

ПРИМЉЕНО: 31. 10. 2022		
Орг. јед.	Број	Привог
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**НАУЧНОМ ВЕЋУ
УНИВЕРЗИТЕТА У БЕОГРАДУ – ИНСТИТУТА
ЗА МУЛТИДИСЦИПЛИНАРНА ИСТРАЖИВАЊА**

На основу одлуке Научног већа Универзитета у Београду – Института за мултидисциплинарна истраживања, од 03. 10. 2022. године, одређени смо за чланове Комисије за оцену испуњености услова кандидаткиње **др Јелене Павловић**, научног сарадника, за њен реизбор у научно звање **научни сарадник**. На основу увида у достављену нам документацију, обавили смо анализу њеног досадашњег научног остварења, те Научном већу подносимо следећи

ИЗВЕШТАЈ

1. БИОГРАФИЈА

Јелена Павловић рођена је у Београду 09.06.1983. године. Основну школу “Милош Црњански” и гимназију “Свети Сава” завршила је у Београду. Биолошки факултет Универзитета у Београду уписала је 2002. године, а дипломирала је 2010. године на студијској групи Екологија и заштита животне средине, са општим успехом 9,40, чиме је стекла стручни назив дипломирани биолог заштите животне средине. Докторске студије на студијском програму Биологија, модул Физиологија и молекуларна биологија биљака, на Биолошком факултету Универзитета у Београду уписала је 2010. године, а докторску дисертацију по насловом “Физиолошка улога силицијума у превазилажењу недостатка гвожђа код краставца (*Cucumis sativus* L.)” одбранила је 09.06.2017. године под менторством Мирослава Николића.

У време студија, у току школске 2007/2008. године, учествовала је у експерименталном раду у оквиру групе за екологију животиња у Институту за биолошка истраживања “Синиша Станковић”. У звање истраживач-приправник изабрана је у децембру 2010. године, а од почетка 2011. године запослена је у Институту за мултидисциплинарна истраживања као истраживач-приправник, у оквиру пројекта “Минерални стрес и адаптације биљака на маргиналним пољопривредним земљиштима (ОИ-173028)”, који је финансирало Министарство просвете, науке и технолошког развоја (2011-2019). У звање истраживач-сарадник изабрана је 2013. године, док је у исто звање реизабрана 2016. године. У звање научни сарадник изабрана је у априлу 2018. године. Од 2022. године је руководилац радног пакета у оквиру пројекта “*Si4Crop*” Програма ИДЕЈЕ Фонда за науку Републике Србије.

Јелена Павловић је члан Уређивачког одбора секције *Plant Nutrition* међународних часописа *Frontiers in Plant Science* и *Frontiers in Nutrition* и рецензент за међународне научне часописе *Plant and Soil*, *Biologia-Springer* и *Food Chemistry*. Од 2017. године члан је Међународног друштва за силицијум у пољопривреди (*ISSAG*).

Јелена Павловић поседује напредно знање енглеског језика, а служи се и шпанским (средњи ниво) и француским језиком (основни ниво).

2. БИБЛИОГРАФИЈА

2.1. Пре избора у звање научни сарадник

Радови у међународним часописима изузетних вредности (M21a)

2.1.1. **Pavlovic J**, Samardzic J, Kostic L, Laursen KH, Natic M, Timotijevic G, Schjoerring JK, Nikolic M (2016): Silicon enhances leaf remobilization of iron in cucumber under limited iron conditions. *Annals of Botany* 118: 271-280.

<https://doi.org/10.1093/aob/mew105>

КоБСОН: 2015, *Plant Sciences* 20/209, ИФ = 3,983

SCOPUS: 126 хетероцитата

2.1.2 Nikolic M, Nikolic N, Kostic L, **Pavlovic J**, Bosnic P, Stevic N, Savic J, Hristov N (2016): The assessment of soil availability and wheat grain status of zinc and iron in Serbia: implications for human nutrition. *Science of the Total Environment* 553: 141-148.

DOI: [10.1016/j.scitotenv.2016.02.102](https://doi.org/10.1016/j.scitotenv.2016.02.102)

КоБСОН: 2016, *Environmental Sciences* 22/229, ИФ = 4,900

SCOPUS: 63 хетероцитата

2.1.3. **Pavlovic J**, Samardzic J, Masimović V, Timotijevic G, Stevic N, Laursen KH, Hansen TH, Husted S, Schjoerring JK, Liang Y, Nikolic M (2013): Silicon alleviates iron deficiency in cucumber by promoting mobilization of iron in the root apoplast. *New Phytologist* 198: 196-1107

<https://doi.org/10.1111/nph.12213>

КоБСОН: 2014, *Plant Sciences* 6/204, ИФ = 7,672

SCOPUS: 28 хетероцитата

Радови у врхунским међународним часописима (M21)

2.1.4. Bityutskii N, **Pavlovic J***, Yakkonen K, Maksimovic V, Nikolic M (2014): Contrasting effect of silicon on iron, zinc and manganese status and accumulation of metal-mobilizing compounds in micronutrient-deficient cucumber. *Plant Physiology and Biochemistry* 74: 205-211. *изједначен допринос са првим аутором

DOI: [10.1016/j.plaphy.2013.11.015](https://doi.org/10.1016/j.plaphy.2013.11.015)

КоБСОН: 2015, *Plant Sciences* 41/209, ИФ = 2,928

SCOPUS: 32 хетероцитата

Радови у истакнутим међународним часописима (M22)

2.1.5. Stevic N, Korac J, **Pavlovic J**, Nikolic M. (2016): Binding of transition metals to monosilicic acid in aqueous and xylem (*Cucumis sativus* L.) solutions: A low-T electron paramagnetic resonance study. *BioMetals*, 29(5): 945-51.

DOI: [10.1007/s10534-016-9966-9](https://doi.org/10.1007/s10534-016-9966-9)

КоБСОН: 2014, *Biochemistry & Molecular Biology* 162/290, ИФ = 2,503

SCOPUS: 6 хетероцитата

Саопштења на скуповима међународног значаја штампана у изводу (M34)

2.1.6. **Pavlovic J**, Nikolic M (2016): Silicon enhances nicotianamine-mediated iron transport in cucumber leaves. 18th International Symposium on Iron Nutrition and Interaction in Plants, May 30-June 3, 2016, Madrid, Spain, Abstracts, S4-PO-01. (постер)

2.1.7. **Pavlovic J**, Samardzic J, Nikolic M (2014): Interactions between iron and silicon in cucumber. 17th International Symposium on Iron Nutrition and Interaction in Plants, July 6-10, 2014 Gatersleben, Germany, p. 38. (одабрана усмена презентација)

2.1.8. Samardzic J, Pavlovic S, Timotijevic G, **Pavlovic J**, Nikolic M (2014): Effects of Si on the expression of miRNA398 and miRNA408 and its target gene, superoxide dismutase (CuSOD) in Fe deficient cucumber plants. 17th International Symposium on Iron Nutrition and Interaction in Plants, July 6-10, 2014 Gatersleben, Germany, p. 108. (постер)

2.1.9. **Pavlović J**, Samardžić J, Maksimović V, Nikolić M (2013): Silicon mediates iron acquisition by Strategy 1 plants. 1st International Conference on Plant Biology, June 4-7, 2013, Subotica, Serbia, p. 42. (постер)

2.1.10. Nikolić DS, Nikolić DB, Timotijević G, **Pavlović J**, Samardžić J, Nikolić M (2013): Silicon mitigates oxidative stress in cucumber at copper excess. 1st International Conference on Plant Biology, June 4-7, 2013, Subotica, Serbia, p. 130. (постер)

2.1.11. Stević N, **Pavlović J**, Nikolić M (2013): The theoretical prediction of interactions between soluble silicon, iron (III) and carboxylate anions in plant fluids. 1st International Conference on Plant Biology, June 4-7, 2013, Subotica, Serbia, p. 45. (постер)

2.1.12. Bosnić P, Savić J, Kostić Kravljanić Lj, Stević N, **Pavlović J**, Lazić M, Marjanović-Jeromela A, Hristov N, Nikolić N, Nikolić M (2013): Zn concentrations in wheat grains along the gradient of native Zn soil availability in Serbia. 1st International Conference on Plant Biology, June 4-7, 2013, Subotica, Serbia, p. 47. (постер)

2.1.13. **Pavlovic J**, Samardzic J, Ilic P, Maksimovic V, Kostic L, Stevic N, Nikolic N, Liang YC, Nikolic M (2011): Silicon ameliorates iron deficiency chlorosis in strategy I plants: first evidence and possible mechanism(s). Proceedings of the 5th International Conference on Silicon in Agriculture, September 13-18, 2011 Beijing, China, pp. 137-138. (предавање по позиву за М. Николића)

Одбрањена докторска дисертација (M71)

2.1.14. **Pavlović J** (2017): Uloga silicijuma u prevazilaženju nedostatka gvožđa kod krastavca (*Cucumis sativus* L.), Univerzitet u Beogradu - Biološki fakultet

2.2. После избора у звање научни сарадник

Поглавље у истакнутој монографији међународног значаја (M13)

2.2.1. Nikolic M, **Pavlovic J** (2018): Plant responses to iron deficiency and toxicity and iron use efficiency in plants. In: Plant Micronutrient Use Efficiency: Molecular and Genomic Perspectives in Crop Plants, 1st Edition, A.M. Hossain et al. (Eds.), pp. 55-69. Academic Press, Elsevier, London. ISBN: 9780128121047.

<https://doi.org/10.1016/B978-0-12-812104-7.00004-6>

Одлука МНО за биологију у прилогу.

SCOPUS: 23 хетероцитата

Радови у међународним часописима изузетне вредности (M21a)

2.2.2. **Pavlovic J**, Kostic L, Bosnic P, Kirkby EA, Nikolic M (2021): Interactions of silicon with essential and beneficial elements in plants. *Frontiers in Plant Science* 12: 1224

<https://doi.org/10.3389/fpls.2021.697592>

КоБСОН: 2021, *Plant Sciences* 20/239, ИФ = 6,627

SCOPUS: 17 хетероцитата

2.2.3. Bosnic D, Nikolic D, Timotijevic G, **Pavlovic J**, Vaculik M, Samardzic J, Nikolic M. (2019): Silicon alleviates copper (Cu) toxicity in cucumber by increased Cu-binding capacity. *Plant and Soil* 441: 629–641

<https://doi.org/10.1007/s11104-019-04151-5>

КоБСОН: 2017, *Agronomy* 7/87, ИФ = 3,306

SCOPUS: 35 хетероцитата

Саопштења на скуповима међународног значаја штампана у изводу (M34)

2.2.4. **Pavlovic J**, Hernandez-Apaolaza L, Dubljanin T, Nikolic M (2022): Silicon Enhances the Biosynthesis of Organic Acids in Zinc-deficient Rice. 8th International Conference on Silicon in Agriculture, May 23-26, 2022, New Orleans, Louisiana, USA, p. 22. (постер)

2.2.5. Kostic Kravljanac Lj, Trailovic M, **Pavlovic J**, Nikolic M (2022): Effect of N-forms on Silicon Mobilization in the Rhizosphere of White Lupin; 8th International Conference on Silicon in Agriculture, May 23-26, 2022, New Orleans, Louisiana, USA, p. 33. (постер)

2.2.6. Trailovic M, Kostic Kravljanac LJ, Stanojevic M, **Pavlovic J**, Nikolic M (2022): Phosphorus Deficiency Induced Silicon Mobilization in Grapevine Rhizosphere: A Field Study; 8th International Conference on Silicon in Agriculture, May 23-26, 2022, New Orleans, Louisiana, USA, p. 47. (постер)

2.2.7. **Pavlović J**, Nikolić M (2018): Silicon increases iron use efficiency in cucumber – a strategy 1 model plant. 3rd International Conference on Plant Biology (22nd SPPS Meeting), June 9-12, 2018, Belgrade, Serbia, p. 17 (одабрана усмена презентација)

2.2.8. Nikolic M, Kostic L, **Pavlovic J**, Bosnic P (2017): Silicon influence on plant ionome and mineral element transporters. 7th International Conference on Silicon in Agriculture, October 24-28, 2017, Bangaluru, India. Abstracts, p. 53. (предавање по позиву за М. Николића)

2.2.9. Nikolic M, Kostic L, **Pavlovic J**, Bosnic P (2017): Silicon mediates ion uptake, transport and homeostasis in plants under mineral stress. In: Proceedings Book of the XVIII International Plant Nutrition Colloquium with Boron and Manganese Satellite Meetings, August 19-24, 2017, Copenhagen, Denmark. University of Copenhagen, A Carstensen, KH Laursen and JK Schjoerring, Eds., pp 75-76. ISBN 978-87-996274-0-0. (предавање по позиву за М. Николића)

3. АНАЛИЗА НАУЧНИХ ОСТВАРЕЊА

Научни рад Јелене Павловић је у области физиологије минералне исхране биљака и претежно је фокусиран на проучавање физиолошких интеракција микроелемената (посебно гвожђа и цинка) и силицијума код биљака. Њена истраживања, по први пут у литератури су јасно показала да исхрана биљака силицијумом ефикасно отклања симптоме изазване недостатком гвожђа (лисна хлороза) и разјаснила је да у основи механизма деловања силицијума лежи повећање депонованог гвожђа у апопласту корена, а затим и његова боља мобилизација у ризосфери и апопласту корена, због повећане синтезе једињења која хелирају гвожђе, као што су карбоксилати и феноли (2.1.3). Радећи даље на изучавању деловања силицијума у модулацији хомеостазе гвожђа у листовима, показано је да силицијум делује на повећану синтезу никоцијан амина, хелатора феро-облика гвожђа, у ком облику се гвожђе транспортује у флоему, паралелно са повећаном експресијом *NAS* гена који регулишу синтезу те аминкиселине (2.1.1). У истом раду, установљена је и силицијумом посредована појачана експресија *YSL* транспортера за комплекс феро облика гвожђа и никоцијан амина у листовима различите старости, што омогућава боље премештање гвожђа из стријих у млађе листове. За разлику од гвожђа, корисна улога силицијума у условима недостатка микроелмената цинка и мангана, огледа, пре свега, у елиминисању симптома њиховог дефицита, што је највероватније везано за познату улогу силицијума у ублажавању оксидативног стреса код биљака. (2.1.4); најновија истраживања кандидаткиње указују да силицијум појачава и премештање цинка ксилемом у комплексу са карбоксилатима (2.2.4). Посредно, показано је и да ортосилицијумова киселина, биоактивни облик силицијума код биљака, може да у растворима реагује са микроелментима (гвожђе, бакар и манган) у ксилемском соку и тако мења њихову приступачност и редокс стање (2.1.5). Своја истраживања на проблему улоге силицијума у усвајању и транспорту микроелемената у условима њиховог дефицита, кандидаткиња проширује на сувишак (токсичност) бакара (2.2.3); додаток силицијума утицао је на повећање капацитета везивања

бакра у ћелијском зиду корена краставца, као и његово секвестирање у листу уграђивањем у протеин пластоцијанин.

Јелена Павловић је такође учествовала и у тимским истраживањима групе за исхрану биљака која су за циљ имала испитивања обезбеђености земљишта цинком и гвожђем и садржаја ових микроелемената у зрну пшенице у житородним регионима широм Србије. Ова истраживања указала су да и поред релативно адекватне обезбеђености земљишта микроелементима, садржај цинка у зрну пшенице, а посебно у узорцима брашна из важнијих млинова у Војводини, налази се на граници дефицита за људску исхрану који прописује Светска здравствена организација (2.1.2).

Имајући у виду да је кандидаткиња дуго времена проучавала исхрану биљака гвожђем, уследио је позив уредника међународне монографије о ефикасности искоришћавања микроелементима у биљака, за писање поглавља о недостатку и токсичности гвожђа и његовом искоришћавању (2.2.1). Пионирски рад, где је по први пут показано да силицијум поспешује усвајање и искоришћавање хранива код биљака (нпр. гвожђа и фосфора), препознат у међународној научној заједници, те је на позив међународног часописа изузетних вредности *Frontiers in Plant Science* скорије објављен прегледни рад о интеракцијама силицијума са есенцијалним и корисним елементима код биљака, у коме је кандидаткиња први аутор (2.2.2.).

4. УТИЦАЈНОСТ НАУЧНИХ РЕЗУЛТАТА

Радови у којима је др Јелена Павловић први аутор или коаутор су према бази *SCOPUS*, до сада укупно цитирани 379 пута, од чега је кандидаткиња остварила 364 цитата без самоцитата, односно 330 цитата без цитата свих коаутора на раду (хетероцитата), а њен Хиршов индекс је 8, односно 7 (без самоцитата и цитата свих коаутора). Следи списак цитата без самоцитата, преузетих из базе *SCOPUS* (приступ 27. 10. 2022.):

Pavlovic J, Samardzic J, Masimović V, Timotijevic G, Stevic N, Laursen KH, Hansen TH, Husted S, Schjoerring JK, Liang Y, Nikolic M (2013): Silicon alleviates iron deficiency in cucumber by promoting mobilization of iron in the root apoplast. *New Phytologist* 198: 196-1107, цитиран 139 пута (без самоцитата) у:

Oliveira, K.S., de Mello Prado, R., Checchio, M.V., Gratão, P.L.

Interaction of silicon and manganese in nutritional and physiological aspects of energy cane with high fiber content

(2022) *BMC Plant Biology*, 22 (1), art. no. 374, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85135175163&doi=10.1186%2fs12870-022-03766-8&partnerID=40&md5=29f1b5d5cc241095c9dfe4ac43c254ad>

Chunyan, L., Xiangchi, Z., Chao, L., Cheng, L.

Ionic and metabolic responses of wheat seedlings to PEG-6000-simulated drought stress under two phosphorus levels

(2022) *PLoS ONE*, 17 (9 September), art. no. e0274915, .

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85138186587&doi=10.1371%2fjournal.pone.0274915&partnerID=40&md5=0a9b866b1a0cac48baf458e64cb71d7a>

85138186587&doi=10.1371%2fjournal.pone.0274915&partnerID=40&md5=0a9b866b1a0cac48baf458e64cb71d7a

Etesami, H., Li, Z., Maathuis, F.J.M., Cooke, J.
The combined use of silicon and arbuscular mycorrhizas to mitigate salinity and drought stress in rice
(2022) *Environmental and Experimental Botany*, 201, art. no. 104955, .
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85131834477&doi=10.1016%2fj.envexpbot.2022.104955&partnerID=40&md5=f80840694587f26648df6cd93fee5f1f>

Karimi, E., Ghasemnezhad, A., Ghorbanpour, M.
Selenium- and Silicon-Mediated Recovery of *Satureja* (*Satureja mutica* Fisch. & C. A. Mey.) Chemotypes Subjected to Drought Stress Followed by Rewatering [Selen- und siliziumvermittelte Regeneration von *Satureja*-Chemotypen (*Satureja mutica* Fisch. & C. A. Mey.) bei Trockenstress und anschließender Bewässerung]
(2022) *Gesunde Pflanzen*, 74 (3), pp. 737-757.
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85128305450&doi=10.1007%2fs10343-022-00654-x&partnerID=40&md5=317d127150479adbaaf8fbaf98f9fe1b>

Lyu, J., Jin, N., Meng, X., Jin, L., Wang, S., Xiao, X., Liu, Z., Tang, Z., Yu, J.
Exogenous silicon alleviates the adverse effects of cinnamic acid-induced autotoxicity stress on cucumber seedling growth
(2022) *Frontiers in Plant Science*, 13, art. no. 968514, .
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5. КВАЛИТАТИВНИ ПОКАЗАТЕЉИ И ОЦЕНА НАУЧНОГ ДОПРИНОСА

5.1 Квалитет научних резултата

У периоду од избора у звање научни сарадник, др Јелена Павловић је објавила поглавље у истакнутој монографији међународног значаја (M13) и два научна рада у међународним часописима изузетних вредности (M21a), чиме је кандидаткиња јасно показала своје опредељење за квалитет научног рада, који је недвосмислено препознат у међународној научној јавности из области исхране биљака. Квалитет научних резултата огледа се у перманентном годишњем прирасту њених хетероцитата (2019: 30 хетероцитата; 2020: 50 хетероцитата; 2021: 66 хетероцитата; 2022: 92 хетероцитата). Осам радова кандидаткиње су цитирани 360 пута без самоцитата, што представља просечно 45 цитата (без самоцитата) по раду. На пример, прегледни рад, у коме је кандидаткиња први аутор, је од објављивања у другој половини 2021. године цитиран чак 35 пута без самоцитата.

5.2 Самосталност и оригиналност у научном раду

Објављени радови у периоду од избора др Јелене Павловић у звање научни сарадник су настали као резултат тимског рада групе за исхрану биљака, при чему је у једној публикацији категорије M21a кандидаткиња била први аутор. Просечан број коаутора по раду је 4,7. У свим радовима кандидаткиња је дала значајан допринос у осмишљавању и извођењу експеримената и интерпретацији резултата, анализи и систематизацији литературе (поглавље и преглени рад), презентацији резултата и писању рукописа.

6.4. Међународна научна сарадња

Кандидаткиња је учествовала у пројекту билатералне научне сарадње са Народном Републиком Кином (2012-2013) и демонстрирала међународну сарадњу кроз коауторства са колегама из Данске, Кине и Русије (пре избора у звање научни сарадник), а од избора у звање научни сарадник кандидаткиња је сарађивала и са колегама из Шпаније и Велике Британије, који су коаутори у њеним радовима и соопштењима.

6.5. Организација научног рада и укључивање младих истраживача и научну проблематику

Др Јелена Павловић је руководилац радног пакета “WP:2 Si utilization in the tissues and biofortification of Si” пројекта “Silicon for Crops in the 21st Century (Si4Crop)” програма ИДЕЈЕ Фонда за науку Републике Србије.

Кандидатиња је именована за ментора за израду докторске дисертације Тијане Дубљанин, под насловом “Кружење силицијума и биосеквестрирање угљеника у систему земљиште-биљка на моделу чернозема под пшеницом” (одлука Наставно-научног већа Пољопривредног факултета Универзитета у Београду, број 32/6-5.1 од 30.03.2022. године

6.6. Чланства у научним друштвима

Др Јелена Павловић је члан Међународног друштва за силицијум у пољопривреди (ISSAG; , <http://www.issag.org>).

6.7. Рецензије научних радова у међународним часописима

Јелена Павловић је до сада рецензирала рукописе за следеће међународне часописе: *Plant and Soil* (два рукописа), *Biologia-Springer* (један рукопис) и *Food Chemistry* (један рукопис); верификација на <https://www.webofscience.com/wos/author/record/AGV-5508-2022>.

Кандидаткиња је члан уређивачког одбора секције *Plant Nutrition* међународних часописа *Frontiers in Plant Science* и *Frontiers in Nutrition*.

6. КВАНТИТАТИВНИ ПОКАЗАТЕЉИ УСПЕХА У НАУЧНОМ РАДУ

Квантитативни показатељи резултата научног рада др Јелене Павловић приказани су у табелама које следе.

Табела 1. Сумарни преглед резултата научноистраживачког рада кандидаткиње, од избора у звање научни сарадник, са квантитативним вредностима М коефицијената.

Категорија резултата	Број остварених резултата	Појединачна вредност М-коефицијената	Збирна вредност М-коефицијената
M13	1	7	7
M21a	2	10	20
M34	6	0,5	3
УКУПНО М-коефицијената = 30			

Табела 2. Укупне вредности М коефицијената кандидаткиње према категоријама прописаним у Правилнику за област природно-математичких и медицинских наука.

Категорија радова	Потребан минимум за звање научни сарадник	Остварено – целокупни рад
M10+M20+M31+M32+M33+M41+M42	10	27,0
M11+M12+M21+M22+M23	6	20,0
УКУПНО	16	30,0

Табела 3. Укупне и просечне вредности фактора утицајности (ИФ).

Категорија радова	Укупан збир	Просечан по раду
Пре избора у звање научни сарадник	21,986	4,397
После избора у звање научни сарадник	9,933	4,967
За цео период	31,919	4,560

7. ЗАКЉУЧАК И ПРЕДЛОГ

Од избора у звање научни сарадник 2018. године, др Јелена Павловић је објавила два рада из категорије међународних часописа изузетних вредности (M21a) и једно поглавље у истакнутој монографији међународног значаја (M13). Укупан збир импакт фактора који је до сада остварила кандидаткиња износи 31,919 (9,933 од избора), а њен просечан импакт фактор по раду је 4,560, односно 4,967 од избора у претходно звање. Кандидаткиња је до сада остварила 364 цитата без самоцитата, односно 330 хетероцитата, са Хиршовим индексом 8 (укупан број цитата), односно 7 (хетероцитати).

Др Јелена Павловић је стекла експертизу у области физиологије минералне исхране биљака, посебно у делу који се односи на усвајање и транспорт микроелемената у биљци и физиолошку улогу силицијума у стресу биљака, као и демонстрирала високу самосталност у планирању експеримената, критичкој интерпретацији научних резултата и синтетичкој анализи литературе. У периоду од избора у звање научни сарадник, Кандидаткиња је стекла рутинско лабораторијско искуство у анализи земљишта и биљног материјала, коришћењем савремених метода елементарне анализе (ICP-OES и CHNS), проширила своја теоретска знања из области физиологије минералне исхране и молекуларне биологије биљака, развила способност за тимски рад и успоставила плодну сарадњу са колегама из иностранства, али и започела свој менторски рад.

Комисија сматра да на основу критеријума које је прописало Министарство за просвету, науку и технолошки развој Републике Србије др **Јелена Павловић** испуњава услове за реизбор у научно звање **научни сарадник**, те предлаже Научном већу Универзитета у Београду – Института за мултидисциплинарна истраживања да прихвати овај извештај и утврди предлог за њен реизбор у то звање.

Београд, 27. 10. 2022.

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