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## Dr. Ali Akbar

### HEC Approved Supervisor

<b>Research Areas</b>	Food Microbiology / Biotechnology, Environmental Microbiology, Nano-Biotechnology, Microbial Metabolites/Enzymes.
<b>Research Interests</b>	Food safety, Biopreservation/Protective culturing, Active packaging, Novel antimicrobials, Nanofoods, Extremophiles and Microbial interaction.

### Selected Publication

#### Publications (Journal)

1. Sareen Fatima, Ali Akbar, Muhammad Irfan, Muhammad Shafee, Amjad Ali, Zaara Ishaq, Syed Kashif Raza, Abdul Samad, Mohammad Y. Alshahrani, Syed Shah Hassan (2023) Virulence factors and antimicrobial resistance of Uropathogenic *Escherichia coli* EQ101 (UPEC) isolated from UTI patient in Quetta-Balochistan, Pakistan. *Biomed Research International*, Vol 2023 Article ID 7278070.
2. Malik Y., Ackakzai W.M., Mustafa S., Saddozai S., Akbar A. (2023) Accumulation of heavy metals and detection of resistant associated genes in *Pseudomonas aeruginosa* in an edible catfish (*Wallago attu*) from Pat Feeder Canal, Pakistan. *Iranian Journal of Fisheries Sciences*, 22(3) 602-614.
3. **Akbar A.**, Gul G., Hussain N., Al Haddad AHI., et al., (2023) High throughput Biochemical Profiling, and Functional potential analysis for valorization of Grape peduncles. *Scientific Reports*, 13:8328, <https://doi.org/10.1038/s41598-023-34893-3>
4. Fatima S, Ishaq Z, Irfan M., AlAsmari AF, Achakzai JK, Zaheer T, Ali A, **Akbar A.** (2023) Whole-Genome sequencing of MDR *Salmonella typhi* clinical strains isolated from Balochistan, Pakistan. *Frontiers in Public Health*, DOI: 10.3389/fpubh.2023.1151805.
5. Sharifi-Rad J., Iqbal MJ., Javed Z., Sadia H, Mehmood S., **Akbar A.**, Zahid B. et al., (2023) Clinical applications of targeted therapy with nanocomposite delivery systems in cancer: Emphasis on miR34a regulation. *Cancer Cell International*, 23:84, <https://doi.org/10.1186/s12935-023-02929-3>
6. Kainat F, Ali A, **Akbar A.**, Masih R, Mehnaz S, Sadiq MB. (2023) Ultrasonic extraction of phenolic compounds from eggplant peel and formulation of eggplant peel extract enriched ice-cream. *Journal of Food Quality* Vol. 2023 | Article ID 3267119 | <https://doi.org/10.1155/2023/3267119>
7. **Akbar A.**, Gul Z., Chein SH., Sadiq MB. (2023) Investigation of anti-inflammatory properties, phytochemical constituents, antioxidant, and antimicrobial potential of whole plant ethanolic extract of *Achillea santolinoides* subsp. *wilhelmsii* (K. Koch) Greuter of Balochistan. *Oxidative Medicine and Cellular Longevity*, Vol. 2023, Article ID 2567333 | <https://doi.org/10.1155/2023/2567333>

8. Gul Z., **Akbar A.**, Naseem M, Achakzai JK, Rehman ZU, Khan NA. (2023) Phytonutrient and antinutrient components profiling of *Berberis baluchistanica* Ahrendt bark and leaves. *Journal of The King Saud University Science*, 35: 102517
9. Muhammad J, Rabbani M, Sheikh AA, Rabaan AA, Khan A, Haq IU, Ghori MT, Khan SA, **Akbar A.** (2023) Molecular detection of *Mycoplasma gallisepticum* in different poultry breeds of Abbottabad and Rawalpindi, Pakistan. *Brazilian Journal of Biology*, (83): e246514
10. Rashid N, Shafi M, Iqbal S, Samad A, Khan SA, Hasni MS, Rehman ZU,...., **Akbar A.** (2023) Enterotoxigenic methicillin resistant *Staphylococcus aureus* contamination in salted fish from Gwadar Balochistan. *Brazilian Journal of Biology*, (83): e247701
11. Khan NA., Khan K., Khan RU., Khan H., Khan R., Bezabih M., **Akbar A.** (2022) Effect of supplementation of oilseeds co-products on production performance and fatty acids composition of beetal goats. *Tropical Animal Health and Production*, 54:407 <https://doi.org/10.1007/s11250-022-03409-y>
12. Jiang M, Ma Y, Khan N, Khan MZ, **Akbar A.**, Khan RU, Kamran M, Khan NA. (2022) Effect of spring maize genotypes on fermentation and nutritional value of whole plant maize silage in Northern Pakistan. *Fermentation*, 8(11): 587 <https://doi.org/10.3390/fermentation8110587>
13. **Akbar A.**, Naeem W., Liaqat F., Sadiq MB., Sahfee M., Gul Z., Khan SA., et al., (2022) Hospital acquired pathogenic *Escherichia coli* from clinical and hospital water samples of Quetta Balochistan. *Journal of Tropical Medicine*, Volume 2022, Article ID 6495044, 8 pages <https://doi.org/10.1155/2022/6495044>
14. **Akbar A.**, Gul Z., Aziz S., Sadiq MB., Achakzai JK, et al., (2022) Bio-functional potential and biochemical properties of propolis collected from different regions of Balochistan Province of Pakistan. *Oxidative Medicine and Cellular Longevity*, Vol. 2022, Article ID 7585406, 14 pages <https://doi.org/10.1155/2022/7585406>
15. Kamran K, **Akbar A.**, Naseem M, Samad A, Samiullah, Achakzai JK, Rehman ZU, Sajid MS, Ali A. (2022) Participatory appraisal for healthcare and welfare management strategies of donkeys (*Equus asinus*) in Balochistan, Pakistan. *Front. Vet. Sci.* 9:1005079. <http://doi:10.3389/fvets.2022.1005079>
16. Jawad M, Ali M, Qasim S, Akbar A, Khan NA, Sadiq MB (2022) Determination of phenolic compounds and bioactive potential of plum (*Prunus salicina*) peel extract obtained by ultrasound assisted extraction. *Biomed Research International*, Article ID 7787958
17. Gul Z, Akbar A, Ali I, Muhammad J, Rehman ZU, Bano A, Samad A, Amjad Khan A, Samiullah, Leghari SK, Chein SH, Rabaan AA. (2022) High throughput screening for bioactive components of *Berberis baluchistanica* Ahrendt root and their functional potential assessment. *Biomed Research International*, Article ID 1746116
18. Rabaan AA, Mutair AA, Alhumaid S, Garout M, Alsubki RA, Alshahrani FS, Alfouzan WA, Alestad JH, Alsaleh AE, Al-Mozaini MA, Koritala T, Alotaibi S, Temsah M-H, **Akbar A.**, et al. (2022) Updates on measles incidence and eradication:

- Emphasis on the immunological aspects of measles infection. *Medicina*, 58(5), 680; <https://doi.org/10.3390/medicina58050680>
19. **Akbar A**, Khan GI, Shafee M, Samad A, Masood H, Khan SA (2022) Biocontrol of aflatoxin through biodegradation by using environment friendly microbes. *Polish Journal of Environmental Studies*, 31(5):4985-4988
  20. Ishaqzai SQ, Kamran K, Sadique S, Khan N, Kousar S, Iqbal A, **Akbar A**. (2022) Medicinal Plants Status, Habitat Degradation Factors and Rehabilitation Possibilities in Sra Ghurgai Protected Area Takatu Mountain Range Quetta Pakistan. *Polish Journal of Environmental Studies*, 31(6): 5047-5056
  21. Aziz S, **Akbar A**, Gul Z, Sadiq MB, Achakzai JK, Khan NA, Samad A, Rehman ZU, Ali I. (2022) Functional potential and chemical profile analysis of propolis oil extracted from propolis of Balochistan. *Journal of Food Quality*. Article ID 4782813 | <https://doi.org/10.1155/2022/4782813>
  22. Khan A., Mushtaq MH., Muhammad J., Sule A., Akbar A., Junaid K., et al., (2022) Household COVID-19 secondary attack rate and associated determinants in Pakistan; Aretrospective cohort study. *PLoS One*, 17(4), e0266277. <https://doi.org/10.1371/journal.pone.0266277>
  23. Gul Z., **Akbar A.**, Leghari SK., Kakar AUR., Khan N, Muhammad J., Nazir Ahmad Khan NA., Rehman ZU, Kamal R., Ali I. (2022) Daily dose standardization based on essential and nonessential trace element presence in *Berberis baluchistanica* Ahrendt bark, leaf, and root. *Biomed Research International*, Article ID 6811613
  24. Gul Z, **Akbar A.**, Leghari SK, (2022) Elucidating therapeutic and biological potential of *Berberis baluchistanica* Ahrendt bark, leaves and roots extracts. *Frontiers in Microbiology*, Vol. 13, Article 823673 <https://doi.org/10.3389/fmicb.2022.823673>
  25. Haleem A., Hamid Ullah H., Samiullah, **Akbar A.**, Ahmad N., Ellahi M., Nawaz M. (2022) Synthesis, Biological Activities of Morita Baylis Hillman Adducts and Synthesis of Their Oxime. *Pharmaceutical Chemistry Journal*, 56(2): 164-169
  26. Zil-e-Huma, Tareen AM, Samad A., Mustafa MZ, Maryam M, Rizwan S, **Akbar A**. (2022) Immunogenic Protein profiling of pathogenic *Escherichia coli* strains isolated from infants with diarrhea in Quetta Balochistan. *Journal of King Saud University – Science*, 34(3): 101883. <https://doi.org/10.1016/j.jksus.2022.101883>
  27. Azhar F-U-A., Mehnaz S, **Akbar A**, Sadiq MB, (2022) Probiotic characterization of *Enterococcus* spp. isolated from raw goat milk. *Brazilian Archives of Biology and Technology*. 65: e22210091
  28. Ehtasham L, Sherani SH, Younas K, Izbel U, Khan AH, Bahadur A, **Akbar A**. (2022) A Review on status of Environmental Impact Assessment in Pakistan. *Integrated Environmental Assessment and Management*, 18(2): 314-318
  29. **Akbar A**, Majeed FA, Sadiq MB, Khan SA, Rabaan AA. (2022) Mycotoxin occurrence in food commodities, their associated hazards and control strategies. *Journal of the Hellenic Veterinary Medical Society*, 73(1): 3853–3866

30. Khan SA, **Akbar A**, Aslam M, Shafee M, Samad A, Rehman FU, Mehmood K, Ali I. (2022) Biotechnologically Potent Halophilic Fungal Biodiversity from Mangroves Ecosystem of Lasbela Balochistan. *Pakistan Journal of Botany*, 54(3): 1103-1112 DOI: [http://dx.doi.org/10.30848/PJB2022-3\(34\)](http://dx.doi.org/10.30848/PJB2022-3(34))
31. Ahmed MH, Akbar A, Sadiq MB. (2021) Cross sectional study on food safety knowledge, attitudes, and practices of food handlers in Lahore district, Pakistan. *Heliyon*, 7(11): e08420
32. Arbab S, Ullah H, Wang W, Zhang J, **Akbar A**, Li K. (2021) Isolation and identification of infection causing bacteria in Dairy Animals and determination of their antibiogram. *Journal of Food Quality*. Vol. 2021, Article ID 2958304
33. Nosheena, Samad A, Naeem M, Jamil H, Farooq P, Sadiq MB, Tariq H, Bugti FS, **Akbar A**. (2021) Presence of *Listeria* species in Fresh Salad Products collected from Quetta Pakistan. *Fresenius Environmental Bulletin*, 31(1A): 1234-1239
34. Shughla., Samad A., Naeem M., Ali H., Sadiq MB., Achakzai MS., Kakar Z., **Akbar A**. (2021) Antibacterial Effects of Cinnamon Extract, Clove Oil and Antibiotics against *Helicobacter pylori* Isolated from Stomach Biopsies. *Brazilian Archives of Biology and Technology*. 64: e21210089.
35. Shah, SIA., Tipu, MY., Aslam, A., Khan, AU., Shafee, M., Khan, SA., Khan, NU., **Akbar, A**. (2021) Elucidating antiviral activity of *Curcuma longa* against H9 N2 influenza virus using embryonated chicken egg model. *Tropical Biomedicine*. 38(3): 353-359
36. Javed Z, Khan K, Herrera-Bravo J, Naeem S, Iqbal MJ, Sadia H, Qaar Raza Qadri QR, Raza S, Irshad A, **Akbar A**, Reiner Z, Al-Harrasi A, Al-Rawahi A, Sharifi-Rad J. (2021) Genistein as a Regulator of Signaling Pathways and MicroRNAs in Different Types of Cancers and Development of an Efficient Delivery System: One Step Closer to Personalized Medicine. *Cancer Cell International*, 21:388.
37. Iqbal S, Hashmi I, **Akbar A**, Ullah H, Panezai H, Zahoor S, Khan A, Majid S. (2021) Chemical and biological food safety threats associated with fresh juices consumed in Capital territory Islamabad Pakistan. *Progress in Nutrition*, 23(4):2021144
38. Manzoor M, Gul I, Bibi S, **Akbar A**, Ali I, Gul S, Rehman GB. (2021) Harvest Yield Index of Pea Plants and Soil Properties as Influenced by Two Years Amendment of Biocarbons under Municipal Wastewater Irrigation in Arid Climate. *Applied Ecology and Environmental Research*, 19(3):2111-2132.
39. Fatima S., Liaqat F., **Akbar A.**, Sahfee M, Samad A. et al., (2021) Virulent and multidrug resistant *Klebsiella pneumoniae* from clinical samples in Balochistan. *International Wound Journal*, 18:510–518, DOI: 10.1111/iwj.13550
40. Jamil H, Samad A, Ali H, Naeem M..... **Akbar A**. (2021) Molecular typing of *Clostridium perfringens* and *Clostridium difficile* from salad and drinking water of Quetta. *Fresenius Environmental Bulletin*, 30(04A):4300-4306
41. Majeed FA., **Akbar A.**, Shafee M., Sadia H., Iqbal S, Phadungchob B, Ishaq G., Khan SA. (2021) Detection of Mycotoxigenic Fungi and Mycotoxins in Poultry Feed of

Balochistan Pakistan. *Journal of the Hellenic Veterinary Medical Society*. 72(1), 2741-2746

42. Rasheed H., Iqbal S., Ullah H., **Akbar A.**, et al., (2020) Analysis of heavy metals as toxic elements in cosmetics available at local markets of Quetta, Balochistan Pakistan. *International Journal of Environmental Analytical Chemistry* (GEAC), 1-14. <https://doi.org/10.1080/03067319.2020.1850707>
43. Abdul MK, Muhammad AP, Achakzai JK, Muhammad A, **Akbar A.**, Shahabuddin K.-et al., (2020) In Vitro Leishmanicidal, Antibacterial, Antifungal, Anticancer (Mcf-7, 3t3 and Hela Cell Lines), and GC-MS analysis of *Perotis Hordeiformis* whole plant fraction of Butanol (PHWFB). *Applied Ecology and Environmental Research*, 18(5):6529-6537
44. Khan I, Rehman GB, Gul S, Ahmad S, Agha Waqar, Ali I, **Akbar A.** (2020) Litter decay in rangeland sites with varying history of human disturbance: a study with Hazargangi Chiltan mountain. *Journal of Mountain Science*, (17):898-906
45. Achakzai JK, Panezai MA, Akhtar B, Kakar S, **Akbar A.** et al., (2020) In Vitro Anti-Inflammatory, Anticancer (MCF-7, 3T3, and HeLa Cell Lines), and Brine Shrimp Lethality Assay and FTIR Analysis of the Extract and Fractions of the Whole Plant of *Heliotropium europaeum*. *Mediators of Inflammation*, Article ID 5056897, 14 pages, <https://doi.org/10.1155/2020/5056897>
46. Sadia H., Bhinder MA., Irshad A., Zahid B., Ahmad R., .... **Akbar A.**, (2020) Determination of expression profile of p53 gene in different grades of breast cancer tissues by real time PCR. *African Health Sciences*, 20 (3): 1273-83
47. Khan SA, **Akbar A.**, Permpornsakul P., Yanwisetpakdee B., Chen X., Ali I. (2020) Molecular Diversity of Halophilic Fungi Isolated from Mangroves Ecosystem of Miani Hor, Balochistan, Pakistan. *Pakistan Journal of Botany*, 52(5): 1823-1829
48. Achakzai JK., Panezai MA., Kakar AM., Akhtar B., **Akbar A.**, Kakar S., et al., (2019) In vitro antileishmanial activity and GC-MS analysis of whole plant hexane fraction of *Achillea wilhelmsii* (WHFAW). *Journal of Chemistry*, Article ID 5734257, 26 pages
49. Bano A., Permpornsakul P., **Akbar A.**, et al., (2019) Purification, Characterization of cellulase from obligate halophilic *Aspergillus flavus* and its prospects for bioethanol production. *Applied Biochemistry and Biotechnology*, (189): 1327–1337
50. Shafee M., Abbas F., Whitelaw A., Tow L.A., Ashraf M., Ahmad I., Patching S.G., Jabbar A., **Akbar A.**, Mustafa M.Z. (2019) Predominance of Central Asian Strain (ST 26) in *Mycobacterium tuberculosis* isolates from Balochistan by spoligotyping. *The Journal of Infection in Developing Countries*, 13(7):619-62
51. **Ali Akbar**, Sadiq M.B., Ali I., Anwar M., Muhammad N., Muhammad J., Shafee M., Ullah S., Gul Z., Qasim S., Ahmad S., Anal A.K. (2019). *Lactococcus lactis* subsp. *lactis* isolated from Fermented Milk Products and Its Antimicrobial Potential. *CyTA-Journal of Food*, 17(1): 214-220

52. Samad A, Abbas F., Ahmed Z., **Akbar A.**, Naeem M., Sadiq MB. et al., (2019) Prevalence, antimicrobial susceptibility and virulence of *Campylobacter jejuni* isolated from chicken meat. *Journal of Food Safety*, (39): e12600
53. Farida Behlil, Samiullah, Khan N., **Akbar A.**, et al., (2019) Phytochemical Screening and Antioxidant activity determination of some medicinally important plants of Balochistan. *Pakistan Journal of Botany*, 51(2): 601-608
54. **Ali Akbar**, Ali I., Samiullah, Ullah N., Rehman Z., Rehman SU. (2019) Functional, antioxidant, antimicrobial potential and food safety applications of *Curcuma longa* and *Cuminum cyminum*. *Pakistan Journal of Botany*, 51(3): 1129-1135
55. **Ali Akbar**, Sadiq MB., Ali I., Muhammad N., Rehman Z., et al., (2019) Synthesis and antimicrobial activity of zinc oxide nanoparticles against foodborne pathogens *Salmonella typhimurium* and *Staphylococcus aureus*. *Biocatalysis and Agricultural Biotechnology*, 17: 36–42
56. Leghari SK., **Akbar A.**, Qasim S., Ullah S., Israr M., Rohail H., Ahmed S., Mehmood K., Ali I. (2019) Estimation of Anticipated Performance Index (API) and Air Pollution Tolerance Index (APTII) of Some Trees and Ornamental Plant Species for the Construction of Greenbelts. *Polish Journal of Environmental Studies*, 28(3): 1-11
57. Muhammad N., Hussain M, Ullah W, Khan TA., Ali S, **Akbar A.**, et al., (2018) Biochar for sustainable soil and environment: A comprehensive review. *Arabian Journal of Geosciences*, 11:731
58. Najma B, Kasi AK., Kasi JK., **Akbar A.**, Bokhari SMA., Stroe IRC. (2018) ZnO/AAO Photocatalytic Membranes for Efficient Water Disinfection: Synthesis, Characterization and Antibacterial Assay. *Applied Surface Science*, 448: 104–114
59. Bano A., Hussain J., **Akbar A.**, Mehmood K., Anwar M., Hasni MS., Ullah S., Sajid S., Ali I. (2018) Biosorption of heavy metals by obligate halophilic fungi. *Chemosphere*, 199: 218-222
60. Ali I., Khan N., Farina Y., Baloch N., Samiullah, **Akbar A.** et al., (2018) Synthesis, spectroscopic characterization, X-ray diffraction studies and in-vitro antibacterial activities of diorganotin (IV) derivatives with N-methyl-4-bromobenzohydroxamic acid. *Inorganica Chimica Acta*, 469: 280–287
61. Ali I., **Akbar A.**, et al., (2018) *Penicillium imranianum*, a new species from the man-made solar saltern of Phetchaburi province, Thailand. *Pakistan Journal of Botany*, 50(5): 2055-2058
62. Rafiullah, Khan MA, Shafee M, **Akbar A.**, et al., (2017) Occurrence of mastitis and associated pathogens with antibiogram in animal population of Peshawar, Pakistan. *Thai Journal of Veterinary Medicine*, 47 (1): 103-108.
63. Samiullah, Alam F., Aslam S., Sajida, **Akbar A.**, et al., (2017) Determination of chemical composition, total phenolic content and antioxidant activity of *Xylanthemum macropodum*. *Journal of the Chemical Society of Pakistan*, 39(1): 83-91

64. Muhammad N., Banoori N., **Akbar A.**, et al., (2017) Microbial and toxic metal contamination in well drinking water: potential health risk in selected areas of Kohat, Pakistan. *Urban Water Journal*, 14(4): 394-400
65. Ali I., Prasongsuk S., **Akbar A.**, et al., (2016) Hypersaline habitats and halophilic microorganisms. *Maejo International Journal of Science and Technology*, 10(03): 330-345
66. **Ali Akbar**, Ali, I. and Anal AK. (2016) Industrial perspectives of lactic acid bacteria for biopreservation and food safety (review). *Journal of Animal and Plant Sciences*, 26(4): 938-948
67. Ali I., **Akbar A.**, Aslam M., et al., (2016) Comparative study of physical factors and microbial diversity of four man-made extreme ecosystems. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, 86(3):767-778 (
68. Ali I., **Akbar A.**, Anwar M., Prasongsuk S., Lotrakul P., Punnapayak H (2015) Purification and characterization of a polyextremophilic  $\alpha$ -amylase from an obligate halophilic *Aspergillus penicillioides* isolate, and its potential for souse with detergents. *BioMed Research International*, Article ID 245649, 8 pages
69. **Ali Akbar** and Anil K. Anal (2015) Isolation of *Salmonella* from ready-to-eat poultry meat and evaluation of its survival at low temperature, microwaving and simulated gastric fluids. *Journal of Food Science and Technology*, 52(5):3051-3057
70. Muhammad N., **Akbar A.**, et al., (2015) Isolation optimization and characterization of peptide antibiotic producing bacteria from soil. *Journal of Animal and Plant Sciences*, 25(4): 1107-1113
71. Kumaree K.K., **Akbar A.**, Anal A.K. (2015) Bioencapsulation and application of *Lactobacillus plantarum* isolated from catfish gut as antimicrobial agents and additives in fish feed pellets. *Annals of Microbiology*, 65(3):1439-1445
72. Ali I., **Akbar A.**, Anwar M., Yanwisetpakdee B., Prasongsuk S., Lotrakul P., Punnapayak H. (2014) Purification and characterization of extracellular, polyextremophilic  $\alpha$ -amylase obtained from halophilic *Engyodontium album*. *Iranian Journal of Biotechnology*, 12(4): e1155
73. **Ali Akbar** and Anil K. Anal (2014) Zinc oxide nanoparticles loaded active packaging a challenge study against *Salmonella typhimurium* and *Staphylococcus aureus* in ready-to-eat poultry meat. *Food Control*, 38:88-95
74. **Ali Akbar** and Anil K. Anal (2014) Occurrence of *Staphylococcus aureus* and evaluation of anti-staphylococcal activity of *Lactococcus lactis* subsp. *lactis* in ready-to-eat poultry meat. *Annals of Microbiology*, 64(1):131-138
75. Ali I., **Akbar A.**, et al., (2014) Purification, characterization and potential of saline waste-water remediation of a polyextremophilic  $\alpha$ -amylase from an obligate halophilic *Aspergillus gracilis*. *BioMed Research International*, Article ID 106937,7 pages



76. **Ali Akbar**, Uzma Sitara, Shabir Ahmed khan *et al.*, (2014) Presence of *Escherichia coli* in poultry meat, A potential food safety threat. *International Food Research Journal*, 21(3):941-945
77. **Ali Akbar**, Sitara U., Ali I., Muhammad N. and Khan SA. (2014) Isolation and characterization of biotechnologically potent *Micrococcus luteus* strain from environment. *Pakistan Journal of Zoology*, 46(4):967-973
78. Ali I., **Akbar A.**, et al., (2014) 7 Big Challenges for Pakistan and the Lessons They Could Teach. *The Futurists*, 48(5): 22-26
79. Athar M.A., **Akbar A.**, Khan Y. H., Ali I., Mehmood U., Sabri A. N., Hasnain S. (2014) Hydrocarbon degrading bacteria isolated from hydrocarbon contaminated soil. *Journal of Pure and Applied Microbiology*, 8(6):4509-4516
80. **Ali Akbar** and Anil Kumar Anal (2013) Prevalence and antibiogram study of *Salmonella* and *Staphylococcus aureus* in poultry meat. *Asian Pac J Trop Biomed.*, 3(2): 163-168

#### Book Chapters

1. Hashim M., **Akbar A.**, Safi SZ., Arshad M., Gul Z. (2023) Valorization of Animal Waste for the Production of Sustainable Bioenergy. In: Arshad M. Ed. Climate Changes Mitigation and Sustainable Bioenergy Harvest through Animal Waste - Sustainable Environmental Implications of Animal Waste. Springer Nature Switzerland AG. Chapter 17, [https://doi.org/10.1007/978-3-031-26224-1\\_17](https://doi.org/10.1007/978-3-031-26224-1_17)
2. Talib KM, Luhuai J, Chen X, **Akbar A.**, Tahir A, Iqbal I. et al. (2022) Isolation, Culture, and Maintenance of Extremophilic Fungi, In Extremophilic Fungi (pp. 33-51). Springer, Singapore.
3. Tahir A, Iqbal I, Talib KM, Luhuai J, Chen X, **Akbar A.**, et al. (2022) Modern Tools for the Identification of Fungi, Including Yeasts, In Extremophilic Fungi (pp. 33-51). Springer, Singapore.
4. **Akbar A.**, Khan MI. Khan GI., (2021) Probiotics in Biodegradation of Microbial Toxins: Principles and Mechanisms. In: Panesar PS., and Anal AK., Ed. “*Probiotics, Prebiotics and Synbiotics: Technological Advancements Towards Safety and Industrial Applications*” John Wiley & Sons, Publisher Ltd., Chapter 7 (**In Press**)
5. **Akbar A.**, Sadiq MB. (2020) Zinc oxide nanomaterials as an antimicrobial agent for food applications. In: Abd-Elsalam KA., Ed. “*Zinc-Based Nanostructures for environmental and agriculture applications*” Elsevier Publisher, Chapter 9. Vol. 2 Pages 167-180 <https://doi.org/10.1016/B978-0-12-822836-4.00012-4>
6. **Ali Akbar**, Muhammad Bilal Sadiq, Imran Ali and Muhammad Naeem (2020) Organic waste utilization for sustainable ethanol production. In: Arshad M., Ed. “*Sustainable Ethanol and Climate Change*” Springer Publisher, p-59-63
7. Hasnain Nangyal, **Ali Akbar**, Imran Ali, Tanzeel Zohra, Uzma Sitara, and Muhammad Anwar (2019) Diversity of Functional Potential of Selected Medicinal Plants. In: Nangyal H. and Khan M S., Edition. “*Environmental Pollution, Biodiversity, and Sustainable Development Issues and Remediation*” APP Press USA. Chapter 12.



8. Fatima Abdul Majeed and **Ali Akbar** (2019) Fungal Biodiversity of Foods and Feeds. In: Nangyal H. and Khan M S., Edition. “*Environmental Pollution, Biodiversity, and Sustainable Development Issues and Remediation*” APP Press USA. Chapter 13.
  9. Ali I., Khaliq S., Sajid S., Akbar A., (2019) Biotechnological application of halophilic fung: past, present and future. In Tiquia-Arashiro SM., Grube M., Ed. “*Fungi in Extreme Environment: Ecological Role and Biotechnological Significance*” Springer Publisher, PP- 291-306
  10. **Ali Akbar** and Imran Ali (2018) Value-added by-products from sugar processing industries. In: Anal A.K., ed. “*Food Processing By-Products and their Utilization*” John Wiley & Sons, Publisher Ltd., chapter 21, PP. 509-534
- Posters Presentation**
1. Sabiha Shafi, **Ali Akbar** (May 2016) Health, Nutritional and Antioxidant Potential of Propolis from Selected areas of Balochistan, in **1<sup>st</sup> Invention to Innovation Summit**, organized by IRP and University of Balochistan Quetta
  2. Shabir Ahmad Khan, **Ali Akbar**, Imran Ali, Fazal Ur Rehman (May 2016) Halophilic and Halotolerant Fungi from Mangroves Ecosystem with Biotechnological Potential, in **1<sup>st</sup> Invention to Innovation Summit**, organized by IRP and University of Balochistan Quetta
- Abstracts (Conference)**
1. **Ali Akbar**, Sareen Fatima, Faiza Liaqat, Zareen Gul (2020) Multidrug Resistant and Virulent *Klebsiella Pneumoniae* Isolated from Clinical Samples in Balochistan. FEMS Online Conference on Microbiology 2020. (28 – 31 October).
  2. **Ali Akbar** (2019) Microbes for Biotechnological and Antitoxin potentials, Humboldt Kolleg: International Conference on Microbes for Sustainable Agriculture organized by FC College Lahore (March 2019).
  3. Shabir Ahmad Khan, **Ali Akbar** et al., (May 2017) Isolation and characterization of biotechnologically potent halophilic fungi from mangroves ecosystems. In 6th International and 15th National Conference on “**Dynamic Trends in Plant Sciences: Fostering Environment and Food Security**” organized by SBKWU and Pakistan Botanical Society (PBS).
  4. **Ali Akbar** et al., (May 2017) Functional, antioxidant, antimicrobial potential and food safety applications of *Curcuma longa* and *Cuminum cyminum*. In 6th International and 15th National Conference on “**Dynamic Trends in Plant Sciences: Fostering Environment and Food Security**” organized by SBKWU and Pakistan Botanical Society (PBS).
  5. Farida Behlil, Naqeebullah Khan, Ali Akbar et al., (May 2017) Phytochemical screening and antioxidant activity determination of some medically important plants of Balochistan. In 6th International and 15th National Conference on “**Dynamic Trends in Plant Sciences: Fostering Environment and Food Security**” organized by SBKWU and Pakistan Botanical Society (PBS).
  6. **Ali Akbar** and Shabir Ahmad Khan (Dec 2016) Nanoparticles and bacteriocin activated biopolymeric packaging for food safety, in **1<sup>st</sup> National Conference on "Recent Trends in Microbiology"** organized by AUST, ASM and PSM

7. Sabiha Shafi, **Ali Akbar** (May 2016) Functional and bioactive properties of propolis of *Apis mellifera* beehives of Balochistan, in **1<sup>st</sup> Invention to Innovation Summit**, organized by IRP and University of Balochistan Quetta
8. **Ali Akbar** (April 2016) Food safety and foodborne pathogens; the use of consumer and environment friendly control measures **1<sup>st</sup> Conference cum workshop on Trends in Applied Microbiology and Vaccinology**, organized by American Society for Microbiology, PSM and CASVAB University of Balochistan Quetta
9. Hasnain Nangyal, **Ali Akbar** et al., (Jan. 2016) Phytochemical, antioxidant and antibacterial potential of three selected medicinal plants. **14<sup>th</sup> National and 5<sup>th</sup> International Conference of Climate Change and Phytodiversity Challenges and Opportunities**, Organized by PBS and Department of Botany University of Karachi.
10. Imran Ali, **Ali Akbar** et al., (Jan. 2016) *Penicillium imranianum*, a new species from the man-made solar saltern of Phetchaburi province, Thailand. **14<sup>th</sup> National and 5<sup>th</sup> International Conference of Climate Change and Phytodiversity Challenges and Opportunities**, Organized by PBS and Department of Botany University of Karachi.
11. **Ali Akbar**, Ali I., Rehman F., Tareen AM and Anal A. Kumar (April 2015) Probiotic and biocontrol potential of *Lactococcus lactis* subsp. *lactis* isolated from fermented milk. **1<sup>st</sup> International Conference on Environment and Biosciences**, organized by SBK Women University Quetta Pakistan.
12. Shabir A. Khan, Muhammad Yousaf and **Ali Akbar** (April 2015) Prevalence of malaria parasite (*Plasmodium*) in Loralai District Balochistan. **1<sup>st</sup> International Conference on Environment and Biosciences**, organized by SBK Women University Quetta Pakistan.
13. **Ali Akbar**, Ali I., Rehman F., Tareen AM and Anal A. Kumar (March 2015) Preparation and bio-application of zinc oxide nanoparticles for Nanofood and food safety. **10th Biennial International Conference of Pakistan Society of Microbiology, Exploring Microbes for Future Endeavors**. Organized by American Society for Microbiology and Department of Microbiology and Molecular Genetics, University of the Punjab Lahore Pakistan.
14. **Ali Akbar**, Imran Ali and Shabir Ahmad Khan (March 2015) Methicillin-resistant and sensitive *Staphylococcus aureus* from ready-to-eat poultry meat and its biocontrol using lactic acid bacteria and zinc oxide nanoparticles. **12th Annual MMIDSP Conference**, organized by Medical Microbiology and Infectious Disease Society of Pakistan
15. Siriporn Chaemsanit, **Ali Akbar** and Anil K. Anal (Feb. 2014) Isolation of total aerobic and pathogenic bacteria from table eggs and its contents. **The 2<sup>nd</sup> International Conference on Food and Applied Bioscience**, organized by Chiang Mai University Thailand
16. Najmul Hasan, **Ali Akbar**, Muhammad A. Ahmed, Sheikh Mohiuddin (Feb. 2014) Silver nanoparticles: Green synthesis and their usage in food safety via determination of mercury contamination in seafood. **The 2<sup>nd</sup> International Conference on Food and Applied Bioscience**, organized by Chiang Mai University Thailand
17. **Ali Akbar**, Anil K. Anal and Phadungchob T. (August 2013) Isolation of bacteriocinogenic *Lactococcus lactis* subsp. *lactis* from fermented milk products and

its application in biopreservation of poultry meat. *International Conference of Chemical Engineering and Industrial Biotechnology (ICCEIB 2013)*, organized by UMP Malaysia

18. **Ali Akbar** and Anil K. Anal (2012) Prevalence, antibiogram study and preservation techniques against *Staphylococcus aureus* and *Salmonella* in poultry meat. *6<sup>th</sup> Asian Conference on Food and Nutrition Safety*, organized by ILSI Southeast Asia Region and Agri-Food and Veterinary Authority of Singapore

<b>Sequence submitted to GenBank (NCBI)</b>	Sequence data of fourteen fungal isolates are indexed in NCBI with NCBI Accession numbers MH282504- MH282517
<b>Keynote talk</b>	<ol style="list-style-type: none"> <li>1. Waterborne Diseases and Associated Risk in a workshop organized by <b>Balochistan Food Authority</b> at BFA Quetta, (28 September 2022)</li> <li>2. Food waste utilization value and opportunities in <b>2<sup>nd</sup> Invention to Innovation Summit</b> organized by UoB and IRP (April 2017)</li> <li>3. Food Safety perspectives and Balochistan in seminar “<b>Food Safety: Our National Responsibility</b>” organized by National Alliance for Safe Food and UoB Quetta. (Dec. 2016)</li> </ol>
<b>Projects Completed/Secured</b>	<ol style="list-style-type: none"> <li>1. Standardization of Balochistan folk medicines (<b>PI</b>) (<b>UBRF-UoB Quetta</b>, 2.4 million, 1 year) (<b>Approved</b>)</li> <li>2. Aflatoxins/Ochratoxin detection in animals feeds of Balochistan and devising ecofriendly strategies for its biodegradation (<b>PI</b>) (<b>USAID, ALP-PARC</b>) <b>Completed.</b></li> <li>3. Nutritional, Functional, Anti-Cancer and Antimicrobial Potential Assessment and applications of Propolis from Balochistan (<b>PI</b>) (<b>NRPU-HEC</b>) <b>Completed.</b></li> <li>4. Mycotoxins in poultry feed and its control through probiotics (<b>PI</b>) (<b>USAID, AIP-PARC</b>) <b>Completed.</b></li> <li>5. Bio-waste utilization of grapes and apples of Balochistan for functional components (<b>PI</b>) (<b>UBRF-UoB Quetta</b>) <b>Completed.</b></li> <li>6. Detection of enteric parasites and heavy metals contents in wastewater irrigated vegetables of Quetta (<b>Co-PI</b>) (<b>UBRF-UoB Quetta</b>) <b>Completed</b></li> </ol>
<b>Courses designed</b>	<ol style="list-style-type: none"> <li>1. Advances in Food Microbiology and standardization (Graduate level 3 credits)</li> <li>2. Trends in Bioprocess Technology (Graduate level 3 credits)</li> <li>3. Advances in Mycology (Graduate level 3 credits)</li> </ol>
<b>Personal</b>	<b>Languages:</b> English, Pashto and Urdu.
	<b>Birth:</b> Born in Swat, <b>Pakistan.</b>
<b>Education</b>	<p>2010-14 <b>PhD</b> (Food Microbiology and Bioprocess Technology) Asian Institute of Technology (<b>AIT</b>), Thailand</p> <p>2008-10 <b>M. S</b> (Food Microbiology and Bioprocess Technology) Asian Institute of Technology (<b>AIT</b>), Thailand</p> <p>2003-04 <b>M. Sc</b> (Microbiology) <b>FUUAST</b> Karachi, Pakistan</p> <p>1999-01 <b>B. Sc</b> (Zool, Chem, Microbiol.) University of Karachi, Pakistan</p>

<b>Technical education</b>	<ul style="list-style-type: none"> <li>• Diploma in dispensing medicines. (Dow Medical College Karachi Pakistan)</li> <li>• Diploma in laboratory technologies. (Dow Medical College Karachi Pakistan)</li> </ul>
<b>PhD details</b>	<b>PhD Scholar (2010- 2014) Asian Institute of Technology (AIT), Thailand.</b> <b>Research topic:</b> “Prevalence and biocontrol of foodborne pathogens ( <i>Salmonella</i> and <i>Staphylococcus aureus</i> ) in raw and ready-to-eat poultry meat”
<b>Experience</b>	<b>July 2023 to date</b> <b>University of Swat Khyber Pakhtunkhwa, Pakistan</b>
<b>Designation</b>	<b>Associate Professor</b>
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Supervising master and doctoral students in academics and research</li> <li>• Conducting research for different projects</li> <li>• Teaching and designing graduate and undergraduate level courses</li> </ul>
<b>Experience</b>	<b>June 2007- July 2023. University of Balochistan Quetta, Pakistan</b>
<b>Designation</b>	<b>Associate Professor (March 2021- July 2023)</b>
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Supervising master and doctoral students in academics and research</li> <li>• Conducting research for different projects</li> <li>• Teaching and designing graduate and undergraduate level courses</li> <li>• Member Departmental Admission committee</li> <li>• Member Advance Studies and Research Board University of Balochistan</li> </ul>
<b>Designation</b>	<b>Assistant Professor (Dec. 2014 – March 2021)</b>
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Supervising master and doctoral students in academics and research</li> <li>• Conducting research for different projects</li> <li>• Teaching and designing graduate and undergraduate level courses</li> <li>• Member examination committee</li> </ul>
<b>Designation</b>	<b>Lecturer (June 2007-Nov. 2014)</b>
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>♦ Teaching and research.</li> <li>♦ Member examination committee.</li> <li>♦ Food Microbiology laboratory in-charge.</li> </ul>
	<b>Courses taught / teaching</b> <ul style="list-style-type: none"> <li>○ Advances in Food Microbiology and Standardization (PhD)</li> <li>○ Advances in Applied Microbiology (PhD)</li> <li>○ Research Methodology and Critical Analysis (MPhil)</li> <li>○ Environmental Microbiology and Public Health (M. Sc)</li> <li>○ Marine Microbiology (M. Sc)</li> <li>○ General Mycology and Medical Microbiology (M. Sc)</li> <li>○ Food &amp; Dairy Microbiology (M. Sc)</li> <li>○ Bacterial Genetics (M. Sc)</li> <li>○ Soil Microbiology (B.S)</li> <li>○ Trends in Bioprocess Technology (MPhil)</li> </ul>
<b>Experience</b>	<b>Sep. 2006 to June 2007 Islamic Relief Pakistan. (INGO)</b>
<b>Designation</b>	<b>Water Quality Monitoring Officer</b>
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>♦ Bacteriological and chemical analysis of drinking and wastewater.</li> <li>♦ Catchment and risk assessment, surveillance of source and distribution network.</li> </ul>

- ♦ Training of related staff, agencies & community on health hygiene & water safety.
- ♦ Remedial actions plan for contaminated water and safety maintenance.

**Experience**  
**Designation**  
**Responsibilities**

**Nov. 2005-Sept. 2006. King's Food (Hilal group of industries Karachi)**  
**Quality Assurance Officer/ Food Safety**

- ♦ Food safety and GMP team member.
- ♦ Microbiological and chemical assay of raw material and final products.
- ♦ Environmental monitoring and Sampling of materials.

**Experience**  
**Designation**  
**Responsibilities**

**Sept. 2005- Nov. 2005. Glaxo Smith Kline. (GSK) Karachi.**  
**Microbiologist (Internship)**

- ♦ Environmental monitoring, media preparation, microbiological assay, MLT.
- ♦ Introduction to LAL test, sterility testing and standard culturing.

**Experience**  
**Designation**  
**Responsibilities**

**April 2005 - August 2005. S. Zia-Ul-Haq & Sons Karachi.**  
**Food Safety Supervisor**

- ♦ Food safety and HACCP team member.
- ♦ Awareness and training of staff on cGMP and food safety.

**Biosafety**  
**Biosecurity**  
**Trainer**

- ♦ Five days Train the Trainer workshop on Biosafety and Biosecurity organized by Pakistan Biological Safety Association, NIH Fogarty and Behavioral-Based Improvement Solutions as a **facilitator** (November 2017).
- ♦ Three days Biosafety awareness workshop organized by Pakistan Biological Safety Association NIH Fogarty and Behavioral-Based Improvement Solutions as a **co-facilitator** (December 2017).
- ♦ Five days Wet workshop on Biosafety and Biosecurity organized by Pakistan Biological Safety Association, NIH Fogarty and Behavioral-Based Improvement Solutions as a **Coach** (July 2018).
- ♦ Five days Train the Trainer workshop on Biosafety and Biosecurity organized by Pakistan Biological Safety Association, NIH Fogarty and Behavioral-Based Improvement Solutions as a **facilitator** (September 2018).
- ♦ One day introduction to Biosafety and Biosecurity workshop organized by Institute of Public Health Quetta and by Pakistan Biological Safety Association as a **facilitator** (16 October 2018)
- ♦ Three days Biosafety Awareness Workshop by Pakistan Biological Safety Association, NIH Fogarty in BUITEMS Quetta as a **facilitator** (April 2019)
- ♦ Three days Train the Trainers Workshop by Pakistan Biological Safety Association, NIH Fogarty in Karakorum International University Gilgit as a **facilitator** (Oct, 2022)

**Training/**  
**workshops**

- ♦ One day training on continual improvement on ISO 9001:2000
- ♦ Three days training on water sampling and analysis techniques
- ♦ Three days training for trainer organized by UOB Quetta, Pakistan
- ♦ Six days training on research methodologies organized by HEC Pakistan
- ♦ One day biosafety training workshop organized by department of Microbiology, University of Balochistan Quetta and American Society of Microbiology
- ♦ Two days workshop on project proposal writing by Pakistan Science Foundation
- ♦ One day workshop on "Developing Industry Driven Technologies" organized by ORIC University of Balochistan Quetta

- ◆ Two days orientation workshop on “HEC policy guidelines for the implementation of uniform semester examination system” held on June 3-4 at University of Balochistan
- ◆ Recourse person in two days workshop on screening abiotic and biotic factors from environment organized by Institute of Biochemistry University of Balochistan Quetta (10<sup>th</sup> Nov. 2015)
- ◆ Five days workshop of biosafety and biosecurity organized by Relief International and Department of Microbiology University of Balochistan Quetta
- ◆ Two days “Project formulation workshop” organized by PSF Pakistan and UoB Quetta (April 2017)
- ◆ Three days Train the Trainer (Bioprism) workshop on Biosafety and Biosecurity organized by Pakistan Biological Safety Association NIH Fogarty and Behavioral-Based Improvement Solutions (April 2017)
- ◆ Five days Master trainer workshop Biosafety and Biosecurity organized by Pakistan Biological Safety Association NIH Fogarty and Behavioral-Based Improvement Solutions (August 2017).
- ◆ Five days “Wet Workshop” Biosafety and Biosecurity organized by Pakistan Biological Safety Association NIH Fogarty and Behavioral-Based Improvement Solutions (September 2017).
- ◆ Two days Biosafety cabinet workshop organized by Pakistan Biological Safety Association, NIH Fogarty and Xibios Biosafety Consulting as participant (Sep. 2018).
- ◆ Responsible conduct in Life sciences Research five days comprehensive workshop organized by Pakistan Biological Safety Association facilitated by **Tim Trevan** (Feb, 2019)
- ◆ Biosafety Leadership Summit organized by Pakistan Biological Safety Association NIH Fogarty and Safer behavior (April 2019)
- ◆ Three days workshop on Dual Use Research Concern (DURC) organized by Health Security Partners (HSP) USA at Movenpick Hotel Karachi. (29 June-July 1, 2019)
- ◆ Three days Biowaste Management workshop organized by Pakistan Biological Safety Association at Islamabad facilitated by **Philippe Stroot** (29-31 July 2019)
- ◆ Three days write shop for development of Institutional Biosafety and Biosecurity manual organized by Health Security Partners (HSP) and Pakistan Biological Safety Association at Colombo Sri Lanka (17-20 Feb 2020)
- ◆ Two days workshop on Institutional Biosafety Committee organized by Pakistan Biological Safety Association, and NIH Fogarty International center (FIC) at Lahore facilitated by **Tim Trevan** (22-23 October 2022).
- ◆ Five Days training on PhD Supervisors Capacity Building Program 2023 Phase I, organized by NAHE-HEC Pakistan, British Council Pakistan and Coventry University UK at Islamabad (18-23 June 2023)
- ◆ Five Days **Master training** on PhD Supervisors Capacity Building Program 2023 Phase II, organized by NAHE-HEC Pakistan, British Council Pakistan and Coventry University UK at Karachi (31<sup>st</sup> July- 4<sup>th</sup> August 2023)

#### **Event Organizer**

- ◆ Organized three days Train the Trainer (ToT) workshop on Bio Risk Management (BRM) for Health Professionals of Balochistan region at Gwadar (5-7 March 2023)

- ◆ As a Treasurer PBSA, organized two days awareness workshop on Biosafety and Biosecurity practices, emphasis on Personal Safety of Lab Biologist, in collaboration with University of Turbat Kech Balochistan Pakistan (3-4<sup>th</sup> March 2023)
- ◆ Principle organizer for Two days workshop of Roadmap and Implementation of Biosafety and Infection Control in Balochistan organized by Pakistan Biological Safety Association and Department of Microbiology University of Balochistan Quetta (17-18 May 2022)
- ◆ Principle organizer for Two days International Conference on Plant Science and Management of Drylands for Agriculture and Biodiversity - A Step Towards Sustainable Development, Organized by University of Balochistan Quetta (June 1-2, 2022)

## Membership

American Society for Microbiology (**ASM**).  
 Institute of Food Technologies (**IFT**).  
 Pakistan Biological Safety Association (**PBSA**)  
 Pakistan Society for Microbiology (**PSM**).  
 Medical Microbiology Association of Pakistan (**MMA**)  
 Biological Safety Association of Pakistan (**BSAP**).  
 Zoological Society of Pakistan (**ZSP**)  
 Bolan Society of Pure and Applied Biology (**PSBAP**)

## Administrative tasks

Member Departmental Examination Committee  
 Member Departmental Quality Assurance Cell  
 Member Departmental Admission Committee  
 Elected member of Academic Council, University of Balochistan Quetta (2016-2019)  
 In-charge/Head Food Microbiology and Bioprocess Technology Laboratory  
 Coordinator for MPhil/PhD program in department of Microbiology  
 Member Advance Studies and Research Board (**ASRB**) University of Balochistan (2021-23)  
 Finance Secretary Pakistan Biological Association (**PBSA**) (2021-22)

## Awards/ Grants Achievements

- Grant for FEMS Summer School on Microbiology Education (15-20 September 2019 at Greek island of Euboea Greece), from The Federation of European Microbiological Societies (FEMS)
- Travel grant for oral presentation in Humboldt Kolleg: International Conference on Microbes for Sustainable Agriculture organized by FC College Lahore (March 2019).
- Secured Best Teacher Award (Year 2016), From Academic Staff Association University of Balochistan Quetta
- Secured Travel grant from Health Security Partner (HSP) USA for abstract presentation in 1<sup>st</sup> **National Conference on "Recent Trends in Microbiology"** (Dec. 2016) organized by AUST, ASM and PSM
- Secured 2<sup>nd</sup> position in oral presentation in 1<sup>st</sup> **National Conference on "Recent Trends in Microbiology"** (Dec. 2016) organized by AUST, ASM and PSM
- Secured technology award in 2<sup>nd</sup> **Invention to Innovation Summit** (2017) University of Balochistan for pathogens control in foods by using active edible and biodegradable film.



- Secured American Society of Microbiology fellowship for travel grant to attend 10<sup>th</sup> Biennial International Conference (2015) of Pakistan Society of Microbiology, Exploring Microbes for Future Endeavors. Organized by **MMG**, University of the Punjab
- Secured full scholarship for higher studies (MS and PhD) from Higher Education Commission Pakistan under faculty development program

#### Academic/ Research Supervision

Degree	Supervisor	Co-Supervisor	Status
<b>MPhil</b>	19	06	<b>Completed</b>
<b>MPhil</b>	02	03	Continue
<b>PhD</b>	03	-	<b>Completed</b>
<b>PhD</b>	01	01	Continue

#### PhD Thesis Supervised

1. Shabir Ahmad Khan (2020) Screening, Characterization and Biotechnological Potential Exploration of Halophilic and Halotolerant Fungi from Mangroves Ecosystem of Pakistan. Degree from UoB Quetta (**Supervisor**) **Degree Completed**
2. Sareen Fatima (2022) Drug Resistance in Salmonella spp., Klebsiella spp., *Escherichia coli* and its Redressal with Nanoparticles. Degree from UoB Quetta (**Supervisor**) **Degree Completed**
3. Zareen Gul (2023) Phyllo microbiome and Bioactive components evaluation of *Berberis baluchistanica* from Ziarat Balochistan. (**Supervisor II**) **Degree Completed**
4. Gul Makai (2020) Metagenomic analysis of Lactic acid bacteria for probiotic potential isolated from chicken gut. (**Supervisor**) **in progress**
5. Asyia (2022) Genetic and Rhizomicrobiome characterization of *Juniperus excelsa* from different ecological zones of Balochistan, Pakistan. (**Supervisor II**) **in progress**

#### MPhil Thesis supervised

##### As a Main Supervisor (Completed)

1. Sabiha Shafi (2016) Assessment of Nutritional and Antioxidant Potential of Propolis of Selected areas of Balochistan. Degree from SBK Women University Quetta Balochistan (**Supervisor**)
2. Hasina Sajid (2016) Synthesis Characterization and Bio-application of Zinc Oxide Nanoparticles. Degree from SBK Women University Quetta Balochistan (**Supervisor**)
3. Sajid Ali (2017) Sero-prevalence of Ovine Brucellosis in the province Balochistan. Degree from University of Balochistan Quetta Balochistan (**Supervisor**)
4. Gulmakai Shakoor (2018) Isolation of lactic acid bacteria from chicken gut and its probiotic potential characterization. Degree from UoB Quetta (**Supervisor**)
5. Saira Tareen (2018) Synthesis of silver bio-nanocomposites and its antibacterial and packaging use potential. Degree from SBK Women University Quetta Balochistan (**Supervisor**)
6. Wajeeha Naeem (2019) Comparative analysis of drug resistance genes present in *E. coli* isolated from clinical and food sources. Degree from UoB Quetta (**Supervisor**)

7. Faiza Liaqat (2019) Isolation and assessment of drug resistance and virulence genes in *Klebsiella* spp. from clinical samples. Degree from UoB Quetta (**Supervisor**)
8. Fatima Abdul Majeed (2020) Detection of Mycotoxigenic Fungi and Mycotoxins in Poultry Feed from Quetta, Balochistan. Degree from UoB Quetta (**Supervisor**)
9. Saliha Aziz (2020) Functional potential of propolis from Balochistan. Degree from UoB Quetta (**Supervisor**)
10. Ghulam Ishaq (2020) Biodegradation of Mycotoxins through Microbial species. Degree from UoB Quetta (**Supervisor**)
11. Rahim Ullah (2020) Sero-prevalence of selected blood borne infection in university students of Balochistan. Degree from UoB Quetta (**Supervisor**)
12. Syed Iqbal Shah (2021) Isolation and identification of microorganisms in pre and post hemodialysis of kidney patients from Quetta. Degree from UoB Quetta (**Supervisor**)
13. Nasrullah (2021) Detection of Pathogenic microbes and enteric parasites in wastewater irrigated vegetables of Quetta City. Degree from UoB Quetta (**Supervisor**)
14. Muhammad Farooq (2022) Detection of biofilm producing bacteria in tap water and their antibiogram. Degree from UoB Quetta (**Supervisor**)
15. Mehnaz Hashim (2023) Valorization and Bioconversion of banana waste for valuable byproducts through halophilic fungi (**Supervisor**)
16. Zeenat Hamid (2023) Functional and phytochemical potential of Bitter Apricot kernel oil (**Supervisor**)
17. Zadrana Achakzai (2023) Functional and Phytochemical potential of *Berberis Baluchistanica* and *Berberis callibotrys* (**Supervisor**)
18. Sundus Shahid (2023) Functional and Nutritional Value Analysis of Pistacia Khinjuk Hull and Kernel Oil (**Supervisor**)
19. Mamona Zubair (2022) Therapeutic Potential and Biological Profiling of *Solanum surattense* Burm. f. & *Sonchus asper* (L.) Hill (**Supervisor**)

### **Scholars currently working on thesis**

20. Tehreem Atta (2022) Bio-functional component analysis and antimicrobial assays of *Plantago* spp. (**Supervisor**) Continue
21. Fahad Rasheed (2023) Biological Applications and Preservation Potential Analysis of *Prunus amygdalus* and *Citrullus lanatus* Kernel Oil for Apple Preservation. (**Supervisor**) Continue

### **As a Co-Supervisor (Completed)**

22. Nazira Rashid (2021) Isolation of enterotoxigenic *Staphylococcus aureus* from salted fish of Gwadar Balochistan, Degree from UoB Quetta (**Co-Supervisor**)
23. Habiba Rasheed (2018) Determination of heavy metals in cosmetic available in local market of Quetta Balochistan. Degree from SBK Women University Quetta Balochistan (**Co-Supervisor**)

24. Shaista Zahoor (2018) Physicochemical analysis and total *E. coli* count of fresh juices collected from different areas of Islamabad city Pakistan. Degree from SBK Women University Quetta Balochistan (**Co-Supervisor**)
25. Sultana Arifteen (2018) Phytochemical analysis of crude extract of *Ferula Oopoda* and their antibacterial assay. Degree from SBK Women University Quetta Balochistan (**Co-Supervisor**)
26. Adeel Rafiq (2018) Isolation of antibiotic producing microbes from soil. Degree from UoB Quetta (**Co-Supervisor**)
27. Babar Yousaf (2018) Functional and nutritional assessment of grapes and apple wastes. Degree from UoB Quetta (**Co-Supervisor**)

## Editorial Board Assignments

Editorial Board member Academic Editor PLOS ONE  
<https://journals.plos.org/plosone/static/editorial-board>

Editorial Board member as Academic Editor “*Journal of Food Quality*”  
<https://www.hindawi.com/journals/jfq/editors/>

Editorial Board member as Academic Editor “*Journal of Food Processing and Preservation*”  
<https://www.hindawi.com/journals/jfpp/editors/>

Review Editor in “*Frontiers in Nutrition*” and Food Microbiology Section of “*Frontiers in Microbiology*” <https://loop.frontiersin.org/people/1575740/overview>

Editorial Board Member “*Pak-Euro Journal of Medical and Life Sciences (PJMLS)*”.  
<https://www.readersinsight.net/PJMLS/about/editorialTeam>

Member Board of Reviewer Editors “*Annals of Clinical Microbiology and Antimicrobials*”  
<https://ann-clinmicrob.biomedcentral.com/about/editorial-board>

Advisory Board Member Pure and Applied Biology (PAB)  
<https://thepab.org/index.php/journal/about/editorialTeam>

Guest Editor Special Issue “**Biological Potential and Chemical Composition of Functional Food**” *Journal of Food Quality* 2022 & 2023

Guest Editor Special issue: “*Current Research and Future of Renewable Energy*” in *International Journal of Sustainable and Green Energy* (2015)  
<https://scholar.google.com.pk/citations?user=MsNGmoQAAAAJ&hl=en>  
[https://www.researchgate.net/profile/Ali\\_Akbar2](https://www.researchgate.net/profile/Ali_Akbar2)  
<https://orcid.org/0000-0002-0376-1425>

## Online profiles