

Mohibullah Shah, PhD**Associate Professor**

Department of Biochemistry

Bahauddin Zakariya University, Multan

Email: mohib@bzu.edu.pk ; mohibusb@gmail.com**Profile:** <https://profiles.bzu.edu.pk/mohibullahshah>**ORCID:** [0000-0001-6126-7102](https://orcid.org/0000-0001-6126-7102)**Google Scholar:** <https://scholar.google.com/citations?user=UqIMxv4AAAAJ&hl=en>**Curriculum Lattes:** <http://lattes.cnpq.br/3230303572417055>**TEACHING & RESEARCH EXPERIENCE**

Position	Institution	Duration
Associate Professor	Department of Biochemistry, Bahauddin Zakariya University, Pakistan.	November 2024 to Date
Assistant Professor	Department of Biochemistry, Bahauddin Zakariya University, Pakistan.	November 2018 to November 2024
Assistant Professor	Department of Biochemistry, Abdul Wali Khan University Mardan, Pakistan	September 2016 to August 2018
Visiting Researcher/ Post-doctoral Research	Department of Animal Science, Federal University of Ceara, Fortaleza, Brazil	October 2024 to February 2026
Postdoctoral Research Fellow	Department of Biochemistry & Molecular Biology, Federal University of Ceara, Brazil	April 2014 to April 2016

ACADEMIC QUALIFICATION

Degree	Institution	Year
Doctorate (Ph.D.) in Biochemistry	Department of Biochemistry & Molecular Biology, Federal University of Ceara, Brazil	2014
Masters in Chemistry/Biochemistry	Institute of Chemical Sciences, University of Peshawar, Pakistan.	2006
Bachelor of Science	University of Peshawar, Pakistan.	2004

PROFESSIONAL QUALIFICATION

Degree	Institution	Year
Bachelor of Education	Institute of Education and Research University of Peshawar, Pakistan	2007

RESEARCH INTEREST

- Natural product-based therapeutics
- Neurological disorders, Cancer, Infectious diseases.
- Application of OMICS to plant stress biology
- Computer-aided vaccine design
- Biosensors

RESEARCH SUPERVISION

Level	Completed	Under Supervision
Doctorate (PhD)	06	03
Master (MS)	50	06
Undergraduate (BS)	25	20

Publications list

1. Bashir H., Ahmad I., Khan MU., Arshad F., Al-regaiey K., Dib H., Nishan U., Sheheryar S., **Shah M***, Algarzae NK. Ligand-Based Pharmacophore Modeling and Virtual Screening of Safinamide Analogs as Potential MAO-B Inhibitors Against Parkinson's Disease. Accepted in Cell Biochemistry & Biophysics. **2026**.
2. Noor S., Mishra VK., Zaman A., Ahmad I., Perveen A., Ahmed S., Asif U., Sherwani AK., Alasmari SMN., Dib H., Ali A., Altwaim SA., **Shah M***. Heliocide H2 and Cadinatriene Glucopyranoside as Promising Dual β -Lactamase Inhibitors against Antibiotic Resistance: An Integrated Computational Study. Scientific Reports. **2026**. doi: 10.1038/s41598-026-72528-5
3. Parvez KF., Najeeb F., Khan MU., Rehmani MBI., Arshad F., Amjad A., Asif U., Sherwani AK., **Shah M***. A Genome-Wide Computational Approach for Therapeutic Targets Identification and Synthetic Peptide Assembly Enable Rational Vaccine Design against Arcanobacterium haemolyticum. Scientific Reports. **2026**. doi: 10.1038/s41598-026-69548-6
4. Pacheco WBM, Maciel IA, Santos SSAD, Araújo AM, Almeida FNM, Guerreiro DD, Sheheryar S, Oliveira LLB, de Sousa FD, **Shah M**, Moraes MEA, Paier CRK, Monteiro ACO, Salmito-Vanderley CSB, Moura AA. Global Proteomic Analysis of Sperm and Seminal Plasma From Tropically-Adapted Rams with Contrasting Parameters of Frozen-Thawed Semen. Molecular Reproduction and Development 93: e70148. **2026**. doi:10.1002/mrd.70148.
5. Hayat A., Murtaza, Mahmoud ERI., Asad M., Khan N., **Shah M.**, Fawy KF., Badshah A., Nishan U. Green-synthesized iron–zinc oxide nanomaterials immobilized on Morus alba sawdust for highly sensitive optical glucose sensing. RSC Advances, **2026**. doi. 10.1039/d6ra05736e

6. Mohammad SF., Shahid TF., Noor S., Ahmad I., Zia M., Song H., Shah SA., Thiruvengadam V., Nishan U., Fawy KF., **Shah M***. Computational Discovery of Novel CYP51 Inhibitors for Antifungal Therapy Against *Aspergillus fumigatus*. *Probiotics and Antimicrobial Proteins*. **2026**. doi: [10.1007/s12602-026-11178-5](https://doi.org/10.1007/s12602-026-11178-5)
7. Bashir H., Sarfraz A., Shehroz M., Arshad F., Nishan U., Ali A., Fawy KF., **Shah M.*** Computer-assisted design of a novel peptide vaccine against multidrug-resistant *Nocardia farcinica*. *Netw Model Anal Health Inform Bioinforma* 15, 142, **2026**. doi: [10.1007/s13721-026-00813-4](https://doi.org/10.1007/s13721-026-00813-4)
8. Majid A., Numan M., Tila H., Liaqat I., **Shah M**, Sun Z., et al. Molecular-based detection of Ehrlichia spp. in stray dogs infesting Rhipicephalus ticks in high-altitude of northern Pakistan. *PLoS One* 21(3): e0342091, **2026**. doi: [10.1371/journal.pone.0342091](https://doi.org/10.1371/journal.pone.0342091)
9. Javaid N., Amjad A., Ismail A., Shah M., Zafar S., Ahmad S., Hussain M., Chaudhary MN., Abdi G. Ultrasound-extracted sea buckthorn in microencapsulated yogurt: a functional approach to diabetes management. *Food Production, Processing and Nutrition*. 8, 77 **2026**. doi: [0.1186/s43014-026-00433-5](https://doi.org/10.1186/s43014-026-00433-5)
10. Haroon N., Amjad A., Maaz M., Noman AM., Anees N., Muhammad Z., **Shah M.**, Abdulmonem WA. Phytochemistry, Bioavailability, and Molecular Mechanisms Underlying Multitarget Anticancer Activity of Aloe vera. *Nutrients*, 18 (12), 2034, **2026**. doi: [10.3390/nu18122034](https://doi.org/10.3390/nu18122034).
11. Javaid N., Amjad A., Weiskirchen R., Abbas A., Zafar S., **Shah M.**, Javed MS., Afzal K., Zafar U., Israr M. Sea Buckthorn (*Hippophae rhamnoides* L.) Nutritional Significance, Phytochemistry, Molecular Mechanisms, Therapeutic Potential, and Emerging Applications in Food Systems. *Foods*. 15, 1389, **2026**. doi: [10.3390/foods15081389](https://doi.org/10.3390/foods15081389).
12. Ahmad I., Waheed S., Alotaibi BS., Abbasi SW., Khan MU., Rahman FU., Dib H., Fawy KF., Nishan U., Ali A., Zaman A., **Shah M***. Cheminformatics-driven discovery of natural isoquinoline alkaloid inhibitors of Beta-secretase I for Alzheimer's management. *PLoS One*, 21(3):e0343717, **2026**. doi: [10.1371/journal.pone.0343717](https://doi.org/10.1371/journal.pone.0343717).
13. Siddiqua A., Shah AH.A., Nishan U., Khan N., **Shah M.**, Ahmad I. GC-MS profiling integrated with molecular docking and DFT analysis to elucidate the antioxidant and antimicrobial potential of Micromeria biflora. *Spectroscopy Letters*, 1–17, **2026**. doi: [10.1080/00387010.2026.2633296](https://doi.org/10.1080/00387010.2026.2633296).
14. Rubab A., Sarfraz A., Khan MU., Fawy KF., **Shah M***. In-silico design and evaluation of a novel mRNA vaccine against human bocavirus 1: A neglected viral pathogen. *Computers in Biology & Medicine*. 200, 111344, **2026**. doi: [10.1016/j.combiomed.2025.111344](https://doi.org/10.1016/j.combiomed.2025.111344).
15. Ansari SH, Amjad S, Wara TU, Hanif S, Raza A, Hussain HK, Akhtar N, **Shah M***, Imran I, Khan SJ, Yaqub B, Rasheed S. Real-time electrochemical detection of Ascorbic acid in mouse brain homogenate using SCN-wrapped Co@NiO Nanosensor. *Analytical Biochemistry*, 708:115980, **2026**. doi: [10.1016/j.ab.2025.115980](https://doi.org/10.1016/j.ab.2025.115980).
16. Ashraf Z., Arshad F., Shakeel SN., Rahman FU., Fawy KF., Altwaim SA., Alasmari SMN, Ali A., Khan MU., **Shah M***. Core Genome Analysis Reveals Novel Drug and Vaccine Targets in Multidrug-Resistant *Citrobacter koseri*. *Molecular Genetics & Genomics*. 301 (13), **2026**. doi: [10.1007/s00438-025-02333-8](https://doi.org/10.1007/s00438-025-02333-8)
17. Numan M., Khan Z., Khan SB., **Shah M.**, Liaqat I., Junior ISV., Dobler LC., Ali A., Sun Z., Almutairi MM. Genetic and morphological data indicate the occurrence of a Rhipicephalus sp.

- and the absence of *Rhipicephalus linnaei* in Pakistan. *Tropical Animal Health and Production* 58:48, 2026. doi: [10.1007/s11250-025-04810-z](https://doi.org/10.1007/s11250-025-04810-z)
18. Zaman A., Rukh S., Akrem A., Saeed Q., Noreen A., Ullah N., Ahmed S., **Shah M***. Structural and Functional Characterization of a Cysteine Protease from *Nelumbo nucifera* as a Potential Biopesticide against *Sitotroga cerealella*. *Cell Biochemistry & Biophysics*. 84, 1071–1086, 2026. doi: [10.1007/s12013-025-01924-x](https://doi.org/10.1007/s12013-025-01924-x).
 19. Alotaibi BS., Khan F., Rehmani MBI., Arshad F., Khan MU., Nishan U., Ali A., Khaled Fawy KF., Altwaim SA., Alasmari SMN., Dib H., **Shah M***. In-Silico Core Proteome Analysis for Chimeric Vaccine Development against Tick-Borne Tularemia. *Plos One*. 20(12): e0337692, 2025. doi: [10.1371/journal.pone.0337692](https://doi.org/10.1371/journal.pone.0337692).
 20. Asad M., **Shah M.**, Khan N., Anwar I., Fawy KF., Xiao-Ping Z., Sun W., Badshah A., Nishan U. Synergistic Catalysis of Ionic Liquid-Modified Ceria and Silver Deposited Activated Carbon for Rapid and Sensitive Colorimetric Detection of Hydrogen Peroxide. *RSC Advances*, 15, 48236, 2025. doi: [10.1039/d5ra06434a](https://doi.org/10.1039/d5ra06434a)
 21. Ullah S., Asad M., Ullah F., **Shah M.**, Fawy KF., Zhang X., Sun W., Nishan U., Badshah A. From trash to sensor: banana peel-derived silver nanocomposite as a mimic enzyme for cholesterol detection and antibacterial applications. *RSC Advances*. 15, 49288, 2025. doi: [10.1039/d5ra07350b](https://doi.org/10.1039/d5ra07350b)
 22. Asad M., **Shah M.**, Khan N., Jan MI., Fawy KF., Zhang X., Sun W., Badshah A., Nishan U. Ionic liquid capped ceria and zinc oxide doped activated carbon: A point-of-care sensor for dopamine detection. *Journal of Alloys and Compounds*. 1047, 185062 2025. doi: [10.1016/j.jallcom.2025.185062](https://doi.org/10.1016/j.jallcom.2025.185062).
 23. Kanwal A., **Shah M***, Khan MU., Latif M., Anum H., Younas S., Aljasham AT., Ojha SC. Computational development of multi-epitope vaccine to induce adaptive immunity against multi-drug resistant *Prevotella intermedia*. *BMC Infectious Diseases*. 25, 1674, 2025. doi: [10.1186/s12879-025-12105-9](https://doi.org/10.1186/s12879-025-12105-9)
 24. Alotaibi BS., Shabbir F., Khan MU., Ahmad I., Khalid H., Aziz S., Ali A., Younas S., Dib H., Fawy KF., Nishan U., **Shah M***. Bacterial Metabolite-Derived NDM-1 Inhibitors: A Computational Strategy to Overcome β -Lactam Resistance. *Probiotics and Antimicrobial Proteins*. 2025. doi: [10.1007/s12602-025-10801-1](https://doi.org/10.1007/s12602-025-10801-1).
 25. Shabbir F., Mishra VK., Noor S., Nath S., Khan MU., Fawy KF., Nishan U., Dib H., **Shah M***, Chen K. Computer-aided Screening of Marine Fungal Metabolites as Potential Inhibitors of New Delhi Metallo-Beta-Lactamase-1. *Scientific Reports*, 15, 33997, 2025. doi: [10.1038/s41598-025-12523-4](https://doi.org/10.1038/s41598-025-12523-4).
 26. Rehmani MBI., Arshad F., Khan MU., Ejaz H., Nishan U., Alotaibi A., Ullah R., Chen K., Ohja SC., **Shah M***. Computational Design of an mRNA Vaccine Targeting Antifungal-Resistant *Lomentospora prolificans*. *Scientific Reports*, 15, 34157, 2025. doi: [10.1038/s41598-025-14907-y](https://doi.org/10.1038/s41598-025-14907-y).
 27. Arshad F., Sarfraz A., Shehroz M., Nishan U., Perveen A., Ullah R., Ibrahim. MA, **Shah M***. Core-genome guided Novel Therapeutic Targets Identification and Chimeric Vaccine Designing against *Rickettsia rickettsii*. *Scientific Reports*, 15, 921, 2025. doi: [10.1038/s41598-024-83395-3](https://doi.org/10.1038/s41598-024-83395-3)
 28. Yaqub B., Perveen A., Sheheryar S., Moura AA., Campos FAP., Domont GB., Nishan U., Ullah R., Ibrahim MA., Nogueira FCS., **Shah M***. Proteome-based Investigation of Seeds

- from Two *Gossypium Hirsutum* L. Genotypes. *South African Journal of Botany*, 180C, 83-95, 2025. doi: [10.1016/j.sajb.2025.03.002](https://doi.org/10.1016/j.sajb.2025.03.002).
29. Perveen A, Sheheryar S, Ahmad F, Mustafa G, Moura AA, Campos FAP, Domont GB, Nishan U, Ullah R, Ibrahim MA, Nogueira FCS, **Shah M***. Integrative physiological, biochemical, and proteomic analysis of the leaves of two cotton genotypes under heat stress. *PLoS ONE* 20(1): e0316630, 2025. doi: [10.1371/journal.pone.0316630](https://doi.org/10.1371/journal.pone.0316630)
30. Rukh S, Akrem A, Saeed Q, Mehmood S, Adil N, Rao T, Nasir M, Ishaq U, Zaman A, Ullah N, **Shah M***. A Potent Plant-Derived Chitinase: Structural Informatics and Insecticidal Activity against *Helicoverpa armigera*. *Cell Biochemistry & Biophysics*. 83(4):4439-4451 2025. doi: [10.1007/s12013-025-01777-4](https://doi.org/10.1007/s12013-025-01777-4).
31. Arshad F., Pervaiz R., Sarfraz A., Ejaz H., Alotaibi A., Ullah R., Nishan U., Ali A., Khan MU., **Shah M***. Computational identification of membrane proteins for vaccine design against drug-resistant *Moraxella catarrhalis*. *Molecular Genetics & Genomics*, 300, 92, 2025. doi: [10.1007/s00438-025-02288-w](https://doi.org/10.1007/s00438-025-02288-w)
32. **Shah M***, Anum H., Sarfraz A., Aktaruzzaman Md., Hasan Alr., Khan Mu., Fahmi Fk., Altwaim Sa., Alasmari Smn., Ali A., Nishan U., Chen K. Bioinformatics-guided decoding of the *Ancylostoma duodenale* genome for the identification of potential vaccine targets. *BMC Genomics* 26, 468, 2025. doi: [10.1186/s12864-025-11652-4](https://doi.org/10.1186/s12864-025-11652-4).
33. **Shah M***, Fatima R., Sarfraz A., Khan MU, Ejaz H., Alam M., Aziz S., Nishan U., Ali A., Bari A., Ojha SC. Screening of novel therapeutic targets and chimeric vaccine construction against antibiotic-resistant *Yersinia Enterocolitica*. *Frontiers in Immunology*, 16:1555248. 2025. doi: [10.3389/fimmu.2025.1555248](https://doi.org/10.3389/fimmu.2025.1555248).
34. Zia M., Ahmad I., Khan MU., Ejaz H., Alam M., Aziz S., Ullah MI., Nishan U., Dib H., Fawy KF., Ojha SC., **Shah M***. Computational Analysis of Ayurvedic Metabolites for Potential Treatment of Drug-Resistant *Candida Auris*. *Frontiers in Cellular & Infection Microbiology*, 15, 2025. doi: [10.3389/fcimb.2025.1537872](https://doi.org/10.3389/fcimb.2025.1537872)
35. Zaman A., Noor S., Ahmad I., Shehroz M., Alhajri N., Ahmed S., Nishan U., Sheheryar S., Ullah R., Shahat AA., Dib H., **Shah M***. Exploring Cotton Plant Compounds for Novel Treatments Against Brain-Eating *Naegleria fowleri*: An In-silico Approach. *PLoS ONE*, 20(2):e0319032, 2025. doi: [10.1371/journal.pone.0319032](https://doi.org/10.1371/journal.pone.0319032).
36. Ahmad I., Tassawer A., Khan MU., Ullah MI., Shehroz M., Tayyab M., Nishan U., Sheheryar S., Ahmed S., Khan AA., Dib H., Abdelfattah MA., **Shah M***. Identification of Novel Amides and Alkaloids as Putative Inhibitors of Dopamine Transporters for Schizophrenia Using Computer-Aided Virtual Screening. *Frontiers in Pharmacology*, 16, 1509263, 2025. doi: [10.3389/fphar.2025.1509263](https://doi.org/10.3389/fphar.2025.1509263).
37. Khalid H., Ahmad I., Butt MH., Shamim A., Nishan U., Ali A., Dib H., Zaman A., **Shah M***. Computational Profiling of Asteraceae-Derived Phytochemicals Targeting S-Adenosylhomocysteine Hydrolase (SAHH) of *Naegleria fowleri*. *ChemistrySelect*, 10:(26) e00905, 2025. doi: [10.1002/slct.202500905](https://doi.org/10.1002/slct.202500905).
38. **Shah M***, Pervaiz S., Ahmad I., Ansari SH., Junior VFP., Ahmed S., Khan MU., Fawy KF., Nishan U., Dib H., Abdelfattah MAO. Computer-Aided Discovery of Dual-Target Compounds for Alzheimer's from Ayurvedic Medicinal Plants. *Plos One*, 20(6): e0325441. 2025. doi: [10.1371/journal.pone.0325441](https://doi.org/10.1371/journal.pone.0325441).
39. **Shah M***, Sarfraz A., Shehroz M., Perveen A., Jaan S., Zaman A., Nishan U., Moura AA., Ullah R., Iqbal Z., Ibrahim MA. Computer-aided Rational Design of a mRNA Vaccine

- Against *Guanarito* mammarenavirus. *Biotechnology Letters*. 47 (2), 2025. doi: [10.1007/s10529-024-03543-7](https://doi.org/10.1007/s10529-024-03543-7)
40. Sarfraz A, Chaudhary I, Arshad F, Shehroz M, Perveen A, Nishan U, Ali A, Ullah R, Shahat AA, Zaman A, **Shah M***. Peptide-based vaccine design against Hendra virus through immunoinformatics approach. *Veterinary Immunology and Immunopathology*, 280, 110869, 2025. doi: [10.1016/j.vetimm.2024.110869](https://doi.org/10.1016/j.vetimm.2024.110869)
41. Khan F., Li D., Ahmad I., Abbasi SW., Nishan U., Sheheryar S., Moura AA., Ullah R., Ibrahim MA., **Shah M***, Li W. Exploring the Genomic Potential of *Kytococcus schroeteri* for Antibacterial Metabolites Against Multi-drug Resistant *Mycobacterium tuberculosis*. *Journal of Infection and Public Health*, 18 (1) 102598, 2025. doi: [10.1016/j.jiph.2024.102598](https://doi.org/10.1016/j.jiph.2024.102598)
42. Khalid H, Ahmad I, Sarfraz A, Iqbal A, Nishan U, Dib H, Ullah R, Sheheryar S, **Shah M***. Screening Asian Medicinal Plants for SARS-CoV-2 Inhibitors: A Computational Approach. *Chemistry & Biodiversity*. 13:e202402548, 2025. doi: [10.1002/cbdv.202402548](https://doi.org/10.1002/cbdv.202402548)
43. Khalid H., Sattar F., Iqra Ahmad I., Junior VFP., Nishan U., Ullah R., Dib H., Omari KW., **Shah M***. Computer-assisted Discovery of Natural Inhibitors for Platelet-derived Growth Factor Alpha (PDGFRA) as Novel Therapeutics for Thyroid Cancer. *Frontiers in Pharmacology*, 15, 1512864, 2025. doi: [10.3389/fphar.2024.1512864](https://doi.org/10.3389/fphar.2024.1512864)
44. Yaqub B., Sarfraz S., Zulfiqar A., Wara TU., Rasheed S., Ansari SH., Hanif S., Khan SU., **Shah M***, Akhtar N. Development of polydopamine functionalized Co-EDTA complex-based electrochemical aptasensor for precise monitoring of *Pseudomonas aeruginosa*. *New Journal of Chemistry*, 49, 11107-11114, 2025. doi: [10.1039/d5nj00760g](https://doi.org/10.1039/d5nj00760g).
45. Ullah S., Zhao J., Almutairi MM., Mohammad A., Liaqat I., **Shah M.**, Sun Z., Ali A. Toxicosis in human and domestic hosts caused by ixodid ticks detected with *Anaplasma platys* and *Hepatozoon ayorgbor*, *Acta Tropica*, 271, 107857, 2025. doi: [10.1016/j.actatropica.2025.107857](https://doi.org/10.1016/j.actatropica.2025.107857)
46. Rahman, S., Huang, D.-W., **Shah, M.**, Almutairi, M. M., Liaqat, I., Tanaka, T., Chen, C.-C., Bahadar, S., & Ali, A. Vaccinomics-based identification of immunodominant epitopes in the tick-borne encephalitis virus polypeptide for multi-epitope vaccine development. *Computational and Structural Biotechnology Reports*, 2, 100047, 2025. doi: [10.1016/j.csbr.2025.100047](https://doi.org/10.1016/j.csbr.2025.100047).
47. Manzoor H, Khan MU, Khan S, **Shah M**, Shabbir CA, et al. (2025) Linalool-based silver nanoconjugates as potential therapeutics for glioblastoma: in silico and in vitro insights. *Plos One* 20(6), e0325281, 2025. doi: [10.1371/journal.pone.0325281](https://doi.org/10.1371/journal.pone.0325281).
48. Munir M., Shan MA., **Shah M.**, Rehman R., Shabbir CA., Alkhtani HM., Khan MU. Evaluating *Allium lycanonicum* Phytochemicals as CCR5 Inhibitors for HIV Therapy: A Computational Study. *Chemistry & Biodiversity*, (11):e00980, 2025. doi: [10.1002/cbdv.202500980](https://doi.org/10.1002/cbdv.202500980).
49. Rahman S., Liu H., **Shah M.**, Almutairi MM., Liaqat I., Tanaka T., Chen CC., Aloul, A., Abid Ali A. Prediction of potential drug targets and key inhibitors (ZINC67974679, ZINC67982856, and ZINC05668040) against *Rickettsia felis* using integrated computational approaches. *Frontiers in Veterinary Science*, 11, 1507496, 2025. doi: [10.3389/fvets.2024.1507496](https://doi.org/10.3389/fvets.2024.1507496)
50. Khan N., Afridi S., Soylak M., Asad M., Khan M., **Shah M.**, Khan N., Ullah R., Ali EA., Sun W., Badshah A., Nishan U. Colorimetric insights: Harnessing silver-doped graphitic carbon

- nitride for uric acid detection. *Synthetic Metals*, 311, 117832, **2025**. doi:10.1016/j.synthmet.2025.117832.
51. Asad M., Khan N., Khan M., **Shah M.**, Sun W., Zhang X., Ullah R., Ali EA., Badshah A., Nishan U. Ionic liquid-capped silver-zinc oxide@activated carbon: A Powerful nanocomposite for colorimetric uric acid detection. *Journal of Photochemistry and Photobiology A: Chemistry*, 463, 116273, **2025**. doi: 10.1016/j.jphotochem.2025.116273
 52. Ghayas H., Sun W., Asad M., **Shah M.**, Khan N., Ullah R., Shahat AA., Ibrahim MA., Ullah M., Badshah A., Nishan U. Synthesis and Characterization of Cedrus deodara Sawdust-Deposited Silver and Copper Nanoparticles Using Punica granatum Extract for Sensing of Uric Acid. *Waste and Biomass Valorization*, 16, 1701–1713, **2025**. doi: 10.1007/s12649-024-02763-2
 53. Ullah R., Soylak M., Asad M., Khan M., **Shah M.**, Khan N., Muhammad N., Ullah R., Ibrahim MA., Sun W., Badshah A., Nishan U. Manganese Oxide-Doped Graphitic Carbon Nitride-Based 2D Material as Nanozyme for the Colorimetric Sensing of Ascorbic Acid. *Sensors and Actuators: A. Physical*, 380, 115995, **2024**. doi: 10.1016/j.sna.2024.115995
 54. Khalid H., Butt MH., Aziz AR., Ahmad I., Iqbal F., Shamim A., Nishan U., Ullah R., Ibrahim MA., Moura AA., Shah M., Sun W. Phytobioinformatics screening of ayurvedic plants for potential α -glucosidase inhibitors in diabetes management. *Current Plant Biology*, 40, 100404, **2024**. doi: 10.1016/j.cpb.2024.100404
 55. Arshad F., Sarfraz A., Rubab A., Shehroz M., Moura AA., Sheheryar S., Ullah R., Shahat AA., Ibrahim MA., Nishan U., **Shah M***. Rational Design of Novel Peptide-based Vaccine Against the Emerging OZ Virus. *Human Immunology*, 85, 111162, **2024**. doi: 10.1016/j.humimm.2024.111162
 56. Khan N., Ahmad M., Sun W., Shah N., Asad M., **Shah M.**, Ullah R., Ibrahim M., Badshah A., Nishan U. Optical Detection of Uric Acid Based on Citric Acid Functionalized Copper-doped Biochar Nanozyme. *RSC Advances*, 14, 33007–33018, **2024**. doi: 10.1039/d4ra05976j
 57. Mursaleen S., Sarfraz A., Shehroz M., Zaman A., Rahman FU., Moura AA., Sheheryar S., Aziz S., Ullah R., Iqbal Z., Nishan U., Sun W., **Shah M***. Genome-level therapeutic targets identification and chimeric Vaccine designing against the Blastomyces dermatitidis, *Heliyon*, 10 (16) e36153, **2024**. doi: 10.1016/j.heliyon.2024.e36153
 58. Ahmad I., Khalid H., Perveen A., Shehroz M., Nishan U., Rahman FU., Moura AA., Ullah R., Ali EA., **Shah M***, Ojha SC. Identification of Novel Quinolone and Quinazoline Alkaloids as Phosphodiesterase 10A Inhibitors for Parkinson's Disease through a Computational Approach. *ACS Omega*, 9 (14), 16262-16278, **2024**. doi: 10.1021/acsomega.3c10351
 59. Sarfraz A., Fatima SQ., Shehroz M., Ahmad I., Zaman A., Nishan U., Tayyab M., Sheheryar., Moura AA., Ullah R., Ali EA., **Shah M***. Decrypting the multi-genome data for chimeric vaccine designing against the antibiotic-resistant *Yersinia pestis*. *International Immunopharmacology*, 132, 111952, **2024**. doi: 10.1016/j.intimp.2024.111952
 60. Yamin R., Ahmad I., Khalid H., Perveen A., Abbasi SW., Nishan U., Sheheryar., Moura AA., Ahmed S., Ullah R., Ali EA., **Shah M***, Ojha SC. Identifying Plant-derived Antiviral Alkaloids as Dual Inhibitors of SARS-CoV-2 Main Protease and Spike Glycoprotein through Computational Screening. *Frontiers in Pharmacology*, 15, 1369659, **2024**. doi: 10.3389/fphar.2024.1369659
 61. **Shah M***, Sitara F., Sarfraz A., Shehroz M., Wara TU., Perveen A., Ullah N., Zaman A., Nishan U., Ahmed S., Ullah R., Ali EA., Ojha SC. Development of a Subunit Vaccine against

- the Cholangiocarcinoma causing *Opisthorchis viverrini*: A Computational Approach. *Frontiers in Immunology*, 15, 1281544, 2024. doi: [10.3389/fimmu.2024.1281544](https://doi.org/10.3389/fimmu.2024.1281544)
62. **Shah M***, Yamin R., Ahmad I., Wu G., Jahangir Z., Shamim A., Nawaz H., Nishan U., Ullah R., Ali EA., Sheheryar., Chen K. *In-silico* evaluation of natural alkaloids against the main protease and spike glycoprotein as potential therapeutic agents for SARS-CoV-2. *Plos One*, 19 (1): e0294769, 2024. doi: [10.1371/journal.pone.0294769](https://doi.org/10.1371/journal.pone.0294769)
63. Shahbaz A., **Shah M.**, Asad M., Khan N., Jan MI., Ullah R., Ibrahim MA., Ali EA., Ahmad M., Sun W., Badshah A., Nishan U. Nickel Doped Hydroxyapatite Nanocomposite via Salt Melting Approach: A Colorimetric Sensing Platform for the Determination of Ascorbic Acid, *Analytical Letters*, 58, 1863 - 1878, 2024. doi: [10.1080/00032719.2024.2392648](https://doi.org/10.1080/00032719.2024.2392648)
64. Nishan U., Ullah R., Muhammad N., Khan N., Afridi S., Asad M., Niamat H., Ullah R., Ali EA., Ojha SC., **Shah M***. Dalbergia sissoo Extract for the Fabrication of Manganese Dioxide Nanoparticles on Erythrina suberosa Sawdust an Eco-Friendly Approach for Colorimetric Glucose Detection. *Arabian Journal for Science and Engineering*, 49, 9235–9247, 2024. doi: [10.1007/s13369-023-08572-4](https://doi.org/10.1007/s13369-023-08572-4)
65. Nishan U., Ullah K., Muhammad N., Badshah A., Afridi S., Khan N., Asad M., Ullah R., Ali EA., Zulqarnain., Nawaz H., **Shah M***. Environment-Friendly and Efficient Colorimetric Sensing of Hydrogen Peroxide Based on Dalbergia sissoo Sawdust-Deposited Nickel Nanoparticles. *Waste and Biomass Valorization*, 15, 5151–5162, 2024. doi: [10.1007/s12649-024-02525-0](https://doi.org/10.1007/s12649-024-02525-0)
66. Ibrahim S., Iqbal J., **Shah M.**, Sun W., Asad M., Ullah M., Khan N., Ullah R., Iqbal Z., Badshah A., Nishan U. From Waste to Sensor: Facile Synthesis of a Copper-Doped Hydroxyapatite Nanocomposite as a Colorimetric Sensing Platform for Uric Acid. *ChemistrySelect*, 9, e202402879, 2024. doi: [10.1002/slct.202402879](https://doi.org/10.1002/slct.202402879)
67. Badshah A., Noreen S., **Shah M.**, Asad M., Ullah R., Ali EA., Iqbal J., Sun W., Nishan U. From waste to wealth: iron oxide doped hydroxyapatite-based biosensor for the colorimetric detection of ascorbic acid. *RSC Advances*, 14, 19539, 2024. doi: [10.1039/d4ra02264e](https://doi.org/10.1039/d4ra02264e)
68. Nishan U., Ahmed A., Muhammad N., **Shah M.**, Asad M., Khan N., Ullah F., Ullah R., Ali EA., Nawaz H., Badshah A. Uric acid quantification via colorimetric detection utilizing silver oxide-modified activated carbon nanoparticles functionalized with ionic liquid. *RSC Advances*, 14, 7022, 2024. doi: [10.1039/d4ra00659c](https://doi.org/10.1039/d4ra00659c)
69. Nishan U., Jabeen N., Badshah A., Muhammad N., **Shah M.**, Ullah I., Afridi S., Iqbal J., Asad M., Ullah R., Ali EA., Ahmed S., Ojha SC. Nanozyme-based sensing of dopamine using cobalt-doped hydroxyapatite nanocomposite from waste bones. *Frontiers in Bioengineering & Biotechnology*, 12:1364700, 2024. doi: [10.3389/fbioe.2024.1364700](https://doi.org/10.3389/fbioe.2024.1364700)
70. Nishan U., Zahra T., Badshah A., Muhammad N., Afridi S., **Shah M.**, Khan N., Asad M., Ullah R., Ali EA., Chen K. Colorimetric sensing of hydrogen peroxide using capped Morus nigra-sawdust deposited zinc oxide nanoparticles via Trigonella foenum extract. *Frontiers in Bioengineering & Biotechnology*, 12:1338920. 2024. doi: [10.3389/fbioe.2024.1338920](https://doi.org/10.3389/fbioe.2024.1338920)
71. **Shah M***, Khan F., Ahmad I., Deng CL., Perveen A., Iqbal A., Nishan U., Zaman A., Ullah R., Ali EA., Chen K. Computer-aided identification of Mycobacterium tuberculosis resuscitation-promoting factor B (RpfB) inhibitors from *Gymnema sylvestre* natural products. *Frontiers in Pharmacology*, 14, 2023. doi: [10.3389/fphar.2023.1325227](https://doi.org/10.3389/fphar.2023.1325227)
72. **Shah M***, Jaan S., Shehroz M., Sarfraz A., Asad K., Wara TU., Zaman A., Ullah R., Ali EA., Nishan U., Ojha SC. Deciphering the Immunogenicity of Monkeypox Proteins for Designing

- the Potential mRNA Vaccine. *ACS Omega*, 8, 43341-43355, 2023. [doi:10.1021/acsomega.3c07866](https://doi.org/10.1021/acsomega.3c07866)
73. Sarfraz A, Wara TU, Sheheryar, Chen K, Ansari SH, Zaman A, Nishan U, Iqbal A, Ullah R, Ali EA, **Shah M*** and Ojha SC. Structural informatics approach for designing an epitope-based vaccine against the brain-eating *Naegleria fowleri*. *Frontiers in Immunology*. 14:1284621, 2023. [doi: 10.3389/fimmu.2023.1284621](https://doi.org/10.3389/fimmu.2023.1284621)
74. **Shah, M***, Anwar, A., Qasim, A., Jaan, S., Sarfraz, A., Ali, R.U.E., Nishan, U., Shehroz, M., Zaman, A., Ojha, S.C. Proteome Level Analysis of Drug Resistant *Prevotella melaninogenica* for the Identification of Novel Therapeutic Candidates. *Frontiers in Microbiology*, 14: 1271798, 2023. [doi: 10.3389/fmicb.2023.1271798](https://doi.org/10.3389/fmicb.2023.1271798)
75. Zulfiqar, A., Zafar, F., Yaqub, B., Mahmoud, H.M.A., **Shah, M***, Widaa, E.M.A., Nawaz, H., Akhtar, N., Nishan, U. Cobalt oxide modified sulfur and phosphorus Co-doped g-C3N4 for screening of urinary human albumin. *Microchimica Acta*, 190:355, 2023. [doi: 10.1007/s00604-023-05936-3](https://doi.org/10.1007/s00604-023-05936-3)
76. Qasim, A., Jaan, S., Wara, T., Shehroz, M., Nishan, U., Shams, S., **Shah, M***, Ojha, S.C. Computer-aided genomic data analysis of drug-resistant *Neisseria gonorrhoeae* for the Identification of alternative therapeutic targets. *Front. Cell. Infect. Microbiol.* 13: 1017315, 2023. [doi: 10.3389/fcimb.2023.1017315](https://doi.org/10.3389/fcimb.2023.1017315)
77. Nishan U., Ullah I., Gul R., Badshah A., Muhammad N., Khan N., **Shah M.**, Asad M., Afridi S., Ullah R., Ali EA., Ojha SC. Paracetamol-Mediated Synthesis of Silver Nanoparticles and Their Functionalization with Ionic Liquid for the Colorimetric Biosensing of Ascorbic Acid. *ACS Omega*, 8, 47, 44931–44941, 2023. [doi: 10.1021/acsomega.3c06353](https://doi.org/10.1021/acsomega.3c06353)
78. Nishan U., Khan N., Muhammad N., Afridi SU., **Shah M.**, Asad M., Ullah R., Niamat H., Ullah R., Ali EA., Ojha SC. Colorimetric sensing of uric acid based on sawdust-deposited silver nanoparticles via an eco-friendly and cost-effective approach. *Frontiers in Materials*, 10, 2023. [doi: 10.3389/fmats.2023.1298873](https://doi.org/10.3389/fmats.2023.1298873)
79. Nawaz, H., Zafar, N., Jabeen, R., Amjad, A., **Shah, M.**, Munir, S. Effects of repeated frying on physicochemical characteristics, oxidative stress, and free radical scavenging potential of canola oil and ghee. *European Journal of Lipid Science & Technology*, 125, 2300053, 2023. [doi: 10.1002/ejlt.202300053](https://doi.org/10.1002/ejlt.202300053)
80. Khaliq, A.; Nazir, R.; Khan, M.; Rahim, A.; Asad, M.; **Shah, M.**; Khan, M.; Ullah, R.; Ali, E.A.; Khan, A.; et al. Co-Doped CeO₂/Activated C Nanocomposite Functionalized with Ionic Liquid for Colorimetric Biosensing of H₂O₂ via Peroxidase Mimicking. *Molecules*, 28, 3325, 2023. [doi: 10.3390/molecules28083325](https://doi.org/10.3390/molecules28083325)
81. Nishan U, Rehman S, Ullah R, Bari A, Afridi S, **Shah M**, Iqbal J, Asad M, Badshah A, Khan N, Hwang IM, Khan HU and Muhammad N. Fabrication of a colorimetric sensor using acetic acid capped drug-mediated copper oxide nanoparticles for nitrite biosensing in processed food. *Frontiers in Materials*, 10:1169945. 2023. [doi: 10.3389/fmats.2023.1169945](https://doi.org/10.3389/fmats.2023.1169945)
82. Javed, M.S., Amir, M., Amjad, A., **Shah, M.**, Anwar, M.J., Ahmad, F. Viability of Microencapsulated Probiotics (*Lactobacillus Reuteri*) In Guava Juice. *J. Anim. Plant Sci.*, 33 (3), 644-654, 2023. [doi: 10.36899/JAPS.2023.3.0657](https://doi.org/10.36899/JAPS.2023.3.0657)
83. Ahmed, S., Ahmed, M.Z., Rafique, S., Almasoudi, S.E., **Shah, M.**, Jalil, N.A., Ojha, S.C. Recent Approaches for Downplaying Antibiotic Resistance: Molecular Mechanisms. *BioMed Research International*, 23, 5250040, 2023. [doi: 10.1155/2023/5250040](https://doi.org/10.1155/2023/5250040)

84. Zia, A., Shams, S., **Shah, M.**, Afridi, S.G., Khan, A. Structural Consequences of IRS-2 nsSNPs and Implication for Insulin Receptor Substrate-2 Protein Stability. *Biochemical Genetics*. 61:69–86, **2023**. doi: [10.1007/s10528-022-10247-y](https://doi.org/10.1007/s10528-022-10247-y)
85. Asad, M., Muhammad, N., Khan, N., **Shah, M***, Khan, M., Khan, M., Badshah, A., Latif, Z., Nishan, U. Colorimetric acetone sensor based on ionic liquid functionalized drug-mediated silver nanostructures, *Journal of Pharmaceutical & Biomedical Analysis*, 221, 115043. **2022**. doi: [10.1016/j.jpba.2022.115043](https://doi.org/10.1016/j.jpba.2022.115043)
86. Jaan, S.; Zaman, A.; Ahmed, S.; **Shah, M***; Ojha, S.C. mRNA Vaccine Designing Using Chikungunya Virus E Glycoprotein through Immunoinformatics-Guided Approaches. *Vaccines*, 10, 1476, **2022**. doi: [10.3390/vaccines10091476](https://doi.org/10.3390/vaccines10091476)
87. Jaan, S., **Shah, M***, Ullah, N., Amjad, A., Javed, M. S., Nishan, U., et al. Multi-epitope chimeric vaccine designing and novel drug targets prioritization against multi-drug resistant *Staphylococcus pseudintermedius*. *Frontiers in Microbiology*, 13:971263, **2022**. doi: [10.3389/fmicb.2022.971263](https://doi.org/10.3389/fmicb.2022.971263)
88. Nishan, U., Ullah, W., Muhammad, N., Asad, M., Afridi, S., Khan, M., **Shah, M.** Development of a Nonenzymatic Colorimetric Sensor for the Detection of Uric Acid Based on Ionic Liquid-Mediated Nickel Nanostructures. *ACS OMEGA*. 7(30):26983-26991, **2022**. doi: [10.1021/acsomega.2c04070](https://doi.org/10.1021/acsomega.2c04070)
89. Jan, M.I., Khan, R.A., Fozia., Ahmad, I., Khan, N., Urooj, K., Shah, A.H., Khan, A.U., Ali, T., Ishtiaq, A., **Shah, M.**, Ullah, A., Murtaza, I., Ullah, R., Alotaibi, A., Murthy, H.C.A. C-Reactive Protein and High-Sensitive Cardiac Troponins Correlate with Oxidative Stress in Valvular Heart Disease Patients. *Oxidative Medicine and Cellular Longevity*, 30, 5029853, **2022**. doi: [10.1155/2022/5029853](https://doi.org/10.1155/2022/5029853)
90. **Shah, M***, KHALIQ, F., NAWAZ, H., RAHIM, F., ULLAH, N., JAVED, M.S., AMJAD, A., NISHAN, U., ULLAH, S., AHMED, S., JALIL, N.A. Comparative evaluation of proximate composition and biological activities of peel extracts of three commonly consumed fruits. *Food Science and Technology*, 42, e61021, **2022**. doi: [10.1590/fst.61021](https://doi.org/10.1590/fst.61021)
91. Ramzan, A., **Shah, M***, Ullah, N., Sheheryar., Nascimento, J.R.S., Campos, F.A.P., Domont, G.B., Nogueira, F.C.S., Abdellattif, M.H. Proteomic Analysis of Embryo Isolated from Mature *Jatropha curcas* L Seeds. *Frontiers in Plant Science*. 13, 843764, **2022**. doi: [10.3389/fpls.2022.843764](https://doi.org/10.3389/fpls.2022.843764)
92. Ullah, I., Khan, A., Israr, M., **Shah, M.**, Shams, S., Khan, W., Shah, M., Siraj, M., Akbar, K., Naz, T., Afridi, S.G. Genomic miscellany and allelic frequencies of Plasmodium falciparum msp-1, msp-2 and glurp in parasite isolates. *PLoS ONE* 17(3), **2022**. doi: [10.1371/journal.pone.0264654](https://doi.org/10.1371/journal.pone.0264654)
93. Nishan, U., Khan, H.U., Rahim, A., Asad, M., Qayum, M., Khan, N., **Shah, M.**, Muhammad, N. Non-enzymatic colorimetric sensing of nitrite in fortified meat using functionalized drug mediated manganese dioxide. *Materials Chemistry and Physics* 278, 125729, **2022**. doi: [10.1016/j.matchemphys.2022.125729](https://doi.org/10.1016/j.matchemphys.2022.125729)
94. Amjad, A., Sohaib, M., Nawaz, H., Javed, S., **Shah, M.**, Shah, F., Tariq, M.R., Sajid, M.W., Khan, A.A., Bilal, M., Usman, H., Ahmad, M., Ahmad, T.M. Assessment of rheological and quality characteristics of bread made by the addition of ginger powder in wheat flour. *Food Science and Technology*, 42, e47820, **2022**. doi: [10.1590/fst.47820](https://doi.org/10.1590/fst.47820)

95. **Shah, M***, Bashir, S., Jaan, S., Nawaz, H., Nishan, U., Abbasi, S.W., Jamal, S.B., Khan, A., Afridi, S.G., Iqbal, A. Computational Analysis of Plant-Derived Terpenes as α -glucosidase Inhibitors for the Discovery of Therapeutic Agents against Type 2 Diabetes Mellitus, *South African Journal of Botany*, 143, 462-473, **2021**. doi: [10.1016/j.sajb.2021.09.030](https://doi.org/10.1016/j.sajb.2021.09.030)
96. Muhammad, I., Rahman, N., Nayab, G., Nishan, U., **Shah, M***. Antidiabetic activities of alkaloids isolated from medicinal plants. *Brailian Journal of Pharmaceutical Science*. 57: e19130, **2021**. doi: [10.1590/s2175-97902020000419130](https://doi.org/10.1590/s2175-97902020000419130)
97. Khan, S.A., Khan, S.U., Fozia, Ullah, N., **Shah, M.**, Ullah, R., Ahmad, I., Alotaibi, A. Isolation, Structure Elucidation and In Silico Prediction of Potential Drug-Like Flavonoids from *Onosma chitralicum* Targeted towards Functionally Important Proteins of Drug-Resistant Bad Bugs. *Molecules* 26, 2048, **2021**. doi: [10.3390/molecules26072048](https://doi.org/10.3390/molecules26072048)
98. Aslam, M., Shehroz, M., Ali, F., Zia, A., Pervaiz, S., **Shah, M***, Hussain, Z., Nishan, U., Zaman, A., Afridi, S.A., Khan, A. Chlamydia trachomatis core genome data mining for promising novel drug targets and chimeric vaccine candidates identification. *Computers in Biology and Medicine*, 136, **2021**. doi: [10.1016/j.compbiomed.2021.104701](https://doi.org/10.1016/j.compbiomed.2021.104701)
99. **Shah, M***, Jaan, S., Fatima, B. et al. Delineating Novel Therapeutic Drug and Vaccine Targets for *Staphylococcus cornubiensis* NW1T Through Computational Analysis. *International Journal of Peptide Research and Therapeutics*. 27:181–195, **2021**. doi: [10.1007/s10989-020-10076-w](https://doi.org/10.1007/s10989-020-10076-w)
100. Qureshi, N.A., Bakhtiar, S.M., Faheem, M., **Shah, M.**, Bari, A., Mahmood, H.M., Sohaib, M., Mothana, R.A., Ullah, R., Jamal, S.B. Genome-Based Drug Target Identification in Human Pathogen *Streptococcus gallolyticus*. *Frontiers in Genetics*, 12, 1–20., **2021**. doi: [10.3389/fgene.2021.564056](https://doi.org/10.3389/fgene.2021.564056)
101. Rahman, N., **Shah, M.**, Muhammad, I., Khan, H., Imran, M. Genome-Wide Core Proteome Analysis of *Brucella melitensis* Strains for Potential Drug Target Prediction. *Mini-Reviews in Medicinal Chemistry*, 21 (18), 2778 – 2787, **2021**. doi: [10.2174/1389557520666200707133347](https://doi.org/10.2174/1389557520666200707133347)
102. Ashiq, R., Fatima, B., **Shah, M.** et al. Tin derived antimony/nitrogen-doped porous carbon (Sb/NPC) composite for electrochemical sensing of albumin from hepatocellular carcinoma patients. *Microchim Acta* 188, 338, **2021**. doi: [10.1007/s00604-021-05005-7](https://doi.org/10.1007/s00604-021-05005-7)
103. Nishan, U., Sabba, U., Rahim, A., Asad, M., **Shah, M.**, Iqbal, A., Iqbal, J., Muhammad, N. Ionic liquid tuned titanium dioxide nanostructures as an efficient colorimetric sensing platform for dopamine detection. *Materials Chemistry and Physics* 262 (2021) 124289. doi: [10.1016/j.matchemphys.2021.124289](https://doi.org/10.1016/j.matchemphys.2021.124289)
104. Nawaz, H., **Shah, M.**, Nishan, U., Iqbal, J., Mannan, R. Microwave-Induced Modification of Physical and Functional Characteristics and Antioxidant Potential of Alkali-Soluble Cell Wall Polysaccharides of *Nelumbo nucifera* Rhizome. *Journal of Polymers and the Environment* 29, 3548–3560, **2021**. doi: [10.1007/s10924-021-02131-4](https://doi.org/10.1007/s10924-021-02131-4)
105. Javed, M.S., Amjad, A., **Shah, M.**, Shah, F.-U.-H., Sardar, H., Tariq, M.R., Khan, A.A., Sajid, M.W., Ali, U., Amir, M., Nasir, F. Isolation and characterization of moringa oleifera l. Flower protein and utilization in functional food bars. *Food Sci. Technol.* 2061, 1–10, **2021**. doi: [10.1590/fst.24620](https://doi.org/10.1590/fst.24620)
106. Nawaz, H., Shad, M.A., **Shah, M.**, Amjad, A., Rehman, T., Mehmood, A., Shahwar, D., Abbasi, S.T. Response surface optimization of flavonoids extraction, beta carotene bleaching

- and lipid-reducing capacity of Nelumbo Nucifera seed kernel extracts. *Indian J. Pharm. Educ. Res.* 55, S193–S201, **2021**. doi: [10.5530/ijper.55.1s.50](https://doi.org/10.5530/ijper.55.1s.50)
107. Aslam, M.; Shehroz, M.; Hizbullah.; **Shah, M.**; Khan, M.; Afridi, S.; Khan, A. Potential druggable proteins and chimeric vaccine construct prioritization against Brucella melitensis from species core genome data. *Genomics* 112, 1734–1745, **2020**. doi: [10.1016/j.ygeno.2019.10.009](https://doi.org/10.1016/j.ygeno.2019.10.009)
108. Muhammad, I.; Rahman, N.; Nayab, G.; Niaz, S.; **Shah, M.**; Afridi, S.G.; Khan, H.; Daglia, M.; Capanoglu, E. The Molecular Docking of Flavonoids Isolated from Daucus carota as a Dual Inhibitor of MDM2 and MDMX. *Recent Patents on Anti-Cancer Drug Discovery*, 15 (02), 154 – 164, **2020**. doi: [10.2174/1574892815666200226112506](https://doi.org/10.2174/1574892815666200226112506)
109. Ullah, Z.; Iqbal, A.; Baloch, M.K.; Nishan, U.; **Shah, M.** New insights into the zinc- α 2-glycoprotein (ZAG) scaffold and its metal ions binding abilities using spectroscopic techniques. *Life Sciences* 249, 117462, **2020**. doi: [10.1016/j.lfs.2020.117462](https://doi.org/10.1016/j.lfs.2020.117462)
110. U. Ali, M. Saleem, A. M. Qureshi, I. Riaz, **M. Shah**, and W. Gao. A variant of the unknotting number of a knot with applications to the topology of biomolecules. *EPL*, 131, 50004, **2020**. doi: [10.1209/0295-5075/131/50004](https://doi.org/10.1209/0295-5075/131/50004)
111. Nishan, N., Gul, R., Muhammad, N., Asad, M., Rahim, A., **Shah, M.**, Iqbal, J., Uddin, J., Shah, A. Shujah, S. Colorimetric based sensing of dopamine using ionic liquid functionalized drug mediated silver nanostructures. *Microchemical Journal*, 159, 105382, **2020**. doi: [10.1016/j.microc.2020.105382](https://doi.org/10.1016/j.microc.2020.105382)
112. Nawaz, H., Akbar, A., Andaleeb, H., **Shah, M.**, Amjad, A., Mehmood, A., Mannan, R. Microwave-Induced Modification in Physical and Functional Characteristics and Antioxidant Potential of Nelumbo nucifera Rhizome Starch. *Journal of Polymers and the Environment*, 28:2965–2976, **2020**. doi: [10.1007/s10924-020-01828-2](https://doi.org/10.1007/s10924-020-01828-2)
113. Khan, A.M.; Saeed, S.; Ullah, N.; Rukh, S.; Javed, S.M.; Amjad, A.; Jamil, M.; Nishan, U.; **Shah, M.*** Effect of nickel on the germination and Biochemical parameters of two rice varieties. *Fresenius Environmental Bulletin*. 29 (02), 956-963, **2020**.
114. Nishan, U., Bashir, F., Muhammad, N., Khan, N., Rahim, A., **Shah, M.**, Nazir, R., Sayed, M. Ionic liquid as a moderator for improved sensing properties of TiO₂ nanostructures for the detection of acetone biomarker in diabetes mellitus. *Journal of Molecular Liquids* 294, 111681, **2019**. doi: [10.1016/j.molliq.2019.111681](https://doi.org/10.1016/j.molliq.2019.111681)
115. Afridi, S.G.; Islam, N.; Shams, D.F Shams, S.; Khan, A.; **Shah, M.**; Islam, M.; Iqbal, A. Assessment of air pollution tolerance of selected trees and crop species using biochemical and physiological analyses. *Fresenius Environmental Bulletin* 28, 6, 4805-4810, **2019**.
116. Farooq, K.; Aurangzeb.; **Shah*, M.**; Javed, M.S.; Amjad, A.; Khan, W.; Rishma.; Afridi, S.G. Prevalence of tuberculosis in Khyber Pakhtunkhwa Pakistan using GeneXpert assay and light microscopy. *International Journal of Biosciences*, 15 (4), 223-229, **2019**. doi: [10.12692/ijb/15.4.223-229](https://doi.org/10.12692/ijb/15.4.223-229)
117. Amjad, A.; Javed, M.S.; **Shah, M.**; Hameed, A.; Shahbaz, M.; Ahmad, S. Effect of drying methods and extraction solvents on the antioxidant properties of cooked and raw spinach leaves. *International Journal of Food Science and Nutrition*, 4 (5), 112-119, **2019**.
118. Samad, A.; **Shah, M.**; Amjad, A.; Javed, M.S.; Shams, S.; Ullah, I.; Rishma.; Nawaz, M.; Afridi, S.G. Prevalence and seasonal variation of malaria in human population of Bajaur

- Agency Near Pak-Afghan border. *International Journal of Biosciences*, 15 (5), 401-405, **2019**. doi: [10.12692/ijb/15.5.401-405](https://doi.org/10.12692/ijb/15.5.401-405)
119. Nawaz, H.; Shad, M.A.; Hassan, S.; **Shah, M.**; Shahzad, H.; Jabeen, R.; Nawaz, A.; Riaz, Z.; Jamal, S. Comparative Evaluation of Physical and Physicochemical Properties and Antioxidant Potential of Various Cooking Oils. *European Journal of Nutrition & Food Safety*, 10(3): 199-207, **2019**. doi: [10.9734/ejnf/2019/v10i330113](https://doi.org/10.9734/ejnf/2019/v10i330113)
120. **Shah, M.**; Taxeira, F.M.; Domont, G.B.; Nogueira, F.C.S.; Campos, F.A.P. In-dept proteome analysis of *Ricinus communis* pollens. *Proteomics*, (19), 1800347, **2019**. doi: [10.1002/pmic.201800347](https://doi.org/10.1002/pmic.201800347)
121. Hizbullah, Nazir, Z.; Afridi, S.G.; **Shah, M.**; Shams, S.; Khan, A. Reverse vaccinology and subtractive genomics-based putative vaccine targets identification for *Burkholderia pseudomallei* Bp1651. *Microbial Pathogenesis*, 125, 219-229, **2018**. doi: [10.1016/j.micpath.2018.09.033](https://doi.org/10.1016/j.micpath.2018.09.033)
122. **Shah, M.**; Soares, E.L.; Lima, M.L.L.; Pinheiro, C.B.; Soares, A.A.; Domont, G.B.; Nogueira, F.C.S.; Campos, F.A.P. Deep proteome analysis of gerontoplasts from the inner integument of developing seeds of *Jatropha curcas*. *Journal of Proteomics*, 30:143:346-352, **2016**. doi: [10.1016/j.jprot.2016.02.025](https://doi.org/10.1016/j.jprot.2016.02.025)
123. **Shah, M.**; Taxeira, FM.; Thornburg, RW.; Carvalho, PC.; Domont, GB.; Nogueira, FCS.; Campos, F.A.P. Time-course proteomic analysis of extra-floral nectaries from *Ricinus communis*. *Proteomics*. 16(4):629-33, **2016**. doi: [10.1002/pmic.201500292](https://doi.org/10.1002/pmic.201500292)
124. **Shah, M.**; Soares, E.L.; Carvalho, P.C.; Soares, A.A.; Domont, G.B.; Nogueira, F.C.S.; Campos, F.A.P. Proteomic Analysis of the Endosperm Ontogeny of *Jatropha curcas* L. Seeds. *Journal of Proteome Research*, 14 (6):2557-68, **2015**. doi: [10.1021/acs.jproteome.5b00106](https://doi.org/10.1021/acs.jproteome.5b00106)
125. Soares, E.L.;[#] **Shah, M.**;[#] Soares, A.A.; Costa, H.J.; Carvalho, P.C.; Domont, G.B.; Nogueira, F.C.S.; Campos, F.A.P. Proteome Analysis of the Inner Integument from Developing *Jatropha curcas* L. Seeds. *Journal of Proteome Research*, 13 (8), 3562-70, **2014**. doi: [10.1021/pr5004505](https://doi.org/10.1021/pr5004505)
126. Pinheiro, C.B.;[#] **Shah, M.**;[#] Soares, E.L.; Nogueira, F.C.S.; Carvalho, P.C.; Junqueira, M.; Araujo, G.D.T.; Soares, A.A.; Domont, G.B.; Campos, F.A.P. Proteome Analysis of Plastids from Developing Seeds of *Jatropha curcas*. *Journal of Proteome Research*, 12 (11), 5137-45, **2013**. doi: [10.1021/pr400515b](https://doi.org/10.1021/pr400515b)
127. Nogueira, F.C.S.; Giuseppe, P.; Soares, E.L.; **Shah, M.**; Soares, A.A.; Roepstorff, P.; Campos, F.A.P.; Domont, G.B. Proteomic profile of the nucellus of castor bean (*Ricinus communis*) seeds during development. *Journal of Proteomics*, 75(6), 1933-39, **2012**. doi: [10.1016/j.jprot.2012.01.002](https://doi.org/10.1016/j.jprot.2012.01.002)
128. Imran, M.; Khan, H.; **Shah, M.**; Khan, R.; Khan, F. Chemical Composition and Antioxidant Activity of certain *Morus* species. *J. zhejiang univ-sc B*. 11, 973-980, **2010**. doi: [10.1631/jzus.B1000173](https://doi.org/10.1631/jzus.B1000173)

Book Chapters

1. Zulfiqar A., Wara T., Rasheed S., Khan SJ., Sajjad W., **Shah M.**, Akhtar N. Facilitation of Nanomaterial-based Electrochemical Sensors: Design and Processing. *Advances in Electrochemical Sensor Applications Using Nano-structured Materials*. ed.: Royal Society of Chemistry, v. , p. 437-465, **2025**. Doi: <https://doi.org/10.1039/9781837675289-00437>

2. Zulfiqar A., Fatima A., Khan M., Rehman MU., Fazal MW., Wara TU., **Shah M.**, Akhtar N. **Chap 6** - Two-dimensional material-based scaffolds for cell-based chip and tissue engineering and their recent progress in medical application, **Book**: In Woodhead Publishing Series in Electronic and Optical Materials, Functionalization of Two-Dimensional Materials and Their Applications, Woodhead Publishing, Pages 177-208, **2024**, <https://doi.org/10.1016/B978-0-323-89955-0.00003-0>.
3. Fatima, F., Hussain, D., Jamil, M., **Shah, M***, Rice Biotechnology: Modern Techniques of Rice Crop Production. Page No. 647-679., Springer Nature, **2022**. https://doi.org/10.1007/978-981-16-4955-4_32
4. Nawaz, H. , Shad, M.A. , Hassan, S. , **Shah, M.** , Shahzad, H. , Jabeen, R., Nawaz, A. , Riaz, Z. and Jamal, S. 2021. Comparative Evaluation of Physical and Physicochemical Properties and Antioxidant Potential of Various Cooking Oils: A Recent Study. Current Research in Agricultural and Food Science Vol. 5. (May **2021**), 126–137. B.P International Publishers. <https://doi.org/10.9734/bpi/crafs/v5/2343E>

ADMINISTRATIVE EXPERIENCE

- Member Board of Studies, Department of Biochemistry, BZU.
- Member of the Departmental admission committee.
- Member of the Departmental Committee for appointment of teachers on part-time basis.
- Member Examination Committee.
- Member Purchase Committee.
- Member Departmental Discipline Committee.
- Member Departmental Technical Committee.
- Departmental Focal Person for Office of Research Innovation & Commercialization.
- Incharge Instrumental Laboratory.
- Departmental Research Ethical Committee.
- Member of the Committee for the Purchase/Determination of different items/accessories for repair, renovation and replacement for different Category of Houses
- Member Board of faculty at the University level.
- Member of Hall, Stage & Seating Arrangement Committee: Convocation.

HONORS & AWARDS

- Awarded a Special Visiting Researcher fellowship for the Department of Animal Science, Federal University of Ceara, Brazil, by the Brazilian National Council for Scientific & Technological Development (CNPq) (2025).
- Awarded a Visiting Professor/Researcher fellowship for the Department of Animal Science, Federal University of Ceara, Brazil, by the Ceará Foundation for Support of Scientific and Technological Development (FUNCAP) (2024).

Curriculum Vitae

MOHIB

- Awarded a performance-based increment and honorarium by Bahauddin Zakariya University in recognition of research productivity (2021).
- Awarded a performance-based increment and honorarium by Bahauddin Zakariya University in recognition of research productivity (2020).
- Awarded a performance-based increment by Bahauddin Zakariya University in recognition of research productivity (2019).
- PhD fellowship jointly from the “World Academy of Sciences (TWAS)” and “Brazilian Council for Scientific and Technological Development (CNPq). 2009.
- Scholarship from Wellcome trust for participation in the workshop on “Proteomics Bioinformatics” at Wellcome Trust Genome Campus, Hinxton, Cambridge-UK. 2013.
- Postdoctoral fellowships from the Brazilian Council for Scientific and Technological Development. 2014 & 2015.

ORGANIZATION OF SCIENTIFIC EVENTS

- Organizer: 1st International Symposium on Microbial Biotechnology, Organized by Department of Biochemistry, BZU, Multan, 27-28 November 2025.
- Organizer: One day International Seminar Session at Bahauddin Zakariya University, Multan, dated: 17-02-2023
- Organizer: One day International Seminar Session at Bahauddin Zakariya University, Multan, dated: 07-11-2019
- Organizer: (Conference Secretary): Three days International Conference at NARC, Islamabad, “1st International Conference on Advances in Drug Discovery and Development. Dated: 03-05, January 2018. (*Conference Secretary*)
- Organizer: One day International Seminar Session at Abdul Wali Khan University Mardan, dated: 06-10-2017
- Organizer: One day International Seminar Session at Agriculture University, Peshawar, dated: 09-10-2017
- Organizer: One day International Seminar Session at Shaheed Benazir Bhutto Women University, Peshawar dated: 11-10-2017

Workshops/Symposiums Participation

- Participated in different national and international seminars, conferences and symposiums.