

RESEARCH PUBLICATIONS

Year - 2023

1. Babar, M., Afzal, N., Siddiqui, K., Azhar, A. and Galani, S. (2023). Exploring graft incompatibility markers: Intraspecific and interspecific grafts of tomato (*Solanum lycopersicum L.*). *Scientia Horticulturae*, 310, 1-9.
2. Saleh, B., Huma, N., Azhar, A. and Galani, S. (2023). Cloning of brazzein gene (sweet protein) into PBI121 vector through prokaryotic expression system. *Journal of Animal and Plant Sciences*, 33, 1-7.
3. Jamil, I., Azhar, A., Shinwar, Z.K. and Ali, S.I. (2023). Phylogeny of Solanaceae based on morphological and molecular data-useful approach for classification. *Pakistan Journal of Botany*, 55, 1-10.
4. Khan, B., Jamil, I., Mirani, Z.K., Hassan, U., Azhar, A. and Galani, S. (2023). Investigation and application of a novel *Pseudomonas aeruginosa* (KIBGE-AB9) for the biodegradation of malathion in agriculture soil. *International Journal of Agriculture and Biology (In-Press)*.
5. Saleem, S., Zia, M., Siddiqui, F., Ghouri, M., Kulsoom, U., Kawal, S., Fatima, S. and Zehra, S. (2023). Hyperfunction variant rs708035 of interleukin 1 receptor-associated kinases 2 gene involved in the predisposition of leprosy infection. *Gene Medicine*, 25, e3473.
6. Zehra, S., Kulsoom, U., Khan, A., Tabassum, A., Saghir, T., Fatima, S. and Saleem, S. (2023). Association of serum vitamin D levels and TaqIrs731236 among patients with hypertensive coronary heart disease. *Steroids*, 191, 109162.
7. Zehra, S., Ghouri, M., Jafari, H., Saleem, S., Fatima, S. and Azhar, A. (2023). Muti-locus single nucleotide polymorphisms rs3736228 and rs4988321 of low-density lipoprotein receptor-related protein-5 gene with susceptibility to rheumatoid arthritis. *Gene*, 851, 147025.
8. Mumtaz, Z. Rashid, Z. Ali, A. Arif, A. Ameen, F. Al-Tami, M.S. and Yousaf, M.Z. (2023). Prospects of microfluidic technology in nucleic acid detection approaches. *Biosensors*, 13, 584.
9. Hanif, M.I. Qaiser, M. Arif, A. Shoeb, E. Ismail, M. Khan, A. and Ahmed, S.A. (2023). Genetic evaluation of spontaneous miscarriages and couples through conventional and modern diagnostic tools. *Liaquat National Journal of Primary Care*, 5,1-5.

Year - 2022

1. Ali, M.K., Mehdi, F., Zeng, Y., Azhar, A. and Galani, S. (2022). Sugarcane varietal response for sucrose accumulation subjected to thermal stress at formative stage. *Pakistan Journal of Botany*, 54, 1-8.
2. Afzal, N., Mehdi, F., Sahar, S., Galani, S., Shahzad, S. and Azhar, A. (2022). Plant extracts inducing systemic resistance in *Solanum lycopersicum* (tomato) seedlings against *Rhizoctonia*. *Pakistan Journal of Botany*, 54, 701-709.
3. Vankwani, S., Ansari, A., Azhar, A. and Gilani, S. (2022). Synergistic evaluation of *Moringa oleifera* extract and β -lactam antibiotic to restore the susceptibility of methicillin-resistant *Staphylococcus aureus*. *Molecular Biology Reports*, 49, 421-432.
4. Ghouri, M., Ismail, M., Zaidi, S., Rehman, S., Dahani, A., Saleem, S. and Zehra, S. (2022). Multi-locus SNP analyses of interleukin 1 receptor associated kinases 2 gene polymorphisms with the susceptibility to rheumatoid arthritis. *PLOS ONE*, 17, e0268496.
5. Qamar, A., Haque, Z., Zehra, S. and Baig, M. (2022). Obstructive sleep apnoea: Potential role of tumour necrosis factor alpha as a circulating biomarker. *Journal of the Pakistan Medical Association*. 72, 1350-1354.
6. Nazar, S., Khan, T.A. and Zehra, S. (2022). Association of promoter region A-1012G polymorphism (rs4516035) of vitamin-D receptor gene with coronary artery disease. *Journal of the Pakistan Medical Association*. 72, 1137-1141.
7. Amjad, M., Tabassum, A., Sher, K., Kumar, S., Zehra, S. and Fatima, S. (2022). Impact of GABAA receptor gene variants (rs2279020 and rs211037) on the risk of predisposition to epilepsy: a case-control study. *Neurological Sciences*, 43, 4431-4438.
8. Fatima, S., Khan, B., Khan, O., Amjad, M., Zehra, S. and Azhar, A. (2022). Tetra-primers ARMS-PCR based association analyses of synonymous and intronic variants in the ADAM12 gene with susceptibility to knee osteoarthritis: a case-control study. *Biochemical Genetics*, 60, 1695-1715.
9. Imran, I., Ansari, A., Saleem, S., Azhar, A. and Zehra, S. (2022). Insights of OPs and PYR cytotoxic potential Invitro and genotoxic impact on PON1 genetic variant among exposed workers in Pakistan. *Scientific Reports*, 12, 9498.
10. Kafeel, S., Hashim, Z., Fawwad, A. and Nawab, S.N. (2022). Association of *SOD1* gene promoter 50 bp indel polymorphism with susceptibility of type 2 diabetes mellitus. *Diabetes and Obesity International Journal*, 7. e000259.
11. Kafeel, S., Fawwad, A., Basit, A. and Nawab, S.N. (2022). Clinical association of biochemical variations among multilocus genotypes of antioxidant enzymes with susceptibility of cataract in hyperglycemia. *Applied Biochemistry and Biotechnology*, 194, 3871-3889.

12. Kafeel, S., Hashim, Z., Fawwad, A. and Nawab, S.N. (2022). Predisposition of *SOD1*, *GPXI*, *CAT* genetic variants and their haplotypes in cataractogenesis of type 2 diabetes mellitus in Pakistan. *Acta Diabetologica*, 59, 623-632.
13. Begum, I. Soomro, Z.H. and Arif, A. (2022). Bottom-up approach for the preparation of capped silver nanoparticles and their antibacterial activity. *Acta Scientific Microbiology*, 5, 52-56.
14. Zafar, S.B. and Aman, A. (2022). Boosting extracellular dextransucrase production by *Weissella confusa* by combining a statistical and randomized mutational approach during upstream fermentation processing. *Journal of Taibah University for Science*, 16, 1241-1253.
15. Aman, A., Shahid, F. and Pervez, S. (2022). Exploration of a three-dimensional matrix as micro-reactor in the form of reactive polyaminosaccharide hydrogel beads using multipoint covalent interaction approach. *Biotechnology Letters*, 44, 299-319.
16. Bibi, Z., Sattar, H., Nawaz, M.A., Karim, A., Pervez, S., Qader, S.A.U. and Aman, A. (2022). Polyacrylamide hydrogel carrier (matrix-type macrogel beads): Improvement in the catalytic behavior, stability, and reusability of industrially valuable xylanase from a thermophile *Geobacillus stearothermophilus*. *Current Research in Biotechnology*, 4, 229-237.

Year - 2021

1. Rashid, Z., Yousaf, M.Z., Gilani, S.M.H., Zehra, S., Ali, A., Azhar, A. and Galani, S. (2021). Comparative analysis of chicken cecal microbial diversity and taxonomic composition in response to dietary variation using 16S rRNA amplicon sequencing. *Molecular Biology Reports*, 48, 7203–7214.
2. Gilani, S.M.H., Zehra, S., Rashid, Z., Galani, S., Ilyas, S., Sahar, S., Hassan, Z., Al-Ghanim, K., Azhar, A., Al-Misned, F., Ahmed, Z., Mulham, N. and Mahboob, S. (2021). Growth performance, intestinal histomorphology, gut microflora and ghrelin gene expression analysis of broiler by supplementing natural growth promoters: a nutrigenomics approach. *Saudi Journal of Biological Sciences*, 28, 1-10.
3. Ali, A., Rashid, Z., Zhou, J., Yousaf, Z.M., Galani, S., Ashraf, A., Al-Ghanim, K.A., Al-Suliman, E., Ahmed, Z., Farooq, M., Virik, P., Kaimkhani, Z.A., Al-Mulhm, N., Mahboob, S., Dong, M. and Huang, Q. (2021). Evaluating antibody response pattern in asymptomatic virus infected pregnant females: Human well-being study. *Journal of King Saud University-Science*, 33, 1-6.
4. Ahmad, A., Qamarunisa, S., Jamil, I., Raza, S. and Khatoon, K. (2021). *In-silico* and phylogenetic analysis of DREB transcription factor in *Solanum melongena* L. *Pakistan Journal of Botany*, 53, 1-9.

5. Rashid, Z., Yousaf, M., Gilani, S., Zehra, S., Ali, A., Azhar, A. and Galani, S. (2021). Comparative analysis of chicken cecal microbial diversity and taxonomic composition in response to dietary variation using 16S rRNA amplicon sequencing. *Molecular Biology Reports*, 48, 7203-7214.
6. Kulsoom, U., Khan, A., Saghir, T., Nawab, S.N., Tabassum, A., Fatima, S., Saleem, S. and Zehra, S. (2021). Vitamin D receptor gene polymorphism TaqI (rs731236) and its association with the susceptibility to coronary artery disease among Pakistani population. *Journal of Gene Medicine*, 23, e3386.
7. Khan, A., Kulsoom, U., Nawab, S.N., Fatima, S., Saleem, S., Azhar, A. and Zehra, S. (2021). Association of non-synonymous +326 A>T and synonymous +258 G>A polymorphisms of omentin-1 gene (ITLN-1) among type 2 diabetes patients of Pakistan. *Health Biotechnology and Biopharma*, 5, 46-60.
8. Tabassum, A., Amjad, M., Kulsoom, U., Zehra, S., Azhar, A. and Fatima, S. (2021). Association of interleukin-10 gene promoter variants with ischemic stroke among the Pakistani population. *Health Biotechnology and Biopharma*, 5, 1-14.
9. Saleem, S., Khan, R., Haider, G., Zehra, S. and Azhar, A. (2021). Association of genetic polymorphism rs2071676 in carbonic anhydrase gene (CA9) with the risk of squamous cell carcinoma of lungs and esophagus. *Biologia*, 76, 1-8.
10. Imran, I., Saleem, S., Azhar, A. and Zehra, S. (2021). Pyrethroid exposure: as determinant of CYP1A1 and GSTP1 genetic variations in occupationally exposed Sindh farmers. *Biologia*, 76, 1-7.
11. Gilani, S.M.H., Zehra, S., Rashid, Z., Galani, S., Ilyas, S., Sahar, S., Hassan, Z., Al-Ghanim, K., Azhar, A., Al-Misned, F., Ahmed, Z., Mulham, N. and Mahboob, S. (2021). Growth performance, intestinal histomorphology, gut microflora and ghrelin gene expression analysis of broiler by supplementing natural growth promoters: a nutrigenomics approach. *Saudi Journal of Biological Sciences*, 28, 3438-3447.
12. Akram, Z., Perveen, R., Saleem, S., Siddiqui, R., Hussain, M., Shaukat, S. and Yusuf, M.Z. (2021). Novel target of the 4-piperidone thiazole derivative for platelet inhibitions by using inducers collagen and ADP. *Health Biotechnology and Biopharma*. 5, 1-16.
13. Akram, Z., Perveen, R., Saleem, S., Akhtar, M., Abrar, H., Siddiqui, R., Hussain, M., Faqooqi, U.G. and Pervaiz, S. (2021) In-Vitro and in-silico antiplatelet action of the new piperidin4-one-thiosemicarbazide derivative. *Annals of the Romanian Society for Cell Biology*. 25, 20257-20266.
14. Zafar, H., Rehman I., Ejaz, U., Ansari, A. and Sohail, M. (2021). Production of multienzyme by *Bacillus aestuarii* UE25 using ionic liquid pretreated sugarcane bagasse. *Journal of Basic Microbiology*, 61, 1-13.

15. Raza, S., Ansari, A., Siddiqui, N.N., Ibrahim, F., Abro, M.I. and Aman, A. (2021). Biosynthesis of silver nanoparticles for the fabrication of non-cytotoxic and antibacterial metallic polymer based nanocomposite system. *Scientific Reports*, 11, 1-15.
16. Iftikhar, R., Ansari, A., Siddiqui, N.N., Hussain, F. and Aman, A. (2021). Structural elucidation and cytotoxic analysis of a fructan based biopolymer produced extracellularly by *Zymomonas mobilis* KIBGE-IB14. *Carbohydrate Research*, 499, 108223.
17. Ansari, A., Ibrahim, F., Haider, M.S. and Aman, A. (2022). *In-vitro* application of bacteriocin produced by *Lactiplantibacillus plantarum* for the biopreservation of meat at refrigeration temperature. *Journal of Food Processing and Preservation*, 46, e16159.
18. Karim, A., Bibi, Z., Nawaz, M.A., Aman, A. and Qader, S.A.U. (2021). Thermodynamics, kinetics and optimization of catalytic behavior of polyacrylamide-entrapped carboxymethyl cellulase (CMCase) for prospective industrial use. *Bioprocess and Biosystems Engineering*, 44, 2417-2427.
19. Ansari, M., Zafar, U., Ejaz, U., Sohail, M., Pirzada, A. and Aman, A. (2021). Comparison of composting of chemically pretreated and fermented sugarcane bagasse for zero-waste biorefinery. *Journal of Material Cycles and Waste Management*, 23, 911-921.
20. Karim, A., Bibi, Z., Rehman, H.U., Aman, A., Qader, S.A.U. and Rashid, M.H. (2021). Single step immobilization of CMCase within agarose gel matrix: kinetics and thermodynamic studies. *Colloids and Surfaces B: Biointerfaces*, 200, 111583.
21. Hussain, M., Perveen, R., Lateef, M., Akram, Z., Azhar, I. and Saima Saleem (2021) Dose response effect of Bergenin on platelet aggregation by inhibiting inducers (Collagen and ADP) and Lipoxigenase. *Health Biotechnology and Biopharm*, 5, 24-38.
22. Zakir, U., Siddiqui, N.N., Naqvi, F.H. and Khan, R. (2021). Aberrant STAT1 methylation as a non-invasive biomarker in blood of HCV induced hepatocellular carcinoma. *Cancer Biomarkers*, 34, 95-103.

Year - 2020

1. Rashid, Z., Mirani, A.M., Zehra, S., Gilani, S.M.H, Ashraf, A., Azhar, A., Al-Ghanim, K., Al-Misne, F., Al-Mulahim, N., Mahboob, S. and Galani, S. (2020). Enhanced modulation of gut microbial dynamics affecting body weight in birds, triggered by natural growth promoters administered in conventional feed. *Saudi Journal of Biological Sciences*, 27, 1-9.
2. Huma, N., Sahar, S., Iftikhar, Y. Azhar, A. and Galani, S. RNA isolation efficacy of commercial and modified conventional methods for *Citrus tristeza virus* and mRNA internal control amplification. *Biologia*, 8, 1195-1202.

3. Rashid, Z., Gilani, S.M.H, Ashraf, A., Zehra, S., Azhar, A., Galani, S., Al-Ghanim, K., Al-Misne, F. and Mahboob, S. (2020). Benchmark taxonomic classification of chicken gut bacteria based on 16s rRNA gene profiling in correlation with various feeding strategies. *Journal of King Saud University-Science*, 32, 1034-104.
4. Mehdi, F., Ali. M.K., Huma, N., Hussain, I., Azhar, A. and Galani, S. (2020). Comparative biochemical analysis of high and low sucrose accumulating sugarcane varieties at formative stage under heat stress. *Journal of Agriculture Sciences*, 26, 78-86.
5. Khan, B., Khan, O.Y., Zehra, S., Azhar, A. and Fatima, S. (2020). Association between obesity and risk of knee osteoarthritis. *Pakistan Journal of Pharmaceutical Sciences*, 33, 295-298.
6. Siddiqui, M.A., Ali, L., Fawwad, A., Banu, B., Chowdhury, H.A., Waris, N., Butt, A., Nawab, S.N. and Basit, A. (2020). Mobile SMS: A tool for management of diabetes via patients-relative's knowledge and belief. *Clinical Epidemiology and Global Health*, 8, 455-460.
7. Changxing, L. Galani, S. Hassan, F.U., Rashid, Z. Naveed, M. Fang, D., Ashraf, A. Qi, W. Arif, A. and Jianhua, L. (2020). Biotechnological approaches to the production of plant-derived promising anticancer agents: An update and overview. *Biomedicine and Pharmacotherapy*, 132, 110918.
8. Sirajuddin, S., Khan, M.A., Qader, S.A.U., Iqbal, S., Sattar, H. and Ansari, A. (2020). A comparative study on degradation of complex malathion organophosphate using of *Escherichia coli* IES-02 and a novel carboxylesterase. *International Journal of Biological Macromolecules*, 145, 445-455.
9. Shahid, F., Ansari, A., Aman, A. and Qader, S.A.U. (2020). A Comparative Study Among Different Protocols of Immobilization of Dextranase Using Chitin as a Matrix. *Catalysis Letters*, 150, 613-622.
10. Ansari, A., Ibrahim, F., Pervez, S. and Aman, A. (2020). Inhibitory mechanism of BAC-IB17 against β -lactamase mediated resistance in methicillin-resistant *Staphylococcus aureus* and application as an oncolytic agent. *Microbial Pathogenesis*, 149, 104499.
11. Asif, T., Javed, U., Zafar, S.B., Ansari, A., Qader, S.A.U. and Aman, A. (2020). Bioconversion of colloidal chitin using novel chitinase from *Glutamicibacter uratoxydans* exhibiting anti-fungal potential by hydrolyzing chitin within fungal cell wall. *Waste and Biomass Valorization*, 11, 4129-4143.
12. Ibrahim, F., Siddiqui, N.N., Aman, A., Qader, S.A.U. and Ansari, A. (2020). Characterization, cytotoxic analysis and action mechanism of antilisterial bacteriocin produced by *Lactobacillus plantarum* isolated from cheddar cheese. *International Journal of Peptide Research and Therapeutics*, 26, 1751-1764.

13. Rehman, H.U., Nawaz, M.A., Pervez, S., Jamal, M., Attaullah, M., Aman, A. and Qader, S.A.U. (2020). Encapsulation of pectinase within polyacrylamide gel: Characterization of its catalytic properties for continuous industrial uses. *Heliyon*, 6, e04578.

Year – 2019

1. Rashid, Z., Mirani, Z.A., Zehra, S., Gilani, S.M.H, Chishti, A.A, Azhar, A. and Galani, S. (2019). Dietary inclusion of phytogenic feed additives (PFA) as alternative to in-feed antibiotics modulating gut microbial dynamics in broiler chicken. *Biologia*, 65, 1-9.
2. Faraz, L., Siddique, M.F., Galani, S. and Mehdi, F. (2019). Assessing the effect of phytohormone on growth and germination of Soybean (*Glycin max* L. (Merr.) from cotylednary node. *Pakistan Journal of Botany*, 51, 1-6.
3. Abid, R., Qamarunisa, S., Jamil, I., Ather, A. and Ali, A. (2019). Hybridization in *Sida ovata* complex: an evidence from random amplified polymorphic DNA (RAPD) profile studies. *Pakistan Journal of Botany*, 51, 2179-2184.
4. Jamil, I., Qamarunisa, S. and Azhar, A. (2019). Effect of outgroup on phylogeny reconstruction: a case study of family Solanaceae. *Pure and Applied Biology*, 8, 2213-2227.
5. Rizvi, T.F. Arif, A. and Azhar, A. (2019). TNF gene promoter region polymorphisms and association with young-onset rheumatoid arthritis. *Pakistan Journal of Pharmaceutical Sciences*, 32, 2295-2297.
6. Ghani, M., Ansari, A., Haider, M.S., Asif, T., Ibrahim, F., Qader, S.A.U. and Aman, A. (2019). Purification and characterization of a thermostable starch-saccharifying alpha-1,4-glucan-glucohydrolase produced by *Bacillus licheniformis*. *Starch/Stärke*, 71, 1800352.
7. Pervez, S., Nawaz, M.A., Jamal, M., Jan, T., Maqbool, F., Shah, I. and Qader, S.A.U. (2019). Improvement of catalytic properties of starch hydrolyzing fungal amyloglucosidase: Utilization of agar-agar as an organic matrix for immobilization. *Carbohydrate Research*, 486, 107860.
8. Shahid, F., Aman, A. and Qader, S.A.U. (2019). Immobilization of dextranase using anionic natural polymer alginate as a matrix for the degradation of a long-chain biopolymer (dextran). *International Journal of Polymer Science*, 2019, 1354872.
9. Shahid, F., Aman, A., Pervez, S. and Qader, S.A.U. (2019). Degradation of long chain polymer (Dextran) using thermostable dextranase from hydrothermal spring isolate (*Bacillus megaterium*). *Geomicrobiology Journal*, 36, 683-693.

10. Pervez, S., Nawaz, M.A., Shahid, F., Aman, A., Tauseef, I. and Qader, S.A.U. (2019). Characterization of cross-linked amyloglucosidase aggregates from *Aspergillus fumigatus* KIBGE-IB33 for continuous production of glucose. *International journal of Biological Macromolecules*, 135, 1252-1260.
11. Ibrahim, F., Zafar, S.B., Aman, A., Qader, S.A.U. and Ansari, A. (2019). Improvement of *Lactobacillus plantarum* for the enhanced production of bacteriocin like inhibitory substance using combinatorial approach. *Biocatalysis and Agricultural Biotechnology*, 22, 101386.
12. Javed, U., Ansari, A., Aman, A. and Qader, S.A.U. (2019). Fermentation and saccharification of agro-industrial wastes: A cost-effective approach for dual use of plant biomass wastes for xylose production. *Biocatalysis and Agricultural Biotechnology*, 21, 101341.
13. Shahid, F., Javed, U., Aman, A. and Qader, S.A.U. (2019). Role of metal ions on the catalytic efficiency of dextran hydrolyzing biocatalyst. *Pakistan Journal of Pharmaceutical Sciences*, 32, 2761-2765.
14. Nawaz, M.A., Pervez, S., Jamal, M., Jan, T., Khan, W., Rauf, A. and Qader, S.A.U. (2019). Maltose deterioration approach: Catalytic behavior optimization and stability profile of maltase from *Bacillus licheniformis* KIBGE-IB4. *Biotechnology Reports*, 24, e00400.
15. Sattar, H., Bibi, Z., Kamran, A., Aman, A. and Qader, S.A.U. (2019). Degradation of complex casein polymer: production and optimization of a novel serine metalloprotease from *Aspergillus niger* KIBGE-IB36. *Biocatalysis and Agricultural Biotechnology*, 21, 101256.
16. Kamran, A., Bibi, Z., Aman, A. and Qader, S.A.U. (2019). Purification and catalytic behavior optimization of lactose degrading β -galactosidase from *Aspergillus nidulans*. *Journal of Food Science and Technology*, 56, 167-176.
17. Bibi, Z., Nawaz, M.A., Waqas, M., Aman, A. and Qader, S.A.U. (2019). Significance of metal ions, solvents and surfactants to improve the xylan degrading behavior of β -1, 4-D-xylanohydrolase from *Geobacillus stearothermophilus* KIBGE-IB29. *Biocatalysis and Agricultural Biotechnology*, 17, 242-246.
18. Tayyaba, A., Pirzada, A., Asma, A., Siddiqui, N.N. and Qader, S.A.U. (2019). Influence of chemical stress on the stability of chitinase produced by *Glutamicibacter uratoxydans* KIBGE-IB41. *International Journal of Biology and Biotechnology*, 16, 261-266.
19. Ibrahim, F., Aman, A., Siddiqui, N.N., Zohra, R.R., Qader, S.A.U. and Ansari, A. (2019). Screening of antilisterial efficacy and partial purification of chromosomally located bacteriocin isolated from *Lactobacillus plantarum*. *International Journal of Biology and Biotechnology*, 16, 283-290.
20. Bibi, Z., Qader, S.A.U., Aman, A., Rehman, H.U., Nawaz, M.A., Karim, A. and Kamran, A. (2019). Xylan deterioration approach: Purification and catalytic behavior optimization of a

novel β -1, 4-d-xylanohydrolase from *Geobacillus stearothermophilus* KIBGE-IB29. *Biotechnology Reports*, 21, e00299.

21. Kanwal, M., Haider, G., Zareef, U. and Saleem, S. (2019). Addiction of tobacco chewing and smoking in the patients of head and neck squamous cell carcinoma: A descriptive epidemiological study in Pakistan. *Pakistan Journal of Medical Science*, 35, 1712-1717.