, Krinulović K. Toxic effects of digoxin and gitoxin acting on the  $\text{Na}^+/\text{K}^+$ -ATPase receptor. European conference on drug delivery and pharmaceutical technology, Sevilla, Spain, May 10-12, 2004, Programme and Abstracts, p.103.
5. **Krstić D**. Prevention and recovery of  $\text{Hg}^{2+}$ -induced inhibition of porcine cerebral cortex  $\text{Na}^+/\text{K}^+$ -ATPase by glutathione. 4<sup>th</sup> International Conference of the Societies of the South-Eastern European Countries on Chemical Sciences in Changing Times: Visions, Challenges and Solutions, Belgrade, Serbia&Montenegro, July 18-21, 2004, Book of abstracts, Volume I p. 202.
6. **Krstić D**, Joksić G, Vasić V. The cytotoxic and genotoxic effects of digoxin on human lymphocytes. The first congress of physiological sciences of Serbia and Montenegro with international participation: "Molecular, cellular and integrative basis of health, disease and therapy", Belgrade, Serbia, November 9-12, 2005, Abstract book, p. 150.
7. Čolović M, **Krstić D**, Bavcon Kralj M, Trebše P, Krinulović K, Vasić V. Screening of malathion and its degradation products by AChE bioassay. 2nd EMCO workshop on emerging contaminants in wastewaters: monitoring tools and treatment technologies, Belgrade, Serbia, April 26-27, 2007, Book of abstracts, p.117.
8. **Krstić D**, Čolović M, Vujačić A, Djurić D, Vasić V. The influence of chlorpyrifos on  $\text{Na},\text{K}$ -ATPase activity. Joint Meeting of The Slovak Physiological Society, The Physiological Society and The Federation of European Physiological Societies, Bratislava, Slovakia, Sept. 11 – 14, 2007, Abstracts, p 84.
9. Pavelkić V, Gopčević K, **Krstić D**, Djurić D, Ilić M. Activation of pepsin by  $\text{Al}^{3+}$  ions *in vitro*. Joint Meeting of The Slovak Physiological Society, The Physiological Society and The Federation of European Physiological Societies, Bratislava, Slovakia, Sept. 11 – 14, 2007, Abstracts, p. 96.
10. Čolović M, **Krstić D**, Vujačić A, Krinulović K, Vasić V. Chlorpyrifos induced inhibition of acetylcholinesterase and  $\text{Na}^+/\text{K}^+$ -ATPase and reactivation of enzymes activity. International conference: on "Quality of life and environment in the frame of E.U. sustainability", Belgrade, Serbia, November 15-17, 2007, Book of abstracts, p.111.
11. **Krstić D**, Bošnjaković-Pavlović N, Spasojević-de Bire A, Vasić V. Inhibition of rat synaptic plasma membrane  $\text{Ca}^{2+}$ -ATPase activity by decavanadate. 6<sup>th</sup> International Vanadium Symposium, The Chemistry and Biological Chemistry of Vanadium, Lisbon, Portugal, July 17-19, 2008, Book of Abstracts, p. 48.
12. Hrnčić D, **Krstić D**, Rašić-Marković A, Čolović M, Sušić V, Stanojlović O, Djurić D. Pretreatment with L-arginine reverse reduction of brain  $\text{Na}^+/\text{K}^+$  ATPase activity induced by homocysteine thiolactone in adult rats. Acta Physiologica, Official journal of Federation of European Physiological Societies, Abstracts 2009, 88<sup>th</sup> Annual Meeting Deutsche Physiologische Gesellschaft, Justus Liebig University, Giessen, Germany, March 22-25, 2009, Volume 195, Supplement 669, p.84.
13. Čolović M, **Krstić D**, Petrović S, Leskovac A, Savić J, Joksić G, Vasić V. Toxic effects of diazinon and its photodegradation products. REP LECOTOX 2<sup>nd</sup> workshop, Trends in ecological risk assessment, Novi Sad, Serbia, Sept. 21-23, 2009, Programme and Abstracts, p. 36.



14. **Krstić D**, Čolović M, Leskovac A, Avramović N, Vasić V. The influence of diazinon on  $\text{Na}^+/\text{K}^+$ -ATPase activity. Second congress of physiological sciences of Serbia with international participation, Kragujevac, Serbia, Sept. 17-20, 2009, Abstract book, p. 92.
15. Čolović M, **Krstić D**, Petrović S, Joksić G, Vasić V. Inhibition of AChE by diazinon and its photoinduced by products. Second congress of physiological sciences of Serbia with international participation, Kragujevac, Serbia, Sept. 17-20, 2009, Abstract book, p. 117.
16. Leskovac A, Petrović S, **Krstić D**, Čolović M, Vasić V, Joksić G. Genotoxicity testing of diazinon and its photodegradation products. Second congress of physiological sciences of Serbia with international participation, Kragujevac, Serbia, Sept. 17-20, 2009, Abstract book p. 118
17. Đurić D, **Krstić D**, Čolović M, Pantić I. D,L-homocysteine thiolactone effects on the acetyl cholinesterase activity in different tissues of rat. Second congress of physiological sciences of Serbia with international participation, Kragujevac, Serbia, Sept. 17-20, 2009, Abstract book p.119
18. Đurić D, **Krstić D**, Jakovljević V, Stanojlović O. The role of homocysteine and folic acid in coronary artery disease, 2<sup>nd</sup> International Symposium on Adipobiology and Adipopharmacology (ISAA), Varna, Bulgaria, Oct. 23-25, 2009, Adipobiology, An International Journal of Adipose Tissue in Health and Disease, Volume 1, p.115
19. **Krstić D**, Čolović M, Leskovac A, Vasić V. The effect of diazinon on  $\text{Na}^+/\text{K}^+$ -ATPase activity. Abstracts of the XII International Congress of Toxicology, Barcelona, Spain, July 19–23, 2010, Volume 196S, p. S324.
20. Čolović M, **Krstić D**, Petrović S, Vasić V. The influence of diazinon and its photoinduced by-products on AChE activity. Abstracts of the XII International Congress of Toxicology, Barcelona, Spain, July 19–23, 2010, Volume 196S, p. S325.
21. Hrnčić D, Rašić - Marković A, **Krstić D**, Čolović M, Stanojević J, Šušić V, Stanojlović O, Đurić D. Subchronic supplementation with folic acid reverse reduction of brain  $\text{Na}^+/\text{K}^+$  ATP-ase activity induced by homocysteine thiolactone in rats. Abstracts der wissenschaftlichen Beiträge zur 25. Jahresagung der Deutschen Gesellschaft für Arterioskleroseforschung, Heinrich-Fabry-Institute, Blaubeuren, Germany, März 24.-26. 2011, p. 25.
22. Brkić P, Jovanović T, **Krstić D**, Peković S, Čolović M, Mitrović A, Lavrnja I, Dacic S, Bjelobaba I, Stojkov D, Parabucki A, Stojiljković M. The effects of the hyperbaric oxygenation on antioxidant status and lipid peroxidation after the experimental brain injury. Abstract and Conference Book of 37<sup>th</sup> Annual Meeting of the European Underwater and Baromedical Society, International Conference on Diving and Hyperbaric Medicine, Gdansk, Poland, August 24 – 27, 2011, p.39.
23. Xu X, Bošnjaković-Pavlović N, **Krstić D**, Čolović M, Vasić V, Pingfan Wu, Yongge Wei, Spasojević-de Biré A. Crystal structures and  $\text{Na}^+/\text{K}^+$  ATPase inhibition properties of functionalized hexavanadate: a new series with promising properties. XIX conference of the Serbian Crystallographic Society, Bela Crkva, Serbia, 2012, Abstracts, p. 90.
24. **Krstić D**, Čolović M, Avramović N, Bošnjaković Pavlović N, Holclajtner Antunović I, Djurić D, Vasić V. ATPases inhibitors: toxicology and pharmacology. Joint meeting of national physiological societies, Kovačica, Serbia, June 20-22, 2013, Abstract book with final program, p. 21.
25. Brkić P, Peković S, **Krstić D**, Lavrnja I, Dacic S, Čolović M, Parabucki A, Savić D, Stojiljković M, Jovanović T. The effects of the hyperbaric oxygenation during the recovery from the experimental brain injury, Abstract book of 3<sup>rd</sup> Congress of Croatian Physiological Society, Rijeka, Croatia, Sept. 13–15, 2013. Periodicum biologorum, 2013, Volume 115(suppl.2), p. 19.
26. Stanojlović O, Hrnčić D, Rašić-Marković A, Čolović M, **Krstić D**, Macut Dj, Šušić V, Djurić D. The effects of methionine nutritional overload on  $\text{Na}^+/\text{K}^+$ -ATPase and E-NTPDase activity in the rat brain. The Fifth International Symposium on Neurocardiology NEUROCARD 2013, Belgrade, Serbia, Oct. 17-18, 2013, Abstract book, p. 157.
27. Hrnčić D, Rašić - Marković A, Čolović M, **Krstić D**, Obrenović R, Grubač Ž, Šušić V, Macut D, Djurić D, Stanojlović O. Methionine-enriched diet increases susceptibility of rats to epilepsy: the role of sodium – potassium pump. 30th International Congress of Clinical Neurophysiology, Berlin, Germany, March 19-23, 2014. Abstracts of poster presentations/ Clinical Neurophysiology, 2014, Volume 125(suppl.1), p.S75.
28. Djurić D, Stanojlović O, Hrnčić D, Puškaš N, Rašić-Marković A, Čolović M, **Krstić D**, Bjekić JM, Grubač Ž, Šutulović N, Šušić V. Effects of methionine-enriched diet on the rat heart and aorta. Aug 2014. Acta Physiologica, Volume 211, (suppl. 697), p. 78.
29. Stanić M, Zakrzewska J, Miladinović Z, Jakovljević J, Čolović M, **Krstić D**, Djurić D. Effects of homocysteine isoforms on oxygen consumption of the rat heart tissue homogenate: the role of different gasotransmitters. 3rd Congress of Physiological Sciences of Serbia with International Participation, Military Medical Academy, Belgrade, Serbia, Oct. 29-31, 2014, Abstract Book, p. 191.

30. Djurić D, Čolović M, Jakovljević J, Stanojlović O, Djurić M, Jakovljević V, **Krstić D**. The effects of DL-homocysteine or DL-homocysteine thiolactone on cardiac acetylcholinesterase activity and plasma antioxidant enzymes in rats. Abstracts of the 29th Annual Meeting of the German Atherosclerosis Society, Giessen, Germany, March 26–28, 2015, p. 29.
31. Čolović M, Vasić V, Avramović N, **Krstić D**. The influence of diazinon and its metabolites on acetylcholinesterase,  $\text{Na}^+/\text{K}^+$ -ATPase and antioxidant enzymes in rat brain synaptosomes. 3rd International Conference on Radiation and Applications in Various Fields of Research, RAD 2015, Budva, Montenegro, June 8-12, 2015, Book of Abstracts, p. 15.
32. Djurić D, Živković V, Srejšević I, Jeremić N, Čolović M, Stanić M, **Krstić D**, Djurić M, Stevanović A, Stanojlović O, Jakovljević J, Jakovljević V. Homocysteine and Thiolactone Metabolites: Progress in Cardiovascular Research. International Symposium on Advances in Cardiovascular Research: from the Bench to the Patient's Bed, Bratislava, Slovakia, Sept. 2-5, 2015, Program & Book of Abstracts, p. 25.
33. Hrnčić D, Rašić Marković A, Puškaš N, Stojković T, Velimirović M, Čolović M, **Krstić D**, Šušić V, Petronijević N, Djurić D, Stanojlović O. Brain and Heart in Hyperhomocysteinemia Induced by Methionine Nutritional Overload. 2nd European Section Meeting of the International Academy of Cardiovascular Sciences, Belgrade, Serbia, Oct. 8 – 10, 2015, p.57.
34. Čolović M, Kortz U, Vasić V, **Krstić D**. The influence of synthesized polyoxometalates on acetylcholinesterase activity. Frontiers in Metal-Oxide Cluster Science IV@PoCheMoN 2016, Newcastle upon Tyne, England July 10-14, 2016, Book of Abstracts, p.26.
35. Čolović M, Vasić V, Kortz U, **Krstić D**. The influence of synthesized polyoxotungstates on  $\text{Na}^+/\text{K}^+$ -ATPase activity. Frontiers in Metal-Oxide Cluster Science IV@PoCheMoN 2016, Newcastle upon Tyne, England July 10-14, 2016, Book of Abstracts, p.29.
36. Čolović M, Vasić V, Kortz U, **Krstić D**. The influence of synthesized polyoxometalates on  $\text{Na}^+/\text{K}^+$ -ATPase activity. The Fourth International Conference on Radiation and Applications in Various Fields of Research (RAD 2016), Niš, Serbia, May 23-27, 2016, Book of Abstracts, p. 33.
37. Čolović M, Vasić V, Kortz U, **Krstić D**. Interaction of some polyoxotungstates with acetylcholinesterase. The Fourth International Conference on Radiation and Applications in Various Fields of Research (RAD 2016), Niš, Serbia, May 23-27, 2016, Book of Abstracts, p. 34.
38. Hrnčić D, Rašić-Marković A, Šutulović N, Grubač Ž, Čolović M, **Krstić D**, Šušić V, Đurić D, Stanojlović O. Methionine nutritional overload facilitates epileptogenesis: Possible role of modulation of rat brain  $\text{Na}^+/\text{K}^+$ -ATPase and E-NTPDase activity. The 25th International C.I.A.N.S. Conference 2016 and the 5th Congress of the Slovak Neuropsychiatric Society SkMA, Bratislava, Slovakia, Sept. 21 – 23, 2016, Abstract book, p.23.
39. Djurić D, Čolović M, **Krstić D**, Obrenović R, Djurić M, Stevanović A, Stamenković A, Kostić S, Hadžibegović A. The effects of subchronic methionine overload on body weight, standard biochemical parameters, homocysteine level and on plasma oxidative stress following acute methionine administration in male *Wistar* rats. Joint meeting, The 8th International Symposium on Neurocardiology, The 7th International Symposium on Noninvasive Electrocardiology, NEUROCARD 2016, Belgrade, Serbia, Oct. 14-15, 2016. Book of Abstracts, p. 92.
40. Hrnčić D, Rašić-Marković A, Čolović M, **Krstić D**, Šutulović N, Grubač Ž, Šušić V, Đurić D, Stanojlović O. Hyperhomocysteinemia induced by methionine nutritional overload more promptly affects brain than heart cholinergic system without affects on food intake and body mass gain. 85th European Atherosclerosis Society (EAS) Congress, Prague, Czech Republic, April 23-26, 2017. Atherosclerosis 2017, Volume 263, p. e168.
41. Hrnčić D, Rašić-Marković A, Šutulović N, Grubač Ž, Vorkapić M, Ademović A, Čolović M, **Krstić D**, Rankov-Petrović B, Šušić V, Đurić D, Stanojlović O. Advanced-level analysis of spiking EEG activity potentiaded by high dietary methionine: contribution of purinergic signaling. Joint Meeting of the Federation of European Physiological Societies and the Austrian Physiological Society with Participation of the Czech, French, Italian, Slovak, Slovenian, Swiss and Turkish Physiological Societies, Vienna, Austria, Sept. 13–15, 2017. Acta Physiologica 2017, Volume 211, (suppl. S713), p. EYPS-06.
42. Dinčić M, Todorović J, **Krstić D**, Čolović M, Nešović Ostojić J, Kovačević S, Milovanović A. Effect of hypothyroidism on acetylcholinesterase activity of adult rat brain, 7th Congress of Serbian Neuroscience Society with international participation, Belgrade, Serbia, Oct. 25-27, 2017, Book of Abstracts, p. 120.
43. Dinčić M, Todorović J, **Krstić D**, Čolović M, Nešović Ostojić J, Kovačević S, Milovanović A. Combined effects of hypothyroidism and REM sleep deprivation on  $\text{Na}^+/\text{K}^+$ -ATPase activity in rat brain, 7th Congress of Serbian Neuroscience Society with international participation, Belgrade, Serbia, Oct. 25-27, 2017, Book of Abstracts, p. 121.

44. Čolović M, Vasić V, **Krstić D.** *In vitro* toxicity evaluation of 12-tungstosilicic and 12-tungstophosphoric acid. Book of abstracts, 2<sup>nd</sup> World Congress on Pharmacology & Toxicology, Rome, Italy, 16-18.08.2018. p. 79.

45. Dinčić M, Čolović M, Lalatović J, Todorović J, Mougharbel A, Kortz U, **Krstić D.** *In vivo* hypoglycemic effect of  $(\text{NH}_4)_{14}[\text{NaP}_5\text{W}_{30}\text{O}_{110}]\cdot 31\text{H}_2\text{O}$  in rats with streptozotocin-induced diabetes. Book of abstracts, 2<sup>nd</sup> World Congress on Pharmacology & Toxicology, Rome, Italy, 16-18.08. 2018. p. 27.

46. Dinčić M, Sarić M, Čolović M, Todorović J, Ignjatović S, Radosavljević B, Mougharbel AS, Kortz U, **Krstić D.** Toxicity evaluation of two biologically active polyoxotungstates. Book of Abstracts, 8<sup>th</sup> International Congress of Pathophysiology, Bratislava, 2018, p. 243-244.

47. Zeković J, Zdravković M, Dinčić M, Čolović MB, Četković M, Kravić Stevović T, Mougharbel AS, Kortz U, **Krstić D.** Evaluation of  $(\text{NH}_4)_{14}[\text{NaP}_5\text{W}_{30}\text{O}_{110}]\cdot 31\text{H}_2\text{O}$  induced hepatotoxicity and nephrotoxicity. Abstracts 13<sup>th</sup> YES Meeting, Porto, Portugal, 2018, p. 38.

48. Jovanović A, Balint V, Dinčić M, Čolović MB, Mougharbel AS, Kortz U, **Krstić D.** Effects of polyoxotungstates on liver and kidney function. Abstracts 13<sup>th</sup> YES Meeting, Porto, Portugal, 2018, p. 47.

49. **Krstić D.** Polyoxometalates as promising drugs: toxicological aspects. Book of abstracts, 2<sup>nd</sup> World Summit on Toxicology & Applied Pharmacology, Berlin, Germany, June 03-04, 2019. p. 22.

### Izvod u zborniku nacionalnog skupa

(od izbora u zvanje vanrednog profesora 5 - 8)

1. Vasić V, Joksić G, Krinulović K, **Krstić D.** Humani limfociti kao model sistem za ispitivanje uticaja kardiovaskularnih lekova na aktivnost  $\text{Na}^+/\text{K}^+$ -ATPaze, Treći kongres farmaceuta Jugoslavije sa međunarodnim učešćem, Beograd, 29. oktobar-2. novembar, 2002, Arhiv za farmaciju 2002, Vol. 4, p. 712.

2. **Krstić D.** Inhibicija animalnih i humanih ATPaza lekovima, Stremljenja i novine u medicini, Beograd, 2002. Medicinska istraživanja 2002, Vol. 36 (sveska 4), p. 65.

3. Rašić-Marković A, Hrnčić D, Djurić D, Šušić V, **Krstić D**, Čolović M, Stanojlović O. Značaj  $\text{Na}^+/\text{K}^+$ -ATPaze u modulatornom uticaju etanola na homocisteinom izazvanu epilepsiju kod pacova, VII/XIII Kongres neurologa Srbije sa međunarodnim učešćem, IV Kongres društva za neuronauku Srbije sa međunarodnim učešćem, Kragujevac, 11-14. septembar, 2008, Zbornik sažetaka, p.373.

4. Mladenović D, Radosavljević T, Rašić - Marković A, Hrnčić D, **Krsić D**, Čolović M, Petrovic S, Maksić N, Đurić D, Stanojlović O. Lipidna peroksidacija i aktivnost katalaze u mozgu pacova u akutnoj insuficijenciji jetre izazvanoj tioacetamidom. Prvi Kongres Mitohondrije i slobodni radikali u biomedicini – perspektive, Beograd, 24. septembar 2011, Knjiga sažetaka, p. 35.

5. **Krstić D**, Čolović M, Avramović N, Vasić V. Inhibitori ATPaza: farmakologija i toksikologija. Stremljenja i novine u medicini, Beograd, 2013. Medicinska istraživanja 2013, Vol. 47 (sveska 3), p. 59.

6. Čolović M, Vasić V, **Krstić D.** Bioanalitičke metode za evaluaciju toksičnosti organofosfatnih insekticida i njihovih degradacionih proizvoda. Stremljenja i novine u medicini, Beograd, 2013. Medicinska istraživanja, 2013, Vol. 47 (sveska 3), p. 62.

7. Avramović N, Čolović M, Bošnjaković Pavlović N, Holclajtner Antunović I, Vasić V, **Krstić D.** Ispitivanje toksičnih efekata polioksometalata sa potencijalnim antitumorskim osobinama. Stremljenja i novine u medicini, Beograd, 2013. Medicinska istraživanja, 2013, Vol. 47 (sveska 3), p. 63.

8. Dinčić M, Todorović J, **Krstić D**, Čolović M, Nešović Ostojić J, Kovačević S, Milovanović A. Efekat deprivacije REM faze spavanja na aktivnost acetilholinesteraze i  $\text{Na}^+/\text{K}^+$ -ATPaze sinaptosoma mozga pacova u hipotireoidizmu, Četvrti srpski kongres o štitastoj žlezdi, Institut za štitastu žlezdu i metabolizam "Zlatibor", Zlatibor, septembar, 2017. Medicinski glasnik, Vol. 22 (broj 66), p. 69.

### Poglavlja u udžbenicima, praktikumima

(od izbora u zvanje vanrednog profesora 8-12)

1. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. Praktikum iz hemije sa random sveskom i zbirkom zadataka za studente II godine medicinskog fakulteta (prvo izdanje, urednik Karadžić I.), Medicinski fakultet Univerziteta u Beogradu, CIBID 2005.

2. Vujović Z, Karadžić I, Gopčević K, Vujić V, Stojanović K, **Krstić D.** Odabrana poglavlja iz hemije za studente Medicinskog fakulteta, Medicinski fakultet Univerziteta u Beogradu, CIBID 2006.

3. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. Praktikum iz hemije sa random sveskom i zbirkom zadataka za studente II godine medicinskog fakulteta (drugo dopunjeno izdanje, urednik Karadžić I.), Medicinski fakultet Univerziteta u Beogradu, CIBID 2006.
4. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. A practical guide to chemistry exercises with workbook and collection of numerical problems for 2<sup>nd</sup> year students of medicine School of Medicine, University of Belgrade, CIBID 2006 (prevod prvog izdanja Praktikuma na srpskom jeziku, urednik Karadžić I.).
5. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. A practical guide to chemistry exercises with workbook and collection of numerical problems for 2<sup>nd</sup> year students of medicine School of Medicine, University of Belgrade, CIBID 2008 (second edition, editor Karadžić I.).
6. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. A practical guide to chemistry exercises with workbook and collection of numerical problems for 2<sup>nd</sup> year students of medicine School of Medicine, University of Belgrade, CIBID 2012 (third edition, editor Karadžić I.).
7. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. Praktikum iz hemije sa random sveskom i zbirkom zadataka za studente II godine medicinskog fakulteta (treće dopunjeno izdanje, urednik Karadžić I.), Medicinski fakultet Univerziteta u Beogradu, CIBID 2013.
8. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. Praktikum iz hemije sa random sveskom i zbirkom zadataka za studente II godine medicinskog fakulteta (četvrto dopunjeno izdanje, urednik Karadžić I.), Medicinski fakultet Univerziteta u Beogradu, CIBID 2014.
9. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. A practical guide to chemistry exercises with workbook and collection of numerical problems for 2<sup>nd</sup> year students of medicine School of Medicine, University of Belgrade, CIBID 2015 (fourth edition, editor Karadžić I.).
10. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. Praktikum iz hemije sa random sveskom i zbirkom zadataka za studente II godine medicinskog fakulteta (peto dopunjeno izdanje, urednik Karadžić I.), Medicinski fakultet Univerziteta u Beogradu, CIBID 2016.
11. Gopčević K, Vujić V, Stojanović K, Dragutinović V, **Krstić D**, Radosavljević B, Avramović N, Izrael-Živković L, Bašić R. A practical guide to chemistry exercises with workbook and collection of numerical problems for 2<sup>nd</sup> year students of medicine School of Medicine, University of Belgrade, CIBID 2016 (prevod petog izdanja Praktikuma na srpskom jeziku, urednik izdanja na srpskom jeziku Karadžić I., editor of the english edition Avramović N.).
12. Vujović Z, Karadžić I, Gopčević K, Vujić V, Stojanović K, **Krstić D**. Odabrana poglavlja iz hemije za studente Medicinskog fakulteta, Medicinski fakultet Univerziteta u Beogradu, CIBID 2016. (drugo dopunjeno izdanje, prvo elektronsko izdanje).

#### **Poglavlja u monografijama, knjigama**

(od izbora u zvanje vanrednog profesora 2.)

1. Momić T, Čolović M, **Krstić D**, Vasić V. Inhibition of Na<sup>+</sup>/K<sup>+</sup>-ATPase and Mg<sup>2+</sup>-ATPase by Metal Ions and Complexes. **Advances in Chemistry Research** (Editor: James C. Taylor), Nova science Publishers, Inc. Hauppauge New York, United States of America (2011), 9, 93-137. (ISBN 978-1-61209-702-2)
2. Peković S, Dacić S, **Krstić D**, Jeremić R, Djelić M, Brkić P. Hyperbaric oxygen therapy in traumatic brain injury: cellular and molecular mechanisms. **Hyperbaric Oxygen Treatment in Research and Clinical Practice - Mechanisms of Action in Focus** (Edited by Ines Drenjančević), InTech - open science /open minds, (2018), Chapter 3, 25-45. <https://www.intechopen.com/books/hyperbaric-oxygen-treatment-in-research-and-clinical-practice-mechanisms-of-action-in-focus>

#### **b) Rukovođenje ili učešće na projektima**

**Domaći projekti:** Dr sci. Danijela Krstić učestvovala je na sledećim projektima koje je finansiralo i finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije:

- 1) od 2002. do 2005. godine: „Fizičko-hemijska ispitivanja mehanizma reakcija biološki aktivnih organskih jedinjenja“ (br.1991); Rukovodilac: dr Vesna Vasić, naučni savetnik Instituta za nuklearne nauke Vinča.
- 2) od 2006. do 2010. godine: „Istraživanje mehanizama interakcija biološki aktivnih jedinjenja sa biomolekulima“ (br. 142051); Rukovodilac: dr Vesna Vasić, naučni savetnik Instituta za nuklearne nauke Vinča.

3) od 2011. „Istraživanja interakcija enzima sa toksičnim i farmakološki aktivnim molekulima“ (br. 172023); Rukovodilac: dr Vesna Vasić, naučni savetnik Instituta za nuklearne nauke Vinča.

4) od 2011. „Razvoj animalnih modela epilepsije i testiranje konvulzivnih i antikonvulzivnih supstanci“ (br. 175032); Rukovodilac: Prof. dr Olivera Stanojlović, Medicinski fakultet Univerziteta u Beogradu.

#### c) Citiranost

Prema podacima iz baze Scopus radovi dr sci. Danijele Krstić (Author ID: 57199836500) citirani su **1120** puta (autocitaci nisu uzeti u obzir) na dan 05. 11. 2019. godine.

#### d) Organizovanje naučnih sastanaka i simpozijuma

- Mini simpozijum „90 godina Instituta za Hemiju u medicini Medicinskog fakulteta Univerziteta u Beogradu“ u okviru 42. Simpozijuma Stremljenja i novine u medicini, 13. decembar 2013.

-4<sup>th</sup> CliniMark Cost Action CA16113 meeting, 20. – 22. septembar 2018.

[http://mail.ipb.ac.rs/~ncc-serbia/Uspesne\\_Price.php](http://mail.ipb.ac.rs/~ncc-serbia/Uspesne_Price.php)

#### e) Druga dostignuća (recenzije, recenzije u časopisima)

Dr sci. Danijela Krstić je recenzirala radove u sledećim međunarodnim časopisima:

1. Neurotoxicology, 2008. (M22 IF<sub>2008</sub>=2,409)
2. International Journal of Developmental Neuroscience, 2010. (M23 IF<sub>2010</sub>=1,938)
3. Life Sciences, 2010. (M22 IF<sub>2010</sub>=2,451)
4. The Open Parasitology Journal, 2010. (nema IF)
5. Medicinal Research Reviews, 2013. (M21a IF<sub>2013</sub>=8,131)
6. Journal of the Neurological Sciences, 2014. (M22 IF<sub>2014</sub>=2,474)
7. Arabian Journal of Chemistry, 2015. (M21 IF<sub>2015</sub>=3,613)
8. Food Technology and Biotechnology, 2015. (M22 IF<sub>2015</sub>=1,179)
9. Acta Neurobiologiae Experimentalis, 2016. (M23 IF<sub>2016</sub>=1,207)
10. Scientific Reports, 2016. i 2017. (M21 IF<sub>2016</sub>=4,259)
11. Neuropsychiatric Disease and Treatment, 2016. (M22 IF<sub>2016</sub>=2,198)
12. Biomarkers in Medicine, 2018. (M22 IF<sub>2018</sub>= 2,268)
13. Current pharmaceutical design, 2019. (M22 IF<sub>2018</sub>= 2,412)

Kandidatkinja je recenzirala jednu aplikaciju za postdoktorske studije (application for postdoctoral fellowship, 2016. za The Research Foundation Flanders (FWO) i po jedan rad za:

The 6<sup>th</sup> International Conference on Biomedical Engineering and Biotechnology, 2017. i The 8th International Conference on Biomedical Engineering and Biotechnology, 2019.

### F. OCENA O REZULTATIMA NAUČNOG I ISTRAŽIVAČKOG RADA

Dr sci. Danijela Krstić je priložila spisak od 156 publikacija, od čega je 144 naučnih publikacija, a 12 stručnih publikacija. Od izbora u zvanje vanrednog profesora kandidatkinja je objavila 60 naučnih publikacija.

Dr sci. Danijela Krstić ima ukupno 47 (četrdeset sedam) radova objavljenih u časopisima sa JCR liste (od čega 3 rada iz kategorije M21a, 13 radova iz kategorije M21, 8 radova iz kategorije M22 i 23 rada iz kategorije M23 sa ukupnim IF = 91,007 (u 8 (osam) radova je prvi autor, a u 9 (devet) je nosilac rada i/ili korespondirajući autor), 1 (jedno) poglavlje u monografiji vodećeg međunarodnog značaja (M13), 1 (jedno) poglavlje u monografiji međunarodnog značaja (M14), 4 (četiri) rada u časopisu koji nije indeksiran u pomenutim bazama podataka, ukupno 91 (devedeset jedno) saopštenje na međunarodnim i nacionalnim skupovima od čega: 30 (trideset) celih radova u zbornicima sa međunarodnih skupova, 49 (četrdeset devet) izvoda u zborniku sa međunarodnog skupa, 4 (četiri) cela rada u zbornicima sa nacionalnih skupova i 8 (osam) izvoda u zbornicima sa nacionalnih skupova.

Od izbora u zvanje vanrednog profesora dr sci. Danijela Krstić objavila je 17 (sedamnaest) publikacija u časopisima sa JCR liste (od čega 2 rada iz kategorije M21a, 9 radova iz kategorije M21 i 6 radova iz kategorije M23), 2 (dva) rada u časopisu koji nije indeksiran u pomenutim bazama podataka, 1 (jedno) poglavlje u monografiji međunarodnog značaja (M14), 10 (deset) celih radova u zborniku međunarodnog skupa (u 4 je nosilac rada, u 1 radu je prvi autor i u 5 rada je saradnik), 26 (dvadeset šest) izvoda u zborniku međunarodnog skupa (u 1 je jedini autor, u 1 je prvi autor, u 11 je nosilac rada, a u 13 je saradnik) i 4 (četiri) izvoda u zbornicima sa nacionalnih skupova. Održala je dva predavanja po pozivu na međunarodnim skupovima:

-2<sup>nd</sup> World Congress on Pharmacology & Toxicology, Rome, Italy, 16-18.08. 2018.

*In vivo* hypoglycemic effect of (NH<sub>4</sub>)<sub>14</sub>[NaP<sub>5</sub>W<sub>30</sub>O<sub>110</sub>]•31H<sub>2</sub>O in rats with streptozotocin-induced diabetes.

-2<sup>nd</sup> World summit on Toxicology & Applied Pharmacology, Berlin, Germany, June 03-04, 2019.

Polyoxometalates as promising drugs: toxicological aspects (Keynote talk) i bila član organizacionog komiteta skupa "2<sup>nd</sup> World summit on Toxicology & Applied Pharmacology", održanom u Berlinu, 03-04. jun 2019.

<https://scientificfederation.com/toxicology-2019/committee.php>

Priloženi radovi i njihova analiza pokazuju zaista široko interesovanje kandidata u oblasti enzimologije, medicinske hemije, biosenzora i toksikologije. Najveći broj objavljenih radova odnosi se na *in vitro* ispitivanja mehanizama modulacije enzimске katalize: ATPaza (Natrijumova pumpa, Ecto-ATPaza) i holinesteraza (AChE, BuChE) u prisustvu biološki aktivnih organskih i neorganskih jedinjenja. Ispitivani su mehanizmi interakcija

navedenih enzima sa: jonima teških i prelaznih metala, specifičnim inhibitorima natrijumove pumpe, organofosfatnim pesticidima i njihovim degradacionim proizvodima, kao i kompleksnim jedinjenjima plemenitih metala i polioksometalatima (vanadijuma i volframa) koja pokazuju potencijalnu antitumorsku aktivnost. Za navedena ispitivanja korišćeno je nekoliko model sistema: 1) komercijalni enzimski preparati 2) membrane humanih i animalnih krvnih ćelija i 3) sinaptičke membrane eksperimentalnih životinja (pacova, kunića).

Dalja istraživanja kandidata usmerena su ka primeni rezultata fundamentalnih ispitivanja modulacije aktivnosti navedenih enzima u prisustvu biološki aktivnih jedinjenja, i to u dva pravca:

1) testiranje enzima kao biološke komponente biosenzora za kontrolu kvaliteta lekova iz grupe kardioaktivnih steroida i detekciju toksičnih metalnih jona, organofosfatnih pesticida i njihovih degradacionih proizvoda. U toku realizacije ovih istraživanja dr sci. Danijela Krstić je ostvarila saradnju sa Univerzitetom u Novoj Gorici (Laboratory for Environmental Research, University of Nova Gorica, Slovenia).

2) korelacija *in vitro* indukovane enzimske modulacije sa uticajem ispitivanih jedinjenja na funkcionisanje zdravih i malignih ćelija (praćenjem različitih markera toksičnosti), izlaganjem kulture ćelija i/ili eksperimentalnih životinja navedenim jedinjenjima. U okviru ovih istraživanja Danijela Krstić je uključena u testiranju konvulzivnih i antikonvulzivnih supstanci, kao i kardiotoksičnih i kardioprotektivnih supstanci, u saradnji sa Institutom za Medicinsku fiziologiju "Rihard Burjan" Medicinskog fakulteta.

Novija istraživanja usmerena su ka testiranju biološke aktivnosti novosintetisanih polioksometalata iz grupe polioksovanadata u saradnji sa Prof. A. Spasojević-de Biré (Laboratory "Structures Propriétés et Modélisation des Solides"), Pariz, Francuska. Kao rezultat ove saradnje publikovna su tri rada u međunarodnim časopisima i urađena doktorska disertacija: „Experimental and theoretical charge density analysis of functionalized polyoxovanadates: toward a better understanding of chemical bonding and chemical reactivity” (kandidat: Xiao Xu, odbranjena 2015.), <https://www.theses.fr/2015ECAP0026.pdf>. U okviru studijskog boravka u ovoj laboratoriji Danijela Krstić je 18. 11. 2011. održala predavanje pod naslovom: „ATPases-activity and inhibition“ na Farmaceutskom fakultetu u Parizu, Francuska.

Od 2015. dr sci. Danijela Krstić realizuje saradnju sa Prof. U. Kortzom (Department of Life Sciences & Chemistry) sa Univerziteta Jacobs, Bremen, Nemačka, a koji je jedan od svetskih lidera u sintetskoj hemiji polioksometalata. U okviru ove saradnje Danijela Krstić ispituje biološku aktivnost novosintetisanih polioksopaladata i polioksovolframata: interakcije ovih jedinjenja sa enzimima pri *in vitro* izlaganju, potencijalnu primenu ovih jedinjenja u terapiji nekih neuroloških bolesti, tumora i dijabetesa, kao i njihovu toksičnost pri *in vivo* izlaganju eksperimentalnih životinja. Kao rezultat ove saradnje publikovano je nekoliko saopštenja na međunarodnim skupovima i dva rada u međunarodnim časopisima (M21 i M21a). U okviru studijskog boravka na Jacobs Univerzitetu Danijela Krstić je 25. 08. 2016. održala predavanje pod naslovom: „ATPases and acetylcholinesterase-target enzymes for some pharmacologically active and toxic compounds“.

<http://ukortz.user.jacobs-university.de/guest-speakers/>

Od 2017. dr sci. Danijela Krstić je MC member u COST Action CA16113CliniMARK: ‘good biomarker practice’ to increase the number of clinically validated biomarkers. U okviru ove COST akcije član je radnih grupa 1: (WG1 Selection and analytical validation of biomarker detection technique(s)) i 3. (WG3 Implementation of BBP guidelines). U okviru WG3 rukovodi aktivnostima vezanim za biobanke za COPD i slične bolesti, a na mitingu u Lisabonu 13.03.2018. održala je prezentaciju pod nazivom: „Identification of the most suitable samples/biobanks“. Kandidatkinja je organizovala 4<sup>th</sup> CliniMark Cost Action CA16113 meeting, koji je održan 20. – 22. septembar 2018. na Medicinskom fakultetu Univerziteta u Beogradu.

[http://mail.ipb.ac.rs/~ncc-serbia/Uspesne\\_Price.php](http://mail.ipb.ac.rs/~ncc-serbia/Uspesne_Price.php)

Analiza priloženih radova dr sci. Danijele Krstić pokazuje široko interesovanje, multidisciplinarni pristup i biomedicinsku orijentaciju naučnog i istraživačkog rada, kao i doprinos u unapređenju timskog rada i saradnje sa drugim naučnim institucijama u zemlji i inostranstvu.

## **G. OCENA O ANGAŽOVANJU U RAZVOJU NASTAVE I DRUGIH DELATNOSTI VISOKOŠKOLSKJE USTANOVE**

Dr sci. Danijela Krstić je koautor dva izdanja udžbenika »Odabrana poglavlja iz hemije za studente Medicinskog fakulteta«, pet izdanja praktikuma »Praktikum iz hemije sa radnom sveskom i zbirkom zadataka za studente II godine Medicinskog fakulteta« i pet izdanja prevoda ovog praktikuma na engleski jezik (A practical guide to chemistry exercises with workbook and collection of numerical problems for 2nd year students of medicine). Učestvovala je u izradi banke zadataka za pripremu kolokvijuma iz hemije (u okviru zajedničkog predmeta Medicinska biohemija i hemija) i banke zadataka za pripremu prijemnih ispita iz Hemije za upis na Medicinski fakultet u periodu 2009. - 2015. i 2019. godine.

Učestvovala je (2011. i 2012.godine) u pripremnoj nastavi za upis stranih studenata na Medicinski fakultet u okviru projekta »Svet u Srbiji« i bila član Komisije za upis studenata u prvu godinu studija na Medicinskom fakultetu Univerziteta u Beogradu (2002. 2003. 2008. i 2009. godine). Školske 2014/15. godine učestvovala je u pripremi i realizaciji *online* nastave Bezbednost u radu u hemijskoj laboratoriji, na *Reticulumu*, portalu za *online* nastavu Medicinskog fakulteta u Beogradu.

Poslove sekretara Katedre obavljala je u periodu od 2002. do 2009. godine a poslove upravnika Instituta Hemija u medicini obavljala je od 2009. do 2015. godine.

## IZBORNI USLOVI ZA IZBOR U ZVANJE REDOVNOG PROFESORA

### 1) Za stručno-profesionalni doprinos

**Angažovanost u sprovođenju složenih dijagnostičkih, terapijskih i preventivnih procedura i 1.2 Broj i složenost složenih, dijagnostičkih, terapijskih i preventivnih procedura koje je kandidat uveo, ili je učestvovao u njihovom uvođenju**

Imajući u vidu da rad u Institutu za hemiju u medicini isključuje angažovanost u sprovođenju i uvođenju složenih dijagnostičkih, terapijskih i preventivnih procedura, analogno tome, Danijela Krstić je uvela sledeće laboratorijske metode na Institutu za hemiju u medicini:

-Izolovanje subcelularnih struktura (sinaptozoma, sinaptičkih plazma membrana) iz mozga eksperimentalnih životinja

-Izolovanje membrana animalnih i humanih eritrocita

-Spektrofotometrijsko određivanje aktivnosti sledećih enzima:

Acetilholinesteraze,  $\text{Na}^+/\text{K}^+$ -ATPaze, Ecto-ATPaze, laktat dehidrogenaze

-Spektrofotometrijsko određivanje parametara oksidativnog stresa (aktivnost enzima antioksidativne zaštite: katalaze, GPx i SOD, i parametara oksidativnog oštećenja ćelijske membrane) u krvi i homogenatima tkiva.

### 2) Za doprinos akademskoj i široj zajednici

#### 2.1 Značajno strukovno, nacionalno ili međunarodno priznanje za naučnu ili stručnu delatnost

Zlatna medalja za "Biosenzor za detekciju pesticida na bazi holinesteraze", XXVI Tradicionalna izložba "Pronalazaštvo", Beograd, 2006.

Organizator: Savez pronalazača Beograda.

#### 2.4 Uređivanje časopisa ili monografija priznatih od strane resornog ministarstva za nauku

Guest Editor specijalnog broja pod nazivom „Metal-based compounds in biomedicine: overview and update” časopisa Current Medicinal Chemistry (M21) (izdavač: Benthamscience Publisher)

#### 2.6 Rukovođenje ili angažovanje u nacionalnim ili međunarodnim naučnim ili stručnim organizacijama

1) **MC Member** u COST Action CM1203 Polyoxometalate Chemistry for Molecular Nanoscience (PoCheMoN), 2012-2016. Finansiranje: EU-funded programme.

2) **MC Member** u COST Action CA16113CliniMARK: 'good biomarker practice' to increase the number of clinically validated biomarkers 2017-2021. Finansiranje: EU-funded programme.

### 3) Za saradnju sa drugim visokoškolskim, naučno-istraživačkim ustanovama u zemlji i inostranstvu-mobilnost:

#### Studijski boravci u naučnoistraživačkim institucijama u zemlji ili inostranstvu

- Kurs primenjene biotehnologije: "Agro-food training course"; organizatori: Bologna University (Italy) and „Bay Zoltan” Institute for Biotechnology (Hungary), školske 1998/99.

- Laboratory "Structures Propriétés et Modélisation des Solides", Ecole Centrale Paris, 12-19. 11. 2011.

- Department of Life Sciences & Chemistry, Jacobs University, Bremen, Nemačka, 22-28. 08. 2016.

- Faculty of Chemistry, University of Vienna, 03-09.12.2016

- Department of Life Sciences & Chemistry, Jacobs University, Bremen, Nemačka, 21-28. 07. 2017.

- STSM, Institut za medicinska istraživanja i medicinu rada, Zagreb, Hrvatska, 07-14. 04. 2019.

- Institut za medicinska istraživanja i medicinu rada, Zagreb, Hrvatska, 29.07 - 05. 08. 2019.

#### 3.1 Predavanja po pozivu ili plenarna predavanja na međunarodnim akreditovanim skupovima u zemlji i inostranstvu:

- „*In vivo* hypoglycemic effect of  $(\text{NH}_4)_{14}[\text{NaP}_5\text{W}_{30}\text{O}_{110}]\cdot 31\text{H}_2\text{O}$  in rats with streptozotocin-induced diabetes“ 2<sup>nd</sup> World Congress on Pharmacology & Toxicology, Rome, Italy, 16-18.08. 2018.

- „Polyoxometalates as promising drugs: toxicological aspects“ (Keynote talk)

2<sup>nd</sup> World Summit on Toxicology & Applied Pharmacology, Berlin, Germany, June 03-04, 2019.

#### 3.3 Predavanja po pozivu:

- „ATPases-activity and inhibition“ na Farmaceutskom fakultetu u Parizu, Francuska, 18. 11. 2011.

- „ATPases and acetylcholinesterase-target enzymes for some pharmacologically active and toxic compounds“ u Department of Life Sciences & Chemistry, Jacobs University, Bremen, Nemačka, 25. 08. 2016.

#### 3.4 Učešće ili rukovođenje međunarodnim projektima

1) „Experimental and theoretical studies of some polyoxovanadates interaction with  $\text{Na}^+/\text{K}^+$ -ATPase and  $\text{Ca}^{2+}$ -ATPase“, (br. 69-00-4/2012-09/04), u okviru bilateralne saradnje između Srbije i Francuske, 2011-2012.

Rukovodioci (sa srpske strane): **dr Danijela Krstić**, (sa francuske strane): Anne Spasojević-de Biré

Finansiranje: Centre national de la recherche scientifique i Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije

2) „Polyoxopalladates: ATPases inhibition studies and toxicity evaluation“, (br. 451-03-01038/2015-09/16), u okviru bilateralne saradnje između Srbije i Nemačke, 2016-2017. Rukovodioci (sa srpske strane): **dr Danijela Krstić**, (sa nemačke strane): Prof. Ulrich Kortz



Finansiranje: Deutscher Akademischer Austauschdienst –DAAD i Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije

3) „Polyoxometalates as potential anticancer and anti-Alzheimer drugs: modulation of Na<sup>+</sup>,K<sup>+</sup> -ATPase and acetylcholinesterase activity”, (br. 451-03-01039/2015-09/18), u okviru bilateralne saradnje između Srbije i Austrije, 2016-2017, Rukovodioci (sa srpske strane): dr Mirjana Čolović, (sa austrijske strane): Annette Rompel  
Finansiranje: Austrian agency for international mobility and cooperation in education, science and research i Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije

4) „Inhibitori acetilholinesteraze kao potencijalni terapeutici za Alchajmerovu bolest: prooksidativna i citogenotoksična svojstva (SafeAChE)“, (br. 337-00-205/2019-09/19), u okviru bilateralne saradnje između Srbije i Hrvatske, 2019-2021.

Rukovodioci (sa srpske strane): dr Mirjana Čolović, (sa hrvatske strane): dr Goran Gajski

Finansiranje: Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije i Ministarstvo znanosti i obrazovanja Republike Hrvatske

### **3.6 Izvođenje nastave ili mentorstvo u zajedničkim međunarodnim studijskim programima.**

1. Mentor u IFMSA razmenskom program, 2016.

Student: Farcas Catalin-Daniel, Faculty of Medicine and Pharmacy, University of Oradea, Romania

2. Mentor u IFMSA razmenskom program, 2017.

Student: Anna Shirinskaya, Medicinski fakultet, Univerziteta za medicinu u Omsku, Rusija

Student: Sokratis Oikonomou, Democritus University of Thrace, Grčka

3. Mentor u IFMSA razmenskom program, 2018.

Student: Gizem Gurbuz, Faculty of Medicine, Gazi University, Turska

Student: Deniz Arici, Faculty of Medicine, Gazi University, Turska

4. Mentor u IFMSA razmenskom program, 2019.

Student: Mareen Kraft, Eberhard Karls Universität Tübingen, Nemačka

Student: Alexios Grammenidis, Democritus University of Thrace, Grčka

Sudent: Alejandro Rivas Guerrero, Medical School at Autonomous University of Zacatecas “Francisco García Salinas”, Meksiko



## ZAKLJUČNO MIŠLJENJE I PREDLOG KOMISIJE

Na konkurs raspisan za izbor jednog REDOVNOG PROFESORA za užu naučnu oblast Hemija u medicini javila se jedna kandidatkinja, dr sci. Danijela Krstić, dosadašnji vanredni profesor na predmetu Medicinska biohemija i hemija.

Na osnovu uvida u priloženu dokumentaciju i procene dosadašnje naučne, stručne i pedagoške aktivnosti dr sci. Danijele Krstić članovi komisije smatraju da kandidatkinja ispunjava sve uslove propisane Zakonom o visokom obrazovanju i Statutom Medicinskog fakulteta u Beogradu za izbor u zvanje redovnog profesora i sa zadovoljstvom predlažu Izbornom veću Medicinskog fakulteta u Beogradu da utvrdi predlog za izbor **dr sci. Danijele Krstić** u zvanje **redovnog profesora** za užu naučnu oblast **Hemija u medicini**.

Beograd, 06. 11. 2019.god.

Članovi komisije:

**1. Prof. dr Ivanka Karadžić**, redovni profesor Medicinskog fakulteta u Beogradu

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**2. Prof. dr Vesna Vujić**, redovni profesor Medicinskog fakulteta u Beogradu

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**3. Prof. dr Tibor Sabo**, redovni profesor Hemijskog fakulteta u Beogradu

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