DR. MUHAMMAD USMAN AHMAD

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Alternate E-mail: usman_ah5@hotmail.com

Education

Year of Passing	Degree (Institution)
2019	Ph.D. Biotechnology: Area Applied Microbiology (GC University, Lahore)
2013	M.Phil. Microbiology (GC University, Lahore)
2011	B.S. (Hons.) Applied Microbiology (UVAS, Lahore)
2006	F.Sc. Pre-Medical (Government Islamia College, Civil Lines, Lahore)
2004	Matriculation (Standard Model High School, New Muslim Town, Lahore)

Award/ Distinction

In 2017, Granted with International Research Support Initiative Program (IRSIP) Scholarship by HEC Pakistan to conduct Doctoral Research work at Department of Microbiology, Immunology and Molecular Genetics (MIMG), University of California, Los Angeles (UCLA) under the supervision of Prof. Dr. Robert P. Gunsalus.

Language Skills

Language	Written	Spoken
English	✓	✓
Urdu	✓	✓

Professional Experience

Designation	Organization	Responsibilities	Duration
Assistant Professor (BPS-19)	IIB, GCU Lahore	Teaching and Research	May, 2019 – To date
Lecturer (BPS-18)			April, 2012 – May, 2019
Visiting Graduate Researcher	MIMG & PETC, UC Los Angeles	Research	Feb – Aug, 2017
Teaching Assistant	IIB, GCU Lahore	Teaching and Research	Nov, 2011 – April, 2012
Internee	PCSIR, Lahore	Research	Mar, 2011 – June, 2011

Membership

Member of the eLibrary USA (2015-Todate).

Last updated on 07-12-2025

Administrative Responsibilities/ Activities at GCU Lahore

1. Departmental Focal Person (Microbiology) for PM Laptop Scheme (Phase-IV, 2025)
2. Incharge Time Table, Department of Microbiology (2023-Todate).
3. Advisor Ibn-e-Sina Society of Microbiology, GCU Lahore (2023-Todate).
4. Co-Advisor Ibn-e-Sina Society of Microbiology, GCU Lahore (2022-2023).
5. Secretary/ Member of Board of Studies in Biotechnology and Microbiology, GCU Lahore (2021-2024).
6. Secretary/ Member of Departmental Research Advisory Committee (2021-2022).
7. Incharge, Non-Teaching Staff of IIB, GCU Lahore (2020-2022).
8. Co-Opted Member, Academic Staff Association of GCU Lahore (2020-2022).
9. Program Coordinator for BS Biotechnology Self-Supporting (2022-2023).
10. Member of BS, M.Phil (Biotechnology & Microbiology) and MLT Admission Committees (2021-2023).
11. Program Coordinator for M.Phil Microbiology (2021).
12. Departmental Proctor (2020-2021).
13. Additional Tutor, Faculty of Chemistry and Life Sciences (2020-2022)
14. Departmental Focal Person for Turnitin (2019-Todate).
15. Convener for Departmental Faculty Evaluation Team for QEC (2019-2021).
16. Incharge, Department Chemical Store (2019-2021).
17. Tutor (Academic Session 2019-2020).
18. Focal Person (Biotechnology and Microbiology) for Placement Center, GCU Lahore (2015-2016).
19. Co-Advisor Khorana Society of Biotechnology and Microbiology (2014-2017).
20. Member of Inter- & Intra-Departmental Class Checking Committee (2013-2014 & 2016, 2019-Todate).
21. Program Team Member, Departmental QEC Committee (2013-2016).
22. Focal person (Biotechnology and Microbiology) for PM's National Laptop Scheme-Phase-II (2015).
23. Member of M.Phil Biotechnology and Microbiology Admission Committee (2015).
24. Co-Incharge, Research Lab IIB-5; Incharge, B.Sc. General Lab-I (2015-2016).
25. Secretary/Member, Biotechnology and Microbiology Curriculum Revision Committee (2014).
26. Member of Chemicals, Glassware and Equipment annual audit Committee of IIB (2014).
27. Evaluator (Nominated by Department) for Student's Faculty Evaluation by QEC (2013-2016).
28. Member, Board of Faculty of Science and Technology, GCU Lahore (2013-2015).
29. Secretary/Member Board of Studies in Biotechnology and Microbiology, GCU Lahore (2013-2014).
30. Departmental Sports Coordinator (2013-2014).

Training Courses, Seminars, Workshops and Conferences Attended

Topic/Title	Organized By	Venue	Duration
1. 8th International and 17th National Conference on "Advances in Plant Sciences in the era of climate change"	Botanical Society of Pakistan	GC University, Lahore and University of the Punjab, Lahore	October 26-28, 2022
2. Citation and Literature Management using Mendeley Software	PASTIC and ORIC GCU Lahore	New Meeting Rooms, GCU Lahore	October 24, 2022
3. Importance of Intellectual Property Rights in Academia	PASTIC, ORIC GCU Lahore and Intellectual Property Organization Pakistan	GC University, Lahore	September 22, 2022
4. 02 Days Teachers' Training Workshop on inclusive Education & Implementation of the HEC Policy for students with disabilities	Centre for Special Students GC University, Lahore	New Meeting Rooms, GCU Lahore	August 17 – 18, 2022
5. Workshop on "A Successful Journey from Research to Publication"	ORIC, GCU Lahore	New Meeting Rooms, GCU Lahore	February 17, 2022

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	6. Funding Opportunities for Scientists under Pakistan Science Foundation	ORIC, GCU Lahore	New Meeting Rooms, GCU Lahore	November 12, 2021
	7. COMSTECH-ICCBS International Workshop on Chemical Safety & Security in Academic and Industrial Laboratories	OIC Standing Committee on Science and Technological Cooperation, Islamabad	COMSTECH, Islamabad	August 24 – 25, 2021
	8. Cascading Workshop of Master Trainers Faculty Professional Development Training Programme	Quality Enhancement Cell, GC University Lahore	GC University, Lahore	October 15 – 19, 2018
	9. Textbooks and Monographs Writing Awareness Session	Punjab HEC in coordination with Oxford University Press, Pakistan	GC University, Lahore	September 18, 2018
	10. Elucidating the Role of Host Glycosylation in Host-Microbe Interactions	Department of Chemistry and Biochemistry, UCLA	3440 Molecular Sciences Building, UCLA	March 10, 2017
	11. The Evolutionary 'Design' of Proteins			March 3, 2017
	12. International Conference on Latest Trends in Domestic and Wild Animal Genomics and Biotechnology	Department of Molecular Biology, Virtual University of Pakistan, Lahore	Virtual University of Pakistan, M.A. Jinnah Campus Defence Road, Off Raiwind Road, Lahore	November 21 – 22, 2016
	13. National Symposium on Potential Impact of Genetic Testing and Counseling	Department of Molecular Biology, Virtual University of Pakistan, Lahore	Virtual University of Pakistan, M.A. Jinnah Campus Defence Road, Off Raiwind Road, Lahore	August 04, 2016
	14. A Seminar on World TB Day	Department of Molecular Biology, Virtual University of Pakistan, Lahore	Virtual University of Pakistan, M.A. Jinnah Campus Defence Road, Off Raiwind Road, Lahore	April 06, 2016
	15. Bioinformatics Workshop: Hands on Training on Analysis of Biological Data using R	Department of Bioinformatics and Computational Biology, Virtual University of Pakistan, Lahore	Virtual University of Pakistan, M.A. Jinnah Campus Defence Road, Off Raiwind Road, Lahore	January 05, 2016

	16. Workshop on Nanoscience and Nanotechnology	Nano-Chemistry Lab. GC University Lahore	GC University, Lahore	August 27, 2015
	17. National Workshop on Molecular Diagnostics	University Diagnostic Lab (UDL), Institute of Biochemistry & Biotechnology, and Quality Operations Lab (QOL) UVAS, Lahore	UVAS, Lahore	June 23 – 25, 2015
	18. National Conference on Cutting-Edge Techniques in Molecular Research	Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore	UVAS, Lahore	March 12, 2015
	19. 2nd International Conference on Biotechnology for Sustainable Development	Institute of Industrial Biotechnology, GC University Lahore	GC University, Lahore	November 26 – 28, 2014
	20. Invention to Innovation Summit-2013	Pakistan Science Foundation and ORIC University of the Punjab, Lahore	University of the Punjab, Lahore	April 9 – 10, 2013
	21. Orientation Session on Second Cycle of Self Assessment Report (SAR) of MS/M.Phil. Programme	Quality Enhancement Cell (QEC), GC University Lahore	Faiz Seminar Hall, GC University Lahore	February 19, 2013
	22. International Workshop on Industrial Biotechnology	OIC Standing Committee on Science and Technological Cooperation, Islamabad	COMSTECH, Islamabad	July 10 – 12, 2012
	23. Nanotechnology–Its Application in Animal Production and Health	Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore	UVAS, Lahore	April 16 – 17, 2012
	24. Environmental Sampling	Institute of Continuing Education and Extension, UVAS, Lahore	UVAS, Lahore	March – September, 2009

Events Organized

- **Two Days Training Workshop on Fermenter Studies and End-Product Analysis by HPLC** (29-30 June, 2015) held at GC University, Lahore.
  - Secretary/Member Organizing Committee
  - Resource Person for hands on training to run 7.5L stirred fermenter/bioreactor
- Invited Lecture on **'Systemic Virology and Viral Diagnostics'** (6th May, 2015) held at Institute of Industrial Biotechnology, GC University Lahore.
- **2nd International Conference on Biotechnology for Sustainable Development** (26-28 November, 2014) held at GC University, Lahore.
  - Member of Publishing/Printing Committee
  - Member of Local Organizing Committee

<table>
<tr><td rowspan="4">Diploma/ Certificate</td><td>Title</td><td>Year of Passing</td><td>Institution</td></tr>
<tr><td>Laboratory Safety Fundamentals</td><td>Mar, 2017</td><td>Department of Environment, Health and Safety (UCLA)</td></tr>
<tr><td>Microsoft Office</td><td>Jul-Oct, 2009</td><td>Peak Solutions College, Lahore</td></tr>
<tr><td>English Conversation</td><td>Nov-Dec, 2006</td><td>College of Tourism and Multimedia Computing, Lahore</td></tr>
<tr><td>Research Work Experience</td><td colspan="3">• Exploration of bacterial cytoplasmic membrane fragments for production, characterization and utilization of oxyrase for industrial use (Ph.D Thesis).
• Submerged Fermentation of Corynebacterium glutamicum for the production of L-lysine (M.Phil. Thesis).
• Utilization of Agricultural wastes as a substrate for Carboxymethyl Cellulase production from Aspergillus niger in Submerged Fermentation (B.S. (Hons.) Internship work).
• Analysis of Food Additives, Contaminants and Mycotoxins (B.S. (Hons.) Internship work).
• Microbiological Analysis of Food and Water Samples (B.S. (Hons.) Internship work).</td></tr>
<tr><td>Oral Presentation at International Professional Conference</td><td colspan="3">• Muhammad Usman Ahmad, Ikram-ul-Haq, Muhammad Mohsin Javed and Hamid Mukhtar (2014). Oral Presentation of Abstract Entitled "Submerged Fermentation of Corynebacterium glutamicum NRRL-B2784 for the Production of L-lysine" in 2nd International Conference on Biotechnology for Sustainable Development (26-28 November, 2014) at GC University, Lahore.</td></tr>
<tr><td>Conference Abstracts</td><td colspan="3">• International Conference on Latest Trends in Domestic and Wild Animal Genomics and Biotechnology, Nov. 21-22, 2016.
1. Ayisha Javed, Muhammad Mohsin Javed, Sana Zahoor, Masroor Ellahi Babar, and Muhammad Usman Ahmad. Isolation and Characterization of halotolerant/halophilic bacteria from hypersaline environment of Khewra, District Jhelum.
2. Huma Yaqoob, Muhammad Mohsin Javed, Sana Zahoor, and Muhammad Usman Ahmad. Isolation and Characterization of Nicotine Degrading Enzyme from Bacterial Isolate.
3. Fatima Mansoor, Sana Zahoor, Masroor Ellahi Babar, Muhammad Usman Ahmad, and Muhammad Mohsin Javed. Isolation and Characterization of halotolerant/halophilic fungi from the hypersaline environment of Khewra mines, District Jhelum.
• 36th Pakistan Congress of Zoology (International) 16-18 February 2016 at Department of Zoology, University of Sindh, Jamshoro.
4. Muhammad Mohsin Javed, Muhammad Azhar Nisar, Haleema Qamar, Zahid Hussain and Muhammad Usman Ahmad. Osmolarity Effect on the production of Bioelectricity by mixed microbial culture.</td></tr>
<tr><td>Review Article in Scientific Ravi</td><td colspan="3">Muhammad Usman Ahmad. 2013. Making Vaccines: Bringing Innovation to Life. The Scientific Ravi, Vol. XXII (150th Anniversary Special Edition): pp. 105-107.</td></tr>
<tr><td>Institutional Accomplishment</td><td colspan="3">• Convener to Prepare Self Assessment Report (SAR) of M.Phil. Microbiology Program-2023.
• Team Member to Prepare Self Assessment Report (SAR) of M.Phil. Biotechnology Program-2020.
• Team Member to Prepare Self Assessment Report (SAR) of M.Phil. Microbiology Program-2016.
• Prepared the Self Assessment Report (SAR) of Ph.D. Biotechnology program for year 2015.
• In 2014, I have single handedly compiled and composed the entire reviewed course contents of Curriculum of B.Sc. (Hons.) Biotechnology, B.Sc. (Hons.) Microbiology, M.Phil. Biotechnology, M.Phil. Microbiology and Ph.D. Biotechnology, and formatted in the form of Booklets. These Booklets have been approved, in 2015, by the following authorities/forums of GC University, Lahore:
➢Board of Studies in Biotechnology and Microbiology
➢Board of Faculty, Science and Technology
➢Academic Council
➢Syndicate
• Prepared the 'Standardized Annual Report' of IIB for FY 2013-2014.
• Team Member to Prepare Self Assessment Report (SAR) of Biotechnology Program-2013.</td></tr>
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Brief Summary of Research Training and Accomplishments at University of California, Los Angeles

1. Preparation of aerobic and anaerobic culture media types.
2. The Hungate method for anaerobic culture of microbes.
3. Small and Intermediate scale of microbial culture.
4. Cell harvest and disruption method.
5. Strain and plasmid storage methods.
6. Gibson-type gene cloning.
7. Protein over-production using *E.coli* host cells.
8. Induction of protein synthesis and assay of or cell protein production.
9. Purification of recombinant proteins by Ni-affinity and Gel Exclusion Chromatography.
10. SDS-PAGE and protein determination assays.
11. Screening for protein localization and solubility.
12. Isolation of cell membranes for protein characterization.
13. Experimental design and cloning of ten microbial flagellar and pili genes.
14. Experimental purification of three archaeal flagella proteins.
15. Experimental purification of one archaeal pili protein.
16. Experimental cloning of one bacterial type hydrogenase gene.
17. Crystallization trials for three microbial proteins.
18. Characterization of oxyrase activity from *E.coli* cells.
19. Cloning of *E.coli* proteins involved in oxyrase activity.

Courses Taught

Sr. #	Course Title	Class
1.	Principles of Food Microbiology	M.Phil. Biotechnology
2.	Immunology	
3.	Pharmaceutical Biotechnology	
4.	Virology	M.Phil. Microbiology
5.	Molecular Immunology	
6.	Clinical Bacteriology	
7.	Biotechnology	B.Sc. (Hons.) Microbiology
8.	General Microbiology-I	
9.	General Microbiology-II	
10.	General Microbiology-III	
11.	General Immunology	
12.	Mycology	
13.	Food Microbiology	
14.	Clinical Bacteriology	
15.	Medical Microbiology	
16.	Microbial Anatomy and Physiology	
17.	Management of Infectious Wastes	
18.	Soil Microbiology	
29.	Fermentation Technology	B.Sc. (Hons.) Biotechnology
20.	Basic Biotechnology-I	
21.	Basic Biotechnology-II	
22.	Food Microbiology	
23.	Biosafety and Bioethics	
24.	Biochemistry-I (Practical)	
25.	Biochemistry-II (Practical)	
26.	Cell Biology	
27.	Biochemistry-II	
28.	Immunology	

Faculty Evaluation Score (Awarded by Quality Enhancement Cell, GC University-Lahore)

Year	Mean Score (Out of 5.00)	Grade	%
2022	4.84	A	96.90
2017	4.21	A	84.30
2016	4.49	A	89.84
2015	4.51	A	90.23
2014	4.37	A	87.57
2013	4.21	B	84.35
2012	4.28	A	85.62

Research Students Supervised

M. Phil. = 16

1. Rabia Naeem – Fermentative production, characterization and kinetic studies of microbial pectinase from fruit waste (2025).
2. Faisal Kareem – Production and characterization of antimicrobial peptides from Lactic Acid Bacteria: Evaluation of their antimicrobial potential against selected indicator bacteria (2025).
3. Umama Saif – Green synthesis of silver capped zinc oxide nanoparticles by using biomass of *Spirulina platensis*: characterization and evaluation of its potential antibacterial activity (2025).
4. Huma Ijaz – Dye removal from textile effluents using spent black tea-capped silver nanoparticles (2024). **Co-Supervisor**
5. Abeera Ahmed – Utilization of *Aspergillus niger* for the fermentative production of natural dyes (2023).
6. Saleem Sulaiman – Optimization and fermentative production of lignin peroxidase using mushroom mycelia (2023).
7. Ayesha Nazir – Isolation, screening and production optimization of phosphate solubilizing bacteria and its impact on plant growth (2022). **Co-Supervisor**
8. Hira Qamar – Immobilization of *Aspergillus oryzae* cutinase on ZnO nanocrystals for the degradation of insecticide and polyester waste (2022). **Co-Supervisor**
9. Nimra Riaz – Valorization of fruit waste for baker's yeast production and evaluation of its kinetic parameters (2022).
10. Khola Mohyuddin – Fermentative production of citric acid by *Aspergillus* sp. from different fruit wastes (2022).
11. Mamoona Kashaf – Fermentative production and characterization of fungal β-carotene (2022).
12. Sundas Sharif – *In vitro* and *In silico* analysis of antibacterial potential of herbal extracts (2021).
13. Kaynat William – Utilization of antimicrobial peptide-nano conjugates from Lactic acid bacteria for potential use (2021).
14. Saamia Mukhtar – Production, Characterization and Comparative kinetic studies of fungal tannase. (2019)
15. Yaqoob Hussain – Molecular Characterization of Multi Drug Resistant Extended Spectrum Beta Lactamase producing *Escherichia coli* in Tertiary care Hospital, Lahore. (2016)
16. Maqsood Arif – Study of uropathogenic *Enterococcus* and its antimicrobial susceptibility pattern in Punjab. (2014)

B.S Biotechnology and Microbiology = 9 (+70 Internship Students)

1. Abeera Ahmad – Optimization of fermentation conditions for Baker's yeast biomass production using fruit peel as substrate: A Review. (2021)
2. Amina Inam – Optimization of fermentation conditions for Baker's yeast biomass production using fruit extract as substrate: A Review. (2021)
3. Nimra Riaz – Characterization and Utilization of Bacteriocin from Lactic Acid Bacteria: A Review. (2020)
4. Saleha Mahnoor Faheem – Isolation and evaluation of Bacteriocin producing potential from Lactic Acid Bacteria. (2020)
5. Farah Junaid – Utilization of *Aspergillus* sp. for fermentative production of collagenase. (2019)
6. Amal Shaista – Isolation and screening of Tannase producing fungi from soil. (2018)
7. Ayesha Sarfaraz – Isolation and screening of extracellular protease producing fungi from soil. (2018)
8. Maira Zahid – Evaluation of Phenolic derivatives from different fruits for antibacterial activity. (2016)
9. Haleema Qamar – Production of Oxyrase from *Salmonella sp.* (2015)

Research Publications

1. Sikander Ali, Saif Ullah, **Muhammad Usman Ahmad**, Umama Saif, Ayesha Saleem, Aimenara Shafique, Huma Ijaz and Saba Amjad. **2026**. Enhanced Xylanase Production by N-methyl-N-nitro-N-nitrosoguanidine Mutated *Aspergillus niger* using Agricultural Waste. *Intl. J. Agric. Biol.,* 35:350205, *doi:* https://doi.org/10.17957/IJAB/15.2435

2. Sikander Ali, Hijab Zahra, **Muhammad Usman Ahmad**, Sibtain Ahmed, Khayala Mammadova, Rehana Masood, Iqra Chaudary, Khaled Fahmi Fawy and Muhammad Arshad. **2025**. Scalable production of hyaluronic acid from *Bacillus paralicheniformis* PV154040.1 under optimized conditions: a GRAS-based bioprocess for biomedical and cosmetic applications. *Int. Microbiol., doi:* https://doi.org/10.1007/s10123-025-00742-8 (IF= 2.3)

3. Syeda Wajiha Khalid, Sikander Ali, Qaiser Farid Khan, Amna Waseem, **Muhammad Usman Ahmad**, Yousef A. Bin Jardan, and Tawaf Ali Shah. **2025**. Entrapment of *Rhizopus oligosporus* conidiospores in silica-gel microbeads for stability in exo-inulinase production. *Int. J. Food Prop.,* 28:1, 2581382, *doi:* https://doi.org/10.1080/10942912.2025.2581382 (IF=3.8)

4. Sikander Ali, Taha Shafi, Iram Liaqat, **Muhammad Usman Ahmad**, Ifrah Shabbir, Tariq Aziz, Maha Alharbi, Ashwag Shami, Fahad Al-Asmari, Ibrahim Faisal Halawani, Abdullah A. Alqasem, Reham M. Mashat and Majid Alhomrani. **2025**. Exploring microbiological transformation of glutamate to γ-aminobutyric acid unleashed by a potential *Lactobacillus* spp. isolated from commercial cheese samples. *Int. Dairy J.,* 172: 106407, *doi:* https://doi.org/10.1016/j.idairyj.2025.106407 (IF=3.1)

5. Sikander Ali, **Muhammad Usman Ahmad**, Saba Amjad, Sumaira Iqbal, Fatima Rehman, Abid Sarwar, Ayaz Ali Khan, Maryam M. Alomran, Ashwag Shami, Abeer M. Alghamdi, Hana Abdulrahman Sagini, Fakhria A. Al-Joufi. **2025**. Investigating E, E-farnesol production unleashed by an indigenous Saccharomyces cerevisiae isolated from baker's yeast under stationary culture. *J. Microbiol. Methods*, 237:107240, *doi:* https://doi.org/10.1016/j.mimet.2025.107240 (IF=1.9)

6. Sikander Ali, Mehwish Mahrukh Iqbal, **Muhammad Usman Ahmad**, Ifrah Shabbir, Sadaf Saleem, Dawood Ahmed, Sumera Shaheen, Sibtain Ahmed, Khaled Fahmi Fawy and Muhammad Arshad. **2025**. Improved Citric Acid Productivity from Waste Molasses by Lowering Heavy Metal Concentration Through Soil-Inhabited Mutagen of *Aspergillus niger*. *Waste Biomass Valori., doi:* https://doi.org/10.1007/s12649-025-03281-5 (IF=2.8)

7. Areesha Batool, Sikander Ali, Aneeba Rashid, **Muhammad Usman Ahmad**, Saba Sana and Luiza C. Campos. **2025**. Enhanced catalytic stability for L-Dopa synthesis through cross-linking of Al_2O_3 nanocrystals with *Bacillus subtilis* tyrosine hydroxylase. *World J. Microbiol. Biotechnol.,* 41: 282, *doi:* https://doi.org/10.1007/s11274-025-04492-7 (IF=4.2)

8. Sikander Ali, Sana Maqsood, **Muhammad Usman Ahmad**, Ifrah Shabbir, Mohammad Raish, Fozia Batool, Asad-ur-Rehman, Iram Liaqat, Bakar Bin Khatab Abbasi, Ali Irfan and Yousef A. Bin Jardan. **2025**. Enhanced production of extracellular L-asparaginase in batch culture via nitrous acid-induced mutagenesis of *Aspergillus oryzae*. *Microb. Cell Fact.,* 24: 172, *doi:* https://doi.org/10.1186/s12934-025-02797-8 (IF=5.31)

9. Sikander Ali, Hijab Zahra, **Muhammad Usman Ahmad**, Amany A. Abdel-Rheem, Muhammad Afzaal, Rab Nawaz, Bakar Bin Khatab Abbasi, Ali Irfan and Yousef A. Bin Jardan. **2025**. Synergistic photocatalytic and biomedical applications of Ag_2O-immobilized *Bacillus subtilis*-hyaluronic acid. *Microb. Cell Fact.,* 24: 129, *doi:* https://doi.org/10.1186/s12934-025-02750-9 (IF=4.3)

10. Sikander Ali, Farzana Nazir, **Muhammad Usman Ahmad**, Hira Sarfraz, Abid Sarwar, Tariq Aziz, Ashwag Shami, Fahad Al-Asmari, Areej. A. Alhhazmi, Abeer M. Alghamdi and Fakhria A. Al-Joufi. **2025**. Isolation, Identification, biochemical and molecular characterization of potential source of enterotoxigenic strains of *Staphylococcus aureus* from the bovine raw and mastitis milk. *Int. Dairy J.,* 168: 106306, *doi:* https://doi.org/10.1016/j.idairyj.2025.106306 (IF=3.1)

11. Sikander Ali, Afra Ejaz, Muhammad Umar Hayyat, **Muhammad Usman Ahmad**, Zafar Siddique, Baber Ali, Sezai Ercisli, Tabarak Malik, Reem M. Aljowaie, Mohamed Soliman Elshikh and Muhammad Ammar Javed. **2025**. Cross-linking of fungal β-glucosidase on Al_2O_3 nanocrystals synthesized using *Cajanus cajan* L. Millsp. extracts for *in suit* genistein manufacture. *Sci. Rep.,* 15: 6810, *doi:* https://doi.org/10.1038/s41598-025-89973-3 (IF=3.8)

12. **Muhammad Usman Ahmad**, Sundas Sharif, Sikander Ali, Ishtiaq Ahmad, Qaiser Farid Khan, Iram Liaqat, Kaynat William, Tawaf Ali Shah, Abdulhakeem S. Alamri, Charis M. Galanakis and Majid Alhomrani. **2025**. Exploring in vitro and in silico potential inhibitory effects of eugenol and its analogues for broad range development of antibacterial drugs. *Discov. Life*, 54:4, *doi:* https://doi.org/10.1007/s11084-025-09679-4

13. Sikander Ali, Huma Ijaz, **Muhammad Usman Ahmad**, Rukhma, Najeeb Ullah, Abid Sarwar, Muhammad Jalal Khan, Tariq Aziz, Ashwag Shami and Fahad Al-Asmari. **2025**. Photocatalytic removal of textile wastewater-originated methylene blue and malachite green dyes using spent black tea extract-coated silver nanoparticles. *Sci. Rep.,* 15: 1851, *doi:* https://doi.org/10.1038/s41598-025-85894-3 (IF=3.8)

14. Sikander Ali, Alisha Moazzam, Saima Shahzad Mirza, Majid Mahmood, Sibtain Ahmed**, Muhammad Usman Ahmad**, Gildardo Rivera, Akhtar Rasool Asif, Muhammad Arshad, Mirza Imran Shahzad, Kaynat William and Sundas Sharif. **2025**. Exploring green synthesis of parietin-mediated silver nanoparticles using γ-ray induced *Xanthoria parietina* foliose extracts for antibacterial potential. *Results Chem.,* 13: 101961, *doi:* https://doi.org/10.1016/j.rechem.2024.101961 (IF=2.5)

15. Sikander Ali, Hijab Zahra, **M. Usman Ahmad**, Rukhma, Najeeb Ullah, Abid Sarwar, Tariq Aziz, Metab Alharbi, Abdullah F. Alasmari and Thamer H. Albekairi. **2024**. Maximizing dopa-oxidase activity in *Aspergillus oryzae* mycelia: insights into production optimization and potential biomedical applications. *Int. Microbiol., doi:* https://doi.org/10.1007/s10123-024-00627-2 (IF=2.3)

16. Sikander Ali, Maheen Aslam, **Muhammad Usman Ahmad**, Rehana Masood, Nasib Zaman, Muhammad Arshad and Sundas Sharif. **2024**. Valorization of Orange Peel Waste as a Potential Substrate for the Fermentative Production of Extracellular Laccase from *Aspergillus niger* ISL-09 and Determination of its Kinetic Parameters. *Waste Biomass Valori., doi:* https://doi.org/10.1007/s12649-024-02821-9 (IF=2.6)

17. Sikander Ali, Ghanwa Tahir, **Muhammad Usman Ahmad**, Iram Liaqat, Muhammad Nauman Aftab, Shazia Khurshid, Jahangir Khan, Abid Sarwar, Tariq Aziz, Metab Alharbi, Abdullah F. Alasmari, and Thamer H. Albekairi. **2024**. Green synthesis and effective utilization of biogenic Al_2O_3-nanocoupled fungal lipase in the resolution of active homochiral 2-octanol and its immobilization via aluminium oxide nanoparticles. *Green Process. Synth.*, 13(1): 20240141, *doi:* https://doi.org/10.1515/gps-2024-0141 (IF=3.8)

18. **Muhammad Usman Ahmad**, Abeera Ahmad, Sadaf Mutahir, Muhammad Asim Khan, Sikander Ali, Abdulrahman A. Almehizia and Kaynat William. **2024**. Utilization of *Aspergillus niger* for the fermentative production of azaphilone dye in YEPB medium. *3 Biotech*, 14: 259, *doi:* https://doi.org/10.1007/s13205-024-04098-0 (IF=2.6)

19. Sikander Ali, Pakeeza Noor, **Muhammad Usman Ahmad**, Qaiser Farid Khan, Kaynat William, Iram Liaqat, Tawaf Ali Shah, Abdulaziz Abdullah Alsahli, Youssouf Ali Younous and Mohammed Bourhia. **2024**. Kinetics of cellulase-free endo xylanase hyper-synthesis by *Aspergillus niger* using wheat bran as a potential solid substrate. *BMC Biotechnol.,* 24:69, *doi:* https://doi.org/10.1186/s12896-024-00895-w (IF=3.5)

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Book Published	A LABORATORY MANUAL OF MYCOLOGY. **2024**. Saba Sana, Iqra Liaqat, Asma Abdul Latif, Kinza Khan, Sikander Ali, Muhammad Nouman Aftab, **Muhammad Usman Ahmad**, Shamsa Niaz and Nida Sana. Scientific Knowledge Publisher (SciKnowPub), USA ISBN 978-1-960740-04-5, doi: 10.5281/zenodo.10631334.

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