

# **GUL NABI KHAN, Ph.D**

**(Assistant Professor & HEC Approved Ph.D. Supervisor)**

## **Personal information**



Date of birth: 04.01.1983

Domicile: District Swabi, Khyber Pakhtunkhwa

Email address: [gulnabi@icp.edu.pk](mailto:gulnabi@icp.edu.pk)

Marital Status: Married

Nationality: Pakistani

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Current affiliation: Department of Zoology, Islamia College University Peshawar, Khyber Pakhtunkhwa, Pakistan

## **Summary**

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I have 11 years of teaching and research experiences. I have practical research work experience in field of cell & molecular biology, cancer biology, stem cell biology, epigenetics modulation of breast cancer cells and chemosensitization, toxicology, mechanism of chemical-induced carcinogenesis and pharmacology. I have worked with national and international scientist in many projects. I am working as an ambassador of European Association of Cancer research. I have supervised many M.Phil students who have completed their projects in the field of cancer biology. Currently, 12 M.Phil and 2 Ph.D scholar are working under my direct supervision. The focus of our research is to uncover the molecular mechanism of diethyl nitrosamine (DEN)-induced carcinogenesis in rat model. The involvement of Caspases and Bcl-2 family members as well as the main key regulators of extrinsic and intrinsic apoptosis pathways, are the target sights of our research interest. We are also focusing on the role of cancer stem cells in hepatocarcinogenesis.

## **Professional Training/Education**

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| 2011-2017 | Ph.D. Cell Biology, Laboratory for Stem Cell Niche Regulation, Division of Life Sciences, Korea University, Anam Dong, Seoul, Republic of Korea. |
| 2006-2008 | M.Phil Biochemistry (Pharmacology & Toxicology), Quaid-i-Azam University Islamabad, Pakistan   |
| 2004-2006 | MSc Animal Sciences/Zoology, Quaid-i-Azam University Islamabad, Pakistan   |
| 2001-2003 | BSc Biology, University of Peshawar, KP, Pakistan  |

## Chronological List of Positions/Work Experience

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1. Assistant Professor in Department of Zoology Islamia College University, Peshawar (Since September 2017 to date)
2. Researcher in Laboratory for Stem Cell Niche Regulation, School of Life Sciences, Korea University, Seoul, Republic of Korea. (From March 2011 to August 2017)
3. Working as a Lecturer in Department of Zoology Islamia College University, Peshawar (2009 to Feb 2011)
4. Two years of Research experience in Molecular Genetics Lab, Department of Molecular Biology/Biochemistry, Faculty of Biological Sciences Quaid-i-Azam University Islamabad, from Feb 2006-Feb, 2008.
5. One year of administrative experience in Project Wing Ministry of Education Islamabad, Pakistan under the National Internship Program from June 2007 to Feb 2008.
6. Two years' experience of M.Sc Class Practical demonstrations and Lab performance in Department of Molecular Biology/Biochemistry, Faculty of Biological Sciences Quaid- i-Azam University Islamabad

## Courses Taught

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Advanced Molecular Biology, Cell Biology, Cancer Biology, Biology of Stem cell, Developmental Biology, Principle of Systematics, Molecular Endocrinology, Research Methodology

## Technical Expertise

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- Mouse and Chicken primary cell culture (MEF & CEF)
- Culture of breast cancer, Hepatic and other cancer cell lines (HepG2, N2A, MCF-7, MDA-MB-231, F-9 & BV-2 )
- Bright field and fluorescent microscopy
- Immunocytochemistry
- Immunohistochemistry and immunofluorescence
- Semi-quantitative PCR
- Western blotting
- Electrophoresis
- Cell and Gene cloning
- Zebra-fish culture system and *in vivo* model
- Gene transfection & transformation

## List of publications

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1. Rehman G, Gul, N, **Khan, GN**, Zaman, K., Anwar, Z., & Kakakhel, MA. (2020). Ethanol extract of *Allacanthos* crab inhibits cancer cell proliferation, possesses anti-inflammatory and antioxidant potentials. *Gene Reports*, 21, 100907.

2. Gul S, Khisroon M, Attaullah, Gul S, Khan A and **Khan GN** (2019). Assessment of genotoxicity in lymphocytes of active and passive cigarette smokers attenuated with green tea. *Pakistan Journal of Zoology* 51(3): pp 1131-1136.
3. **Khan GN**, Kim EJ, Shin TS, Lee SH (2017) Heterogeneous cell types in single-cell- derived clones of MCF7 and MDA-MB-231 cells. *Anticancer Res* 37(5):2343-2354.
4. **Khan GN**, Kim EJ, Shin TS, Lee SH (2017). Azacytidine-induced chemosensitivity to doxorubicin in human breast cancer MCF7 cells. *Anticancer Res* 37(5):2355-2364.
5. Attaullah and **Khan GN** et al., (2017). In district Swat Khyber Pakhtunkhwa Pakistan anemia (iron deficiency) in pregnant women of different ages as a public health problem becomes a reality. *J Entomol Zool Stud* 5(2):1266-1269.
6. Attaullah, Iqbal N and **Khan GN** et al., (2017) Incidence of dengue virus eruption in Swat, Khyber Pakhtunkhwa, Pakistan. *APJTD* 7(3):129-131.
7. Gul S, Hasan Z, and **Khan GN** et al., (2017) Proximate body composition of five commercial fish species of family Cyprinidae commonly consumed in Swat Khyber Pakhtunkhwa Pakistan. *J Entomol Zool Stud* 5(3):1255-1257.
8. Khan, M. R., Memon, A., **Khan GN**., Shabbir, M., Saeed, N., Shah, N. A & Rashid, U. (2013). Protective effects of *Digera muricata* (L.) Mart. against carbon tetrachloride-induced oxidative stress in thyroid of rat. *Afr J Biotechnol* 10(76), 17564-17570.
9. Khan, M.R., **Khan GN**, & Dawood, A. (2011). Evaluation of antioxidant and fertility effects of *Digera muricata* in male rats. *AJPP* 5(6), 688-699.
10. Khan, M.R., Rizvi, W., **Khan GN**., Khan, R.A., Shaheen, S., (2009) Carbon tetrachloride-induced nephrotoxicity in rats: Protective role of *Digera muricata*. *J Ethnopharmacol* 122(1), 91-99

### **Poster Presentations**

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1. **Gul Nabi Khan, Saleha Gul and Muhammad Khesroon (2017)** Assessment of genotoxicity in lymphocytes of active and passive cigarette smokers attenuated with green tea. Japanese Cancer Society meeting (**JCA 2107**). P2018
2. **Eun Jin Kim, Gul Nabi Khan, Tae Seoup Shin, Sang Ho Lee (2015)** Fates of ECM Matrices and Nucleic Acids during Decellularization of Adult Mouse Heart. The 15th International Symposium on Developmental Biotechnology, Korean Society of Animal Reproduction.
3. **Shin Tae Seop, Gul Nabi Khan, Jo Seungho, Eun Jin Kim, Kim SY, Cho SY Sang Ho Lee (2015)** Different response in malignant breast cancer (MCF7) and nonmalignant breast epithelial cells (MCF10A) to Ginseng berry exposure. The 6th International Conference on Food Factors, ICoFF 2015, Bioconvergence for Food Function.
4. **Gul Nabi Khan, Seungho Jo, Eun Jin Kim, Tae Seop Shin , Sang Ho Lee (2014)** Azacytidine pretreatment induces chemosensitivity to doxorubicin in MCF7 breast cancer cells. Korean Society for Developmental Biology (KSDB) 33rd annual meeting 2014.

5. **Shin Tae Seop, Gul Nabi Khan, Seungho Jo, Eun Jin Kim, Sang Ho Lee (2014)** Different antiproliferative and antioxidant activities of Ginseng berry in breast cancer (MCF7) and nonmalignant (MCF10A) epithelial cells. Korean Society for Food and Nutrition (KFN) annual meeting 2014.
6. **Seungho Jo, Eun Jin Kim, Gul Nabi Khan, Sang Ho Lee (2014)** Analysis of neural differentiation from mouse stem cells in the mild hypothermic niche. Korean Society for Developmental Biology (KSDB) 33rd annual meeting 2014.

### Ph.D Students under my Supervision

S.No	Name	Research Project	Session
1	Sidra Tul Muntaha	Mechanism of action of newly synthetic anticancer compounds against hepatocellular carcinoma	2021-25
2	Islam Habib	Bioaccumulation of Heavy metals in different tropic levels of food chain and its impact on human Life in District Dir, Khyber Pakhtunkhwa, Pakistan	2021-25

### M.Phil Students Supervised

S.No	Name of Scholar	Thesis Title	Session
6	Amber Parvez	EVALUATION OF CD73 <sup>+</sup> /CD44 <sup>+</sup> /CD90 <sup>+</sup> CELLS POPULATION IN LIVER OF DIETHYLNITROSAMINE (DEN)-TREATED MALE RATS AND ANTICANCER ROLE OF SILVER NANOPARTICLES.	2019-21
5	Sumayya Khattak	EXPRESSION PATTERN OF <i>PTEN</i> , <i>TP53</i> , <i>E-CADHERIN</i> , <i>P65</i> AND <i>P21</i> GENES IN DIETHYLNITROSAMINE (DEN)-INDUCED LIVER TOXICITY ATTENUATED WITH SILVER NANOPARTICLES (AgNPS) IN MALE RATS.	2019-21
4	Mazhar Ali	Protective EFFECT OF 17- HYDROXY ISOSTEVIOL AGAINST DIETHLENITROSAMINE (DEN) – INDUCED TESTES TOXICITY IN MALE RATS	2019-21
3	Nazma Kausar	EVALUATION OF NECK MASSES IN THE COMMUNITY OF LOWER DIR DISTRICT OF KPK PAKISTAN	2019-21
On of 2	Sidra Ali Khan	PROTECTIVE EFFECTS OF AN ISOSTEVIOL DERIVATIVE AGAINST DIETHYLNITROSAMINE (DEN) INDUCED NEPHROTOXICITY IN RATS	2018-20
1	Afshan Zeb	HEPATOPROTECTIVE EFFECT OF 2,4 -DINITRO PHENYL HYDROZONE OF 17 HYDROXYISOSTEVIOL AGAINST DIETHYLNITROSAMINE (DEN)-INDUCED LIVER TOXICITY IN MALE RATS	2018-20

### BS Students Supervised

6	Asad Khan	QUANTIFICATION OF ALANINE TRANSAMINASE (ALT), ASPARTATE AMINOTRANSFERASE (AST) AND ALKALINE PHOSPHATASE (ALP) IN HEPATITIS B PATIENTS	2014-18
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5	Mahmood Ahmad	SEROPREVELENC AND RISK FACTORS IN HEPATITIS C VIRUS (HCV) TRANSMISSION IN BLOOD DONORS IN SWABI	2014-18
4	Abid Ali Khan	PREVALENCE OF HBV AND HCV IN HEMODIALYSIS PATIENTS	2014-18
3	Muhammad Hassan	AWARENESS OF DENGUE VIRUS IN PESHAWAR	2014-18
2	Muhammad Numan	EVALUATION OF ALANINE TRANSAMINASE (ALT), ASPARTATE AMINOTRANSFERASE (AST), AND ALKALINE PHOSPHATASE (ALP) LEVEL IN HCV DIAGNOSE PATIENTS OF DIFFERENT AGES	2014-18
1	Hira Ahmad	THE FREQUENCY OF PATIENTS DIAGNOSED WITH HIV VISITED HAYAT ABAD MEDICAL COMPLEX FOR DIFFERENT TREATMENT PURPOSES	2014-18

## Reference

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1. Prof. Dr. Sang Ho Lee (R), Professor in Developmental Biology, Division of Life Sciences &, Korea University, Seoul 02841, South Korea. Email: [sangho@korea.ac.kr](mailto:sangho@korea.ac.kr) .

2. Prof. Dr. Seung-Cheol Choi, Department of Cardiology, Cardiovascular Center, 73, Incheon-ro, Seongbuk-gu, Cardiology Lab, 6th Floor, College of Medicine, Korea University, Seoul, Korea. Email: [choisc86@gmail.com](mailto:choisc86@gmail.com) , Office: +82-2-2286-1214; FAX: +82-2-929-1214.

3. Dr. Sun-Uk Kim, Futuristic Animal Resources and Research Center, Korea Institute of Biosciences and Biotechnology, Chungcheongbuk-do 28116, Republic of Korea. Email: [sunuk@kribb.re.kr](mailto:sunuk@kribb.re.kr), Office: +82-43-240-6321; FAX: +82-43-240-6309.