

MUHAMMAD ISHTIAQ ALI

Ph.D. (Microbiology)



POSTAL ADDRESS: Department of Microbiology, Quaid-i-Azam
University Islamabad-45320, Pakistan

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□ **ACADEMIC PROFILE:**

2012- 2013 **Post Doctorate (Microbiology)**
University of New South Wales Sydney, Australia

2005-2009 **Ph.D (Doctor of Philosophy in Microbiology)**
Quaid-i-Azam University, Islamabad

2003 **Master of Sciences (Zoology)**
University of Arid Agriculture Rawalpindi

2001 **Bachelor of Sciences (Botnay, Zoology, Chemistry)**
University of Punjab, Lahore

1999 **FSc (Pre Medical)**
BISE Mirpur

Research and Employment History:

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| Director Academics Feb-2019 to-date | Quaid-i-Azam University Islamabad |
| Professor March 2021-to-date | Department of Microbiology, Quaid-i-Azam University |
| Associate Professor Jan 2016- March 2021 | Department of Microbiology, Quaid-i-Azam University |
| Visiting Academic fellow Feb 2012 – December 2012 | School of biotechnology and bimolecular Sciences University of New South Wales, Sydney, Australia |
| Assistant Professor Sep 2011- Jan 2016 | Department of Microbiology, Quaid-i-Azam University |
| Lecturer (Aug. 2009- Aug. 2011) | Department of Microbiology, Quaid-i-Azam University |
| Visiting Research Fellow June 07- Dec 2007 | Faculty of Life Sciences, University of Manchester, UK |
| Research Associate: 2004-2005 | Microbiology Research Lab, Department of Microbiology Quaid-I-Azam University, Islamabad. |
| Ph.D Research Fellow 2005-2009 | Four year post graduation research project for Ph.D. under HEC Indigenous Fellowship at Microbiology Research Lab. Quaid-i-Azam University Islamabad. |

Teaching & Research interest:

Courses Taught: Microbial biotechnology, Advances in Microbial Genetics Solid waste management, Microbial Metabolism, Molecular Microbiology, General Microbiology, Industrial Microbiology

Research Interest: Applied and Environmental Microbiology/ Biotechnology, Renewable Bioenergy, Molecular Microbiology, Bioremediation of organochlorinated compounds, Biodegradation of synthetic polymers, Food Microbiology, Waste to energy, Biogenic conversion of coal to methane

Honors/Awards

1. Indigenous Fellowship for the Ph.D Programme (Batch 1) awarded by Higher Education Commission, Pakistan (2005-2009)
2. International research support initiative program at University of Manchester UK by Higher Education Commission, Pakistan (June 07- December 2007).
Post-Doctoral Fellowship Phase II (batch V) awarded by Higher Education Commission, Pakistan (2012-2013)
- 3.

Research Grants

| Sr. # | Title | Donor Agency | Amount (Rs.) | Duration | | Role as | |
|-------|---|---------------------------|--------------|----------|------|---------|-------|
| | | | | From | To | PI | Co-PI |
| 1 | Cloning and characterization of plastic degrading microbial isolates funded by Pakistan Science foundation | PSF (Completed) | 2.14 M | 2012 | 2015 | PI | |
| 2 | Characterization of food and vegetable waste for energy production by microorganism funded by HEC | HEC (Completed) | 0.5 M | 2012 | 2013 | PI | |
| 3 | Targeting the Hidden Natural Resource for Alternative Energy Source; Screening and Optimization of Microbial Biogasification Techniques for Methane Production using Low to High Grade Coal | HEC | 5.6M | 2015 | 2018 | PI | |
| 4 | Characterization of Biochar for Remediation of Contaminated Soils | HEC | 7.0 M | 2017 | 2020 | PI | |
| 5 | Development of Biological Treatment System for Pulp and Paper Industry Effluent | HEC | 5.1M | 2017 | 2020 | | CO-PI |

Research Supervision

MPhil Completed: 51

MPhil in process: 5

Ph.D. Completed: 6

PhD in Process. 5

Research Supervision

PhD's Produced*

06

Under supervision:

06

| S.No | Student's Name | Thesis title | Year |
|------|-----------------------|---|------|
| 1. | Sadia Aziz | Production and characterization of Biochar from organic waste and its Application for bioremediation in Diesel contaminated soils | 2019 |
| 2. | Hassan Waseem | Evaluation of Antimicrobial Resistance Dissemination in the Environment | 2019 |
| 3. | Jafir Hussain Shirazi | Clinical and Epidemiological Studies of Oropharyngeal Candidiasis in Various Hospitals of Pakistan | 2019 |
| 4. | Aneela Younis Malik | Isolation and Characterization of Coal solubilizing Microorganism | 2018 |

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| 5. | Nazia Khatoon | Molecular Characterization of Microbial Oxidoreductases and their Application in Polymer Biodegradation | 2018 |
| 6. | Rabia Liaquat | Anaerobic digestion of organic waste for biogas production | 2016 |

* A student recommended for the award of degree by the Advanced Studies and Research Board.

M.Phil. Produced

Total Number: 50

| S.No | Name | Title | Year |
|------|---------------|--|------|
| 1. | Saniya Fatima | Stimulation of methane generation from lignite coal samples through co-digestion of different substrates | 2019 |
| 2. | Samia Anjum | Enhanced solubilization of bituminous coal through indigenous fungal strain for the extraction of humic acid | 2019 |
| 3. | Momina Mansha | Comparative analysis of Tea spent and sludge waste derived biochar for remediation of Cadmium polluted soils | 2019 |
| 4. | Muqadas Zafar | Evaluation of biomethane potential of microalgae and enhancement by co-digestion with eucalyptus leaves | 2019 |
| 5. | Adeela Abbas | Characterization of Fruit and Vegetable-Based Biochar for Remediation of Diesel Oil Contaminated Soils | 2019 |
| 6. | M Adnan Sabir | Bio Gasification Potential of Indigenous Low Rank Coal by <i>Rhizopus oryzae</i> | 2019 |
| 7. | Anab Mujataba | Studies on Enzymatic Desulphurization of Coal from Salt Range Coal Mine | 2019 |
| 8. | Merium Sandhu | A Field Scale Study for Remediation of Crude Oil by Agriculture Waste Biochar | 2019 |
| 9. | Tehmina Ahmad | Studies on Optimization of Native Micro-Algal Strain for Biodiesel Production | 2018 |
| 10. | Rida Riaz | Applications of Agricultural Waste Mediated Biochar for the Remediation of Crude Oil Contaminated Soil | 2018 |
| 11. | Marya Khan | Biosolubilization and Gasification Potential of Selected Microbial Strains from Balochistan Coal | 2018 |
| 12. | Shahpal Malik | Comparative Molecular Analysis of Indigenous Microbial Diversity of Cherat, Dara and Duki Coal | 2018 |
| 13. | Saira Bano | Some studies on indigenous high carbohydrates accumulating microalgal strain and its potential for bioethanol production | 2018 |
| 14. | Sana Bari | Studies on Coal Desulphurization of Cherat Coal Mine by Native microbial flora | 2017 |

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| 15. | Aamna Kiyani | Cost Effective and Eco Friendly Production of Bio Diesel using Microalgae as a Feed Stock | 2017 |
| 16. | Laiba Yaseen | Effect of Different Types of Bio-char on Plant Growth and Soil Microflora | 2017 |
| 17. | Hira Alam | Bio- desulphurization and Bio- solubilization of Coal Sample of Dara Adam Khel Coal Mines by Indigenous Microbial Flora | 2017 |
| 18. | Afsheen Nawaz | Study on Endosulfan Bioremediation in Aqueous Medium and Soil Microcosm by Fungal Strains Isolated from Pesticide Contaminated Fields | 2017 |
| 19. | Huma Nawaz | Biological pretreatment and Enzymatic Hydrolysis of Paper Waste | 2016 |
| 20. | Bushra Fatima | Studies on pretreatment of poultry slaughter house Waste for biogas enhancement by ammonia Inhibition | 2016 |
| 21. | M Usman | Isolation and characterization of Chirat coal mine (KPK) microorganisms for coal solubilization and methane production | 2016 |
| 22. | Noreen Fatima | Heterologous expression of ligninolytic peroxidases for the biodegradation of synthetic polymers | 2016 |
| 23. | Aeman Sehar | Production and characterization of biochar from organic waste | 2016 |
| 24. | Muslima Afnan | Studies on Bioremediation of Endosulfan by Microbial Oxidoreductases Enzymes | 2016 |
| 25. | Beenish Sadaqat | Decolourization Of Synthetic And Human Hair Melanin By Lignin Peroxidases of Fungal Origin | 2016 |
| 26. | Samreen Zaidi | Isolation and Characterization of Microalgae from Natural Habitats and Local Bodies for Bio-Molecule Production | 2016 |
| 27. | Hifsa Shafiat | Development of Microbial Consortium for the Bioremediation of Endosulfan | 2016 |
| 28. | Javed Khan | Cloning and molecular characterization of laccases and lignin peroxidase for polymer biodegradation | 2015 |
| 29. | Moona Karim | Role of natural Zeolite for biogas production from organic solid waste | 2015 |
| 30. | Tehseen Usman | Microbial desulphurization of Butimonous coal samples from salt range Pakistan | 2015 |
| 31. | Tooba Hayat | Studies on effect of charcoal on microbial diversity of soil and their combined impact on soil fertility | 2015 |
| 32. | Aneesa dawood | Production and characterization of versatile peroxidase from fungal isolates | 2015 |
| 33. | Sidra Kaleem | Molecular and enzymatic characterization of microbial community in fruit and vegetable digester | 2014 |
| 34. | Najam-e- Sahar | Biosynthesis of lignin peroxidase by white rot fungi | 2014 |

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|-----|-----------------|---|------|
| | | for plastic degradation | |
| 35. | Sundus Rani | Some studies on endosulphan degrading microbial isolates | 2014 |
| 36. | Iram Fatima | Isolation and screening of coal degrading anaerobic microorganism | 2014 |
| 37. | Gul Dasta | Biodegradability studies of polystyrene by fungal manganese peroxidases | 2014 |
| 38. | Haider Ali | Production and characterization of fungal lignin peroxidases and laccases for biodegradation of polyvinyl chloride | 2014 |
| 39. | Aqeela Azeem | Effect of co-digestion and operating parameters on bio-gas production by anaerobic digestion of fruit and vegetable waste | 2014 |
| 40. | M. Ali | Isolation and screening of coal solubilizing aerobic microorganisms | 2014 |
| 41. | Sumera Naz | Prevalence of Methicillin-resistant Staphylococcus aureus (MRSA) and Extended spectrum β lactamases (ESBL) in post operative wound infections | 2013 |
| 42. | Mishal Subhan | Biosurfactant production by newly isolated fungal strain and its application in microbial enhanced oil recovery | 2012 |
| 43. | Urooj Kiran | An investigation of Antimicrobial activity of Silver Nanoparticles against Multidrug resistant Microorganisms | 2012 |
| 44. | Nazia Khatoon | Characterization and activity analysis of biofilm formation on polymer exposed to waste water | 2012 |
| 45. | Shumaila Ashfaq | Studies on Microbial degradation of Paints. | 2012 |
| 46. | Muneeba Maryem | Extracellular Myco-synthesis of metal nanoparticles by <i>Aspergillus niger</i> . | 2012 |
| 47. | Maryam Idress | DNA methylation analysis of major DNA components of Banana Bunchy Top virus Genome | 2012 |
| 48. | M. Rafiq | Cloning, sequencing and phylogentic analysis of DNA-A of cotton leaf curl disease associated Begomovirus | 2011 |
| 49. | Hajra Haneef | Isolation and Molecular Characterization of Clostridium tetani | 2011 |
| 50. | Imran Khan | Role of fungal peroxidases in the degradation of Polyvinyl chloride | 2011 |

Research Publications: (Impact Factor 225.6)

1. Ramla Rehman, **Muhammad Ishtiaq Ali**, Naeem Ali, Malik Badshah, Mazhar Iqbal, Asif Jamal, Zaixing Huang (2021). Crude oil biodegradation potential of biosurfactant producing *Pseudomonas aeruginosa* and *Meyerozyma* sp. *Journal of Hazardous Materials*. doi.org/10.1016/j.jhazmat.2021.126276 (**Impact Factor 10.588**)
2. Zaixing Huang, Michael A Urynowicz, Rizwan Haider, Hamed Sattar, Mahmood Saleem, Lan Hoang, , Ngoc Tran Han , Kim Anh Toe , Hung Le Quoc , **Muhammad Ishtiaq Ali** , Honggunag Guo , Huan Hea , Fang-Jing Liua (2021). Biogenic methane generation from Vietnamese coal after pretreatment with hydrogen peroxide. *International Journal of Energy Research* DOI: 10.1002/er.6985 (**Impact Factor 5.164**)
3. Noureen Fatima , Asif Jamal, Zaixing Huang, Rabia Liaquat, Rizwan Haider, Bashir Ahmad, **Muhammad Ishtiaq Ali** (2021). Extraction and Chemical Characterization of Humic Acid from Lignite and Bituminous Coal using Nitric acid as pretreatment. *Sustainability*: 1285875 (**Accepted Impact Factor 3.25**)
4. Muhammad Muddasar, Rabia Liaquat, Ali Abdullah, Asif Hussain Khojaa , Nadia Shahzad , Naseem Iqbal , **Muhammad Ishtiaq Ali** , Azhar Uddin , Sami Ullah (2021). Evaluating the use of unassimilated bioanode with different exposed surface areas for bioenergy production using solar-powered Microbial Electrolysis Cell. *International Journal of Energy Research* DOI: 10.1002/er.7091 (**Impact Factor 5.16**)
5. Mamoona Munir, Mushtaq Ahmad, Muhammad Saeed, Amir Waseem, Abdul-Sattar Nizami, Shazia Sultana, Muhammad Zafar, Mohammad Rehan, Gokul Raghavendra Srinivasan, Arshid Mahmood Ali, **Muhammad Ishtiaq Ali** (2021). Biodiesel production from novel non-edible caper (*Capparis spinosa* L.) seeds oil employing Cu-Ni doped ZrO₂ catalyst. *Renewable & Sustainable Energy Reviews*. 138: 110558. doi.org/10.1016/j.rser.2020.110558 (**Impact factor 14.98, Q1**)
6. Hongguang Guo, Yujie Zhang, Yiwen Zhang, Xingfeng Lia, Zhigang Lia, Weiguo Liang, Zaixing Huang, Michael Urynowicz, **Ali Ishtiaq Muhammad** (2021). Feasibility study of enhanced biogenic coalbed methane production by super-critical CO₂ extraction. *Energy*. 214, 118935 doi.org/10.1016/j.energy.2020.118935 (**Impact Factor 7.14, Q1**)
7. Foqia khalid, Muhammad Zaffar Hashmi, **Muhammad Ishtiaq Ali**, Abdul Qadir (2021). Enzymatic and microbial degradation of PCBs from E-waste contaminated sites. *Environmental*

- Science and Pollution Research. doi.org/10.1007/s11356-020-11996-2 (**Impact Factor 4.22, Q1**)
8. Hongguang Guo, Qing Han, Jinlong Zhang, Weiguo Liang, Zaixing Huang, Michael Urynowicz, **Muhammad Ishtiaq Ali (2021)**. Available methane from anthracite by combining coal seam microflora and H₂O₂ pretreatment. International Journal of Energy Research. doi.org/10.1002/er.5890 (**Impact Factor 5.164, Q1**)
 9. Lubna, Muhammad Zafar, Mushtaq Ahmad, Ghulam Mujtaba Shah, Amir Muhammad Khan, Omer Kilic, Erkan Yilmaz, Fethi A. Ozdemir, **Muhammad Ishtiaq Ali**, Muhammad Ajmal Shah, Shazia Sultana, Shabir Ahmad (**2021**). Application and implication of scanning electron microscopy for evaluation of palyno-morphological features of Vitaceae from Pakistan. Microscopy Research and Technique. 84(4) 608-617 doi.org/10.1002/jemt.23619 (**Impact Factor 2.67, Q1**)
 10. Jafir Hussain Shirazi, **Muhamamd Ishtiaq Ali**, Asif Jamal, Zafeer Saqib, Abdul Rashid (**2021**). Effects of Seasonal Changes on the Patients flux to Basic Health Units in Pakistan. Iranian Journal of Public Health. 50(5) : 1065-67 (**Impact Factor 1.42, Q3**)
 11. Hongguang, Guo; Zhang, Yixuan; Huang, Zaixing; Liang, Weiguo; Urynowicz, Michael; **Ali, Muhammad (2020)**. High potential of methane production from coal by fungi and hydrogenotrophic methanogens from produced water. Energy & Fuels. 34, 9, 10958–10967 (**Impact factor 3.6, Q1**)
 12. Beenish Sadaqat, Nazia Khatoon, Aneela Younas Malik, Asif Jamal, Uzma Farooq, , Huan He, Fang-Jing, Liu, Hongguang Guo, Michael Urynowicz, Qiurong Wang, Zaixing Huang, **Muhammad Ishtiaq Ali (2020)**. Enzymatic decolorization of melanin by lignin peroxidase from Phanerocheate chrysosporium. Scientific Reports. 10, 20240 doi.org/10.1038/s41598-020-76376-9 (**Impact Factor 4.37, Q1**)
 13. Muhammad Sabar; **Muhammad Ishtiaq Ali**, Noureen Fatima, Aneela Malik, Asif Jamal, Rabia Liaquat, Huan He, Fang-Jing Liu, Hongguang Guo, Michael Urynowicz, Zaixing Huang (**2020**). Evaluation of humic acids produced from Pakistani subbituminous coal by chemical and fungal treatments. Fuel. 278:118301 doi.org/10.1016/j.fuel.2020.118301 (**Impact Factor 6.6, Q1**)
 14. Sadia Aziz , **Muhammad Ishtiaq Ali**, Uzma Farooq , Asif Jamal , Fang-Jing Liu , Huan He , Hongguang Guo , Zaixing Huang (**2020**). Enhanced bioremediation of diesel range hydrocarbons in soil using biochar made from organic wastes. Environmental Monitoring and Assessment. 192, 569. doi.org/10.1007/s10661-020-08540-7 (**Impact Factor 2.53, Q2**)

15. Bushra Fatima, **Muhammad Ishtiaq Ali**, Rabia Liaquat, Uzma Farooq, Asif Jamal, Fang-Jing Liu, Huan He, Hongguang Guo, Michael Urynowicz, Zaixing Huang (2020). Enhanced biogas production at mesophilic and thermophilic temperatures from a slaughterhouse waste with zeolite as ammonia adsorbent. *International Journal of Environmental Science and Technology*. doi.org/10.1007/s13762-020-02822-w (**Impact Factor 2.86, Q2**)
16. Aneela Younas Malik, **Muhammad Ishtiaq Ali**, Asif Jamal, Uzma Farooq, Nazia Khatoon, William H. Orem, Elliott P. Barnhart, John R. SanFilipo, Zaixing Huang (2020). Coal biomethanation potential of various ranks from Pakistan: A possible alternative energy source. *Journal of Cleaner Production*. 255:120177 <https://doi.org/10.1016/j.jclepro.2020.120177> (**Impact Factor 9.3, Q1**)
17. Huan He, Qian Zhang, Long-Fei Tang, Kai-Yi Shi, Fen-Fen Hong, Xiu-Xiang Tao, **Muhammad Ishtiaq Ali**, Michael Urynowicz, Zaixing Huang (2020). Biodegradation of Concentrated Benzoic Acid Using White-Rot Fungus *Hypocrea lixii* AH. *Environmental Engineering Science*. 37 (7): 482-489. doi.org/10.1089/ees.2019.0477 (**Impact Factor 1.9, Q3**)
18. Huan he; Di Zhan; Fan Chen; ZaiXing Huang; Ai-kuan Wang; Hua-Zhou Huang; Guan-Hua Huang; **Ishtiaq A Muhammad**; Xiu-Xiang Tao (2020). Microbial Community Succession between Coal Matrix and Culture Solution in a Simulated Methanogenic System with Lignite. *Fuel*. 264: 116905 doi.org/10.1016/j.fuel.2019.116905 (**Impact Factor 6.6, Q1**)
19. Sadia Aziz, Laiba Yaseen, Asif Jamal, Uzma Farooq, Zahid Qureshi, **Muhammad Ishtiaq Ali** (2020). Fabrication of Biochar from organic wastes and its effect on wheat growth and soil microflora. *Polish Journal of Environmental Studies*. 29(2):1069–1076 (**Impact factor 1.7, Q4**)
20. Muhammad Ali Furqan, Rabia Liaquat, Zahid Qureshi, Uzma Farooq, Asif Jamal, **Muhammad Ishtiaq Ali** (2020). Catalytic efficiency of *Acidithiobacillus ferrooxidans* for bioleaching of Copper from Chalcocite Containing Sulfide Ore of Reko Diq Deposits of Balochistan, Pakistan. *Polish Journal of Environmental studies*. 29(2):1593–1600 (**Impact factor 1.7, Q4**)
21. Saeed Ullah Jan, Muhammad Adnan Sabar, Asif Jamal, Huda Ahmed Alghamdi, İbrahim Ortaş, Mehmet Işık, Veysi Akşahin, Bashir Ahmad and **Muhammad Ishtiaq Ali** (2020). Impact of Zea Mays L Waste Derived Biochar on Cadmium Immobilization and Wheat Plant Growth. *Pakistan Journal of Agricultural Sciences*. 57(5), 1201-1210 (**Impact Factor 0.75, Q3**)
22. Zeeshan Ahmad, Shujaul Mulk Khan, **Muhammad Ishtiaq Ali**, Noureen Fatima, Shahab Ali (2019). Pollution indicandum and marble waste polluted ecosystem; role of selected indicator plants in phytoremediation and determination of pollution zones. *Journal of Cleaner Production*. 236(1)117709 doi.org/10.1016/j.jclepro.2019.117709 (**Impact Factor 9.3, Q1**)

23. Shafiq Ahmad, Muhammad Zafar, Mushtaq Ahmad, **Muhammad Ishtiaq Ali**, Shazia Sultana, Neelam Rashid, Maryam A. Butt, Syed N. Shah, Fethi A. Ozdemir, Mehmet A. Kutlu, Rabia Afza, Anwer Usma, Moona Nazish (2019). Seed morphology using SEM techniques for identification of useful grasses in Dera Ghazi Khan, Pakistan. *Microscopy Research and Technique*. 83 (3) 249-258 DOI: 10.1002/jemt.23408 (**Impact Factor 2.77, Q1**)
24. Sana Ayaz, Mushtaq Ahmad, Muhammad Zafar, **Muhammad Ishtiaq Ali**, Shazia Sultana Muhammad Raza Ul Mustafa, Omer Kilic, Duygu N. Çobanoğlu, Azize Demirpolat, Abdul Ghani, Rabia Afza, Khalid Ahmad, Mamoon Munir, Nomana Kalsoom, Jamil Raza (2019). Taxonomic significance of cypsel morphology in tribe Cichoreae (Asteraceae) using light microscopy and scanning electron microscopy. *Microscopy Research and Technique*. 83 (3) 239-248 (**Impact Factor 2.77, Q1**)
25. Haleema Sadia, Muhammad Zafar, Mushtaq Ahmad, Muhammad P. Z. Khan, Ghulam Yaseen, **Muhammad I. Ali**, Shazia Sultana, Omer Kilic, Zeynep Şahan, Naveed Alam, Qamar Abbas, Abdul Ghani, Saeeda Naz, Lubna (2019). Foliar epidermal anatomy of some selected wild edible fruits of Pakistan using light microscopy and scanning electron microscopy. *Microscopy Research and Technique*. 83(3):259-267 (**Impact Factor 2.77, Q1**)
26. Muhammad Adnan Sabar, **Muhammad Ishtiaq Ali**, Noreen Fatima, Aneela Younas Malik, Asif Jamal, Muhammad Farman, Zaixing Huang, Michael Urynowicz (2019). Degradation of low rank coal by *Rhizopus oryzae* isolated from a Pakistani coal mine and its enhanced releases of organic substances. *FUEL*. 253 (1) 257-265 (**Impact Factor 6.6, Q1**)
27. Anwer Usma, Mushtaq Ahmad, Muhammad Zafar, **Muhammad I. Ali**, Omer Kilic, Fethi A. Ozdemir, Shazia Sultana, Abdul Nazir, Farida Anjum, Nomana Kalsoom (2019). Taxonomic significance of caryopsis in subfamily Panicoideae (Poaceae) using scanning electron microscopy and light microscopy. *Microscopy Research and Technique*. 82(10) 1649-1659 (**Impact Factor 2.77, Q1**)
28. Hassan Waseem, Jafar Ali, Fiza Sarwar, Aroosa Khan, Hamza Saleem, Mishal Choudri, Nooh Arif, Muhammad Subhan, Aansa Saleem, Asif Jamal, **Muhammad Ishtiaq Ali** (2019). Assessment of knowledge and attitude trends towards antimicrobial resistance (AMR) among the community members, pharmacists/ pharmacy owners and physicians in district Sialkot, Pakistan. *Antimicrobial Resistance & Infection Control*. 8:67. doi: 10.1186/s13756-019-0517-3 (**Impact Factor 4.9, Q1**)
29. Aisha Khan, Sadia Selim Khan, Muhammad Asif Gondal, Muhammad Sohail Afzal, Muhammad Umer, Muhammad Inam Afzal, Muhammad Ishtiaq Ali, Majid Mehmood, Haroon Ahmed. An

- overview of dengue fever in Pakistan (2019). Asian Pacific Journal of Tropical Medicine. 12(10):18 DOI: 10.4103/1995-7645.243094 (**Impact Factor 1.94, Q2**)
30. Sumreen Dawood, Mushtaq Ahmad, Muhammad Zafar, **Muhammad I. Ali**, Khalid Ahmad, Shazia Sultana, Anwer Usma, Moona Nazish, Maryam A. Butt, Fethi A. Ozdemir, Omer Kilic (2019). Identification of novel nonedible oil seeds via scanning electron microscopy for biodiesel production. Microscopy Research and Technique: 83(2) 165-175 (**Impact Factor 2.77, Q1**)
 31. Hassan Waseem, Sana Jameel, Jafar Ali, Hamza Saleem, Isfahan Tauseef, Uzma Farooq, Asif Jamal, **Muhammad Ishtiaq Ali** (2019). Contributions and Challenges of High throughput qPCR for determining antimicrobial resistance in the environment: A critical review. Molecules. 24(1) 163 (**Impact Factor 4.4, Q2**)
 32. Aisha Khan, Sadia Selim Khan, Muhammad Sohail Afzal, Muhammad Asif Gondal, **Muhammad Ishtiaq Ali**, Naveeda Riaz, Majid Mehmood, Haroon Ahmed (2019). An overview of chikungunya in Pakistan. Asian Pacific Journal of Tropical Medicine. 12(10) 10.4103/1995-7645.243080 (**IF:1.94, Q2**)
 33. Hassan Waseem, Jafar Ali, Asif Jamal, **Muhammad Ishtiaq Ali** (2019). Potential dissemination of antimicrobial resistance from small scale poultry slaughterhouses in Pakistan. Applied Ecology and Environmental Research. 17(2):3049-3063 (**impact factor 0.72, Q4**)
 34. Aisha Khan, Muhammad Sohail Afzal, **Muhammad Ishtiaq Ali**, Naveeda Riaz, Haroon Ahmed (2019). Emerging trend of leishmaniasis in Pakistan: Current status and future prospects. Asian Pacific Journal of Tropical Medicine. 12(Suppl 1): 23 (**Impact Factor 1.94, Q2**)
 35. Farah Nawaz, Muhammad Nadeem Khan, Naeem Ali, **Muhammad Ishtiaq Ali**, Syeda M. Bakhtiar and Muhammad Imran (2019). Genomic and Functional Characterization of Enterococcus mundtii QAUEM2808 Isolated from Artisanal Fermented milk product Dahi. Frontiers in Microbiology. 10, 434, doi: 10.3389/fmicb.2019.00434 (**Impact factor 5.64, Q2**)
 36. Aisha Khan, Qudsia Rasib, Sajida Riaz, Ishtiaq Ali, Naveeda Riaz, Muhammad Sohail Afzal, Muhammad Asif Gondal, Haroon Ahmed (2019). An update on HIV in transgenders of Pakistan. Asian Pacific Journal of Tropical Medicine. 12 (Suppl 1): 21 (**Impact Factor 1.94, Q2**)
 37. Jafir Hussain Shirazi, **Muhammad Ishtiaq Ali**, Asif Jamal, Abdul Rashid (2019). Pediatric oropharyngeal candidiasis: A comprehensive study on risk factors and most prevalent species of Candida. Pakistan Journal of Pharmaceutical Sciences. 32(6):2873-2878 (**Impact Factor 0.84, Q4**)
 38. Ramla Rehman, **Muhammad Ishtiaq Ali**, Umar Masood Qureshi, Asif Jamal (2019). Characterization of brownfield: Ex-Situ detection of hydrocarbon degrading and biosurfactants

- producing Microflora. Pakistan Journal of Agricultural Sciences. 56(4) 953-961 **Impact Factor 0.75, Q3)**
39. Abubakar Muhammad, Bokhari Syed Ali Imran, Vernoux Jean-Paul, **Ishtiaq Ali Muhammad**, Rani Faryal, Desmaures Nathalie, IMRAN MUHAMMAD (2019). Purification, Characterization and Thermodynamic Assessment of an Alkaline Protease by *Geotrichum candidum* of Dairy Origin. Iranian Journal of Biotechnology.17(2) 30-37. **(Impact factor 1.67, Q4)**
 40. Abida Bano, Mushtaq Ahmad, Sofia Rashid, Muhammad Zafar, Shomaila Ashfaq, Saeed ur Rehman, **Muhammad Ishtiaq Ali**, Shazia Sultana, Shabnum Shaheen, Shafiq Ahmad (2018). Microscopic Investigations of some selected species of Papilionaceae through SEM and LM from Skardu valley, Northern Pakistan. Microscopy Research and Technique. 82(4) 452-458 **(Impact factor 2.77, Q1)**
 41. Nazia Khatoon, Asif Jamal and **Muhammad Ishtiaq Ali (2018)**. Lignin peroxidase isoenzyme: A Novel approach to biodegrade the toxic synthetic polymer waste. Environmental Technology. 40 (11)1366-1375 **(Impact Factor 3.25, Q3)**
 42. Nazia Khatoon, Asif Jamal and **Muhammad Ishtiaq Ali (2017)**. Polymeric pollutant biodegradation through microbial oxidoreductase: A better strategy to safe environment. International Journal of Biological Macromolecules. 105(1) 9-16 **(Impact Factor 6.95, Q1) ***
 43. Aneela Younis Malik , Muhammad Ali, Asif Jamal, **Muhammad Ishtiaq Ali (2017)** Isolation and Characterization of Coal Solubilizing Aerobic Microorganisms from Salt Range Coal Mines Pakistan. Geomicrobiology Journal. 34(2): 109-118 **Impact factor (2.31, Q3)**
 44. Rabia Liaquat, Asif Jamal, Isfahan Tauseef, Zahid Qureshi, Uzma Farooq, Muhammad Imran, Muhammad Ishtiaq Ali (2017). Characterization of bacterial consortia from anaerobic digester treating organic waste for biogas production. Polish Journal of Environmental Studies. 26(2) 709-716 **(Impact factor 1.7, Q4)**
 45. Anam Fatima, Muhammad Zafar, Mushtaq Ahmad, Shazia Sultana & **Muhammad Ishtiaq Ali (2017)**. Parametric characterization and statistical optimization of Argemone ochroleuca (Mexican Poppy) methyl esters as a renewable source of energy. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects. 39(19) 1963-1969 **Impact factor 3.45, Q2)**
 46. Nazia Khatoon, Najam I Sahar, Asif Jamal, Naeem Ali, Udonna Ndu, Safia Ahmed, **Muhammad Ishtiaq Ali (2017)**. High throughput production of peroxidase and its biodegradation potential toward polymeric material. International Journal of Environmental Science and Technology. 14 (4): 755-766. **(Impact Factor 2.86, Q2)**

47. Jafar Ali, Abdul Hameed, Safia Ahmed, **Muhammad Ishtiaq Ali** , Shama Zainab, Naeem Ali (2016). Role of catalytic protein and stabilizing agents in transformation of Ag ions to nanoparticles by *Pseudomonas aeruginosa*. IET Nanobiotechnology. 10(5): 295 - 300 (**Impact Factor 1.93, Q3**)
48. Asif Jamal, Muhammad Zahid Qureshi, Raja Rizi ul Hasan, Naeem Ali, **Muhammad Ishtiaq Ali** (2016). Mathematical modeling of bioprocess variables for improved production of Rhamnolipid from *Pseudomonas aeruginosa* strain JQ. Pakistan Journal of Agricultural Sciences 53(3), 551-556 (**Impact Factor 1.054, Q3**)
49. Rabia Liaquat, Sidra Kaleem , Aqeela Azeem , Asif Jamal and **Muhammad Ishtiaq Ali** (2015). Production and characterization of α -amylase from indigenously isolated bacterial strains treating organic waste in anaerobic digester. Pakistan Journal of Agricultural sciences. 52(4) 895-903 (**Impact factor 1.05, Q3**)
50. Hajra Hanif, Awais Anjum, Naeem Ali, Asif Jamal, Muhammad Imran, Bashir Ahmad and **Muhammad Ishtiaq Ali** (2015). Isolation and antibiogram of *Clostridium tetani* from clinically diagnosed Tetanus patients. American Journal of Tropical Medicine and Hygiene. 93(4): 752–756 (**Impact factor 2.78, Q2**)
51. Muhammad Pukhtoon Zada Khan, Mushtaq Ahmad, Muhammad Zafar, Shazia Sultana, **Muhammad Ishtiaq Ali** (2015). Ethnomedicinal Uses of Edible Wild Fruits (EWFs) in Swat Valley, Northern Pakistan. Journal of Ethnopharmacology. 173:191-203 (**Impact factor 4.36, Q1**)
52. Mobushir Riaz Khan, Haroon Ahmed, Rosario Panadero-Fontán, Ceferino López Sández, Muhammad Aamir Khan, Saira Asif, **Muhammad Ishiaq Ali**, Mazhar Qayyum (2015). Risk mapping of bovine hypodermosis using geographical information system (GIS) in cattle of subtropical region, Pakistan. Journal of Infection in Developing Countries. 29; 9(8):872-7 (**Impact factor 1.30, Q4**)
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- institutions of Pakistan International Journal Current Microbiology and Applied Sciences (2015) 4(3): 1067-1072
55. Shumaila Ishfaq, Naeem Ali, Isfahan Tauseef , Muhammad Nasir Khan Khattak , Zabta Khan Shinwari, **Muhammad Ishtiaq Ali. (2015)** Analysis of paint degradation by fungal and bacterial species. Pakistan Journal of Botany. 47(2): 753-760 (**Impact factor 1.207, Q4**)
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 57. Iffat Naz, Nazia Khatoon, **Muhamamd Ishtiaq Ali**, Naeem Ali. Devendra P. Saroj, Syeda Ain-ul Batool, Safia Ahmed (**2014**). Appraisal of the tire derived rubber (TDR) medium for wastewater treatment under aerobic and anaerobic conditions. Journal of Chemical Technology and Biotechnology. **89 (4) : 587-596 (Impact factor 3.17, Q1)**
 58. **Muhammad Ishtiaq Ali**, Safia Ahmed , Imran Javed, Naeem Ali, Naima Atiq, Abdul Hameed, Geoff Robson (**2014**). Biodegradation of Starch Blended Polyvinyl Chloride Film by Phanerochaete chrysosporium PV1. International Journal of Environmental Science and Technology. 11(2):339-348 (**Impact factor 2.80, Q2**)
 59. Asif Jamal, Naeem Ali, **Muhammad Ishtiaq Ali**, Abdul Hameed, Muhammad Zahid Qureshi (**2014**). Enhanced Production of rhamnolipid by *P. aeruginosa* using Response Surface Methodology. Asian Journal of Chemistry. 26(4):1044-1048 (**Impact factor 0.355**)
 60. **Muhammad Ishtiaq Ali**, Safia Ahmed, Geoff Robson , Imran Javed, Naeem Ali, Naima Atiq, Abdul Hameed, (**2014**) Isolation and molecular characterization of polyvinyl chloride (PVC) plastic degrading fungal isolates. Journal of basic Microbiology. 54(1):18-27 (**Impact factor 2.28, Q2**)
 61. Syed Zeeshan Haider Naqvi, Urooj Kiran, **Muhammad Ishtiaq Ali**, Asif Jamal, Abdul Hameed, Safia Ahmed and Naeem Ali (**2013**). Combined efficacy of biologically synthesized silver nanoparticles and different antibiotics against multi-drug resistant bacteria. International Journal of Nanomedicine. 8 : 3187-3195 (**Impact factor 6.4**) *
 62. Lubna Tahir. **Muhammad Ishtiaq Ali**, Muhammad Zia, Naima Atiq, Fariha Hasan, Safia Ahmed (**2013**) Production and Characterization of Esterase in *Lentinus tigrinus* for Degradation of Polystyrene. Polish Journal of Microbiology. 62(1) 101–108 (**Impact factor 1.28, Q3**)
 63. Muneer Ahmed Qazi , Mishal Subhan , Nighat Fatima, **Muhammad Ishtiaq Ali** , Safia Ahmed (**2013**). Role of Biosurfactant Produced By *Fusarium* sp. BS-8 in Enhanced Oil Recovery

- (EOR) Through Sand Pack Column. International Journal of Bioscience, Biochemistry and Bioinformatics. 11/2013; 3(6):598-604
64. Pir Bux Ghumro, Maryam Shafique, **Muhammad Ishtiaq Ali**, Imran Javed, Bashir Ahmad, Asif Jamal, Naeem Ali and Abdul Hameed (2012). Isolation and screening of protease producing thermophilic Bacillus strains from different soil types of Pakistan. African Journal of Microbiology Research. 5(31), 5534-5539 (**Impact factor 0.539**)
 65. Imran Javed, **Muhammad Ishtiaq Ali**, Bashir Ahmed, Pir Bux Ghumro, Abdul Hameed, Safia Ahmed (2011). Optimization and partial purification of bacteriocins from Enterococcus spp. indigenous to Pakistan. Food Biotechnology. 25(2), 130-139 (**Impact factor 1.56, Q3**)
 66. Shama Sehar, Iffat Naz, **Muhammad Ishtiaq Ali** and Safia Ahmed (2011). Monitoring of Physico-Chemical and Microbiological Analysis of Under Ground Water Samples of District Kallar Syedan, Rawalpindi-Pakistan. Research Journal of Chemical Sciences. 1(8), 24-30
 67. Naima Atiq, Safia Ahmed, **Muhammad Ishtiaq Ali**, Saadia Andleeb, Bashir Ahmed, Geoff Robson (2010). Isolation and identification of polystyrene biodegrading bacteria from soil. African Journal of Microbiology Research. 4(14) 1537-1541 (**Impact factor 0.539**)
 68. Saadia Andleeb, **Muhammad Ishtiaq Ali**, Naima Atiq, Fazal ur Rehman, Geoff Robson, Abdul Hameed, Safia Ahmad (2010). Biodegradation of anthraquinone dye by aspergillus niger SA1 in self designed fluidized bed bioreactor. Iranian Journal of Environmental Health Science & Engineering. 7(5); 371-376 (**Impact factor 2.77, Q3**)
 69. Imran Javed, Safia Ahmed, Srikanth Manam, Mariam Riaz, Bashir Ahmad, **Muhammad Ishtiaq Ali**, Abdul Hameed, Abdul Hameed, Ghulam Jilani Chaudry (2010). Production, characterization, and antimicrobial activity of a **bacteriocin** from newly isolated *Enterococcus faecium* IJ-31. Journal of Food Protection. 73(1), 44-52 (**Impact factor 2.07, Q2**)
 70. Imran Javed, **Muhammad Ishtiaq Ali**, Bashir Ahmad, Pir Bux Ghumro, Abdul Hameed, Ghulam Jilani Chaudry, Safia Ahmed (2010). Bacteriocinogenic potential of newly isolated strains of *Enterococcus faecium* and *Enterococcus faecalis* from dairy products of Pakistan. Journal of Microbiology and Biotechnology. 20(1), 153-160 (**Impact factor 2.35, Q2**)
 71. Saadia Andleeb, Naima Atiq, **Muhammad Ishtiaq Ali**, Raja Razi-Ul-Hussnain, Maryam Shafique, Bashir Ahmad, Pir Bux Ghumro, Masroor Hussain, Abdul Hameed, Safia Ahmad (2010). Biological Treatment of Textile Effluent in Stirred Tank Bioreactor. International Journal of Agriculture and Biology. 12(2) 256-260 (**Impact factor 0.94, Q3**)

72. **Muhammad Ishtiaq Ali**, Qaisara Perveen, Bashir Ahmad, Imran Javed, Raja Razi-Ul-Hussnain, Saadia Andleeb, Nazia Atique, Pir Bux Ghumro, Safia Ahmed, Abdul Hameed (2009). Studies on Biodegradation of Cellulose Blended Polyvinyl Chloride Films. International Journal of Agriculture and Biology. 11(5) 577–58 (**Impact factor 0.94, Q3**)

Conferences Organized and Participated

| Conference Title | Organizer | Location | Date | Sponsoring Agency |
|---|--|-------------------------|---------------------|-------------------|
| 12 th International Conference of Pakistan Society for Microbiology | Abbottabad University of Science & Technologys | Havelian, Pakistan | Feb 20-22 , 2019 | HEC ASM |
| 11th International Conference of Pakistan Society for Microbiology | Bahauddin Zakariya University, Multan, Pakistan | Multan Pakistan | Dec 18-20, 2017 | ASM |
| National conference On Recent Trends in Microbiology | Abbottabad University of Science & Technology | Havelian, Pakistan | 19-21 December 2016 | HEC& ASM |
| 10 th Biennial International Conference of Pakistan society for Microbiology | University of Punjab | Lahore | 25-28 march 2015 | HEC |
| Symposium on Coal Biotechnology-Its Commercialization Prospects in Pakistan | NIBGE Faislabad | Faislabad | 24-25 November 2014 | HEC |
| workshop on Application of Statistics and Data Analysis | QAU Islamabad | Islamabad | 24-28 June 2014 | HEC |
| International Conference on energy production from agriculture biomass and domestic waste | PMAS-UAAR | Rawalpindi | 15-17 April 2014 | HEC |
| Biosafety Training Workshop for Young Scientists | AIOU Islamabad | Islamabad | 16 January 2014 | HEC |
| 2nd national conference on Current Approaches In Microbiology | Dept. Microbiology, Hazara University KPK Pakistan | Nathia Gali, Abbottabad | 27-28 June, 2013 | QAU |

| | | | | |
|---|---|---|--------------------------------------|---------------|
| BIT's 6 th annual World congress of Industrial Biotechnology (Ibio-2013) | IBIO China | Nanjing, China | 25-27 April, 2013 | PSF |
| 1st National Symposium on New Horizons of microbiology | Fedral Urdu Univrsity karachi | Karachi, Pakistan | 7th & 8th November 2012 | HEC |
| International workshop on Essential Need of Nano-Education in OIC Countries | COMSTECH-PRESTON Islamabad. Pakistan | Islamabad. | 7-9 April, 2011 | COMSTECH |
| 15 th International Symposium on Biodeterioration and Biodegradation (IBBS-15) | University of Natural Resources and Life Sciences Vienna, Austria | Austria | September 19-24 th , 2011 | HEC |
| 3 rd IPO conference 26 th April 2011 | IPO Pakistan | Islamabad | 26 April 2011 | IPO, pakistan |
| 2nd IPR Conference, by Intellectual Property Organization – Pakistan | IPO-P | Islamabad | May 3, 2010 | |
| 1 st National conference of Microbiology “New Horizons of Microbiology | Department of Microbiology, Shah Abdul Latif University, Khairpur Sindh, Pakistan | Department of Microbiology, Shah Abdul Latif University, Khairpur Sindh, Pakistan | 21-22, 2009 | HEC |
| First international conference on Advances in Waste Water Treatment and Reuse. , from | University of Tehran, College of Engineering, Tehran, IRAN | Tehran, IRAN | 09-11 November, 2009 | |
| 1st International conference on biotechnology, | King Saud University, Riyadh Saudi Arabia | Riyadh Saudi Arabia | 16-18 Sep 2009 | HEC |

MEMBERSHIP OF INTERNATIONAL SOCIETIES:

1. American Society for Microbiology
2. International Biodeterioration & Biodegradation Society
3. European federation for Biotechnology

4. Pakistan Society for Microbiology
5. Pakistan Society for Biochemistry
6. Society of Anaerobic Microbiology

Community Work/Administrative Duties

➤ **Admission Committee**

member:

- o Member MSc Admission Committee (2011, 2013,2014, 2015)
- o Member MPhil Admission Committee (2011, 2013, 2014, 2015, 2016)
- o Member PhD Admission Committee (2016, 2017)

➤ **Student Advisor:** Department of Microbiology, Quaid-i-Azam University (2009-10)

➤ **Member, Board of Studies:**

Department of Microbiology, Quaid-I-Azam University (2013 to date)
 Department of Microbiology, Hazara University (2014 to date)
 Department of Microbiology, HariPur University (2016 to date)
 Department of Zoology, Mirpur University (2016 to date)
 Department of Zoology, Sargodha University (2016 to date)

Member, Board of Faculty:

Faculty of Biological Sciences, Quaid-I-Azam University (2013 to date)

➤ **External Examiner :**

- o National University of Sciences and Technology, Gujrat University, Hazara University, International Islamic University, Pir Meher Ali Shah, Arid Agriculture University, Haripur University, MirPur University, Karachi University, Federal Urdu University

➤ **Reviewer of research grants :**

- o Higher Education Commission Projects, Pakistan Science Foundation (PSF)

➤ **Membership of International Societies :**

- o American Society for Microbiology, International Biodeterioration & Biodegradation Society, European Federation for Biotechnology, Pakistan Society for Microbiology, Pakistan Society for Biochemistry, Society of Anaerobic Microbiology

Reviewer of Peer reviewed International Journals: Science of the Total Environment, Journal of Basic Microbiology, International Biodeterioration & Biodegradation, Jundishapur Journal of Microbiology, Biofouling, International Journal of Environmental Science and Technology, Current Nanoscience, British Biotechnology Journal, Yanbu Journal of Engineering and Sciences, Journal of Basic and Applied Sciences, Iranian Polymer Journal, Journal of Yeast and Fungal Research, Polymer Degradation and Stability, European Journal of Medicinal Plants, Journal of Environmental Health Science and Engineering

➤ **Incharge Maintenance and Works:**

Department of Microbiology, Quaid-i-Azam University (2011, 2013)

- **Executive Member:** Academic Staff Association Quaid-i-Azam University (2013-2014)
- **President,** Academic Staff Association: Quaid-i-Azam University (2016-2017)
- **Secretary (Federal Chapter):** Federation of All Pakistan Universities, Academic Staff Association (2017-2018)
- **Secretary, Academic Staff Association:** Quaid-i-Azam University (2014-2015) ➤ **President (Federal Chapter):** Federation of All Pakistan Universities, Academic Staff Association (2015-2016)
- **Member ASA Scholarship Committee:** (2014-15)
- **Member Colony Maintenance Committee:** Quaid-I-Azam University (2014-15)
- **Member (consultant) UNIDO funded project:** Capacity Building and Strengthening of Biomass Gasification Technology Support Systems in Pakistan- funded by GEF-UNIDO (2014-2017)
- **Member** National curriculum review committee for biogasification and renewable Bioenergy (2014-15)