

CV

Personal Profile

Name : Prof. Abdullah Abdulaziz A. Alarfaj

Nationality : Saudi

Contact Information

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Employment History:

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

Academic Qualifications

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

Areas of Research

Medical Bacteriology, Microbiology, Nanobiotechnology, Antimicrobial agents.

Principal duties

- Teaching of several microbiology and bacteriology courses.
- Scientific Research.
- Supervision of Students' projects.

Supervision of graduate students

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

- 2nd 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

- Indumathi, T., Suriyaprakash, J., Alarfaj, A. A., **Hirad, A. H.**, Jaganathan, R., & Mathanmohun, M. (2024). Synergistic effects of CuO/TiO₂-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 Ni₃V₂O₈ 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 α -Fe₂O₃ (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. A.**, ... & Selvam, N. (2022). Assessment of Bacterial Isolates from the Urine Specimens of Urinary Tract Infected Patient. *BioMed Research International*, 2022.
- Hu, A., **Alarfaj, A. A.**, Hirad, A. H., Veeraraghavan, V. P., Surapaneni, K. M., Hussein-Al-Ali, S. H., ... & Elayappan, P. K. (2022). Chitosan-sodium alginate-polyethylene glycol-crocin nanocomposite treatment inhibits esophageal cancer KYSE-150 cell growth via inducing apoptotic cell death. *Arabian Journal of Chemistry*, 15(6), 103844.
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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.
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- 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*.
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- 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.
- Higuchi, A., Hirad, A. H., Kumar, S. S., Munusamy, M. A., & **Alarfaj, A. A.** (2020).

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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.

Yu, L., Lu, M., Zhang, W., **Alarfaj, A. A.**, Hirad, A. H., & Zhang, H. (2020). Ameliorative effect of Albizia chinensis synthesized ZnO-NPs on *Mycoplasma pneumoniae* infected pneumonia mice model. *Microbial Pathogenesis*, 141, 103960.

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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.

Alarfaj, A. A. (2019). Antibacterial Effect of Chitosan Nanoparticles against Food Spoilage Bacteria. *J Pure Appl Microbiol*, 13(2), 1273-1278.

Nagaraj, A., Munusamy, M. A., **Al-Arfaj, A. A.**, & Rajan, M. (2018). Functional ionic liquid-capped graphene quantum dots for chromium removal from chromium contaminated water. *Journal of Chemical & Engineering Data*, 64(2), 651-667.

Yuan, X., Praphakar, R. A., Munusamy, M. A., **Alarfaj, A. A.**, Kumar, S. S., & Rajan, M. (2019). Mucoadhesive guar gum hydrogel inter-connected chitosan-g-polycaprolactone micelles for rifampicin delivery. *Carbohydrate polymers*, 206, 1-10.

Higuchi, A., Kumar, S. S., Benelli, G., Ling, Q. D., Li, H. F., **Alarfaj, A. A.**, ... & Murugan, K. (2019). Biomaterials used in stem cell therapy for spinal cord injury. *Progress in Materials Science*, 103, 374-424.

Vinothini, K., Rajendran, N. K., Munusamy, M. A., **Alarfaj, A. A.**, & Rajan, M. (2019). Development of biotin molecule targeted cancer cell drug delivery of doxorubicin loaded

κ -carrageenan grafted graphene oxide nanocarrier. Materials Science and Engineering: C, 100, 676-687.

Gowri, M., Suganya, K., Latha, N., Murugan, M., Ahmed, M., **Alarfaj, A. A.**, & Rajan, M. (2018). Metal oxide nanoparticle-functionalized sebacic acid-grafted PHEAM nanocarriers for enriched activity of metronidazole against food borne bacteria: in vitro and in vivo study. New Journal of Chemistry, 42(22), 18437- 18447.

Murugan K, Suresh U, Panneerselvam C, Rajaganesh R, Roni M, Hwang JS, Sathishkumar K, Rajasekar A, Kumar S, **Alarfaj A.A**, Higuchi A. (2018). Managing wastes as green resources: cigarette butt-synthesized pesticides are highly toxic to malaria vectors with little impact on predatory copepods. Environmental Science and Pollution Research, 25(11), 10456-10470.

Benelli, G., Maggi, F., Pavela, R., Murugan, K., Govindarajan, M., Vaseeharan, B., ... **Alarfaj A.A**, & Youssefi, M. R. (2018). Mosquito control with green nanopesticides: towards the One Health approach? A review of non-target effects. Environmental Science and Pollution Research, 25(11), 10184-10206.

Murugan, K., Madhavan, J., Samidoss, C. M., Panneerselvam, C., Malathi, A., Rajasekar, A., ..., **Alarfaj A.A**,& Benelli, G. (2018). Bismuth Oxyiodide Nanoflakes Showed Toxicity Against the Malaria Vector Anopheles stephensi and In Vivo Antiplasmodial Activity. Journal of Cluster Science, 29(2), 337-344.

Murugan, K., Jaganathan, A., Rajaganesh, R., Suresh, U., Madhavan, J., Senthil- Nathan, S., ..., **Alarfaj A.A**, & Nicoletti, M. (2018). Poly (Styrene Sulfonate)/Poly (Allylamine Hydrochloride) Encapsulation of TiO₂ Nanoparticles Boosts Their Toxic and Repellent Activity Against Zika Virus Mosquito Vectors. Journal of Cluster Science, 29(1), 27-39.

Mickymaray, S., Alturaiki, W., Al-Aboody, M. S., Mariappan, P., Rajenderan, V., Alsagaby, S. A., ... & **Alarfajj, A. A.** (2018). Anti-bacterial Efficacy of Bacteriocin Produced by Marine *Bacillus subtilis* Against Clinically Important Extended Spectrum Beta-Lactamase Strains and Methicillin-Resistant *Staphylococcus aureus*. Health Sciences, 7(2), 75-83.

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Ismail Al Hazmi Mohamed, Ashgan Mohamed Hessain, **Abdullah Abdulaziz Al-Arfaj** and Ihab Mohamed Moussa. Molecular detection of *Salmonella enterica* serovars Typhimurium and Enteritidis in diarrheic calves. *Journal of Food, Agriculture & Environment* 2014, Vol. 12 (1): 192 - 194.

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