

Tariq Khan

Date of birth: 06/12/1989 | **Nationality:** Pakistani | **Gender:** Male | **Phone number:**

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https://www.researchgate.net/profile/tariq_khan17 | **Website:**

<https://scholar.google.com.pk/citations?hl=en&authuser=1> |

Address: Department of Biotechnology, University of Malakand , 18800, Chakdara Dir Lower, Pakistan (Work)

● WORK EXPERIENCE

12/01/2016 – CURRENT Chakdara Dir Lower, Pakistan

LECTURER UNIVERSITY OF MALAKAND

I study nanobiotechnology, and antibiotic resistance, teach Biotechnology and related subjects, supervise PhD, MS/MPhil, and BS students in research, work as a Member of Admission Committee, Member Board of studies, and Organizer of the Health care society, University of Malakand

28/11/2022 – CURRENT Dir Lower, Pakistan

MANAGER ACADEMIA-INDUSTRY IINKAGES OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC), UNIVERSITY OF MALAKAND

Development and Management of linkages between Universities and Industries for building partnerships and collaborations.

● EDUCATION AND TRAINING

2018 Islamabad, Pakistan

PHD IN BIOTECHNOLOGY Quaid -i-Azam University

Address Islamabad, Pakistan

2011 Pakistan

BS HONS BIOTECHNOLOGY University of Malakand

82%

Address Chakdara Dir Lower, Pakistan

● DIGITAL SKILLS

Microsoft Word | Microsoft Excel | Data Analysis Statistics

● ADDITIONAL INFORMATION

PROFILE IN NUMBERS

Summary

Publications: 50

Citations: 1756

h-index: 20

i-10 index: 29

Experience: 7 years

Conferences/workshops/training attended: 30

PROJECTS

01/08/2020 – 31/08/2022

Evaluation of combined effects of plant-derived compounds and antibiotics to combat multidrug resistance. Grant received 2020. Granted by International Foundation for Science under the Basic Sciences grant for early career researchers.

PUBLICATIONS

Research Publication 2021- – 2021

1. Rehman, H., Ali, W., Ali, M., Khan, N. Z., Aasim, M., Khan, A. A. Khan T, ... & Hashmi, S. S. (2023). Delphinium uncinatum mediated green synthesis of AgNPs and its antioxidant, enzyme inhibitory, cytotoxic and antimicrobial potentials. *Plos one*, 18(4), e0280553.
2. Khan, S., Khan, R. S., Zahoor, M., Islam, N. U., **Khan, T.**, Muhammad, Z., ... & Bari, A. (2023). Alnus nitida and urea-doped Alnus nitida-based silver nanoparticles synthesis, characterization, their effects on the biomass and elicitation of secondary metabolites in wheat seeds under in vitro conditions. *Heliyon*.
3. Rehman, H., Ali, W., Khan, N. Z., Aasim, M., **Khan, T.**, & Khan, A. A. (2023). Delphinium uncinatum mediated biosynthesis of zinc oxide nanoparticles and in-vitro evaluation of their antioxidant, cytotoxic, antimicrobial, anti-diabetic, anti-inflammatory, and anti-aging activities. *Saudi Journal of Biological Sciences*, 30(1), 103485.
4. Muhammad, J., Sarwar, S., Khan, T., Qasmi, S. A., Ikram, A., Ahmad, G., ... & Ahmed, F. (2021). A Cross-Sectional Survey to Assess Biorisk Management System in Research and Diagnostic Laboratories in Khyber Pakhtunkhwa, Pakistan. *Frontiers in public health*, 9.
5. Khan H, Khan T, Ahmad N, Zaman G, **Khan T**, Ahmad W, Batool S, Hussain Z, Drouet S, Hano C, Abbasi BH. (2021). Chemical Elicitors-Induced Variation in Cellular Biomass, Biosynthesis of Secondary Cell Products, and Antioxidant System in Callus Cultures of *Fagonia indica*. *Molecules*. 26(21):6340. <https://doi.org/10.3390/molecules26216340>
6. Batool SU, Javed B*, Sohail, Zehra SS, Mashwani ZR*, Raja NI, **Khan T**, ALHaithloul HAS, Alghanem SM, Al-Mushhin AAM, Hashem M, Alamri S. (2021): Exogenous Applications of Bio-fabricated Silver Nanoparticles to Improve Biochemical, Antioxidant, Fatty Acid and Secondary Metabolite Contents of Sunflower. *Nanomaterials*. 11(7), 1750.
7. Shehzad MA, Khan MA, Ali A, Mohammad S, Noureldeen A, Darwish H, Ali A, Ahmad A, **Khan T**, Khan RS. Interactive effects of zinc oxide nanoparticles and different light regimes on growth and silymarin biosynthesis in callus cultures of *Silybum marianum* L. **2021**. 523-535.
8. Khan AU, **Khan T***, Khan MA, Nadhman A, Aasim M, Khan NZ, Ali W, Nazir N, Zahoor M. Iron-doped zinc oxide nanoparticles-triggered elicitation of important phenolic compounds in cell cultures of *Fagonia indica*. *Plant Cell, Tissue and Organ Culture (PCTOC)*. **2021**. 1-10.
9. Iqar I, Numan M, **Khan T**, Shinwari ZK, and Ali GS. LC-MS/MS-based profiling of bioactive metabolites of endophytic bacteria from *Cannabis sativa* and their anti-Phytophthora activity. *Antonie van Leeuwenhoek*. 2021.

Review papers 2021- – 2021

1. Iqbal, R., Khan, S., Ali, H. M., Khan, M., Wahab, S., & **Khan, T.** (2022) Application of nanomaterials against SARS-CoV-2: an emphasis on their usefulness against emerging variants of concern. *Frontiers in Nanotechnology*, 101.
2. Iqbal R. **Khan T.** (2022). Application of exogenous melatonin in vitro and in planta: a review of its effects and mechanism of action. *Biotechnology Letters*.
3. Ali, H. M., **Khan, T.**, Khan, M. A., & Ullah, N. (2022). The multipotent Thidiazuron: A mechanistic overview of its roles in callogenesis and other plant cultures in vitro. *Biotechnology and Applied Biochemistry*.
4. Wahab S, **Khan T***, Adil M, Khan A. (2021) Mechanistic aspects of plant-based silver nanoparticles against multi-drug resistant bacteria. e07448.
5. **Khan T***, Tanveer F, Muhammad J. (2021) Improving Biosecurity in Pakistan: Current Efforts, Challenges, and Recommendations on a Multidimensional Management Strategy. *Health security*. 19(3). 254-261.
6. Zohra T,* Numan M, Ikram A, M Salman M, **Khan T**, Din M, Salman M, Farooq A, Amir A, and Ali M; (2021) Cracking the Challenge of Antimicrobial Drug Resistance with CRISPR/Cas9, Nanotechnology and Other Strategies in ESKAPE Pathogens. *Microorganisms*, 9, 954
7. **Khan T***, Khan MA, Karam K, Ullah N, Mashwani ZR, and Nadhman A, (2021) Plant in vitro Culture Technologies; A Promise into Factories of Secondary Metabolites Against COVID-19. *Frontiers in Plant Science*. 12. 356.
8. **T Khan***, MA Khan, Mashwani ZR, N Ullah, and A Nadhman, (2021) Therapeutic potential of medicinal plants against COVID-19: the role of antiviral medicinal metabolites. *Biocatalysis and Agricultural Biotechnology*.. 31. 101890.

Research Publications 2018-2020

1. **Khan T***, Ali GS. Variation in surface properties, metabolic capping, and antibacterial activity of biosynthesized silver nanoparticles: comparison of bio-fabrication potential in phytohormone-regulated cell cultures and naturally grown plants. *RSC Advances*. 2020. 10. 38831-38840.
2. Ahmad N, **Khan T**, Jamal SM. A Comprehensive Study of Dengue Epidemics and Persistence of AntiDengue Virus Antibodies in District Swat, Pakistan. *Intervirolgy*. 2020. 63. 46-56.
3. Khan MA, Ali A, Mohammad S, Ali H, **Khan T***, Mashwani ZR, Jan A, Ahmad P. Iron nano modulated growth and biosynthesis of steviol glycosides in *Stevia rebaudiana*. *Plant Cell, Tissue and Organ Culture*. 2020. 143.121–130.
4. Begum S, Zahid A, **Khan T***, Khan NZ, Ali W. Comparative analysis of the effects of chemically and biologically synthesized silver nanoparticles on biomass accumulation and secondary metabolism in callus cultures of *Fagonia indica*. *Physiology and Molecular Biology of Plants*. 2020. 26(8): 1739–1750.
5. Adil M, **Khan T***, Aasim M, Khan AA, Ashraf M. Evaluation of the antibacterial potential of silver nanoparticles synthesized through the interaction of antibiotic and aqueous callus extract of *Fagonia indica*. *AMB Express*. 2019. 9(75).
6. **Khan T**, Khan T, Hanno C, Abbasi BH. Effects of chitosan and salicylic acid on the production of pharmacologically attractive secondary metabolites in callus cultures of *Fagonia indica*. *Industrial Crops and Products*. 2019. 129(15): 525-535.
7. **Khan T**, Abbasi BH, Ali GS. Glucose-controlled biomass and antioxidant potential in callus cultures of *Fagonia indica*. *Industrial Crops and Products*. 2018. 126(15): 168-176.3.
8. **Khan T**, Abbasi BH, Iqar I, Khan MA and Shinwari ZK. Molecular identification and control of endophytic contamination during in vitro plantlet development of *Fagonia indica*. *Acta Physiologiae Plantarum* 2018. 40:150.
9. **Khan T**, Abbasi BH, Khan MA. The interplay between light, plant growth regulators and elicitors on growth and secondary metabolism in cell cultures of *Fagonia indica*. *Journal of Photochemistry and Photobiology B*. 2018. 185: 153-160.
10. Ali H, Khan MA, Kayani WK, **Khan T**, Mashwani ZR, Ullah N, Khan RS. Thidiazuron regulated growth secondary metabolism and essential oil profiles in shoot cultures of *Ajuga bracteosa*. *Industrial Crops and Products*. 2018. 121 (1): 418-427.
11. Riaz R, Abbasi BH, Hashmi SS, Nazir M, **Khan T**. Melatonin-stimulated biosynthesis of antimicrobial ZnONPs by enhancing bio-reductive prospective in callus cultures of *Catharanthus roseus* var. *alba*. *Artificial Cells, Nanomedicine, and Biotechnology*. 2018.

Research Publication 2012-2017

1. **Khan T**, Abbasi BH, Khan MA, and Azeem M. Production of biomass and useful compounds through elicitation in adventitious root cultures of *Fagonia indica*. *Industrial crops and products*. 2017. 108(1): 451-457.
2. Sumaira, **Khan T**, Abbasi BH, Afridi MS, Tanveer F, Ullah I, Bashir S and Hano C. Melatonin-enhanced biosynthesis of antimicrobial AgNPs by improving the phytochemical reducing potential of a callus culture of *Ocimum basilicum* L. var. *thyrsoflora*. *RSC Advances*. 2017. 61(7): 38699-38713.
3. Saeed S, Ali H, **Khan T**, Kayani W, and Khan MA. Impacts of methyl jasmonate and phenyl acetic acid on biomass accumulation and antioxidant potential in adventitious roots of *Ajuga bracteosa* Wall ex Benth., a high valued endangered medicinal plant. *Physiology and Molecular Biology of Plants*. 2017. 23(1): 229–237.
4. **Khan T**, Abbasi BH, Khan MA and Shinwari ZK. Differential effects of thidiazuron on production of anticancer phenolic compounds in callus cultures of *Fagonia indica*. *Applied Biochemistry and Biotechnology*. 2016. 179(1): 46–58.
5. Adil M. **Khan T**. and Abbasi BH. Interactive effects of melatonin and light on growth parameters and biochemical markers in adventitious roots of *Withania somnifera* L. *Plant cell tissue and Organ culture*. 2015. 123 (2): 405–412.
6. Ali A, Nisar M, Idrees M, Ahmad H, Hussain A, Rafique S, **Khan T**. Prevalence of HBV infection in suspected population of conflict affected area of war against terrorism in North Waziristan FATA Pakistan. *Infection Genetics and Evolution*. 2012. 12(8): 1865-9.

Review Papers 2016-2020 – 2020

1. **Khan T***, Ali M, Khan A, Nisar P, Jan SA, Afridi S and Shinwari ZK. Anticancer Plants: A Review of the Active Phytochemicals, Applications in Animal Models, and Regulatory Aspects. *Biomolecules*. 2020. 10(1), 47.
2. **Khan T**, Ullah N, Khan MA, Mashwani ZR, and Shams AN. Plant-based gold nanoparticles; a comprehensive review of the decade-long research on synthesis, mechanistic aspects, and diverse applications. *Advances in Colloid and Interface Science*. 2019. 272.
3. **Khan T**, Abbasi BH and Khan MA. "Elicitation strategies of in-vitro cultures for the sustainable use of medicinal plants". *Proceedings of the Pakistan Academy of Sciences: Pakistan Academy of Sciences B. Life and Environmental Sciences (Special Issue)* 2019. 56 (3): 49–56

- Salehi B, Zakaria ZA, Gyawali R, Ibrahim SA, Rajkovic J, Shinwari ZK, **Khan T**, Javad Sharifi-Rad J, Adem Ozleyen A, Turkdonmez E, Valussi MB, Boyunegmez Tumer TB, Fidalgo LM, Martorell M, and Setzer WN. Piper Species: A Comprehensive Review on Their Phytochemistry, Biological Activities, and Applications. *Molecules* 2019, 24(7), 1364.
- Ali M, **Khan T**, Fatima K, Ali QA, Ovais M, Khalil AT, Ullah I, Raza A, Shinwari ZK, Idrees M. Selected hepatoprotective herbal medicines: Evidence from ethnomedicinal applications, animal models, and possible mechanism of actions. *Phytotherapy research*. 2018. 32(2): 199-215.
- Mashwani ZR, Khan MA, **Khan T**, and Shams AN. Application of Plant terpenoids in the synthesis of Colloidal Silver Nanoparticles. *Advances in Colloid and Interface Science*. 2016. 234: 132-141.
- Khan T**, Abbasi BA, Khan MA and Shams AN. Why Pakistan is a threat to the Polio Endgame strategic plan 2013-2018? A look into the past decade. Editorial. *International Journal of infectious diseases*. 2016. 43: 4-5.

Review papers 2012-2015 – 2015

- Mashwani ZR, **Khan T**, Khan MA and Shams AN. Synthesis of plant based silver nanoparticles as potent antimicrobial agents: Current status and future prospects. *Applied Microbiology and Biotechnology*. 2015. 99(23): 9923-9934.
- Khan T**, Qazi J. Measles hectic in Pakistan; Upsurge versus the lurking vaccination. *Journal of the Pakistan5 Medical Association*. 2015. 65(2): 213-214.
- Khan T**, Qazi J. Measles outbreaks in Pakistan snatched hundreds of lives: Causes of the tragedy and future implications. *Journal Epidemiology Reports*. 2014.
- Khan T**, Qazi J. Hurdles to the global anti-polio campaign in Pakistan: an outline of the current status and future prospects to achieve a polio free world. *Journal of Epidemiology and Community Health*. 2013. 67(8): 696-702.
- Khan T**. Hepatitis C therapies: A chronology of Past, Present and Future Strategies. *Journal of GHR*. 2012. 1(11): 289-96.

NETWORKS AND MEMBERSHIPS

CURRENT

Lifetime Member of the Pakistan Biological Safety Association (PBSA)

CURRENT

Global outreach member of the American Society of Microbiology (ASM)

CURRENT

Member, Biotechnology Society University of Malakand.

CONFERENCES AND SEMINARS

(As an Event Organizer)

- One-Day Workshop on Biosafety and Biosecurity for life Science researchers Organized jointly by the Pakistan Biological Safety Association (PBSA) and the Department of Biotechnology, UOM. **June 07, 2022.**
- One-day seminar titled "Novel Corona Virus 2019; Explained" at the University of Malakand in collaboration with the Directorate of Student's Societies, **UOM. February 19, 2020.**
- Three-day workshop titled "Awareness Workshop on Crimean-Congo Hemorrhagic Fever (CCHF)" in collaboration with the Health Security Partners (HSP) for the livestock professionals of Malakand Division. **December 22-24, 2020.**
- Team Leader for Conducting a Survey on Responsible Life Sciences Research for Global Health Security in Pakistan. Frontline Health Care foundation. **April 01, 2019.**
- 2nd International DNA Day 2018 celebrations/Poster Competition/DNA Model competition funded by the Science Society and the Department of Biotechnology, University of Malakand. **April 25, 2018.**
- One-Day Workshop on Biosafety and Biosecurity for Scientists Organized jointly by the National academy of young scientists (NAYS), Department of Biotechnology, UOM. **November 15, 2017.**
- First International DNA Day celebrations/Poster Competition/DNA Model competition funded by the Office of Research, Innovation, and Commercialization at the platform of Scientific society of Biotechnology (SSB). **April 25, 2016.**
- Monthly Meeting titled "Making Pakistan Science Conscious" at Pakistan Academy of Sciences. **January 2015-December 2015.**
- Facilitator in "Policy Makers and Practitioners Awareness Workshop on Dual Use Education" Organized by Pakistan Academy of Sciences (PAS), The Global Network of Science Academies (IAP), Department of Biotechnology, Quaid-i-Azam University Islamabad. **March 30, 2015.**

HONOURS AND AWARDS

2021
Elected as Country Coordinator for Next Generation Global Health Security – Next Generation Global Health Security Network

2019
Winner of Honorable Mention – Next generation Biosecurity competition by the Nuclear Threat Initiative (NTI).

Fellow of the American Society for Microbiology's One Health 52 Weeks program 2019-2020. – American Society of Microbiology Amalgam of virtual lectures, practical assignments and in person hands on trainings for 52 weeks

2017
HEC's Best Research Paper Award 2015/2016. – Higher Education Commission

2012
Higher Education Commission Indigenous PhD fellowship Phase II – Higher Education Commission Fully funded Scholarship for PhD

2011
Silver Medal – University of Malakand Third position (82.74%) in BS

VOLUNTEERING

18/03/2019 – CURRENT Pakistan Biological Safety Association
Master trainer of Biosafety Training life science researchers and students in the concepts of biological safety

CONFERENCES/TRAININGS/WORKSHOPS

(As a Participant)

1. Pakistan-Turkey-Kazakhstan Youth Forum on Biotechnology held and organized by National Institute of Biotechnology and Genetic engineering and COMSTECH, Pakistan. **13-15 September, 2022**
2. Three-day workshop on Dual Use Research of Concern Workshop. Organized by Health Security Partners. COMSTECH Islamabad **June 12-14, 2019.**
3. One day workshop on Influence without authority funded by the Fogarty International, National Institute of Health (NIH, USA) and organized by the Pakistan Biological Safety Association (PBSA), **May 03, 2019.**
4. One Day workshop on Intellectual Property Rights Organized by the Office of Research, Innovation and Commercialization (ORIC), University of Malakand. **April 26, 2019.**
5. Five days Wet Workshop on Advanced Biological Risk Mitigation funded by the Fogarty International, National Institute of Health (NIH, USA) and organized by the Pakistan Biological Safety Association (PBSA), **March 13-17, 2019.**
6. Five days Master trainer workshop funded by the Fogarty International, National Institute of Health (NIH, USA) and organized by the Pakistan Biological Safety Association (PBSA), **January 14-18, 2019.**
7. Five days' workshop on "Responsible Conduct in Life Sciences" Jointly organized by the Fogarty International, National Institute of Health (NIH, USA) and organized by the Pakistan Biological Safety Association (PBSA), **December 06-10, 2018.**
8. Five days train the trainer workshop funded by the Fogarty International, National Institute of Health (NIH, USA) and organized by the Pakistan Biological Safety Association (PBSA), **September 10-14, 2018.**
9. 2nd International Workshop on Experimental Biology (IWEB-2017) "Nanotheranostics: From Bench to Bedside and Beyond" **November 22-24, 2017.**
10. 3rd International Nanomedicine Symposium (INS-2017) "Nanotheranostics: The Power of Nanomedicine" **November 21, 2017.**
11. One-day Hands-on workshop on biosafety cabinet at National Institute of genomics and Advanced Biotechnology (NIGAB), NARC Islamabad. **May 20, 2017.**
12. One day brainstorming session "The Future is Now" for Biotechnology. Organized by the Directorate of Science and Technology (DosT) and CECOS University Peshawar. **January 2017.**
13. Monthly Meeting titled "Making Pakistan Science Conscious" at Pakistan Academy of Sciences. **January 2015-December 2015.**
14. One-day international nanomedicine symposium "Nanotheranostics; a new concept in imaging and drug delivery". NORI Islamabad under the Pak-Norway Institutional Cooperation, **November 26, 2015.**

15. Patent management system and Development of Industrial Academic collaboration. Organized by the Institute of Space and Technology, Islamabad. **April 17, 2015.**
16. Young Pakistani Thinkers Assembly. Organized by Young Pakistani Thinkers, Islamabad. **June 2013**

INTERNATIONAL CONFERENCE PUBLICATIONS

In vitro cellular & developmental biology-plant, Dublin, Ireland.

T Khan, BH Abbasi, GS Ali. Enhanced antibacterial silver nanoparticles synthesis through Melatonin and Thidiazuron supplemented callus cultures of *Fagonia indica*. International association for plant biotechnology congress: Dublin, Ireland. August 19-24, 2018. Springer. In vitro cellular & developmental biology-plant 54, S111-S111.

T Khan, and BH Abbasi. Strategies for the elicitation of important anticancer secondary metabolites in cell cultures of *Fagonia indica*. International association for plant biotechnology congress: Dublin, Ireland. August 19-24, 2018. Springer. In vitro cellular & developmental biology-plant. 54, S7-S7.

International Journal of Infectious diseases. 2020

Khan T, Adil M. Synthesis of antibacterial silver nanoparticles through the interaction of reduced dose of antibiotic and aqueous callus extract of *Fagonia indica*. International Journal of Infectious diseases. 2020. 101. Supp. 1. 10.

BOOK CHAPTERS

Biodegradable gum: A green source for silver nanoparticles

Khan T, Jalal H, Karam K, Khan MA, Biodegradable gum: A green source for silver nanoparticles. In Nanobiotechnology for Plant Protection, Green Synthesis of Silver Nanomaterials. Elsevier, Editor(s): Kamel A. Abd-Elsalam, 2022, Pages 189-217, ISBN 9780128245088, <https://doi.org/10.1016/B978-0-12-824508-8.00026-5>.

Phytoremediation of electronic waste: a mechanistic overview and role of plant secondary metabolites

Khan MA, **Khan T**, Jamal M. Phytoremediation of electronic waste: a mechanistic overview and role of plant secondary metabolites. In Electronic Waste Pollution: Environmental Occurrence and Treatment Technologies. Springer International Publishing. Vol. 57. 2019.

Analysis, fate, and toxicity of engineered nanomaterials in plant"

Khan MA, **Khan T**, Mashwani ZR, Riaz MS, Ullah N, Ali H, Nadhman A, Plant cell nanomaterials interaction: Growth, physiology and secondary metabolism. In "Analysis, fate, and toxicity of engineered nanomaterials in plant" Elsevier Series Comprehensive analytical chemistry, Vol. 84 (208). 2019.

Plant Cell Culture Strategies for the Production of Terpenes as Green Solvents

Khan MA, **Khan T**, Ali H. Plant Cell Culture Strategies for the Production of Terpenes as Green Solvents. In Industrial Applications of Green Solvents. Materials Research Foundations, Vol. 50, pp 1-20, 2019.

INTERNATIONAL CONFERENCES

(As a Speaker or Presenter)

1. Lecture titled "Nanobiotechnology against resistant pathogens; a way forward in preventing pandemics" in the ANSO-PAS-MAAP CONFERENCE ON Epidemic and Pandemic Preparedness December 5 - 7, **2022.**
2. Lecture titled "**The age of zoonotic viruses; what lessons should we learn? (A glance at comparison of CCHFV and the SARS-CoV-2)**" awareness workshop on Crimean-Congo Hemorrhagic Fever (CCHF)" in collaboration with the **Health Security Partners (HSP)** for the livestock professional of Malakand Division. December 24, 2020.
3. Lecture titled "**What is Crimean-Congo Hemorrhagic Virus, its reservoirs, hosts and transmission"** awareness workshop on Crimean-Congo Hemorrhagic Fever (CCHF)" in collaboration with the **Health Security Partners (HSP)** for the livestock professional of Malakand Division. December 22, 2020.
4. **Global Young Scientists Summit (GYSS) 2019** organized by the **National Research Foundation of Singapore. Nanyang Technological University Singapore**, January 20-26, 2019.
5. Poster Presentation "**The Declining polio cases; Pakistan needs to Maintain the progress**" in the Conference to promote Safe and Secure Science to Middle East, South east and South Asia Organized

jointly by **National Academy of Sciences, USA** and **Academy of Sciences, Malaysia** in **Kuala Lumpur** February 5-11, 2018.

6. Poster presentation "**Poliovirus surveillance in Pakistan; a call for enhancement**" in the Middle East and South Asia Conference on Epigenetics and Genomics of Infectious Diseases. Organized by **Royal Scientific Society, Amman, Jordan**. March 7-8, 2016.

NATIONAL CONFERENCES/ SEMINARS

(As a speaker or Presenter)

1. Oral Presentation on "**Elicitation strategies of in-vitro cultures for the sustainable use of medicinal plants**" **AASSA-PAS Regional Workshop** on "**Complementary Medicines to Answer in Challenges Faced in Achieving Sustainable Goals in Health**". Islamabad, Pakistan August 18-21, 2019.
2. Poster Presentation "**The Declining number of polio cases: Pakistan needs to maintain the progress**" in the 9th Annual Public Health conference; from local to global. Organized by the **Health Services Academy Islamabad**, Pakistan. December 04-05, 2018.
3. Oral Presentation "**Strategies for the enhancement of commercially important secondary metabolites in cell cultures of F. indica**. in the conference "Plants; from food to Phytomedicine" Jointly organized by University of Malakand and University of Sarghoda. May 03-04, 2018.
4. Oral Presentation "**A general focus on the major vaccine-preventable diseases, polio and measles: an outline of the current status**" in the 5th Annual Research Conference, "Today's Research Tomorrow's Health". Organized by Office of **Research Innovation and Commercialization (ORIC), Khyber Medical University, Peshawar**. February 14-16, 2014.
5. Oral Presentation "**Hurdles to the global anti-polio campaign in Pakistan: an outline of the current status and future prospects to achieve a polio free world**" in the 3rd Annual Public Health conference "Social determinants of health: Issues and challenges in Pakistan" Organized by **Health Services Academy, Islamabad**. December 3-5, 2012.

CERTIFICATIONS

Specialization in Biosafety and Security

1. Certification and 0.5 Continuing Education Units in recognition of successful completion of course on **Bio-risk Management** by the **Frontline Health Care foundation**
2. Certification and 0.5 Continuing Education Units in recognition of successful completion of course on, **Biosafety Cabinets** by the **Frontline Health Care foundation**
3. Certification and 0.5 Continuing Education Units in recognition of successful completion of course on **Biological Waste Management** by the **Frontline Health Care foundation**.
4. **Professional Certification (PC)** of the International **Federation of Biosafety Associations (IFBA)** in **Biorisk management** since January 2018
5. **Professional Certification (PC)** of the International Federation of Biosafety Associations (IFBA) in **Biosafety** since November 2022

PROFESSIONAL SERVICES

CURRENT

Serving as Reviewer for various internationally reputed Journal

CURRENT

External Examiner of MPhil Examination in various Universities

CURRENT

Serving as Member Board of Studies at the Department of Biotechnology, CECOS University, Peshawar

CURRENT

Serving as member Graduate Studies Committee at the Department of Biotechnology, University of Malakand

08/03/2022 – CURRENT

Co-Chapter Head, Khyber Pakhtunkhwa Chapter of Pakistan Biological Safety Association

COURSES TAUGHT

During Lectureship

Health Biotechnology • Animal Biotechnology • Recombinant DNA technology • Genetic Resources and Conservation • Metabolomics Genomics and Proteomics • Elements of Biotechnology • Introduction to Biotechnology • Environmental Biotechnology • Analytical Chemistry and Instrumentation • Environmental Policy • Biosafety and Biorisk Management • Ecology, Biodiversity and Evolution

STUDENTS SUPERVISED

CURRENT

Research Supervision

Undergraduate: 33
MPhil : 08

REFERENCES

CURRENT

References

1. Dr. Dennis R. Lajeunesse

Professor, Nanoscience, and Director of Graduate Studies
Email: drlajeun@uncg.edu

2. Dr. Gul Shad

Senior Scientist
United States Department of Agriculture
Email: gulshadali@gmail.com

3. Dr. Akhtar Nadhman Shams

Chairman
Department of Biotechnology, CECOS University Peshawar
Email: shamsnazman@gmail.com