

CURRICULUM VITAE

Kiran Konain, M.Phil.

Doctoral Researcher | Lecturer.

Team Member: Cancer Cell Culture & Precision Oncomedicine Lab

Team Member: Oral Biology Lab

Institute of Basic Medical Sciences,

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Professional Address

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EDUCATION

- 2022- **PhD. Molecular Biology & Genetics** (In Progress), Department of Molecular Biology and Genetics, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.
- 2018-2021 **M.Phil. Molecular Biology & Genetics** (CGPA 3.83/4.00), Department of Molecular Biology and Genetics, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.
- 2017, **BS Biotechnology** (CGPA 3.8/4.00), Center of Biotechnology and Microbiology, University of Peshawar, Peshawar, Pakistan.
- Optimization of Tetra primer ARMS PCR for genotyping

POSITIONS

- 2025-Present: **Lecturer (BPS 18)**, Dept. of Molecular Biology and Genetics, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.
- 2023-2024: **Visiting Lecturer**, Dept. of Molecular Biology and Genetics, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.
- 2022-2025: **Research Assistant**, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.
- 2020-2022: **Assistant Professor**, Dept. of Medical Lab Technology, Asian Institute of Medical and Management Sciences, Peshawar, Pakistan.

2021: **Lab Technician/Internee**, five months internship at Public Health Reference Lab, Peshawar Pakistan.

2018-2021: **M.Phil. Research Scholar**, Department of Molecular Biology and Genetics, Institute of Basic Medical Sciences, Khyber Medical University, Peshawar, Pakistan.

2017: **Research Lab Internee**, two months internship at Pakistan Health Research Council.

TEACHING EXPERIENCE

Teaching Year	Course	Code	Credit Hours	Degree	Discipline
2023-Present	Cell Signaling	MBG 703	2+0	M.Phil.	Molecular Biology & Genetics
2023-2025	Principles of Proteomics	MBG 704	1+0	M.Phil.	Molecular Biology & Genetics
2024	Molecular Basis of Inheritance	MBG 701	1+1	M.Phil.	Molecular Biology & Genetics
2021-2022	Biochemistry-I	PMS 601	3+1	BS	All Disciplines
2022	Medical Microbiology-I	PMS 613	2+1	BS	Non-MLT
2022	Clinical Bacteriology	MLT 602	2+1	BS	Medical Lab Technology
2022	Molecular Biology	MLT 603	2+1	BS	Medical Lab Technology
2022	Biochemistry-II	PMS 607	3+1	BS	All Disciplines

SKILLS

Lab Skills:

Primary Cells: Generation and maintenance of patient derived primary cell lines generation (brain, breast and oral cancer samples, Chicken chondrocytes, human umbilical cord stem cells)

Commercial: U-87, LN299, MO59K, ZR-75, BT-474, C5, HUVEC, HEPG2, NIH3T3-E1, MC3T3-E1

Cellular Studies: Cells adhesion study, RNA extraction, cDNA synthesis, Primer

designing, Differentiation Assay (PCR, Alizarin Red Staining, ALP Assay), Cell growth inhibitory assay, Cells proliferation and viability (Alamar Blue, MTT, and Crystal violet), Immunofluorescence [beginner]

3D Scaffolds: Tissue engineering 3D scaffold preparation by electrospinning (Characterization studies from nanofibers scaffold, SEM analysis (nanofiber diameter determination) [beginner], FTIR analysis [Intermediate], Swelling study, Drug release study, Degradation study, Determination of wound closure rate on rats, Bone condition media preparation to enhance healing process, Preparation of plant extract (methanol extraction method), Fish Collagen extraction [beginner]

Writing Skills: Research Paper writing, Thesis writing, project report writing, Patent writing

Digital Skills: MS Word, MS Excel, MS PowerPoint, Google Docs

Databases: PubMed, NCBI, Google Scholar

Reference: Endnote, Zotero, Mendeley

Others: Image J, Drugbank, NCBI Blast, Open Target Platform, MOE [beginner], DS Visualizer [beginner]

HONORS AND AWARDS

2026: **Panel Judge** in One Health Debate on the theme One Planet. One Health. One Future. At IBMS, KMU.

2024: **Best Teacher Award** by Quality Enhancement Cell (QEC) of Khyber Medical University

2024: **Appreciation Certificate** awarded for guiding & mentoring junior colleagues in research activities

2021: **Gold Medal** in M.Phil. degree, KMU.

TRAININGS AND CERTIFICATIONS

2026: "Basic Principals of Cell Signaling" authorized by Korea Advanced Institute of Science and Technology (KAIST) offered through Coursera.

2026: "Intellectual Property Rights" Trainng Workshop

2025: "Enhance you Bioinformatics Skills with an International Remote Internship Oppurtunity-Batch V" at Informatix Biolabs Pvt. Ltd

2024: E-Course on "Data Analysis Through R-Batch-I"

2024: E-Course on "Use of AI Tools in Scientific Writing"

2024: Copyrights Awareness and Application Filing Process

2024: Biosafety, Biosecurity & Bio-risk Management

2023: 3D Nanofibrous Scaffold for Tissue Engineering & Drug Delivery
 2023: Small Laboratory Animals Handling Workshop
 2023: Animal Handling Basics
 2023: International Workshop on "development of animal models for metabolic disease"
 2021: COVID19 Laboratory Diagnostic Methods
 2020: Severe Acute Respiratory Infection (SARI) Treatment Facility Design
 2020: COVID-19: How to put on and remove personal protective equipment (PPE)
 2020: Standard Precautions: Waste management
 2020: Training for Healthcare Workers
 2020: Training on COVID19 Laboratory Diagnosis and Biosafety
 2020: Basic Cell Culture Techniques
 2019: Biosafety, Biosecurity and Bio-risk Management
 2019: Thinking Out of the Box Adding "WOW" Factor to your Research Proposal
 2018: Patients Derived Cancer Cell Culture and its Clinical Applications
 2018: Strategies to Develop Chemical & Biological Safety Cultures in Laboratories
 2018: Hands on Workshop on HPLC
 2018: Advanced Medical Statistics
 2018: Next Generation Sequencing (NGS)
 2018: Karyotyping: A Traditional Approach

CONFERENCES SYMPOSIUMS & Seminars

2025: BioNanoCon25-International Conference on Innovations in Biomaterials and Nanotechnology
 2024: 4th National seminar on "Genetic Disorders" at KMU
 2023: BMedCon'23-2nd international Basic Medical Science Conference "A Spectrum of Discoveries"
 2023: Symposium on Biological Weapons Convention & Biosecurity
 2023: Recent Advances in Reproductive Medicines & Assisted Reproductive Technologies
 2022: 2nd International Conference on Advances in Drug Discovery & Development
 2022: 4th International Conference on Emerging Trends in Bioinformatics & Biosciences
 2022: Symposium on Introduction to the Biological Weapons Convention
 2018: BMedCon'18-1st International Basic Medical Sciences Conference "Challenges & Opportunities"
 2018: KARECon 2018- Research Priorities in the Sustainable Development Goals (SDG) Era

FACILITATOR/ORGANIZER

- 2026: Sanger Sequencing Data Analysis & Diagnostic Reporting for Beta Thalassemia" (Organizer)
- 2025: Hands on wordkshop on "*Intellident: AI in Dental Applications*". (Organizer)
- 2022: Symposium on Introduction to the Biological Weapons Convention (Facilitator)

POSTER PRESENTATIONS

- 2025: Development of Biomimetic BL Incorporated Nanofibrous Scaffold for Cell-Directed Tissue Regeneration (**Winner**)
- 2024: Drug Incorporated Nanofibrous Scaffold System as a Tool of Tissue Regeneration by Cell Homing (**2nd position**)
- 2022: Biomarker Guided Drug Repurposing and Molecular Validation of Angiotensin II Receptor Type I in Gliomas
- 2022: Drug Incorporated Nanofibrous Scaffold System as a Tool of Tissue Regeneration by Cell Homing
- 2018: Importance of Probiotics in Gastrointestinal Tract, BMedCon'18
- 2018: Importance of Probiotics in Gastrointestinal Tract, 11th UMR-PMC
- 2017: Use of Probiotics in Gastrointestinal Tract, 10th UMR-PMC

ORAL PRESENTATIONS

- 2024: Khyber Medical University Symposium on Drug Incorporated Nanofibrous Scaffold System as a Tool of Tissue Regeneration by Cell Homing (**Speaker**)
- 2023: Scientific Session (**Speaker**)

VIRTUAL LECTURES

- 2022: Development of Novel Anticancer Compounds Targeting Mitochondrial Protein Homeostasis
- 2022: Microbial Biofilm Formation and its Importance as a Drug Target

Model PRESENTATIONS

- 2016: Disaster Management Exhibition (DME-2016)
- 2015: Disaster Management Exhibition (DME-2015)

PUBLICATIONS

1. **Konain, K.**, Farid, S., Hameed, S., Rehman, F., Samie, M., Sharif, F., ... & Rahman, S. U. (2025). Arabinoxylan-Incorporated Poly (ϵ -caprolactone) Nanofiber Matrix Promote Fibroblast Cells Adhesion and Proliferation.

- BioNanoScience, 15(2), 309.
2. Hameed, S., Rahman, S. U., **Konain, K.**, Samie, M., Farid, S., Elango, J., ... & Arany, P. R. (2025). Advanced 3D biomimetic scaffolds with bioactive glass and bone-conditioned medium for enhanced osteogenesis. *Biomaterials Advances*, 214282.
 3. Yaqoob, Z., Batool, S.A., Basit, M.A., **Konain, K.**, Malik, R.A., Rehman, S.U., Husain, S.W., Alrobei, H. and Rehman, M.A.U., 2024. Hydrothermal synthesis of carbon dots incorporated in magnetite iron oxide nanoparticles for potential targeted brain cancer therapy: In-Vitro Study. *Materials Chemistry and Physics*, p.129698.
 4. **Konain, K.**; Saddique, N.; Samie, M.; Rahman, Z.U.; Farid, S.; Hameed, S.; Mirza, M.R.; Wu, W.; Woo, K.M.; Arany, P.R.; et al. Curcumin-Loaded Nanofibrous Matrix Accelerates Fibroblast Cell Proliferation and Enhances Wound Healing via GSK3- β Inhibition. *J. Compos. Sci.* 2023, 7, 343. <https://doi.org/10.3390/jcs7080343>
 5. Tabassum N, Khalid S, Ghafoor S, Woo KM, Lee EH, Samie M, **Konain K**, Ponnusamy S, Arany P, Rahman SU. Tideglusib-incorporated nanofibrous scaffolds potently induce odontogenic differentiation. *Journal of Biomaterials Applications*. 2023 Jul 24;08853282231190470
 6. **Konain K**, Faheem M, Ullah K, Ayub S, Ahmed J, Huma Z, Javed A, Khan T, Hussain D, Khan IN. Biomarker-Guided Drug Repurposing and Molecular Validation of Angiotensin-2 Receptor Type-1 in Brain Tumor. *Precision Medicine Communications*. 2023 Jun 30;3(01):27-42. <https://doi.org/10.55627/pmc.003.001.0296>
 7. Masood F, Makhdoom MA, Channa IA, Gilani SJ, Khan A, Hussain R, Batool SA, **Konain K**, Rahman SU, Wadood A, bin Jumah MN. Development and Characterization of Chitosan and Chondroitin Sulfate Based Hydrogels Enriched with Garlic Extract for Potential Wound Healing/Skin Regeneration Applications. *Gels*. 2022 Oct 20;8(10):676