

Muhammad Imran Khan

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Personal Information

Current Address: Department of Biotechnology, Faculty of Biomedical and Life Sciences Kohsar University Murree Pakistan.

Permanent Address: Village Kakki, Tehsil and P.O Kakki, & Distt Bannu KPK, Pakistan.

Date of Birth: 01-04-1989

Sex: Male

Marital Status: Married

Academics:

Lecturer Kohsar University Murree	2022-To date
PostDoc Hanyang University South Korea	2021-2022
PostDoc Chonnam National University	2018-2020
PhD (Biotechnology- Biomedical Engineering) Chonnam National University South Korea. CGPA: 4.5/4.5 Grade: A	2015-2017
MPhil (Biotechnology) University of Science & Technology Bannu KPK, Pakistan. CGPA:4/4 Grade: A	2012-2014
BS Hons. (Biotechnology) University of Science & Technology Bannu KPK, Pakistan. MARKS: 4283/5500 Grade: A	2007-2011
F.Sc (Pre Medical) Govt. Post Graduate College Bannu, KPK, Pakistan. MARKS: 838/1100 Grade: A	2005-2007
SSC (Science)/ Secondary school level Govt. Higher secondary school Kakki Bannu KPK Pakistan. MARKS: 811/1050 Grade: A	2003-2005

Major subjects studied

Molecular biology, Pharmaceutical biotechnology, Medical biotechnology, Genetics, Bioprocess engineering, Immunology, Microbiology, Bioinformatics, Biostatistics etc.

Research interest and experience

1. Multidisciplinary research areas of Pharmacology, Molecular biology, Biomedical Engineering, Bionano engineering, Bioprocess Engineering
2. Microalgae, bacteria, natural products, isolation and purification, fermentation, metabolic pathways modification etc.
3. Tumorigenesis, Angiogenesis, Obesity, diabetes and neuropharmacology, neurodegenerative diseases.
4. Regenerative medicines, nanobiparticles, Extra cellular vesicles and exosomes therapeutic and diagnostic research.
 - Outstanding experience of Animals Cells culture, RNA, DNA and Proteins study gene expression etc. PCR, ELISA and Western blotting, Live cell imaging, flow cytometry, confocal microscopy etc. Handling animals, drug discovery, investigation of molecular targets, gene suppression, enhancement expression etc. Sufficiently independent to formulate questions, design experiments, and perform research.

Skills

- Passionate, enthusiastic, and eager for learning/ research working.
- Team orientated problem solving, self-motivated, creative thinking.
- Strong oral and written communication.
- Data analysis.
- Standard grade Journals articles writing/ research projects designing and writing
- Fluent in English.
- Supervision ability and experience.
- Ability to work independently or cooperatively with a team.

Presented research work in International Conferences/ Seminars

1. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) conference October 14-16, 2023.
2. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) conference April 14-16, 2022.
3. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) e conference April 14-16, 2021.
4. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) e conference June 25-26, 2020.
5. International Conference on Biomolecular Engineering (ICBE Asia 2020) by American Institute of Chemical Engineers (AIChE) Copthorne Kings Hotel, Singapore, January 7-9, 2020.
6. International Conference and Exhibition on Traditional & Alternative Medicine (ICETAM-20) | Los Angeles, USA, January 13-14,2020.
7. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) fall meeting and international symposium Seoul, Korea. October 10-12,2019.
8. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) Spring meeting and international symposium Jeju, Korea. April 10-12,2019.
9. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) spring meeting and international symposium Yeosu, Korea. April 10-12,2018.

10. Korean society for Marine Biotechnology (KSMB) annual symposium and meeting, November 23-25, 2017 Yeosu KoreaRe.
11. Korean Society for Biotechnology and Bioengineering Engineering (KSBB) fall meeting and international symposium Busan Korea. November 12-14,2017.
12. KSBB fall meeting and international symposium, Kimdeajung convention Centre,
13. Gwangju. October 12-14, 2016.
14. 2016 KSBB fall meeting and international symposium, Kimdeajung convention Centre, Gwangju. October 12-14,2016.
15. 2016 KSBB fall meeting and international symposium, Gyeongju Hwabaek international convention Centre April 20-22,2016.
16. 30th Anniversary meeting and international symposium of KSBB, Incheon. October 11- 14, 2015.
17. 2016 KSBB spring meeting and international symposium, Yeosu EXPO, April 15- 17, 2015.

Job experience

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| 1. Research assistant (2012-2013) | UST Bannu KPK,Pakistan |
| 2. Lecturer in Biosciences (2014-2015) | Wisdom college Chokara KarakKPK, Pakistan |
| 3. Teaching assistant (2015-2017) | Chonnam national Univ. Re.Korea |
| 4. Research Associate (Research associate and teaching assistant) (2018-2020) | Chonnam national Univ. Re. Korea |
| 5. Research Associate (Research associate and teaching assistant) (2020- 2021) | Hanyang Univ. Re. Korea |
| 6. Lecturer (Department of Biotechnology and Biomedical sciences) (2022- present) | Kohsar University Murrree Pakistan. |

Independent as well as collaborative research associate, investigator, and lecturer as well supervisor role for BS, MS and doctoral students.

Subjects taught

Medical biotechnology	MS Students
Pharmaceutical biotechnology	MS/ BS students
Microbial technology	BS students
Bioprocess Biotechnology	BS students
Nano biotechnology	MS Students
Advanced Biotechnology	MS Students

Reviewer

1. Environmental Progress & Sustainable Energy
2. Process biochemistry
3. Pharmaceutical biotechnology
4. Biotechnology and bioprocess engineering
5. Toxicology report

Selected Research Publications

1. **Muhammad Imran Khan**, Muhammad Zubair Khan, Jin Hyuk Shin, Min Yung KIM, Tia Sun SHIN, Jong Deog KIM (2023). Breast Cancer: Gene Mutations, Therapeutic Targets, Molecular Mechanisms, Treatment Approaches, and Drug Identification. BMC women Health (Under Review). **KUM**
2. **Muhammad Imran Khan**, Muhammad Zubair Khan, Jin Hyuk Shin, Min Yung KIM, Tia Sun SHIN, Jong Deog KIM (2023). "Stem Cell-Derived Exosomes Alleviate Alzheimer's Pathogenesis by Ameliorating Amyloid Beta Production and Tauopathy via Regulating the Associated Molecular Pathways. Scientific Report. 2023 Sep 21; 13(1):15731.doi: 10.1038/s41598-023-42485-4. **KUM**
3. **Muhammad Imran Khan** Gul Karima, Muhammad Zubair Khan, Jin Hyuk Shin, Min Yung KIM, Tia Sun SHIN, Jong Deog KIM (2022). "Therapeutic Effects of Saponins for the Prevention and Treatment of Cancer by Ameliorating Inflammation and Angiogenesis and Inducing Antioxidant and Apoptotic Effects in Human Cells. Int. J. Mol. Sci. 2022, 23(18), 10665. **KUM**
4. **Muhammad Imran Khan**, Muhammad Zubair Khan, Jin Hyuk Shin, Min Yung KIM, Tia Sun SHIN, Jong Deog KIM (2022). Neuroprotective Effects of Green Tea Seed Isolated Saponin Due to the Amelioration of Tauopathy and Alleviation of Neuroinflammation: A Therapeutic Approach to Alzheimer's Disease. Molecules. 2022 Mar 24;27(7):2079. doi: 10.3390/molecules27072079. **KUM**
5. **Muhammad Imran Khan**, Muhammad Zubair Khan, Jin Hyuk Shin, Min Yung KIM, Tia Sun SHIN, Jong Deog KIM (2021). "Pharmacological approaches to attenuate obesity with synergistic therapeutic and preventive effects of natural products by suppression of the associated promoting signaling pathways. Biomed research international Volume 2021 |Article ID 2521273 | https://doi.org/10.1155/2021/2521273
6. **Muhammad Imran Khan**, Jin Hyuk Shin, Jong Deog kim (2020) "Green Tea Seed Isolated Theasaponin E1 Ameliorates AD Promoting Neurotoxic Pathogenesis by Attenuating A β Peptide Levels in SweAPPN2a Cells. *Molecules* 2020,25,2334"
7. **Muhammad Imran Khan**, Jin Hyuk Shin, Jong Deog kim (2019) "Crude microcystins extracted from *Microcystis aeruginosa* exert anti-obesity effects by down regulating angiogenesis and adipogenesis related signaling molecules in HUVEC and 3T3-L1 cells" *BMC complementary and alternative medicines* (2019) 19: 100doi.org/10.1186/s12906-019-2501- 0).
8. **Muhammad Imran KHAN**, Jin Hyuk SHIN, Tai Sun SHIN, Min Yong KIM, Nam Jun CHO and Jong Deog KIM (2018) "Anthocyanins from *Cornus kousa* ethanolic extract attenuate obesity in association with anti-angiogenic activities in 3T3-L1 cells by down- regulating adipogenesis and lipogenesis" *PLOS-ONE* idPONE-D-18-25676)
9. **Muhammad Imran Khan**, Abdulatef Mrghni Ahhmed, Jin Hyuk SHIN, Jun Soo BAEK, Min Yong KIM, and Jong Deog KIM (2018) "Green tea seedisolatedsaponins exerts antibacterial effects against various strains of gram positive and gram-negative bacteria, a comprehensive study in vitro and in vivo" *Evidence-BasedComplementaryand Alternative Medicinedoi.org/10.1155/2018/3486106*).
10. **Muhammad Imran Khan**, Jin Hyuk Shin, Jong Deog kim (2018)"The promising Future of microalgae:currentstatus,challenges, and optimization of a sustainable and renewable industry for biofuels, feed, and other products" *Microb Cell Fact.* 2018 Mar 5;17(1):36. doi:10.1186/s12934-018-0879-x.)
11. **Muhammad Imran Khan**, Moon Geon Lee, Jin Hyuk Shin, Jong Deog kim (2017) "Pretreatment optimization of the biomass of *Microcystis aeruginosa* for efficient bioethanol production" *AMB Express* 2017; 7:19.
12. Moon Geon LEE, **Muhammad Imran KHAN**, Hyo Jin SEO, Jin Hyuk SHIN, Min Yong KIM, and Jong Deog KIM (2017) "In vivo and in vitro antimicrobial effects of natural antibiotics present in crude extracts of various medicinal plants" *Korean Society for Biotechnology and Bioengineering Journal* 32(1): 1-7:2017)
13. **Muhammad Imran Khan**, Moon Geon Lee, Hyo Jin Seo, et al. (2016) "Enhancing the Feasibility of *Microcystis aeruginosa* as a Feedstock for Bioethanol Production under the Influence of Various Factors,"*BioMed Research International* vol. 2016, ArticleID4540826, 9 pages, 2016.doi:10.1155/2016/4540826.
14. **Muhammad Imran Khan**, Mushtaq Ahmad, Nadia Mushtaq and Rehmat Ali Khan, Dilafraz Khan, Safiullah

Khan(2016) "Pharmacological evaluation of antioxidant, antimicrobial and phytotoxic activities of crude extract and purified compound of *Lonicera quinquelocularis*" *Bangladesh journal of botany* 45(5):1235-1239.

15. Amin Ullah, Said Hassan, **Muhammad Imran Khan**, Muhammad Rizwan, Zafar Ullah, MukaramShah(2016)"Antioxidant,phytotoxic and cytotoxic activities of methanolic extract of *Trigonella foenum-graecum*" *Journal of Coastal Life Medicine* 4(5): 386-389).
16. Jong Deog Kim, **Muhammad Imran Khan**, Jin Hyuk Shin, Moon Geon Lee et al. (2015) "HPLC Fractionation and Pharmacological Assessment of Green Tea Seed Saponins for Antimicrobial, Anti-angiogenic and Hemolytic Activities" *Biotechnology & Bioprocess Engineering*, 20:1035-1043)
17. **Muhammad Imran khan**, DilFaraz Khan, Mushtaq Ahmed, Shafiullah Khan, Rahmat Ali Khan, Shahnoor (2014) "Antioxidant and cytotoxic activities of three different fractions of *Lonicera quinquelocularis* (Translucent Honeysuckle)" *Phytochem & Biosub journal*, Vol.8(2)
18. Shahnoor, DilFaraz Khan, Mushtaq Ahmed, Rahmat Ali Khan, Muhammad **Imran khan**, Shafiullah Khan(2014)"Determination of antifungal and phytotoxic activities of three different fractions of *Lonicera quinquelocularis*(TranslucentHoneysuckle)"*Journal of Pharmacognosy and Phytochemistry*, 2 (6): 167-172.9.
19. **Muhammad Imran Khan**, Suhaib Asad, Syed Waqas, Syed Rehman, Asif Iqbal, AminUllah, Ihsan Ullah, Shahnoor, Sher Ali (2013) "Antioxidant and Cytotoxic Activities of Crud Methanolic Extract of *Medicago Polymorpha*" *IOSR Journal of Pharmacy*, 3(8): 32-37.3.)
20. **Muhammad Imran Khan***, Mushtaq Ahmad, Rahmat Ali Khan, Amin Ullah, Syed Rehman, Bakhtar Ullah (2013)"Phytotoxic, antioxidant and anti-fungal activity of crude methanolic extract of *Equisetum debile*" *International Journal of Biosciences*, 3(8):130-135.)
21. Rahmat Ali Khan, Mushtaq Ahmed, **Muhammad Imran Khan**, Nawshad Muhammad, Muhammad Rashid Khan, Amin Ullah, SyedRehman, Nadia Mushtaq, Akhlaq Ahmed, Farman Ullah Khan, Muhammad Shahzad Shifa (2013) "Role of medicinal plants in free radicals induced sickle cell anemia"*International Journal of Biosciences*, 3(7)188-194)
22. Mushtaq Ahmed, **Muhammad Imran Khan**, Muhammad Rashid Khan, Nawshad Muhammad1, Amin Ullah Khan1and Rahmat AliKhan(2013)"Role of Medicinal Plants in Oxidative Stress and Cancer" *OMIC publishing group*, 2:2-6.)
23. AminUllah, **Muhammad Imran Khan***,Yaqoob ur rehman, Muhammad Waqas, Muhammad Ajmal Khan, Sher Ali, Gohar Zaman and Hazrat Ali (2013) "Antifungal and phytotoxic Activities of Crude Methanolic Extract of *Medicago Polymorpha*" *International Journal of Bioassays*,4(7):42-54.)
24. Mushtaq Ahmed, Zafer Ullah Wazir, Rahmat Ali Khan, **Muhammad Imran Khan**, Syed Waqas &Asif Iqbal "Pharmacological evaluation of crude methanolic extract of *Kalanchoe pinnata* leaves" *Journal of Toxicological & Environmental Chemistry*,95(9): 1539-1545.

References

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Declaration

I confirm that all the information provided in this CV are correct and authentic to the best of my knowledge and can be proved by officials/formal documents and certificates.

Muhammad Imran Khan