

Personal Profile

Name : Prof. Abdullah Abdulaziz A. Alarfaj

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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 <i>Acinetobacter baumannii</i> 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

Training

- Completed two months of training at King Khalid hospital laboratories in Riyadh (16 Nov- 15 Dec 2005)
- Completed two weeks course in the field of hospital infection control arranged by Swedish health care, Lund University, Sweden, April 17-28, 1995.

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 ISO Committee for the College of Science Laboratories. College of Science, King Saud University. -Current
- Member of the Graduate Studies and Scientific Research Committee at the College of Science, King Saud University-2017-2018.
- Member of the Standing Committee for the Prevention of Chemical and Biological Pollution, King Saud University-Current
- Member of Students' training committee, college of science, King Saud University. -Current

- Member of the recruitment of Teacher assistants' committee, Department of Botany and Microbiology, College of Science, King Saud University. - Current
- 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. –Current.

Publication

- Higuchi, A., Hirad, A. H., Kumar, S. S., Munusamy, M. A., & Alarfaj, A. A. (2020). Thermoresponsive surfaces designed for the proliferation and differentiation of human pluripotent stem cells. *Acta biomaterialia*, 116, 162-173.
- 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.
- Sung, T. C., Heish, C. W., Lee, H. H. C., Hsu, J. Y., Wang, C. K., Wang, J. H., ... & Alarfaj, A. A. (2020). 3D culturing of human adipose-derived stem cells enhances their pluripotency and differentiation abilities. *Journal of Materials Science & Technology*.
- 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.
- 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.
- 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.

- Danjuma, L., Ling, M. P., Hamat, R. A., Higuchi, A., **Alarfaj, A. A.**, Benelli, G., ... & Subbiah, S. K. (2017). Genomic plasticity between human and mycobacterial DNA: a review. *Tuberculosis*, 107, 38-47.
- Kumaran, S. K., Bakar, M. F. A., Mohd-Padil, H., Mat-Sharani, S., Sakinah, S., Poorani, K., ..., **Alarfaj A.A.**, & Hamat, R. A. (2017). 3D modelling of the pathogenic *Leptospira* protein LipL32: A bioinformatics approach. *Acta tropica*, 176, 433-439.
- Praphakar, R. A., Munusamy, M. A., **Alarfaj, A. A.**, Kumar, S. S., & Rajan, M. (2017). Zn²⁺ cross-linked sodium alginate-g-allylamine-mannose polymeric carrier of rifampicin for macrophage targeting tuberculosis nanotherapy. *New Journal of Chemistry*, 41(19), 11324-11334.
- Munusamy, M. A., Suresh Kumar, S., Rajan, M., & **Alarfa, A. A.** (2017). Reducing indicator organism *Escherichia coli* in drinking water using chitosan nano coated pot system: an inexpensive technique. *Prog Biosci Bioeng*, 1(1), 36-43.
- Priya, S. P., Sakinah, S., Ling, M. P., Chee, H. Y., Higuchi, A., Hamat, R. A., ..., **Alarfaj A.A.**, & Al-Sabri, A. E. (2017). Micro-anatomical changes in major blood vessel caused by dengue virus (serotype 2) infection. *Acta tropica*, 171, 213-219.
- Kalimuthu, K., Panneerselvam, C., Chou, C., Tseng, L. C., Murugan, K., Tsai, K. H., ..., **Alarfaj A.A.**, & Benelli, G. (2017). Control of dengue and Zika virus vector *Aedes aegypti* using the predatory copepod *Megacyclops formosanus*: synergy with *Hedychium coronarium*-synthesized silver nanoparticles and related histological changes in targeted mosquitoes. *Process Safety and Environmental Protection*, 109, 82-96.
- Sujitha, V., Murugan, K., Dinesh, D., Pandiyan, A., Aruliah, R., Hwang, J. S., ... & **Alarfaj, A. A.** (2017). Green-synthesized CdS nano-pesticides: toxicity on young instars of malaria vectors and impact on enzymatic activities of the non-target mud crab *Scylla serrata*. *Aquatic toxicology*, 188, 100-108.
- Sakinah, S., Priya, S. P., Kumari, S., Amira, F., Poorani, K., Alsaedy, H., ..., **Alarfaj A.A.**, & Munusamy, M. A. (2017). Impact of dengue virus (serotype DENV-2) infection on liver of BALB/c mice: A histopathological analysis. *Tissue and Cell*, 49(1), 86-94.

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Pin-Yu Wang, Henry Hsin-chung Lee, Akon Higuchi, Qing-Dong Ling, Hong-Ren Lin, Hsin-Fen Li, S. Suresh Kumar, Yung Chang, **Abdullah A. Alarfaj**, Murugan A. Munusamy, Da-Chung Chen, Shih-Tien Hsu, Han-Chow Wang, Hung-Yi Hsiaom and Gwo-Jang Wun (2015). Pluripotency maintenance of amniotic fluid-derived stem cells cultured on biomaterials **J. Mater. Chem. B**, , 3, 3858

Ihab Mohamed Moussa, Ashgan Mohamed Hessain, Mustafa Abudo Gassem, **Abdullah Abdulaziz Al-Arfaj** and Ismail Al Hazmi Mohamed. Genotyping of *Salmonella enterica* collected from poultry farms located in Cairo, Egypt by Multiplex-PCR. *Journal of Food, Agriculture & Environment* 2014; Vol.12 (1): 195 - 198.

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.

Ihab Mohamed Moussa, Yosra Samy Aleslamboly, **Abdullah Abdulaziz Al-Arfaj**. Molecular characterization of *Salmonella* virulence genes isolated from different sources relevant to human health. *Journal of Food, Agriculture & Environment* 2013, Vol.11 (2): 197-201.

- Abdullah A. Al-Arfaj**, A. M. Murugan, Arunachalam Chinnathambi and M. I. Al-Hazmi. Cost-effective bentonite clayed pyramid technologies for household fruits and vegetables storage. *Journal of Food, Agriculture & Environment* 2013; Vol.11 (2): 175-180.
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- Abdullah A. Al-Arfaj**, Khalid A. A. Abdelrahim, Sobhy M Yakout and Sherif, H. Abd-Abrahim³ Rapid mini-prep isolation of high quality small and large plasmids from phytopathogenic Gram negative bacteria. *Afr. J. Microbiol. Res.*
- Abdullah A. Al-Arfaj**, Ashgan M. Hessian, Al-Doss, A. Abdullaha, Mohamed, I. AlHazmi and Ihab M. Moussa Molecular Identification of the False Negative Mycoplasma Isolates from Bovine Mastitis Infections. *Journal of Pure and Applied Microbiology*. 2013, Vol. 7(3).
- Basheer A. Al-Sum, **Abdullah A. Al-Arfaj**. Antimicrobial activity of the aqueous extract of mint plant. *Science Journal of Clinical Medicine*. 2013; 2(3): 110-113.
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- Mohamed Al-Hazmi, **Abdullah Al-Arfaj**, Ashgan Mostafa., and Moussa Ihab. Molecular Detection of *Salmonella enteric* Serovar *Enteritidis* in Chicken- Related Samples Collected from Egypt. *Life Science Journal*; 2013; 10(3).
- Ashgan M. Hessian, **Abdullah A. Al-Arfaj** and Moussa I. Mohamed. Molecular typing of four major toxins of *Clostridium perfringens* recovered from Egypt. *Journal of Food, Agriculture & Environment* 2013, Vol.11 (1): 151 - 155.
- Ashgan M. Hessian, **Abdullah A. Al-Arfaj**, Mohamed I. Al-Hazmi, Hemeg A. Hassan and Moussa I. Mohamed. Preparation of the Immunoglobulin Y (IgY- antibodies) against *SaudiEchis carinatus* Snake Venom. *Journal of Pure and Applied Microbiology*, Nov. 2013. Vol. 7(Spl. Edn.), p. 325-331.

- Ashgan M. Hessain, **Abdullah A. Al-Arfaj**, Moussa I. Mohamed and Mohamed I. AlHazmi. Phylogenetic Relationships of Escherichia coli Isolates Associated with Bovine Fecal and Milk samples. 2013; Vol. 7(Spl. Edn.), p. 01-12.
- Moussa I. Mohamed, Ashgan M. Hessain. Dalia K. Ismail, **Abdullah A. Al-Arfaj** and Hemeg H.A. Molecular Detection and Characterization of Shiga Toxogenic Escherichia coli Associated with Dairy Product. Journal of Pure and Applied Microbiology, 2013. Vol.7(Spl. Edn.), p. 441-445.
- Rajana M., V. Raja, **Abdullah A. Al-Arfaj**, Muruganb A.M.. Hyaluronidase enzyme core-5-fluorouracil-loaded chitosan-PEG-gelatin polymer nanocomposites as targeted and controlled drug delivery vehicles. International Journal of Pharmaceutics 453, (2013), 514– 522.
- Abdullah A. Al-Arfaj**, Basheer A. Al-Sum and Omar H. M. Shair. Characterization of Bacteriophages as Indicators of Bacterial Contamination in Marketed Leafy Vegetables From Riyadh, Saudi Arabia. Journal of Pure And Applied Microbiology, December 2012. Vol. 6(4), p. 1753-1757.
- Ashraf A. Mostafa, A.N. Al-Rahmah, Ahmed Abdel-Megeed, Essam Nageh Sholkamy, **Abdullah A. Al-Arfaj** and Mohamed S. El-shikh. Fungitoxic Properties of Some Plant Extracts Against Tomato Phytopathogenic Fungi. Journal of Pure and Applied Microbiology, December 2012; Vol. 6(4), p. 1889-1898.
- Essam Nageh Sholkamy, Hesham El-Komy, **Abdullah A. Al-Arfaj**, Ahmed Abdel-Megeed, Ashraf A. Mostafa. Potential role of Nostoc muscorum and Nostoc rivulare as biofertilizers for the enhancement of maize growth under different doses of n-fertilizer. African Journal of Microbiology Research 2012; Vol. 6(48), pp. 7435-7448.
- Ihab M. Moussa, Ashgan M. Hessian, Abdulaziz M. Aleisa, **Abdullah A. Al-Arfaj**, Ounier M. Salem-Bekhit, Salim A. AlRejai, Protective efficacy of immunoglobulins Y prepared against Cerastes cerastes snake venom in the Kingdom of Saudi Arabia. Saudi Med J. 2012; Vol. 33 (8).
- Moussa I. M., Ashgan M. H., Abdulaziz M. Aleisa, **Abdullah A. Al-Arfaj** and Salim A. I. Rejaie. Evaluation of the protective efficacy of immunoglobulin Y (IgY-

antibodies) prepared against *Walterinnesia aegyptia* snake venom in Saudi Arabia. African Journal of Biotechnology 2012, Vol. 11(72), pp. 13726-13731.

Selim S. A., Mousa W. M., Mohamed K. F. Ashgan M. H., **Al-Arafaj A. A.** and Moussa I. M. Evaluation of the synergistic haemolytic activity of phospholipase D produced by *Corynebacterium pseudotuberculosis*. African Journal of Microbiology Research 2012; Vol. 6(46), pp. 7306-7313.

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