


Dr. Ishaq N. Khan

Assistant Professor Cancer Genetics

PI- **CCCPOL** - Cancer Cell Culture & Precision Oncomedicine Lab

Consultant - Sequencing  - Advanced Center for Genomic Technologies

Head - **PIKBiobank** - Pakistan-IK Biobank

Lead - **PKNORG** - Pakistan Neuro-Oncology Research Group

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Member -  - Pakistan Society of Neuro-Oncology



Dr. Ishaq has joined department of Pharmacology, Institute of Basic Medical Sciences (IBMS) Khyber Medical University (KMU) in January 2017 and currently working as Assistant Professor in department of Molecular Biology & Genetics. In year 2017, he has established a research facility – Cancer Cell Culture & Precision Oncomedicine Lab (CCCPOL) and developed a biobank (PIK-BioBank) from brain cancer patients and their primary cancer cell lines. In addition, he is leading a research group - Pakistan Neuro-Oncology Research Group (PKNORG) in collaboration with renowned national and international scientists, neurosurgeons, histopathologists and oncologists. Previously he has worked in international “Transitional NeuroOncology Group” where he has generated primary brain cancer cells from Arabian patients. Dr. Ishaq is a team member of Pakistan Society of Neuro-Oncology (<http://www.pasno.org/>) and a young investigator of European Association for Cancer Research since July 2018.

Dr. Ishaq’s primary area of doctorate research was focused on the characterization of drug resistant cells in primary brain tumors, where he has studied the molecular analysis of pathogenesis, pleomorphism, apoptosis, cancer stem cells presence and unique genetic signatures of meningiomas, that resulted in discovery of AGR2 as a novel marker for aggressive meningiomas. The work has been presented at different platforms including at “Neurooncology 20th scientific meeting” in San Antonio, TX, USA and at DKFZ (German cancer research center) in Hiedelberg, Germany. Currently at CCCPOL, he has generated primary cells from wide range of adult and paediatric brain tumors’ patients including meningiomas, medulloblastomas, pituitary tumors, schwannomas, ependymoma, glioblastomas and other astrocytic tumors. In addition, he has generated primary cell lines from other cancers including Oral-Squamous cell carcinoma and Breast cancer patients. His main focus is to investigate different biological and molecular aspects of aggressive tumors that majorly covers the genomic, transcriptomic, proteomic and metabolomic instabilities in Pakistani population, with the ultimate aim of novel drug discovery and improved therapeutic outcomes. Dr. Ishaq has obtained his Master degree in “Drug Discovery and Development” from University of Sunderland, United Kingdom, under the supervision of Prof. Rosaleen

J.Anderson and Dr. Yu Gong, with thesis entitled: “Synthesis and biotesting of potential drugs against cancer by targeting the transcription factors NFkB p50 and NFkB p65”.

Dr. Ishaq has 29 research publications to his credit in impact journals ([Dr. Ishaq Khan \(Assistant Professor Cancer Genetics\) - Google Scholar](#)). He has supervised/co-supervised 17 M.Phil students and is currently supervising/co-supervising 7 M.Phil. and 5 Ph.D. Students. He has recently completed research projects on brain tumors under start-up research grant and lab-strengthening grant that was awarded by Higher Education Commission of Pakistan. In addition, he has received grant from ORIC, KMU for a project on drug repurposing for cancer treatment. Moreover, he is working as a consultant for COVID-19 diagnostics and Sanger sequencing at Advance Center for Genomic Technologies (ACGT), Public-Health Reference Lab (PHRL). In addition, he is working on Next-Generation Sequencing using Oxford Nanopore Technology platform – MinION at IBMS & PHRL, KMU in collaboration with Johns Hopkins University and NIH, US.