

# Dr. QAISER FARID KHAN

Assistant Professor

(HEC-Approved Supervisor)

Department of Microbiology

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## Education

- Ph.D, Microbiology., Quaid-I-Azam University, Pakistan (2010-2016)
- M.Phil, Environmental Sciences., Quaid-I-Azam University, Pakistan (2008-2010)
- M.Sc, Zoology., Govt. College University, Faisalabad, Pakistan (2003-2005)

## Professional Appointments

- Assistant Professor, Department of Microbiology, Ikram-ul-Haq Institute of Industrial Biotechnology, Government College University, Lahore (2023-Till present)
- Assistant Professor, Sustainable Development Study Centre, Govt. College University, Lahore (March 2018 – 2023)
- Research Associate, Swette Center for Environmental Biotechnology, Biodesign Institute at Arizona State University (May 2014 – January 2015)
- Research Associate, The Gene and Linda Voiland School of Chemical Engineering and Bioengineering, Washington State University (October 2013 – May 2014)
- Researcher, Swette Center for Environmental Biotechnology, Biodesign Institute at Arizona State University (September 2012 – October 2013)
- Researcher, Environmental Biotechnology Division, NIBGE, Pakistan (2006-2008)

## Skill / Expertise

Applied Environmental Microbiology, Bioenergy, Microbial Fuel Cell, Microbial Biofilms, Microbial Ecology, Thermophiles, Antibiotic Resistance, Food Microbiology, Biodegradation

## PUBLICATIONS:

Research Publications: 15

Review Articles: 02

Book Chapters: 10

International and National conference proceedings: 16

Thesis Supervision: 3 Mphil + 7 BS Thesis

## Publications

### ***Research Publications***

1. Sana, S., Anjum, A.A., Khan, Q.F. *et al.* Growth and aflatoxin production by *Aspergillus flavus* isolated from poultry feed: effects of physicochemical factors and storage conditions. *Ann Microbiol* **75**, 36 (2025). <https://doi.org/10.1186/s13213-025-01808-8>
2. Kanwal, A., Farhan, M., Munazir, M. *et al.* Phytoremediation potential of native tree species for lead removal under domestic wastewater irrigation: a nature-based solution for urban water pollution. *Environ Monit Assess* **197**, 1345 (2025). <https://doi.org/10.1007/s10661-025-14789-7>

3. Khalid, S. W., Ali, S., Farid Khan, Q., Waseem, A., Ahmad, M. U., Bin Jardan, Y. A., & Ali Shah, T. (2025). Entrapment of *Rhizopus oligosporus* conidiospores in silica-gel microbeads for stability in exo-inulinase production. *International Journal of Food Properties*, 28(1). <https://doi.org/10.1080/10942912.2025.2581382>
4. Farooq M, Saleem M, Yap C, Zaib M, Khan Q, Ibrahim M et al. Estimation of Heavy Metals in Milk of Different Areas of Sialkot (Pakistan) and Its Possible Health Impact on Consumer. *J. Food Qual. Hazards Control* 2025; 12 (3) :210-217 DOI:10.18502/jfqhc.12.3.19785
5. Ahmad, M.U., Sharif, S., Ali, S. et al. Exploring in vitro and in silico potential inhibitory effects of eugenol and its analogues for broad range development of antibacterial drugs. *Discov Life* 55, 5 (2025). <https://doi.org/10.1007/s11084-025-09679-4>
6. Hayyat, M.U., Iqbal, S., Khan, Q.F. et al. Bioremediation of Metal(loid) toxicity in maize (*Zea mays* L.) by inoculating metal resistant bacterial strains. *Int. J. Environ. Sci. Technol.* (2025). <https://doi.org/10.1007/s13762-025-06364-x>
7. Mussa, S., Farhan, M., Ahmad, S. et al. Exploring the utility of different bulking agents for speeding up the composting process of household kitchen waste. *Sci Rep* 15, 2488 (2025). <https://doi.org/10.1038/s41598-025-85433-0>
8. Ali, S., Noor, P., Ahmad, M.U. et al. Kinetics of cellulase-free endo xylanase hyper-synthesis by *Aspergillus Niger* using wheat bran as a potential solid substrate. *BMC Biotechnol* 24, 69 (2024). <https://doi.org/10.1186/s12896-024-00895-w>
9. Ali, S., Fatima, L., Ahmad, M.U. Khan, Q.F. et al. Green synthesis of *Agaricus avensis*-mediated silver nanoparticles for improved catalytic efficiency of tyrosine hydroxylase towards potential biomedical implications. *Discov Life* 54, 4 (2024). <https://doi.org/10.1007/s11084-024-09647-4>
10. Waseem, A., Ali, S., Khan, Q.F. et al. (2024). Exploring chitosan-immobilized *Rhizopus oligosporus* lipase for olive-mill wastewater treatment. *Int. J. Environ. Sci. Technol.* <https://doi.org/10.1007/s13762-024-05808-0>
11. Ali, S., Lodhi, F.S., Ahmad, M.U. et al. Kinetics and synthesis of poly(3-hydroxybutyrate) by a putative-mutant of *Bacillus licheniformis*. *Bioresour. Bioprocess.* 11, 41 (2024). <https://doi.org/10.1186/s40643-024-00750-y> (IF: 4.6)
12. Zainab Tahir et al., (2023). Phyto & Bio management of metal (loid) contaminated soil by inoculating resistatn bacteria; Evluating tolerance of treated rice plant and soil with its efficiency. *Environmental Science and Pollution Research*. DOI: <https://doi.org/10.1007/s11356-023-30769-1> (IF: 5.8)
13. Asfra Rizwan, Rizwan Rasheed, Hajra Javed, Qaiser Farid, Sajid Rashid Ahmad (2022). Environmental sustainability and life cycle cost analysis of smart versus conventional energy meters in developing countries. *Sustainable Materials and Technologies*, Volume 33, e00464. <https://doi.org/10.1016/j.susmat.2022.e00464> (IF: 10.681)
14. Muhammad Farhan, Maqsood Ahmad, Amina Kanwal, Zahid Ali Butt, Qaiser Farid Khan, Syed Ali Raza, Haleema Qayyum1 & Abdul Wahid (2021). Biodegradation of chlorpyrifos using isolates from contaminated agricultural soil, its kinetic studies. *Scientific Reports* 11, 10320 (2021). <https://doi.org/10.1038/s41598-021-88264-x> (IF: 4.379)
15. Zaib-Un-Nisa, SalmaSultana, K.A.Al-Ghanim, Ghazla, Qaiser FaridKhan, F.Al Misned, Usman Atique, ZubairAhmed, ShahidMahboob (2021). Comparative assessment of heavy metal bioaccumulation in skeletal muscles of soft-shell and hard-shell freshwater turtles. *Journal of King Saud University – Science* 33, 101463 <https://doi.org/10.1016/j.jksus.2021.101463> (IF: 3.829)
16. Bradley G. Lusk, Qaiser Farid Khan, Prathap Parameswaran, Abdul Hameed, Naeem ali, Bruce E. Rittmann, Cesar I. Torres (2015). Characterization of electric current generation capabilities of the thermophile *Thermoanaerobacter pseudethanolicus* using xylose, glucose, cellobiose, or acetate with a fixed anode potential. *Environ Sci Technol*. Nov 24. <https://doi.org/10.1021/acs.est.5b04036> (IF: 11.357)
17. Mia Mae Kimco, Erhan Atci, Qaiser Farid Khan, Abdelrhman Mohamed, Ryan S. Renslow, Nehal Abu-Lail, Boel A. Fransson, Douglas R. Call, and Haluk Beyenal (2015). Vancomycin and

maltodextrin affect the structure and activity of *Staphylococcus aureus* biofilms. Journal of Biotechnology and Bioengineering. <https://doi.org/10.1002/bit.25681> (IF: 4.39)

18. Muhammad Afzaal, Tahir Zahoor, Faizan Ahmed Sadiq, Farhan Ahmad, Qaiser Farid Khan, Adeela Yasmeen, Muhammad Imran, Hafiz Arbab Sakandar (2018). Effect of encapsulation on the viability of probiotics in yoghurt. Progress in Nutrition. <https://doi.org/10.23751/pn.v20i2-S.5331>
19. Sabahat Yaqoob, Hafiz Arbab Sakandar, Nuzhat Huma, Faizan Ahmed Sadiq, Qaiser Farid Khan, Muhammad Imran, Abdur Rehman, Rashida Perveen and Ayesha Sameen (2018). Effects of Artificial Sweeteners on the quality parameters of yoghurt during storage. Progress in Nutrition. <https://doi.org/10.23751/pn.v20i2-S.5667>

### **Review Articles**

1. Hafiz Arbab Sakandar, Raza Hussain, Qaiser Farid Khan, Heping Zhang. Functional microbiota in Chinese traditional *Baijiu* and *Mijiu Qu* (starters): A review. Food Research International 138 (2020) 109830 (IF: 7.425) <https://doi.org/10.1016/j.foodres.2020.109830>
2. Hamid Majeed, Yuanyuan Bian, Barkat Ali, Anjum Jamil, Usman Majeed, Qaiser Farid Khan, Khalid Javed Iqbal, Charles F Shoemaker and Fang Zhong (2015). Essential oil encapsulations: Uses, Procedures, and Trends. RSC Advances. (IF: 4.036) <https://doi.org/10.1039/C5RA06556A>

### **Book Chapters**

1. Mohsin Gulzar Barq, Wasif Hussain, Qaiser Farid Khan, Naba Azhar, Muhammad Afzaal, Chapter 8 - Sustainable microalgae-derived pigments for the food industry, Editor(s): Ashfaq Ahmad, Syed Salman Ashraf, In Developments in Applied Microbiology and Biotechnology, Algae Biotechnology for Biomedical and Nutritional Applications, Academic Press, 2025, Pages 145-165, ISBN 9780443240065, <https://doi.org/10.1016/B978-0-443-24006-5.00006-7>.
2. Muhammad Farhan, Muhammad Afzaal, Amina Kanwal, Atika Waqar, Qaiser Farid Khan, Muhammad Ali, Maqsood Ahmad, Zahid Ali Butt, Chapter 11 - Freshwater microalgae: promising food sources with nutritional and functional properties, Editor(s): Ashfaq Ahmad, Syed Salman Ashraf, In Developments in Applied Microbiology and Biotechnology, Algae Biotechnology for Biomedical and Nutritional Applications, Academic Press, 2025, Pages 205-217, ISBN 9780443240065, <https://doi.org/10.1016/B978-0-443-24006-5.00016-X>.
3. Khan, Q.F. *et al.* (2024). Biodegradation of POPs in Contaminated Land/Water. In: Alshemmar, H., Hashmi, M.Z., Kavil, Y.N., Shu-hong, W. (eds) Contaminated Land and Water. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-031-65129-8\\_8](https://doi.org/10.1007/978-3-031-65129-8_8)
4. Tahir, Z. *et al.* (2024). Isotopic Tools for Tracing Water Pollutants. In: Alshemmar, H., Hashmi, M.Z., Kavil, Y.N., Shu-hong, W. (eds) Contaminated Land and Water. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-031-65129-8\\_6](https://doi.org/10.1007/978-3-031-65129-8_6)
5. Farhan, M. *et al.* (2024). Nutrient Contamination in Water. In: Alshemmar, H., Hashmi, M.Z., Kavil, Y.N., Shu-hong, W. (eds) Contaminated Land and Water. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-031-65129-8\\_7](https://doi.org/10.1007/978-3-031-65129-8_7)
6. Afzaal, M. *et al.* (2024). Industrial Trends in Antibiotics. In: Hashmi, M.Z., Saeed, A., Musharraf, S.G., Shuhong, W. (eds) Recent Advances in Industrial Biochemistry. Springer, Cham. [https://doi.org/10.1007/978-3-031-50989-6\\_8](https://doi.org/10.1007/978-3-031-50989-6_8)

7. Laila Shahzad, Umair Riaz, Sadia Yousaf, Nimra Riaz, Rabiya Nasir, Qaiser Farid Khan (2024). Climate Change Profligacy, Poverty, and Destruction: All Things are Interconnected. In: Jatav H.S. (eds) Environmental Nexus for resource management Routledge Taylor & Francis Group. <https://doi.org/10.1201/9781003358169-8>
8. Khan Q.F. et al. (2022) Occurrence of Microplastic Pollution in Marine Water. In: Hashmi M.Z. (eds) Microplastic Pollution. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-030-89220-3\\_13](https://doi.org/10.1007/978-3-030-89220-3_13)
9. Khan Q.F. et al. (2022) Monitoring of Microplastic Pollution. In: Hashmi M.Z. (eds) Microplastic Pollution. Emerging Contaminants and Associated Treatment Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-030-89220-3\\_3](https://doi.org/10.1007/978-3-030-89220-3_3)
10. Sakandar, H.A., Khan, Q.F., Tahir, Z., Majeed, H., Azhar, N., Nisa, Z.u. (2022). Evaluation of General Health Status of the Animals During the In-Life Phase. In: Dwivedi, M.K., Amaresan, N., Sankaranarayanan, A., Begum, R. (eds) Biosafety Assessment of Probiotic Potential. Methods and Protocols in Food Science. Humana, New York, NY. [https://doi.org/10.1007/978-1-0716-2509-5\\_24](https://doi.org/10.1007/978-1-0716-2509-5_24)

## Research Projects

- Electricity Production and Enrichment of Electroactive Microorganisms Using Sediment microbial fuel cells. Funding: 0.5million (PKR)

## Abstracts Published International

- Qaiser F Khan, Prathap Parameswaran, Zehra E Ilhan, Joseph F Miceli, Naeem Ali, Rosa Krajmalnik-Brown, Cesar I Torres, Bruce E Rittmann. Characterization of electrochemically active anodic bacterial biofilms in microbial electrolysis cells. CSBE/SCGAB AGM and Technical Conference. Greening the Globe: Sustainability through Innovation, July 22-25, 2018 - Guelph, Ontario, Canada
- H. Sakandar, S. Kubow, Q. Khan, K. Usman, M. Imran. Gliadin and phytic acid simultaneous degradation by *Enterococcus mundtii* QAU1 and *Wicherhanomyces anomalous* QAU03 consortia and reduction in toxicity on CaCO<sub>2</sub> monolayers. ASM Microbe, June 1-5, 2017, New Orleans, Louisiana, USA
- Q. F. Khan, P. Parameswaran, Z. E. Ilhan, J.F. Micelli, N. Ali, A. Hameed, B. E. Rittmann, and C. I. Torres. Tools to characterize microbial inocula capable of electricity generation using microbial electrolysis cells. ASM Microbe, June 16-20 2014, MA, USA. (Poster Presentation)
- Mia Mae Kiamco, Erhan Atci, Qaiser Farid Khan, Ryan S Renslow, Nehal Abu-Lail, Boel A Fransson, Douglas R Call, Haluk Beyenal. Combination of hyperosmotic agent and antibiotic enhances oxygen penetration into *Staphylococcus aureus* biofilms. The symposium on Advanced Wound Care (SAWC Fall), September 26-28, 2015, Caesars Palace, Las Vegas, Nevada, USA.
- H. Beyenal, M. Kiamco, Q. F. Khan, E. Atci, A. Mohamed, E. Davenport, B. Fransson, D. Call, N. Abu-Lail. Oxygen profiling and its biokinetic effects in wound biofilms with and without treatment. The symposium on Advanced Wound Care (SAWC Fall), October 16-18, 2014, Caesars Palace, Las Vegas, Nevada, USA. (Poster Presentation)
- Qaiser F. Khan, Bradley G. Lusk, Prathap Parameswaran, Naeem Ali, Abdul Hameed, Bruce E. Rittmann, and César I. Torres. Characterization of the electrical current generation capabilities of the thermophile *Thermoanaerobacter pseudethanolicus*, using a Microbial Electrochemical Cell. 114<sup>th</sup> General Meeting, American Society for Microbiology, May 17-20 2014, MA, USA. (Poster Presentation)
- Qaiser F Khan, Bradley G Lusk, Prathap Parameswaran, César I Torres. Characterization of the simultaneous fermentation and anode respiration capabilities of the thermophilic

*Thermoanaerobacter pseudethanolicus* in a Microbial Electrolysis Cell (MEC). NA ISMET, May 13-15 2014, Pennsylvania, USA.

- H. Beyenal, M. Kiamco, Q. F. Khan, B. Fransson, D. Call, N. Abu-Lail, R. Renslow. Hyperosmotic agents can enhance antibiotic efficacy against *MRSA* biofilms. Wound Healing Society. April 23-17 2014, OR, Florida, USA.
- Jonathan P. Badalamenti, Oluyomi Ajulo, Qaiser F. Khan, Prathap Parameswaran, Naeem Ali, Abdul Hameed, Rosa Krajmalnik-Brown, and César I. Torres. Characterization of newly discovered anode respiring bacteria. 4<sup>th</sup> International Microbial Fuel Cell Conference, 1-4 September 2013, Australia.
- Zaib-Un-Nisa, Salma Sultana, Shahid Mahboob, Shafaqat Ali, Qaiser Farid Khan, Muhammad Siddique. Estimation of Heavy Metals' Accumulation in Freshwater at Balloki Headworks and Trimmu Barrage. 3<sup>rd</sup> International Conference on Environment & Sustainable Development, GC University, Lahore, Pakistan. September 13-15, 2021
- Asfra Rizwan Toor, Hajra Javed, Abdullah Yasar1, Rizwan Rasheed, Faiza Sharif1, Qaiser Farid Khan, Muhammad Afzaal, Abdullah Khan, Yusra Maqbool. Comparative Efficiency Analysis of Ozone Oxidation and Physicochemical Process for Heavy Metal Removal from Electroplating Effluent. 3<sup>rd</sup> International Conference on Environment & Sustainable Development, GC University, Lahore, Pakistan. September 13-15, 2021
- Rabi Shahzad, Faiza Sharif, Qaiser Farid Khan, Hafiz Arbab Sakandar, Muhammad Khurshid. Construction and Operation of Sediment Microbial Fuel Cell for Electricity Generation Using Kallar Kahar Lake Sediments. 3<sup>rd</sup> International Conference on Environment & Sustainable Development, GC University, Lahore, Pakistan. September 13-15, 2021
- Zainab Tahir, Qaiser Farid Khan, Rizwan Rasheed, Faiza Sharif, Hafiz Arbab Sakandar, Muhammad Khurshid, Sahib E Alam. Performance of Sediment Microbial Fuel Cell for Electrical Current Generation Using Khabeki Lake Sediments. 3<sup>rd</sup> International Conference on Environment & Sustainable Development, GC University, Lahore, Pakistan. September 13-15, 2021
- Hajra Javed, Asfra Rizwan Toor, Rizwan Rasheed, Faiza Sharif, Qaiser Farid, Muhammad Afzaal, Abdullah Khan, Yusra Maqbool. Smart Grid Vs Conventional Grid- A Comparative Analysis of Opportunities, Challenges and Future Implications In Pakistan. 3<sup>rd</sup> International Conference on Environment & Sustainable Development, GC University, Lahore, Pakistan. September 13-15, 2021

## National

- Qaiser F. Khan, Bradley G. Lusk, Prathap Parameswaran, Naeem Ali, Abdul Hameed, Bruce E. Rittmann, and César I. Torres. Microbial Electrochemical Cells: Green Energy Technology. National Conference on "Green Energy Technologies". Pearl Continental Hotel, Peshawar, May 18, 2017. (Poster Presentation)
- S.Nadeem, H.M. Muzammil, B. Niaz, T. Mahmood, Q.F. Khan and A.R.Shakoori. Enhanced Production of Glutamic Acid by *Corynebacterium Glutamicum* Strain SS-67 under Specific C and N Sources. 9th Biennial Conference of Pakistan Society for Biochemistry and Molecular Biology, December 17-20, 2008. Pakistan.
- Khan QF. Bioconversion of Agro-Industrial Waste By-product into L-Phenylalanine Using Locally Isolated Bacteria. NIBGE, March 12-16, 2007, Pakistan. (Poster Presentation)

## Dissertations

- Thesis (PhD): Studies on Microbial Electrochemical Cells (MXCs) Using Different Anode Respiring Bacteria. Supervisor: (Prof. Dr. Abdul Hameed Co-Supervisor: Dr. Naeem Ali)
- Thesis (M.Phil): Spatio-Temporal variations in surface water quality from upstream and downstream of the river Chenab Pakistan. (Supervisor: Dr. Riffat N. Malik)
- Thesis (M.Sc): Isolation and screening of L-phenylalanine fermenting bacteria from irrigation water channels and soil, and media optimization for better amino acid production.

## **Supervised Research Thesis**

- Evaluation of power generation and wastewater treatment potential of Microbial Fuel Cells. Sidra Anum (Mphil: 2019-2021, Supervisor)
- Exploiting floating wetlands coupled with microbial fuel cells for the treatment of tannery wastewater. Maida Kanwal (Mphil: 2017-2019, Co-supervisor)
- Evaluation of power generation potential of sediments of Kallar Kahar using microbial fuel cells. Rabi Shehzad, (Mphil: 2018-2020, Co-supervisor)
- Construction and performance of single-chamber microbial fuel cell for electricity generation from khabekki lake sediments. Zainab Tahir (BS Hons: 2016-2020, Supervisor).
- Determination of microbial diversity of Ucchali and Kallar Kahar Lake, Pakistan. Imranullah & Haris Irfan (BS Hons: 2018-2022, Supervisor)
- Socio-economic and eco-sustainability analysis of smart electricity metering systems. Asfra Rizwan Toor (Mphil: 2018-2020, Co-supervisor)
- Isolation and characterization of halophilic fungi from Uchhali Lake: Eeraj Imad & Hira Khalid (BS 2019-2023)

## **Conferences and Symposia Attended**

### **International**

- Attended American Society for Microbiology, 114th General Meeting, Boston, Massachusetts, USA, May 17–20, 2014

### **National**

- Participated in National Conference on “Green Energy Technologies”. Pearl Continental Hotel, Peshawar, May 18, 2017.
- Participated in International Conference on “Emerging issues in Food Safety”. National Institute of Food Science & Technology, University of Agriculture, Faisalabad, Pakistan. November 14-16, 2011.
- Participated in 1<sup>st</sup> Annual HCV Management Symposium, NUST Center of Virology & Immunology, Pakistan, February 11, 2011.
- Participated in “Youth Workshop for Tackling Extremism in Pakistan”. Khudi, Islamabad Hotel, Pakistan. November 1<sup>st</sup>, 2010.
- Participated in 9th Biennial Conference of ‘Pakistan Society for Biochemistry and Molecular Biology’. ARID University, Pakistan. December 17-20, 2008
- Participated in 28<sup>th</sup> Pakistan Congress of Zoology (International), to be held at G C University Faisalabad, Pakistan March, 2008
- Participated in International Symposium on “Microbial Technologies for Sustainable Agriculture” to be held at National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad Pakistan. 12-16 April, 2007
- Participated in 3<sup>rd</sup> Symposium of fisheries on “Conservation of Mahsheel” Lahore, Pakistan, 25 - 26 April, 2005
- Participated in 25<sup>th</sup> Pakistan Congress of Zoology (International), to be held at Sindh Agriculture University, Tandojam, Pakistan March 1-3, 2005

## **Scholarships**

- International Research Support Initiative Program, Higher Education Commission of Pakistan (2012).
- Indigenous Ph. D Scholarship Program (Batch IV), Higher Education of Pakistan (2008-2013)

## **Conferences Organized**

- 3<sup>rd</sup> International conference on Environment and Sustainable Development, Government College University, Lahore, September 13-15, 2021.

## **Trainings**

- Two Day Workshop on Biosecurity and Dual Use Research of Concern, Organized by Health Security Partner, USA. Lahore Pakistan, November 27-28, 2024.
- One-Day hands on training on ‘Intellectual Property Rights and Patent Writing”, Organized by ORIC, Government College University, Lahore. October 09, 2024
- Workshop on Mastering the DNA & Genome-I. Organized by Dept of Animal Breeding and Genetics, UVAS, Lahore, Pakistan, June 13, 2024.
- Training Workshop on “Implementing Basel Convention’s Amendments for Enhanced Control of Plastic Waste Movements in Pakistan”. Organized by COMSATS University, Islamabad. Ramada Hotel, Islamabad October 26, 2023.
- Training of Entrepreneurial Coaching “Transforming Academic Knowledge to Develop Entrepreneurial Universities in Pakistan- Take-Up”. Co-funded by the Erasmus+ Program of the European Union. GCU, Lahore, Pakistan. July 2023.
- One day training course on “Chemical Safety” organized by SAACICE, Govt. of Punjab, Pakistan. February 21, 2019.
- Peer Review Training Course, Publons Academy Mentor.
- Certificate of Education Program. Clinical Laboratory Sciences, ASM, USA.

## **Honors and Awards**

- Bill and Melinda Gates Foundation Abstract Award from Low and Low-to-Middle Income Countries (2021)
- Received cash prize of \$200 for winning second place at the poster competition at National Conference on “Green Energy Technologies”. Pearl Continental Hotel, Peshawar, May 18, 2017.
- ASM Student and Postdoctoral Travel Award at ASM Microbe 2016 in Boston, MA, USA.
- Received a letter of Appreciation from Director NIBGE for outstanding work as a Researcher.

## **Journal Editor/Reviewer**

- Member, Advisory Board, Food Science & Applied Microbiology Reports (FSAMR). (ISSN: 2958-0684)
- Editor, Pacific International Journal, ISSN: 2616-4825 (E) ISSN 2663-8991 (P)

## **Member Board of Studies (BOS)**

- Member, Board of Studies (BoS), Department of Biotechnology, Qarshi University, Lahore.

## **References:**

### **1) Dr. Bruce E. Rittmann (Regents Professor)**

#### **Director**

Swette Center for Environmental Biotechnology  
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### **2) Dr Muhammad Afzal**

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