Curriculum Vitae (2026)



Personal Information

- **Name**: Yousef Mahmoud Abu-Zaitoon
- **Date of Birth**: 15/1/1973
- **E-mail**: yousef.az@ahu.edu.jo, yousefaz@yahoo.com
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- **Postal Address**: P.O. Box (20), Maan 71111/ Jordan

Academic Qualifications

- **2007-2010**: A PhD in biochemistry/ University of New England/ NSW/ Australia. Thesis title "characterization of the tryptamine pathway of auxin biosynthesis in developing rice grains". In this study, bioinformatics, reverse transcriptase polymerase chain reaction and real time polymerase chain reaction were used to identify and analyze the expression of genes proposed to be involved in the tryptamine pathway of auxin biosynthesis. Auxin content in developing rice grains, the plant system used in this research, was measured using liquid chromatography electrospray ionization/tandem mass spectrometry. Expression data were then compared to auxin content at various developmental stages of rice grains to find out the actual involvement of identified genes in auxin biosynthesis.

- **1998-2001**: A master degree in applied biological science/ microbiology/ Jordan University of Science and Technology/ Jordan. Thesis title "Ecological and physiological studies on symbiotic nitrogen fixing microorganisms in non-leguminous plants." In this project nitrogen-fixing microorganism from a wide spectrum of non-leguminous plants collected from representative environments in Jordan were isolated. Additionally, a variety of biochemical and physiological characteristics of isolates were identified.

- **1991-1995**: A bachelor degree in biology/ Yarmouk University/ Jordan.

- TOEFL, IELTS, and ICDL certificates with a high efficiency of using Microsoft Word, Excel, PowerPoint, Access and internet as bioinformatics constitutes 25% of the PhD thesis.

Research Interests

- My research of interests includes investigating tryptophan dependent and independent pathways of auxin biosynthesis in plants. In 2023, IAOx was proved to be conserved in the plant kingdom as it was found to be involved in producing auxin through the tryptophan dependent pathway in cereals in addition to the previously conformed role in Brassicaceae. The next research effort will focus on

finding possible intermediates act with IAOx in the IAOx pathway of auxin synthesis.

- The importance of indole synthase has recently investigated and proposed to independently and separately act in the tryptophan independent pathway of auxin synthesis in Arabidopsis. Amidase was hypothesized to interact with indole synthase in this pathway.

- I am also focusing on the importance of aldehyde oxidase, nitrilase, and amidase enzymes in producing IAA in a wide spectrum of model plant species including; Arabidopsis, rice, wheat, barley and sorghum.

- The importance of IAA on various aspects of grain development in crop plants including rice, wheat, barley and sorghum were also investigated.

Research Proposals

- The involvement of YUCCA in auxin biosynthesis is well established. In my thesis, I hypothesized that in the developing rice grains *OsYUCCA9* and *OsYUCCA11* may dominate over other *OsYUCCAs*. This could be further investigated by knocking out these two genes and examination of any effect on the level of IAA in rice grains. However, it should be noted that an increase in expression of other *OsYUCCA* genes or a possible alternative pathway may compensate for any decline in expression of these two genes.
- *Arabidopsis* would be a good model plant to test the involvement of tryptophan decarboxylase (TDC) in IAA synthesis as it has only two putative *TDC* genes. Knocking out these two genes and measuring the content of IAA may be a good strategy to confirm the role of TDC in IAA synthesis. It should be noted that this mutant could be lethal if TDC is actually involved in a major pathway of IAA synthesis.

- I, previously showed that (sent for publication to Cell Biochemistry and Biophysics) neither nitrilase nor amidase expected to have a significant role in IAA synthesis in developing rice grains. This result was obtained using phylogenetic analysis of targeted genes from all available fully genome-sequenced plants. It will be interesting to knock out these genes in developing rice grains to more dissect their role in IAA synthesis. RNA interference approach could be used.

- Aldehyde oxidase on the other hand was expected to be involved in IAA synthesis. According to data obtained from phylogenetic, expression, and co-expression analysis I suggested an important role for aldehyde oxidase in the tryptophan-independent pathway. I need to do some experimental work including real time PCR and I am sure the manuscript will be heavily cited in the next few years taken into consideration that neither intermediates nor enzymes involved in this pathway have been identified so far.

Conferences

- Abu-Zaitoon, Y.M. & Nonhebel, H.M. (2009). Investigation of the tryptamine pathway of auxin biosynthesis in developing rice grains. ComBio 2009, Christchurch, New Zealand.
- Nonhebel, H.M. & Abu-Zaitoon, Y.M. (2010). Correlations between expression of putative auxin synthesis genes and IAA content of developing rice grains. IPGSA, the 20th International Conference on Plant Growth Substances, Tarragona, Spain.

Grants

1- A grant (28000 Saudi Ryial) from the Islamic University in Madinah. (10/B/1435H) in 2014. Aldehyde Oxidase: A dual role in auxin and abscisic acid synthesis. Dean of Scientific research.
2- A travel grant to attend ComBio 2009 conference from the school of science and technology, University of New England, Armidale, NSW, Australia. The poster and presentation entitled "Characterization of the tryptamine pathway of auxin biosynthesis in developing rice grains"
3- University of New England fees assistance scholarship (2008) to complete PhD studies in Biochemistry.
4- A preliminary approval from the Scientific Research & Innovation Support Fund to support the research (Agr/1/14/2016) entitled "Molecular examination of the indole pyruvic acid pathway of auxin biosynthesis genes in regulating grain fill of developing barley grains"

Work Experiences

- **14/11/2023 Till Now**: Full professor of biochemistry/ Al-Hussein Bin Talal University/ Maan.
- **1/2/2018-14/11/2023**: Associate professor of biochemistry/ Al-Hussein Bin Talal University/ Maan.
- **31/5/2016-1/2/2018**: Assistant professor of biochemistry/ Al-Hussein Bin Talal University/ Maan.
- **1/2/2015-31/5/2016**: Lecturer of biochemistry/ Al-Hussein Bin Talal University/ Maan.
- **1/9/2012-25/1/2015:** Assistant professor of biochemistry/ Islamic University in Madinah/ Saudi Arabia.
- **16/10/2010-11/6/2012**: Assistant professor of biochemistry/ Al-Ghad International Colleges of Applied Medical sciences/ Jeddah/ Saudi Arabia.

Academic Position Experiences

- **3/10/2021- 10/9/2024**: A head of the school of biological science/ Al-Hussein Bin Talal University/ Maan

- **2020-2021/ 2016-2017**: A member of the college of sciences council/ Al-Hussein Bin Talal University/ Maan.
- **30/9/2017- 10/12/2018**: A head of the school of biological science/ Al-Hussein Bin Talal University/ Maan.
- **16/10/2010-11/6/2012**: A vice-dean for the preparatory year affairs, as well as a member of the faculty council/ Al-Ghad International Colleges of Applied Medical sciences/ Jeddah/ Saudi Arabia.

Journal's Reviewer

- Journal of Genetic Engineering and Biotechnology (Springer Q2)
- Jordan Journal of Biological sciences (Q2)

Teaching Interests

- Biochemistry [1,3]
- Molecular Biology[3]
- Human Physiology[1]
- Human anatomy[1]
- Biology[1,2]
- Gene Technology and Medical Genetics[1]
- Electron microscope[1]
- Histology[3]
- Evolution[3]

1) Al-Ghad International Colleges of Applied Medical sciences
2) Islamic University in Madinah
3) Al-Hussein Bin Talal University

Referees

1. Dr Heather M. Nonhebel (supervisor), School of Science and Technology, University of New England, Armidale, NSW 2351, Ph 02 6773 2083, email: hnonheb2@une.edu.au.
2. Associate professor Barrie Entsch (co-supervisor), bentsch@nsw.chariot.net.au.
3. DrTourkey Ali, vice-dean at Al-Ghad International Colleges of Applied Medical sciences / Jeddah- Saudi Arabia. Email: tasbaokbah@hotmail.com.
4. Dr. Abd Al-kareem Al-Sallal. Professor of Microbiology at Jordan University of Science and Technology. Email: sallal5@hotmail.com, sallal51@yahoo.com

Publication

1. ***Yousef M. Abu-Zaitoon***, Abdel Rahman Al Tawaha, Ezz Al-Dein Muhammed Al-Ramamneh, Abdul Latief Al-Ghzawi, Fouad A. Almomani, Omar Mahmoud Al zoubi, Talaat Habeeb, and Mohammad Alhawatema, Sulaiman M. Alnaimat, Khalid Ghazi Fandi. Comparative coexpression analysis of indole synthase and tryptophan synthase A reveals the independent production of auxin via the cytosolic free indole. ***Plants.***

2. Mina Bayanati, Abdel Rahman Al-Tawaham, Duraid Al-Taey, Abdul Latief Al-Ghzawi, ***Yousef M. Abu-Zaitoon***, Samar Shawaqfeh, Omar Al-Zoubi, Ezz Al-Dein Al-Ramamneh, Laith Alomari, Abdel Razzaq Al-Tawaha and Abhijit Dey. Interaction between zinc and selenium bio-fortification and toxic metals (loid) accumulation in food crops. ***Frontiers in Plant Science.*** 2022, 13. https://doi.org/10.3389/fpls.2022.1001992

3. ***Yousef M. Abu-Zaitoon***, Ahmed Abu-Zaiton, Abdel Rahman Al Tawaha, Khalid Ghazi Fandi, Sulaiman M. Alnaimat, Siddhartha Pati and Fouad A. Almomani. Evidence from Co-expression Analysis for the Involvement of Amidase and INS in the Tryptophan-Independent Pathway of IAA Synthesis in Arabidopsis. ***Applied Biochemistry and Biotechnology***. 2022: 1-10. https://doi.org/10.1007/s12010-022-04047-8

4. Fouad A. Almomani, Manasreh, I., ***Yousef M. Abu-Zaitoon*** and Abdel Rahman Al Tawaha. Diversity, Pathogenicity and Biocontrol Efficacy of *Pseudomonas Syringae* Isolated from Plants in Northern Jordan. ***Rom Biotechnol Lett.*** 2022, 27(1): 3264-3269

5. Ahmed Abu-Zaiton, Sohail Alsohaili, Abdulrahim Aljamal, Ayah Algaramseh, Maha Habash, ***Yousef Abu-Zaitoon*** and Mahmoud Abu-Samak. Physiological and Biochemical Changes in Diabetic Rats Treated with Combined Extracts of *Artemisia herba-alba* and *Anabasis syriaca*. ***International Journal of Pharmacology.*** 2022, 18: 1084-1092.

6. Abdel Rahman M. Tawaha, Hiba Alatrash, Abdel Razzaq Al-Tawaha, ***Yousef M Abu-Zaitoon***, Samia Khanum, Abdur Rauf, Arun Karnwal, Abhijit Dey, Rawa Muhsen Youssef, Devarajan Thangadurai9And Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid Palani Saranraj, Ali M.Qaisi. Elif GUNAL Mayada Ahmad Al-Sameen Roghayeh Karimirad R.Z. Sayyed. 2022***. Madhuca longifolia (synonyms, Madhuca indica Gmelin). Handbooks of Crop Diversity:*** Conservation and Use of Plant Genetic Resources. Oilseed Crops. Dr. Godswill Ntsomboh Ntsefong (editors). Springer Nature Switzerland AG.

7. Samia Khanum, Abdel Rahman M. Tawaha, Abdel Razzaq Al-Tawaha, Hiba Alatrash, Abdur Rauf, Arun Karnwal, Abhijit Dey, Munir Turk, Devarajan Thangadurai And Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid Palani Saranraj, Ali M.Qaisi Elif GUNAL, ***Yousef M Abu-Zaitoon*** Mayada Ahmad Al-Sameen Roghayeh Karimirad R.Z. Sayyed , Rawa Muhsen Youssef.2022. ***Rocket salad, Eruca sativa Mill***. ***Handbooks of Crop Diversity:*** Conservation and Use of Plant Genetic Resources. Oilseed Crops. Dr. Godswill Ntsomboh Ntsefong (editors). Springer Nature Switzerland AG.

8. Samia Khanum, Abdel Rahman M. Tawaha, Abdel Razzaq Al-Tawaha*, Hiba Alatrash, Abdur Rauf, ***Yousef M Abu-Zaitoon***, Arun Karnwal, Abhijit Dey, Munir Turk, Devarajan Thangadurai And Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid Palani Saranraj, Ali M.Qaisi, Elif GUNAL .2022. ***Prunus armeniaca (wild apricot). Handbooks of Crop Diversity***: Conservation and Use of Plant Genetic Resources. Oilseed Crops. Dr. Godswill Ntsomboh Ntsefong (editors). Springer Nature Switzerland AG

9. Najwa Al Hajjar, Abdel Rahman M. Tawaha, Abdel Razzaq Al-Tawaha, Samia Khanum, Abdur Rauf, Arun Karnwal, ***Yousef M Abu-Zaitoon***, Abhijit Dey, Sameena Lone, Khursheed Hussain, Devarajan Thangadurai, Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid Palani Saranraj, Ali M.Qaisi, Elif GUNAl, Mayada Ahmad Al-Sameen Roghayeh Karimirad, R.Z. Sayyed. 2022. ***Niger, Guizotia abyssinica (L.f.) Cass***. ***Handbooks of Crop Diversity:*** Conservation and Use of Plant Genetic Resources. Oilseed Crops. Dr. Godswill Ntsomboh Ntsefong (editors). Springer Nature Switzerland AG.
10. Samia Khanum, Abdel Rahman Tawaha, ***Yousef Abu-Zaitoon***, Abdel Razzaq Al-Tawaha, Hiba Alatrash, Abdur Rauf, Arun Karnwal, Abhijit Dey, Mohamad Shatnawi, Devarajan Thangadurai, Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid, Palani Saranraj, and Elif Gunal. 2022. ***Mycorrhizal Role in Phosphorus Metabolism.*** **In:** *MYCORRHIZAL TECHNOLOGY*: *Managing Stress and Mitigating Climate using Mycorrhizae for Sustainable Agricultural Development*. Editors: Jeyabalan Sangeetha, Abdel Rahman M. Al Tawaha, and Devarajan Thangadurai. AAP/CRC Press. Taylor and Frances, USA.

11. Samia Khanum, Abdel Rahman Tawaha, ***Yousef Abu-Zaitoon***, Abdel Razzaq Al-Tawaha, Hiba Alatrash, Abdur Rauf, Arun Karnwal, Abhijit Dey, Mohamad Shatnawi, Devarajan Thangadurai, Jeyabalan Sangeetha, Saher Islam, Imran, Amanullah, Shah Khalid, Palani Saranraj, and Elif Gunal. 2022. ***Arbuscular Mycorrhizal (AM) Biotechnology and its Applications.*** **In:** *MYCORRHIZAL TECHNOLOGY: Managing Stress and Mitigating Climate using Mycorrhizae for Sustainable Agricultural Development.* 2022. Editors: Jeyabalan Sangeetha, Abdel Rahman M. Al Tawaha, Devarajan Thangadurai. AAP/CRC Press. Taylor and Frances, USA.

12. Abdel Rahman M Al-Tawaha, Ezz Al-Dein-Al-Ramamneh, Muhammad Aasim, Canan Sevinc, Abdel Razzaq Al-Tawaha, ***Yousef M Abu-Zaitoon***, Mohammad Alhawatema, Ali M Qaisi, Nusrat Jahan, Munir Turk, Abdur Rauf, Shah Khalid, Mohd Abas Shah, Rokayya Sami, Devarajan Thangadurai, Jeyabalan Sangeetha, A Wafa'a, Shah Fahad**.** ***Plant—Microbe Interaction under Climate Change***. **In:** *Developing Climate-Resilient Crops: Improving Global Food Security and Safety*. Sönmez, O., Saud, S., Wang, D., Wu, C., Adnan, M., and Turan, V. 202. CRC Press. Taylor & Francis. https://doi.org/10.1201/9781003109037

13. Abdel Rahman M. Al-Tawaha, Harpreet Kaur Cheema, Marwa M. El-Deriny, Dina S. S. Ibrahim, Mazen A. Ateyyat, Huma Naz, Abdel Razzaq Al-Tawaha, Ali M. Qaisi, Amanullah, Imran, Abdur Rauf, Shah Khalid, Mohd Abas Shah, Ekaterina Kozuharova, Devarajan Thangadurai, Jeyabalan Sangeetha, Shah Fahad, Moh'd Ali Wedyan, Sonia Sheoran, Pradeep Sharma, Garima Singroh, Wafa'a A. Al-Taisan, and ***Yousef M. Abu-Zaitoon***. ***Biological Control.*** **In:** *Developing Climate-Resilient Crops: Improving Global Food Security and Safety.* Sönmez, O., Saud, S., Wang, D., Wu, C., Adnan, M., and Turan, V. 2021. CRC Press. Taylor & Francis. https://doi.org/10.1201/9781003109037

14. Abdel Rahman Mohammad Al-Tawaha, Sonia Sheoran, Pradeep Sharma, Garima Singroh, ***Yousef M Abu-Zaitoon***, Laila Trioui, Mohammad Ali Shariati, Huma Naz, Abdel Razzaq Al-Tawaha, Ali M Qaisi, Abdur Rauf, Shah Khalid, Mohd Abas Shah, Devarajan Thangadurai, Jeyabalan Sangeetha, Shah Fahad, Khalid Fandi. ***Biological***

Nitrogen Fixation in a Changing Climate. **In*:*** *Sustainable Soil and Land Management and Climate Change.* Shah Fahad, Osman Sönmez, Shah Saud, Depeng Wang, Chao Wu, Muhammad Adnan, Veysel Turan. 2021. CRC Press. Taylor & Francis. https://doi.org/10.1201/9781003108894.

15. Khalid Ghazi Fandi, Fouad A. Almomani, Massadeh, M., ***Yousef Abu-Zaitoon***, and Abdel Rahman Mohammad Said Al-Tawaha. Pectolytic, cellulytic enzyme activity and RAPD polymorphism detection of Macrophomina phaseolina isolated from infected plants in Jordan. ***Research on Crops***. 2020, 21(4).

16. Imran Amanullah, Abdel Rahman Mohammad Said Al-Tawaha, Abdel Razzaq Al Tawaha, Ali M. Qaisi, Devarajan Thangadurai, Jeyabalan Sangeetha, Saher Islam, ***Yousef M. Abu-Zaitoon***, Wafa'a A. Al-Taisan, Alla Aleksanyan, Ezz Al-Dein Al-Ramamneh. ***Micronutrient Biofortification in Rice for Better Quality.*** **In*:*** *Rice Research for Quality Improvement: Genomics and Genetic Engineering. Springer*, Singapore. https://doi.org/10.1007/978-981-15-5337-0_28. 2020: 639-65.

17. Abdel Rahman M. Al-Tawaha1, Nusrat Jahan, Nidal Odat, Ezz Al-Dein Al-Ramamneh, Abdel Razzaq Al-Tawaha, ***Yousef M. Abu-Zaitoon***, Khalid Fandi, Mohammad Alhawatema, Amanullah, Abdur Rauf, Mohammad Wedyan, Mohammad Ali Shariati, Ali M. Qaisi, Imran, Khaled Tawaha, Munir Turk, Samia Khanum. Growth, Yield and Biochemical Responses in Barley to DAP and Chitosan Application Under Water Stress. ***Journal of Ecological Engineering***. 2020, 21(6): 86–93

18. Abdel Rahman M. Al- Tawaha, Nusrat Jahan, Ezz Al-Dein Al-Ramamneh, Abdel Razzaq Al Tawaha, ***Yousef M Abu-Zaitoon***, Amanullah, Shah Khalid, Imran, H. Nasri and Swapnil Ganesh Sanmukh. Actinomycetes as Means of Increasing Yield and Yield Components and Decreasing the Disease Incidence of Lentil Plants. In ***abstracts book of national conference*** on beneficial microbes & sustainable crop production. Editors Dr. Amanullah and Mr. Shah Khalid. Organized by department of agronomy, the university of agriculture. Pakistan, Peshawar. 2020, 19th –20th Feb.

19. Ahmed Abu-Zaiton, Mahmoud Abu-Samak, Sawsan Oran, Israa Yousef, ***Yousef M. Abu-Zaitoon*** and Ayah Algaramseh. Hypoglycemic, Hypolipidimic and Protective Effects of Arbutus andrachne Extract in Streptozotocin Induced Diabetic Rats. ***Research Journal of Biological Sciences***. 2019, 14 (3-6): 56-60

20. ***Yousef M. Abu-Zaitoon***, Abdel Rahman Al Tawaha, Sulaiman M. Alnaimat, Ibrahim M. Al-Rawashdeh, Ahmed Abu-Zaiton and Ahmad Khalifat. Investigation of The Potential Role of Aldehyde Oxidase in Indole-3-Acetic Acid Synthesis of Developing Rice Grains. ***Plant Cell Biotechnology and Molecular Biology***. 2019, 20 (1&2):6–13.

21. Ahmed Abu-zaiton, Sohail Alsohaili, ***Yousef Abu-zaitoon***, BahaTrad and Ammar Wardat. Anti-hyperglycemic Effect and Liver Enzymes Activity of Varthemia iphionoides essential Oil in Diabetic Rats. ***International Journal of Advanced Biotechnology and Research*** (IJABR). 2018, 9(4): 549-554.

22. Sulaiman Alnaimat, Saleem Aladaileh, Saqer Abu Shattal, Ali Al-asoufi, Hussein Nassarat, and ***Yousef Abu-Zaitoon***. Isolation and Molecular Characterization of a Newly Isolated Strain of Bacillus sp. HMB8, With a Distinct Antagonistic Potential Against Listeria monocytogenes and Some Other Food Spoilage Pathogens. ***Jordan Journal of Biological Sciences***. 2017, 10(2): 135-142.

23. Ibrahim M. Al-Rawashdeh, Abdel Rahman Al Tawaha, ***Yousef Abu-Zaitoon***, Ahmed NM, Jawasreh KI. Evaluation of the Genetic Variability among a Wild Peganum Harmala L. Populations with RAPD-PCR. ***MO J Biol Med***. 2017, 1(3): 00015. DOI: 10.15406/mojbm.

24. Abdel Rahman Al Tawaha, Munir Turk, ***Yousef Abu-Zaitoon***, Saleem Aladaileh, Ibrahim M. Al-Rawashdeh, Sulaiman Alnaimat, Abdel Rahman Al Tawaha, M. H. Alu'datt and Moh'd Ali Wedyan. Plants adaptation to drought environment. ***Bulgarian Journal of Agricultural Science***. 2017, 23 (3): 381–388.

25. ***Yousef Abu-Zaitoon***, Saleem Aladaileh, and Abdel Rahman Al Tawaha. Contribution of the IAM Pathway to IAA Pool in Developing Rice Grains. ***Brazilian Archives of Biology and Technology***. 2016, 59: e16150677.

26. ***Yousef M. Abu-Zaitoon***. Identification and characterization of putative conserved IAM-hydrolases in developing rice grains. ***African Journal of Biotechnology***. 2015, 14 (1):29–37.

27. ***Yousef M. Abu-Zaitoon***. Phylogenetic Analysis of Putative Genes Involved in the Tryptophan-Dependent Pathway of Auxin Biosynthesis in Rice. ***Applied Biochemistry and Biotechnology.*** 2014, 172 (8):2480–2495.

28. Sarah Russell French, ***Yousef Abu-Zaitoon***, Md. Myn Uddin, Karina Bennett and Heather M. Nonhebel. Auxin and Cell Wall Invertase Related Signaling during Rice Grain Development. ***Plants***. 2014, 3(1): 95-112.

29. ***Yousef M. Abu-Zaitoon***, Karina Bennett, Jennifer Normanly, Heather M. Nonhebel. A large increase in IAA during development of rice grains correlates with expression of tryptophan aminotransferase OsTAR1 and a grain-specific YUCCA. ***Physiologia Plantarum***. 2012, 146 (4): 487–499.

30. ***Yousef M. Abu-Zaitoon*** and Abdul-Karim Sallal. Ecological and physiological studies of symbiotic nitrogen fixing microorganisms in non leguminous plants. ***African Journal of Microbiology Research***. 2012, 6(15):3656-3661.

Research Gate): https://www.researchgate.net/profile/Yousef-Abu-Zaitoon, *Research Interest Score:* 317.7, *Citations:* 200, *h-index:* 5

(Google Scholar): https://scholar.google.com/citations?user=kG_qG2wAAAAJ, *Citation*:225, *h-index:*5 *Publication Range:* 2012-2023

(Scopus): https://www.scopus.com/authid/detail.uri?authorId=55256158500, *Documents:* 11, *Citation*: 144, *h-index:*5.