

# CV

## Personal Profile

Name : Prof. Abdullah Abdulaziz A. Alarfaj

Nationality : Saudi

## Contact Information

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## Employment History:

<b>2019-To date</b>	Professor, Department of Botany & Microbiology, KSU, Riyadh
<b>2015-2019:</b>	Associate Professor, Department of Botany & Microbiology, KSU, Riyadh
<b>2011-2015:</b>	Assistant Professor, Department of Botany & Microbiology, KSU, Riyadh
<b>2000-2006:</b>	Lecturer, Clinical Laboratory Department, Riyadh College of Health Sciences, Ministry of Health. Riyadh, Saudi Arabia
<b>1995-2000:</b>	Demonstrator, Clinical Laboratory Department, Riyadh College of Health Sciences, Ministry of Health. Riyadh, Saudi Arabia

## Academic Qualifications

Degree	Specification	Title of Thesis	Date
<b>Ph. D.</b>	Microbiology, College of Science, KSA.	Investigation of phenotypic and genetic basis of resistance mechanisms in multidrug resistant <i>Acinetobacter baumannii</i> in Saudi Arabia	2011
<b>M.Sc.</b>	Microbiology, College of Science, KSA.	Production and partial characterization of an extracellular pectinolytic enzymes from different isolates of yeasts	2003
<b>B.Sc.</b>	Biology, College of Science, KSA.		1993

## Areas of Research

Medical Bacteriology, Microbiology, Nano biotechnology, Antimicrobial agents.

## Principal duties

- Teaching of several microbiology and bacteriology courses.
- Scientific Research.
- Supervision of Students' projects.
  - Supervises/ed M.sc, and PhD students.

## Seminar/ Conferences:

- The commercialization and application of enzymes in biotechnology, 18-20  
march 2014 by informal life science, London, UK
- The clinical genome conference, 10-12 June 2014, via Cambridge healthtech

institute in San Francisco, USA

- 2<sup>nd</sup> international conference on bioscience, biochemistry and pharmaceutical science, 17-18 march 2013, Dubai, UAE
- International symposium on electron magnetic compatibility and EMC Europe, 16-22 August 2015, Dresden, Germany
- CPHI word wide conference, 7-9 October 2014, Paris, France

### Committees

- Member of the high committee of the department of Botany and Microbiology, college of science, King Saud University. -Current
- Head of the Graduate Studies and Scientific Research Committee at the College of Science, King Saud University-Current.
- Member of the Standing Committee for the Prevention of Chemical and Biological Pollution, King Saud University-2017-2023. Member of the recruitment of Teacher assistants' committee, Department of Botany and Microbiology, College of Science, King Saud University. 2018-2022.
- Head of the graduate studies admission committee, Department of Botany and Microbiology, College of Science, King Saud University. -2017-2019.
- Supervisor of the central laboratory of the department. Department of Botany and Microbiology, College of Science, King Saud University. 2018-2020.
- Head of the lab-classes supervising committee, Department of Botany and Microbiology, College of Science, King Saud University. 2016–2019.

## Publication

- Sarkar, R., Roy, M., Alam, M., Sarkar, A., Alarfaj, A. A., Alharbi, S. A., & Ansari, M. J. (2025). Physicochemical and antioxidant properties of Citrus macroptera peel pectin extracted by different methods and its impact on nutritional quality of strawberry jam during long-term storage. *Discover Food*, 5(1), 1-20.
- Anees, S. A., Mehmood, K., Raza, S. I. H., Pfautsch, S., Shah, M., Jamjareegulgarn, P., ... & Dube, T. (2025). Spatiotemporal analysis of surface Urban Heat Island intensity and the role of vegetation in six major Pakistani cities. *Ecological Informatics*, 85, 102986.
- Vivekanandhan, P., Alarfaj, A. A., Alfarraj, S., Ansari, M. J., & Kamaraj, C. (2025). Biocontrol toxicity of *Trichoderma harzianum* (Hypocreales: Hypocreaceae) derived chemical molecules against malarial mosquito *Anopheles stephensi* with molecular docking studies. *Biotechnology Letters*, 47(1), 1-19.
- Fariq, K., Malika, B., Fouzia, B., Nabil, T., Adil, M., Danish, S., ... & Alarfaj, A. A. (2025). Chemical composition and insecticidal activity of *Mentha rotundifolia* and *Chrysanthemum coronarium* essential oils against the tomato leaf miner, *Tuta absoluta*. *Scientific Reports*, 15(1), 1411.
- Khan, H., Khan, Z., Eman, I., Ahmad, I., Shah, T., Wang, G., ... & Ansari, M. J. (2025). Synthetic bacterial communities regulate polyamine metabolism and genes encoding antioxidant defense system to enhance arsenic tolerance of rice. *South African Journal of Botany*, 178, 148-161.
- Prasad, P., Parveen, S., Alarfaj, A. A., Hirad, A. H., Subarkhan, M. M., Dhanapal, S., & Kalaiarasi, G. (2025). Palladium (II) complexes containing andrographolide appended N, O heterocyclic chelators: Investigation of anti-oxidant, anti-cancer and apoptotic activities. *Journal of Inorganic Biochemistry*, 112830.
- Munusamy, M. A., Bharathi, M., Hirad, A. H., Alarfaj, A. A., Hussein-Al-Ali, S. H., Sampath, S., & Kudumba, A. (2025). An Escin-loaded Glutaraldehyde-Albumin nanoparticle system for enhancing anticancer activity on lung cancer A549 cells. *Results in Chemistry*, 102021.
- Hareem, M., Mahmood, S., Danish, S., Iqbal, R. K., Alarfaj, A. A., & Alharbi, S. A. (2025). Influence of indole acetic acid, arginine and mango fruit waste biochar on nutrients, chlorophyll contents and antioxidants of Fenugreek in salt affected soil. *Scientific Reports*, 15(1), 167.
- Indumathi, T., Suriyaprakash, J., Alarfaj, A. A., **Hirad, A. H.**, Jaganathan, R., & Mathanmohun, M. (2024). Synergistic effects of CuO/TiO<sub>2</sub>-chitosan-farnesol nanocomposites: Synthesis, characterization, antimicrobial, and anticancer activities on melanoma cells SK-MEL-3. *Journal of Basic Microbiology*, 64(2), 2300505.
- Ganapathy, K., Pandey, S. P., Bishnoi, S., Suriyaprakash, J., **Alarfaj, A. A.**, Hirad, A. H., & Thangavelu, I. (2024). Biocidal activities of nickel oxide nanoparticles modified by copper and manganese, synthesized by green process. *Applied Organometallic Chemistry*, 38(4), e7366.
- Boopathi, T. S., Suksom, S., Suriyaprakash, J., Hirad, A. H., **Alarfaj, A. A.**, & Thangavelu, I. (2024). Psidium guajava-mediated green synthesis of Fe-doped ZnO and Co-doped ZnO nanoparticles: a comprehensive study on characterization and biological applications. *Bioprocess and Biosystems Engineering*, 1-21.
- Elayappan, P. K., Kandasamy, K., Sasikumar, V., Bharathi, M., **Hirad, A. H.**, Alarfaj, A. A., ... & Thangavelu, I. (2024). Facile engineering of aptamer-coupled silk fibroin encapsulated myogenic gold nanocomposites: investigation of antiproliferative activity and

apoptosis induction. *Biotechnology Letters*, 1-15.

Rohit, M., Reji, R., Singh, H. N., Kumar, J. N., **Alarfaj, A. A.**, Praveen, B. M., & Nagaraju, G. (2024). Facile green synthesis of Ni<sub>3</sub>V<sub>2</sub>O<sub>8</sub> nanoparticles for efficient photocatalytic degradation of Rose Bengal dye under visible light irradiation. *Chemical Physics Letters*, 843, 141246.

Zhou, Y., Zhang, X., Guo, Y., **Alarfaj, A. A.**, & Liu, J. (2024). Eupatilin mitigates Gestational diabetes in streptozotocin-induced diabetic pregnant rats through the Regulation of inflammation and oxidative stress. *Heliyon*, 10(10).

Hou, X., Han, Y., Hirad, A. H., **Alarfaj, A. A.**, & Liu, L. (2024). N-Ethyl-N-Nitrosourea Induced Leukaemia in a Mouse Model: Protective Effect of Icaritin via Inhibition of IL-6/JAK2/STAT3 Pathway Causes Apoptosis. *Journal of Inflammation Research*, 777-790.

Arunachalam, S. J., Saravanan, R., Sathish, T., **Alarfaj, A. A.**, Giri, J., & Kumar, A. (2024). Enhancing mechanical performance of MWCNT filler with jute/kenaf/glass composite: a statistical optimization study using RSM and ANN. *Materials Technology*, 39(1), 2381156.

**Alarfaj, A. A.**, Hirad, A. H., Ravindran, B., & Narasimhamoorthi, S. P. (2023). Evaluation of anti-microbial activity and molecular docking of green synthesized copper oxide

- nanoparticle from aegle marmelos leaf extract. *Journal of Drug Delivery Science and Technology*, 87, 104851.
- Aslam, J., Shahzad, M. I., Ali, H. M., Ramzan, M., Hirad, A. H., **Alarfaj, A. A.**, & Danish10, S. (2023). Antioxidant and anti-inflammatory potentials of aerial and floral parts of *Neurada procumbens* extracts: In vitro and in vivo studies
- Saghrouchni, H., Barnossi, A. E., Mssillou, I., Lavkor, I., Ay, T., Kara, M., **Alarfaj A.**, Hirad, A., ... & Var, I. (2023). Potential of carvacrol as plant growth-promotor and green fungicide against fusarium wilt disease of perennial ryegrass. *Frontiers in Plant Science*, 14, 973207.
- Indumathi, T., Hirad, A. H., **Alarfaj, A. A.**, Kumar, E. R., & Chandrasekaran, K. (2023). Phytoextract-mediated synthesis of Cu doped NiO nanoparticle using cullon tomentosum plant extract with efficient antibacterial and anticancer property. *Ceramics International*, 49(19), 31829-31838.
- Xu, B., **Alarfaj, A. A.**, Hirad, A. H., Natarajan, N., Iyappan, P., Al Ali, H., & Hasan, S. (2023). Brassinin Exhibits Anti-Diabetic Activity against Streptozotocin-induced Diabetes Mellitus in Experimental Rats. *Indian Journal of Pharmaceutical Education & Research*, 57.
- Md, F., Hirad, A. H., & **Alarfaj, A. A.** (2023). Synergistic effect of coconut milk and water on synthesizing zinc oxide nanoparticles and its antibacterial properties. *Biomass Conversion and Biorefinery*, 1-17.
- Qian, L., Dawar, K., Ullah, I., Irfan, M., Zhang, Z., Mian, I. A., ... & **Alarfaj, A. A.** (2023). Zinc Foliar Application Mitigates Cadmium-Induced Growth Inhibition and Enhances Wheat Growth, Chlorophyll Contents, and Yield. *ACS omega*.
- Vyshnavi AM, H., Sankaran, S., Namboori PK, K., Venkidasamy, B., Hirad, A. H., **Alarfaj, A. A.**, & Vinayagam, R. (2023). In Silico Analysis of the Effect of *Hydrastis canadensis* on Controlling Breast Cancer. *Medicina*, 59(8), 1412.
- Alarfaj, A. A.**, Hirad, A. H., Munusamy, M. A., Kumar, S. S., & Higuchi, A. (2022). Human embryonic stem cells cultured on hydrogels grafted with extracellular matrix protein-derived peptides with polyethylene glycol joint nanosegments. *IET nanobiotechnology*, 16(9), 295-304.
- Saghrouchni, H., El Barnossi, A., Mssillou, I., Lavkor, I., Ay, T., Kara, M., **Alarfaj A.** & Var, I. (2023). Potential of carvacrol as plant growth-promotor and green fungicide against

fusarium wilt disease of perennial ryegrass. *Frontiers in Plant Science*, 14.

- Thakur, P., Thakur, S., Kumari, P., Shandilya, M., Sharma, S., Poczai, P., **Alarfaj A.** & Sayyed, R. Z. (2022). Nano-insecticide: synthesis, characterization, and evaluation of insecticidal activity of ZnO NPs against *Spodoptera litura* and *Macrosiphum euphorbiae*. *Applied Nanoscience*, 12(12), 3835-3850.
- Ramprasath, R., Pragasan, L. A., Manikandan, V., Sudha, S., Cholan, S., **Alarfaj, A. A.**, ... & Sampath, S. (2022). Visible light photocatalytic and magnetic properties of V doped  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> (VFO) nanoparticles synthesized by polyol assisted hydrothermal method. *Chemosphere*, 307, 135575.
- Prasath Alais Surendhar, S., Ramkumar, G., Prasad, R., Pareek, P. K., Subbiah, R., **Alarfaj, A. A.**, ... & Raju, R. (2022). Prediction of *Escherichia coli* Bacterial and Coliforms on Plants through Artificial Neural Network. *Advances in Materials Science and Engineering*, 2022.
- Nirmaladevi, J., Vidhyalakshmi, M., Edwin, E. B., Venkateswaran, N., Avasthi, V., **Alarfaj, A. A.**, ... & Hailu, T. (2022). Deep Convolutional Neural Network Mechanism Assessment of COVID-19 Severity. *BioMed Research International*, 2022.
- Rao, P., Chennu, M. M., Vennila, T., Kosanam, S., Ponsudha, P., Suriyakrishnaan, K., **Alarfaj, A.**, ... & Selvam, N. (2022). Assessment of Bacterial Isolates from the Urine Specimens of Urinary Tract Infected Patient. *BioMed Research International*, 2022.
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- Sumaiya, K., Akino Mercy, C. S., Muralitharan, G., Hajinur Hirad, A., **Alarfaj, A. A.**, & Natarajaseenivasan, K. (2022). Assessment of serum macrophage migration inhibitory factor (MIF) as an early diagnostic marker of leptospirosis. *Frontiers in Cellular and Infection Microbiology*, 11, 1454.
- Gopinath, V., Kamath, S. M., Priyadarshini, S., Chik, Z., **Alarfaj, A. A.**, & Hirad, A. H. (2022). Multifunctional applications of natural polysaccharide starch and cellulose: An update on

recent advances. *Biomedicine & Pharmacotherapy*, 146, 112492.

- Tian, Z., Wang, C. K., Lin, F. L., Liu, Q., Wang, T., Sung, T. C., **Alarfaj A. A.**, & Higuchi, A. (2022). Effect of extracellular matrix proteins on the differentiation of human pluripotent stem cells into mesenchymal stem cells. *Journal of Materials Chemistry B*, 10(30), 5723-5732.
- Zhang, Y., Zhang, X., Zhang, L., **Alarfaj, A. A.**, Hirad, A. H., & Alsabri, A. E. (2021). Green formulation, chemical characterization, and antioxidant, cytotoxicity, and anti-human cervical cancer effects of vanadium nanoparticles: A pre-clinical study. *Arabian Journal of Chemistry*, 14(6), 103147.
- Sung, T. C., Heish, C. W., Lee, H. H. C., Hsu, J. Y., Wang, C. K., Wang, J. H., , **Alarfaj, A. A.**, & Higuchi, A. (2021). 3D culturing of human adipose-derived stem cells enhances their pluripotency and differentiation abilities. *Journal of Materials Science & Technology*, 63, 9-17.
- Alharbi, F. A., & **Alarfaj, A. A.** (2020). Green synthesis of silver nanoparticles from *Neurada procumbens* and its antibacterial activity against multi-drug resistant microbial pathogens. *Journal of King Saud University-Science*, 32(2), 1346-1352.
- Zhang, Y., Zhang, X., Zhang, L., **Alarfaj, A. A.**, Hirad, A. H., & Alsabri, A. E. (2021). Green formulation, chemical characterization, and antioxidant, cytotoxicity, and anti-human cervical cancer effects of vanadium nanoparticles: A pre-clinical study. *Arabian Journal of Chemistry*, 14(6), 103147.
- Liu, Z., Zhang, Z., Du, X., Liu, Y., **Alarfaj, A.**, Hirad, A., & Zhang, Z. (2021). Novel green synthesis of silver nanoparticles mediated by *Curcumae kwangsiensis* for anti-lung cancer activities: a preclinical trial study. *Archives of Medical Science*.
- Alghuthaymi, M., Alshehri, W. A., Al-Maary, K. S., Bahkali, N. A., AlKahtani, M. D., **Alarfaj, A. A.**, & Ameen, F. (2020). Mycotoxigenicity of *Fusarium* isolated from banana fruits: Combining phytopathological assays with toxin concentrations. *Journal of King Saud University-Science*, 32(2), 1482-1485.
- Adnan, A., Rakha, A., Ameen, F., **Alarfaj, A. A.**, Almansob, A., Wang, C. C., & Xing, J. (2020). Genetic structure and forensic characteristics of Saraiki population from Southern Punjab, Pakistan, revealed by 20 Y-chromosomal STRs. *International journal of legal medicine*, 134(3), 977-979.
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- Asghar, M., Ameen, F., Al-Nadhari, S., Waseem, A., YAqOOB, M., **Alarfaj, A. A.**, & Nabi, A. (2020). A Flow Injection Chemiluminescence Method for the Determination of Retinol in Pharmaceutical Formulations by Using Luminol-Diperiodatoargentate (III) Reaction. *Journal of Nutritional Science and Vitaminology*, 66(1), 10-18.
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- Sayed, R. Z., Wani, S. J., **Alarfaj, A. A.**, Syed, A., & El-Enshasy, H. A. (2020). Production, purification and evaluation of biodegradation potential of PHB depolymerase of *Stenotrophomonas* sp. RZS7. *PloS one*, 15(1), e0220095.
- Hu, X., Islam, S., Ameen, F., **Alarfaj, A. A.**, Murtaza, G., & Mannan, A. (2020). In vitro Screening of *Berberis lycium* Root Extract on HCT-116 and MCF-7 Cell Lines. *Indian Journal of Pharmaceutical Sciences*, 53-57.
- Chen, L. H., Sung, T. C., Lee, H. H. C., Higuchi, A., Su, H. C., Lin, K. J., ... & Munusamy, M. A. (2019). Xeno-free and feeder-free culture and differentiation of human embryonic stem cells on recombinant vitronectin-grafted hydrogels. *Biomaterials science*, 7(10), 4345-4362.
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