



Dr. Asma Gul

PhD (Biochemistry/Molecular Biology)

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I have worked alongside some of the most interesting people today, which have taught me How to Think, Act and Work Smart. Some of my experience is obtained from working in the Institute of Metabolic Sciences, University of Cambridge.

18 Years+ Experience in Academic and Research Background has taught me have a sharp eye for detail and quality. I have always been driven by challenges. I am a Fast learner and a Team Player.

Employment History

- ❖ **June 2022 – To Date Professor** (Biological Sciences)
International Islamic University (IIU), Islamabad, Pakistan
- ❖ **June 2014 - June 2022 Associate Professor** (Biological sciences)
International Islamic University (IIU), Islamabad, Pakistan
- ❖ **June 2016-October 2019 Chairperson** (Biological Sciences)
International Islamic University (IIU), Islamabad, Pakistan
- ❖ **October 2010- October 2011 Postdoctoral Research Associate**
Institute of Metabolic Science, University of Cambridge
Cambridge CB2 0QQ, United Kingdom
- ❖ **June 2008 - to 2014 Assistant Professor** (Biotechnology and bioinformatics)
International Islamic University (IIU), Islamabad, Pakistan
- ❖ **Feb 2007-May 2008 Lecturer** (Biotechnology and Informatics)
International Islamic University (IIU), Islamabad, Pakistan
- ❖ **2005-2007 Research Associate**
Quaid-i-Azam University, Islamabad, Pakistan
- ❖ **2004-2005 Technical Assistant**
Shifa College of Medicine
Shifa International hospital, Islamabad, Pakistan

Certifications

- ❖ Biosafety Leadership Summit on 18-20th March, 2019 by Fogarty International Center, NIH, USA.
- ❖ Responsible Conduct in the life Sciences on 6-10th December, 2018 Fogarty International Center, NIH, USA.

- ❖ Experienced international executive with 18 years experience in leadership, mentoring and responsible conduct in life sciences. Travelled to sixteen different countries and experienced diverse cultures and humans. Published and cited global expert. Gul has several years of experience in the fields of organizational development, behavioral management and modification and how to professionally address a hater in the workplace.

Awards and honors

- ❖ Won the **Excellent Leadership Award in 1435H (2014G)**
- ❖ IDB Merit Scholarship for Postdoc (2010-2011)
- ❖ HEC Indigenous PhD Fellowship (2004-2008)
- ❖ Member National Curriculum Revision Committee, Biotechnology
- ❖ Member National Curriculum Revision Committee, Biochemistry
- ❖ Member of ACACIA Education Foundation
- ❖ Member of Royal Society of Medicine
- ❖ Active Life Time Member of The Pakistan Biological Safety Association
- ❖ Member of Asian Federation of Biotechnology (AFOB).
- ❖ Member of European College of Neuropsychopharmacology (ECNP) Association.

Education

- ❖ **Post Doc (Human Genetics)** University of Cambridge, UK
- ❖ **PhD (Biochemistry/Molecular Biology)** Department of Biochemistry, Quaid-i-Azam University, Islamabad.
Thesis: Identification of Genes Involved in Hereditary Primary Microcephaly and Usher Syndrome
- ❖ **M. Phil (Biochemistry/Molecular Biology)** Dept. of Biochemistry, Quaid-i-Azam University, Islamabad.
Thesis: Isolation and Molecular Characterization of cutaneous leishmaniasis from samples obtained from different regions of Pakistan.
- ❖ **M. Sc. (Zoology)** Department of Biological Sciences, University of Arid Agriculture, Rawalpindi.
Thesis: Isolation, Identification and Characterization of *Salmonella*, *shigella* and *E. coli* from food samples
- ❖ **B. Sc. (Zoology, Botany, Chemistry)** Punjab University Lahore
- ❖ **F. Sc. (Pre Medical)** Federal Board of Intermediate & Sec. Education
- ❖ **Matric (Science)** Rawalpindi Board of Intermediate & Sec. Education, Rawalpindi

Experimental Skills

- ❖ Tissue culturing
- ❖ Next Generation Sequencing and Data Analysis
- ❖ Microarray analysis (Affymetrix SNP 6.0 chip) for CNV detection and SNP genotyping
- ❖ Automated DNA Sequencing
- ❖ Gel Electrophoresis
- ❖ Linkage analysis & microsatellite genotyping

- ❖ PCR
- ❖ DNA and RNA extraction
- ❖ ELISA techniques Cloning

EMBO Practical Course on Targeted NGS in patients with cancer, mendelian or complex diseases (pc16-37). It was held in the Jagiellonian University Medical College, Krakow, Poland from September 19th to 23rd, 2016.

Invited Speaker (International WANA Congress 10-11 May 2023).

Topic: Psychological Stress Manipulates Stretch-induced Piezo-1 Signaling: A Gateway to Cancer Progression.

Teaching experience (Subjects Taught at MS and BS level)

- ❖ Advanced Molecular Biology
- ❖ Cancer Genetics
- ❖ Immunology
- ❖ Molecular Biology
- ❖ Research Methodology
- ❖ Microbiology
- ❖ Techniques in Molecular Biology
- ❖ Human Genetics
- ❖ Cell Signalling
- ❖ Cell Biology
- ❖ Biotechnology

PhD Students under Supervision

- ❖ Ayesha Saleem
139-FBAS/PHDBT/S20
Molecular Mechanism of Potential Chemical Carcinogens Causing Hepatocellular Carcinoma
- ❖ Seemi Zafar
109-FBAS/PHDBT/S20
Proteome Analysis of Hepatocellular Carcinoma
- ❖ Salma Saliha
85-FBAS/PHDBT/F17
Study of Tissue-Gene Interaction in Hepatocellular Carcinoma
- ❖ Sana Mahmood
86/FBAS/PhDBT/F17
Investigating the role of cellular stress induced RNA modifications in cancer progression using cancer cell lines
- ❖ Zantasha Khalid
80/FBAS/PhDBT/S17

PhD Student Produced

- ❖ Beenish Azad
(76/FBAS/PHDBT/F16)
Identification and characterization of genes involved in neurodevelopmental disorder by whole Genome SNP genotyping.
- ❖ Sidra Batool
(64/FBAS/PHDBT/F16)
Fabrication of multifunctional metallic graphene nanocomposites and their diverse biological and photocatalytic potentials.
- ❖ Abida Akbar
(24-FBAS/PHDBT/F14)
Molecular Characterization of Genes Involved in Inherited Skin Diseases.
- ❖ Shazia Khan
(20-FBAS/PHDBT/F14)
Identification of genes in inherited neurological disorders among Pakistani Population.
- ❖ Robina Khan Niazi
(18-FBAS/PHDBT/F14)
Molecular characterization of obesity and Metabolic syndrome in selected families from Pakistan.

MS Students under Supervision

- ❖ Alham Shaheen
573-FBAS/MSBT/F22
Identification of Hepatocellular Carcinoma-Related Potential Biomarkers.
- ❖ Mariam Malik
564/FBAS/MSBT/F22
Phytochemicals profiling and characterization of Zingiber officinale for anti-cancer potential.
- ❖ Rutab Noor
574 FBAS/MSBT/F-22
Unraveling the impact of carcinogen mediated stress on liver via NPY-Y5R interaction.
- ❖ Muryum Shehzad
575-FBAS/MSBT/F22
Expression analysis of c-Met gene elicited by diethylnitrosamine and carbon tetrachloride exposure

MS Students Supervised

- ❖ Huma zaineb
531/FBAS/MSBT/F21
Genetic Analysis of Dopamine Receptor's Genes And Their Role in Cancer.
- ❖ Sehrish Shabnam
522/FBAS/MSBT/F21
Evaluation of the concentration of Albumin in cancer patients related to a potential player in tumor microenvironment.
- ❖ Maryam khan
541-FBAS/MSBT/F21
Mutational impact of Oxytocin Receptor (OXTR) Gene in individuals with Cancer.
- ❖ Attiqa Farzand
513-FBAS/MSBT/F21
Expression analysis of Bcl2 and beta-actin in diethyl nitrosamine (DEN) induced liver disease.
- ❖ Maryam Arshad
529-FBAS/MSBT/F21
Mutational analysis of oxytocin gene in cancer patients.
- ❖ Owais khan
502-FBAS/MSBT/S21
Mutational analysis of Albumin gene in cancer patients.
- ❖ Saba Shah (101-FBAS/MSBT/S14)
Mutational Analysis of CEACAM1 Gene Involved in Insulin Resistance in Pakistani Population.
- ❖ Faria Khalid (104-FBAS/MSBT/S14)
Identification of hERG mutations in Pakistani population.
- ❖ Huda Shakil (97/FBAS/MSBT/S14)
Evaluation of cytotoxicity and genotoxicity of CuO nanostructures-potential anticancer therapeutics.
- ❖ Zantasha Khalid (95/FBAS/MSBT/F13)
Determination of role of complement pathway genes, cfi&cfh, in the onset of age related multifactorial eye disorders.
- ❖ Salma Saleha (46-FBAS/MSBT/F12)
Nano-particles based therapeutic intervention for the treatment of breast/ovarian cancer.
- ❖ Sana Mehmood (44-FBAS/MSBT/F12)
Effect of ZnO and doped ZnO nanoparticles on cancer cell lines.
- ❖ Ayesha Rahim (43-FBAS/MSBT/F12)

Role of calcium channel blockers in hypertension and its association with ACE polymorphism.

- ❖ Hira Hamid (45-FBAS/MSBT/F12)
Mapping of the genes forming the baseline of the hereditary vitiligo.
- ❖ Tania Tanveer (25/FBAS/MSBT/F11)
Molecular identification and characterization of Acanthamoeba species in natural resources of Pakistan.
- ❖ Fehmida Farid Khan (26/FBAS/MSBT/F11)
Genetic analysis of Pakistani population with intellectual disability.
- ❖ Abida Akbar (19/FBAS/MSBT/F11)
Molecular characterization of Acanthamoeba species from Punjab province.
- ❖ Bismillah Mobeen (23/FBAS/MSBT/F11)
Screening of microorganisms from tatapani for the production of industrially important enzymes.
- ❖ Tahira Noor (05/FBAS/MSBI/F07)
Genetic analysis and candidate genes prediction in Pakistani Families with Deafness.
- ❖ Awaisa Ghazal (02/FBAS/MSBI/F07)
Molecular characterization of mytogen activated protein kinase kinase 3 (MKK3).
- ❖ Saima Zubair (07/FBAS/MSBI/F07)
Genetic analysis and candidate genes prediction in Pakistani Families with RP.
- ❖ Ms Tehmina Mazhar (117-FBAS/MSBT/F14)
Association between RAD 51 Polymorphism and risk of ovarian cancer in Pakistani Population.
- ❖ Ms Bushra Rehman (148-FBAS/MSBT/F14)
Linkage Analysis of genes involved in early onset of Obesity in Pakistani Families.
- ❖ Ms Salma Roman (121-FBAS/MSBT/F14)
Study of pharmacogenetic association of candidate gene polymorphism in Pakistani hypersensitive population.
- ❖ Ms Sehrish Sarwar (237-FBAS/MSBT/F14)
Screening of genes involved in Non-syndromic oculocutaneous hereditary albinism.
- ❖ Ms Kiran Noreen (134-FBAS/MSBT/F14)
Determination of the association of head and neck cancer with NOTCH gene polymorphism in Pakistani population.
- ❖ Ms Mehak Maryyam (118-FBAS/MSBT/F14)
Determining the role of Adenomatous polyposis coli (APC) gene polymorphism in the development of colorectal cancer in Pakistani population.

- ❖ Ms Nabeela Ashraf (151-FBAS/MSBT/F14)
Identification of genes involved in Atopic Dermatitis.
- ❖ Aisha Arshad (156-FBAS/MSBT/F14):
Association of estrogen receptor genes variation and risk of ovarian cancer in Pakistani population.
- ❖ Asma Batool (146-FBAS/MSBT/F14)
Identification of strain causing cutaneous leishmaniosis in Pakistan.
- ❖ Rahim Bano (150-FBAS/MSBT/F14)
Linkage analysis of hereditary primary microcephaly in families from Pakistan.
- ❖ Muneeba Bint Farrakh Javed (266-FBAS/MSBT/F16)
Molecular Characterization Of Genes Involved In Hereditary Psoriasis In Pakistani Population.
- ❖ UzmaKiran (274-FBAS/MSBT/F16)
Identification Of Genes Involved In Cone Dystrophy /Cone Rod Dystrophy By Linkage Analysis.
- ❖ KiranIshfaq (281-FBAS/MSBT/F16)
Linkage Analysis Of Genes Involved In congenital Intellectual Disability In Pakistani Families.
- ❖ WajeehaArshad (284-FBAS/MSBT/F16)
Mapping Of Genes Responsible For Inherited Albinism In Pakistani Families

References

Dr. Wasim Ahmad (PhD Supervisor)

Professor & Chairman

Department of Biochemistry, Quaid-I-Azam University, Islamabad, Pakistan Email:

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DrSadafFarooqi PhD, FRCP

Wellcome Trust Senior Clinical Fellow and Reader in Human Metabolism

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Professor Andrew Crosby

Professor of Human Genetics

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Research Publications

- ❖ Lettie E Rawlins, Hashem Almousa , Shazia Khan, Stephan C Collins, Miroslav P Milev, Joseph Leslie, Djenann Saint-Dic, Valeed Khan, Ana Maria Hincapie, Jacob O Day, Lucy McGavin, Christine Rowley, Gaurav V Harlalka, Valerie E Vancollie, Wasim Ahmad, Christopher J Lelliott, Asma Gul, Binnaz Yalcin, Andrew H Crosby, Michael Sacher, Emma L Baple (2022). Biallelic variants in TRAPPC10 cause a microcephalic TRAPPopathy disorder in humans and mice. *PLoS Genetics*, 18(3), e1010114
- ❖ Malik, S. B., Saggi, J. I., Gul, A., Abbasi, B. A., Iqbal, J., Waris, S., and Chalgham, W. (2022). Synthesis and Characterization of Silver and GrapheneNanocomposites and Their Antimicrobial and Photocatalytic Potentials. *Molecules*, 27(16), 5184.
- ❖ Lu, W., KhatibiShahidi, F., Khorsandi, K., Hosseinzadeh, R., Gul, A., &Balick, V. (2022). An update on molecular mechanisms of curcumin effect on diabetes. *Journal of Food Biochemistry*, e14358.
- ❖ Moeez, S., Khalid, S., Shaen, S., Khalid, M., Zia, A., Gul, A., ...& Khalid, Z. (2021). Clinically significant findings of high-risk mutations in human SLC29A4 gene associated with diabetes mellitus type 2 in Pakistani population. *Journal of Biomolecular Structure and Dynamics*, 1-14.
- ❖ Zaka, A., Shahzad, S., Rao, H. Z., Kanwal, S., Gul, A., &Basit, S. (2021). An intrafamilial phenotypic variability in Ellis-Van Creveld syndrome due to a novel 27 bps deletion mutation. *American Journal of Medical Genetics Part A*.
- ❖ Ambreen, F., Sadiq, S., Sheikh, I., Shoukat, S., Zaib, S., & Gul, A. Novel role of Myokineirisin in senile cataract. *Int. J. Biol. Biotech.*, 18 (2): 233-237, 2021.
- ❖ Keyvani-Ghamsari, S., Khorsandi, K., & Gul, A. (2020). Curcumin effect on cancer cells' multidrug resistance: an update. *Phytotherapy Research*, 34(10), 2534-2556.
- ❖ Naz, R., Gul, A., Javed, U., Urooj, A., Amin, S., & Fatima, Z. (2019). Etiology of acute viral respiratory infections common in Pakistan: A review. *Reviews in medical virology*, 29(2), e2024.
- ❖ Robina Khan Niazi; Gjesing, Anette P. ; Hollensted, Mette ; Have, Christian Theil, Grarup, Niels; Pedersen, Oluf; Ullah, Asmat; Shahid, Gulbin; Ahmad, Wasim ; Gul, Asma; &

- Hansen, Torben. Identification of novel LEPR mutations in Pakistani families with morbid childhood obesity. *BMC Medical Genetics* (2018); 19(199):1-8.
- ❖ Beenish Azad, Stephanie Efthymiou, Tipu Sultan, Marcello Scala, JaveriaRaza, Alvi, Caroline Neuray, Natalia Dominik, SYNaPS Study Group, AsmaGul, Henry Houldenb. Novel likely disease-causing CLN5 variants identified in Pakistani patients with neuronal ceroidlipofuscinosis. *Journal of neurological sciences*, Volume 414, 15 July 2020, 116826
 - ❖ Abida Akbar, Claire Prince, Chloe Payne, James Fasham, Emma L Baple, Andrew H Crosby, AsmaGul, Gaurav V Harlalka. Variants in NIPAL4 and ALOXE3 associated with autosomal recessive congenital ichthyosis in Pakistani families. *CongenitAnom(Kyoto)*. 2019 Dec 27. doi: 10.1111/cga.12366.
 - ❖ Abida Akbar, Claire Prince, Chloe Payne, James Fasham, Emma L Baple, Andrew H Crosby, Gaurav V Harlalka, Asma Gul. Novel nonsense variants in SLURP1 and DSG1 cause palmoplantarkeratoderma in Pakistani families. *BMC Medical Genetics* (2019) 20:145.
 - ❖ Robina Khan Niazi¹, Anette Prior Gjesing, MetteHollensted, Christian Theil Have, DmitriiBorisevich, NielsGrarup, Oluf Pedersen, AsmatUllah, GulbinShahid, IfrahShafqat, AsmaGul and Torben Hansen. Screening of 31 genes involved in monogenic forms of obesity in 23 Pakistani probands with early-onset childhood obesity: a case report. *BMC Medical Genetics* (2019); 20:152.
 - ❖ Shazia Khan; Siying Lin; Gaurav V Harlalka; AsmatUllah; Khadim Shah; Sumbul Khalid; SrmadMehmood; Muhammad Jawad Hassan; Wasim Ahmad; Jay E Self; Andrew H Crosby; Emma L Baple; AsmaGul. β BS5 and INPP5E mutations associated with ciliopathy disorders in families from Pakistan. *Ann Hum Genet*. 2019 Nov;83(6):477-482.
 - ❖ Shazia Khan; Gaurav V Harlalka; AsmatUllah; Muhammad Umair; ShaheenShahzad; Wasim Ahmad; Jay E Self; Emma L Baple; Andrew H Crosby; Asma Gul. Homozygous Variants in HEXB and MBOAT7 genes underlieNeurodegenerative diseases in Consanguineous Families. *BMC Medical Genetics* (2019) 20:199
 - ❖ MadihaRasheed, ShaheenShahzad, AffaZaeem, Imran Afzal, AsmaGul, Sumbal Khalid. Updated strategies for the management, pathogenesis and molecular genetics of diferent forms of ichthyosis syndromes with prominent hair abnormalities. *Archives of Dermatological Research*. (2017); 309(10): 773-785.
 - ❖ Faisal Mehmood, JavedIqbal, Tariq Jan, AsmaGul, QaisarMansoor, Rani Faryal. Structural, photoluminescence, electrical, anti cancer and visible light driven photocatalytic characteristics of Co doped WO₃ nanoplates. *Vibrational Spectroscopy* 93 (2017) 78–89

- ❖ Faisal Mehmood, JavedIqbal, AsmaGul, Waqqar Ahmed, M. Ismail. Facile synthesis of 2-D Cu doped WO₃ nanoplates with structural, optical and differential anti cancer characteristics. *Physica E*. 2016; 88: 188–193.
- ❖ Tariq Jan, J. Iqbal, Umar Farooq, AsmaGul, RashdaAbbasi, Ishaq Ahmad, Maaza Malik. Structural, Raman and optical characteristics of Sn doped CuO nanostructures: A novel anticancer agent. *Ceramics International*. 2015; 41(10): 13074–13079.
- ❖ Fazal Abbas, J. Iqbal, T. Jan, M. Sajjad H. Naqvi, AsmaGul, RashdaAbbasi, ArshadMahmood, Ishaq Ahmad, M. Ismail. Differential cytotoxicity of ferromagnetic Co doped CeO₂ nanoparticles against human neuroblastoma cancer cells. *Journal of Alloys and Compounds*. 2015; 648 (5): 1060–1066.
- ❖ Tahir, S., Tayyab, M., Rasul, S., Jabeen, S., & Gul, A. (2015). Prevalence of asymptomatic bacteriuria, associated risk factors and adverse fetomaternal outcome among antenatal women attending a tertiary care hospital. *Pak J Med Health Sci*, 9(4), 1399-402.
- ❖ Tania Tanveer, Abdul Hameed, AsmaGul, Abdul Matin. Quick survey for detection, identification and characterization of *Acanthamoeba* genotypes from some selected soil and water samples in Pakistan. *Ann Agric Environ Med*. 2015; 22(2): 232–235.
- ❖ Tariq Jan, JavedIqbal, QaisarMansoor, M Ismail, M SajjadHaiderNaqvi, AsmaGul, S Faizan-ul-Hassan Naqvi and Fazal Abbas. Synthesis, physical properties and antibacterial activity of Ce doped CuO: a novel nanomaterial. *Journal of Physics D: Applied Physics*. 2014; 47(35): doi:10.1088/0022-3727/47/35/355301.
- ❖ Rasul, S., Gul, A., Tahir, S., &Hameed, A. (2014). Case report of harlequin ichthyosiswho had similar history in two earlier siblings. *Journal of Pakistan Association of Dermatologists*, 24(4), 369-370.
- ❖ Tania Tanveer, Abdul Hameed, AmbreenGulMuazzam, Suk-Yul Jung. Asma Gul and Abdul Matin. Isolation and molecular characterization of potentially pathogenic *Acanthamoeba* genotypes from diverse water resources including household drinking water from Khyber Pakhtunkhwa, Pakistan. *Parasitol Res*. 2013; 112(8): 2925-32.
- ❖ Khan, F.F., Tanveer T and Gul A. Parkinson disease and use of stem cells for therapeutic approaches of Parkinson disease. *IOSR Journal of Pharmacy and Biological Sciences*, 2013, 7(5): 73-82.
- ❖ Tahira Noor. SaimaZubair, Muhammad Ismail, Muhammad Irfan Khan, AsmaGul, Malik ShaukatIqbal, Amara Mumtaz and GhulamMurtaza. Candidate genes prediction in pakistani families with hearing impairment by using bioinformatic approach. *Biosci. J*. 2012; 28 (60): 1024-1033.

- ❖ Naz G, Pastemack SM, Perrin C, Mattheisen M, Refke M, Khan S, Gul A, Simons M, Ahmad W and Betz RC. FZD6 encoding the Wnt receptor frizzled-6 is mutated in autosomal-recessive nail dysplasia. *British Journal of Dermatology*. 2012 May;166(5):1088-94.
- ❖ MahiraArooj, Faiza Abdul Rashid, Asma Gul. Role of epigenetic modifications in stem cell regulatory regions (Oct4, Sox2 and Nanog) and cancer. *IOSR*. 2012. Oct 15.
- ❖ Gul A, Hassan MJ, Mahmood S, Chen W, Rahmani S, Naseer MI, Dellefave L, Muhammad N, Rafiq MA, Ansar M, Chishti MS, Ali G, Siddique T and Ahmad W. Genetic studies of autosomal recessive primary microcephaly in 33 Pakistani families: novel sequence variants in ASPM gene. *Neurogenetics*. 2006; 7(2): 105-10.
- ❖ Gul A, Hassan MJ, Hussain S, Raza SI, Chishti MS and Ahmad W. A novel deletion mutation in CENPJ gene in a Pakistani family with autosomal recessive primary microcephaly. *J Hum Genet*. 2006; 51(9): 760-4.
- ❖ Wali A, John P, Gul A, Lee K, Chishti MS, Ali G, Hassan MJ, Leal SM and Ahmad W. A novel locus for alopecia with mental retardation syndrome (APMR2) maps to chromosome 3q26.2-q26.31. *Clinical Genetics*. 2006; 70(3): 233-9.
- ❖ M. Naeem, M. Jelani, K. Lee, G. Ali, M.S. Chishti, A. Wali, A. Gul, P. John, M.J. Hassan, S.M. Leal and W. Ahmad. Ectodermal dysplasia of hair and nail type: mapping of a novel locus to chromosome 17p12–q21.2. *British Journal of Dermatology*. 2006; 155: 1184–1190.
- ❖ Gul A, Tariq M, Khan MN, Hassan MJ, Ali G and Ahmad W. Novel protein-truncating mutations in the ASPM gene in families with autosomal recessive primary microcephaly. *Journal of Neurogenetics*. 2007; 21: 153–163

International Conferences

- ❖ 2nd International WANA Congress (10-11 May 2023), Isfahan, Iran
- ❖ ISTIG's 4e Biennial International Conference on Women in Science, Technology and Innovation 22-23 July 2019, Sunway Putra Hotel, Kuala Lumpur, Malaysia.
- ❖ 1st International Conference on Advancements in Biotechnology and Biocomputing. The 5th Middle East Molecular Biology Congress and Exhibition 2018-Jordon.
- ❖ 5th International Conference on Drug Development- Natural & Synthetic, Current Approaches and Emerging Trends for the development and discovery of Drugs.

- ❖ 2nd International Conference for “Neurons and Brain Diseases” (August 29-31 2007, Toronto, Canada).

Conferences Attended

- ❖ 1st International Conference on Advancements in Biotechnology and Biocomputing.
- ❖ 1st National Conference on the current usage of Nanotherapeutics and Biodrugs.
- ❖ 6th Annual Public Health Scientific Conference 2015. “Fragile Health System: Issues and Challenges in Pakistan-Harnessing Opportunities” Health Services Academy, Islamabad Participant, 11th and 12th December, 2015, Health Services Academy, Islamabad.
- ❖ Public Health in Pakistan: A Decade of Past Experiences and Future Challenges” 4th Annual Public Health Scientific conference (2-3 Dec 2013). Organized by Health Service Academy

Workshops, Symposium and Meetings Attended

- ❖ Biosafety Leadership Summit on 18-20th March, 2019 at Marriott Hotel, Islamabad, organized by Pakistan Biological Safety Association, Fogarty. USA.
- ❖ Workshop on Responsible Conduct in the life Sciences on 6-10th December, 2018 at Ramada Hotel, Islamabad organized by Pakistan Biological Safety Association & Fogarty NIH.
- ❖ Striving Together For Thalassemia Free Pakistan, on 8th May, 2018 at International Islamic University, Islamabad organized by Department of Bioinformatics and Biotechnology, International Islamic University, Islamabad.
- ❖ Workshop on Biorisk Management, Biosafety and Biosecurity on 8th May, 2018 at International Islamic University, Islamabad organized by International Islamic University, Islamabad.
- ❖ Seminar on “Bioethics and Biosafety issues in biotechnological Research” on May 12, 2016 at Fatima Block Auditorium Female Campus.
- ❖ Next Generation Sequencing and 1000 genome Project on 23rd November, 2017 at Department of Bioinformatics and Biotechnology organized by International Islamic University, Islamabad.
- ❖ Two Days workshop on Flowcytometry: Principles, Applications and Data Analysis on 25th-26th October, 2017 at Alpha Genomics Private Limited, Islamabad organized by Alpha Genomics Private Limited, Islamabad.
- ❖ National Conference on Bioactivity of Phytochemicals on 04-06th October, 2017 at Institute of Molecular Biology and Biotechnology/Centre for Research in Molecular Medicine organized by The University of Lahore.

- ❖ International Conference on Role of Islamic Universities in Teaching of Arabic to Non Native Speakers on 6-7th March 2017 at International Islamic University, Islamabad organized by International Islamic University, Islamabad.
- ❖ Science Communication: Enhancing Public Understanding on 10-11th January, 2017 at COMSTECH organized by Organization of Islamic Cooperation (OIC) Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Technology Times.
- ❖ 6th Annual Public Health Scientific Conference 2015. “Fragile Health System: Issues and Challenges in Pakistan-Harnessing Opportunities” on 11th and 12th December, 2015 at Health Services Academy, Islamabad.
- ❖ Pass on Life: From Grief There Comes Hope. Lecture Theatre (DOBI&BT), Invited Faculty 24th November, 2015.
- ❖ One day international Nanomedicine Symposium “Nanotheranostics: A new concept in Imaging and Drug Delivery” NORI, Islamabad, Participant, 26th November, 2015.
- ❖ Next Generation Data Analysis, COMSATS Institute of Information Technology, Islamabad, Participant, 3rd and 4th September, 2015, Vantage Technologies.
- ❖ NCRC Meeting in Biotechnology, HEC Regional centre, Karachi, 4-6 January 2013, Higher Education Commission.
- ❖ NCRC Meeting in Biochemistry, HEC Regional centre, Lahore, 26-28 December 2012, Higher Education Commission.
- ❖ New Technological Tools and applications in Biological Research” (23rd Sep 2013). Organized by BioRAD lab USA.
- ❖ Role of KIR4.1 in glial physiology and disease (19th Dec 2013). Organized by IBGE.
- ❖ Coagulation system in cardiovascular diseases (19th Dec 2013). Organized by IBGE.
- ❖ Epigenetics – lessons to learn from human imprinting disorders (30th June 2011). Organized by University of Southampton.
- ❖ International thematic workshop on the “Use of Stem Cell in Human Regenerative Medicine” (January 10th-18th, 2007). Jointly organized by OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Higher Education Commission (HEC), Pakistan.
- ❖ Biochemical Engineering and Fermenter Applications. Organized by Bioengineering Switzerland and Dept of Microbiology and Biotechnology. 2006.
- ❖ Real Time PCR Workshop. Organized by Biofluxcorporation, Tokyo, Japan. 2005.

- ❖ Electronic Journals and digital library resources: PERI Programme resource sensitization and training enablers and researchers. Organized by DrRaziuddinSiddiqi Memorial library, Quaid-I- Azam University, Islamabad. 2004.
- ❖ 1st Symposium of Microbiology and Molecular Genetics on Genomics, Proteomics, Metabolomics: Recent trends in Biotechnology. (22nd and 23rd October, 2007). Organized held at Department of Microbiology and Molecular Genetics, University of Punjab, Lahore.

Seminars and Conferences Organized

- ❖ 1st International Conference on Advancements in Biotechnology and Biocomputing on 7th-8th February, 2019 at International Islamic University, Islamabad, organized by organized by Department of Biological Sciences, International Islamic University, Islamabad.
- ❖ 1st National Conference on the Current usage of Nanotherapeutics and Biodrugson 12-13 December, 2018 at International Islamic University, Islamabad, organized by organized by Department of Biological Sciences, International Islamic University, Islamabad.
- ❖ Striving Together For Thalassemia Free Pakistan, on 8th May, 2018 at International Islamic University, Islamabad organized by Department of Bioinformatics and Biotechnology, International Islamic University, Islamabad.
- ❖ Workshop on BioriskManagment, Biosafety and Biosecurity on 8th May, 2018 at International Islamic University, Islamabad organized by International Islamic University, Islamabad.
- ❖ Organized a seminar on “Obesity: A threat to society and cleanliness” on April 12, 2016 at Fatima Block Auditorium Female Campus.
- ❖ Organized a seminar on “HIV/AIDS: Basics, Diagnosis and treatment” on December 10, 2015 at Fatima Block Auditorium Female Campus.
- ❖ Organized a lecture on “Genetics of Alzheimer Disease” on 23rd Dec 2015 at Fatima Block Auditorium Female Campus. Speaker invited was Dr. MaimoonaSiddique (Resource Person, Shifa International Hospital).
- ❖ Organize a seminar on “Genetics of Cleft Lip Palate Defects” on February 14, 2013 at Fatima Block Auditorium Female Campus. Speakers invited were Dr. Nick Hart (Consultant Plastic Surgeon) and Dr. Ijaz Bashir.
- ❖ Organize a Seminar on “Dream Becoming Reality” on 22nd October, 2012.
- ❖ Organize a seminar on “How to Purify Your Soul” on November 22, 2012. Ms. Sarah Chowdary (Former Actress) and Dr. KanwalQaiser from (Al Huda) were invited as guest speakers.
- ❖ Organize a seminar “Scientific Methods of Genomics and Biotechnology Research” on November 29th, 2012. Dr. Muhammad Afzal (Ex. Director General and Executive Editor “Eastern Mediterranean Health Journal”, WHO was invited as guest speaker.

- ❖ Seminar on “Pick the right Slammer” has been arranged on 20th Dec, 2012. Mr. Bilal Ahmad was invited as guest speaker.

BS Students Supervised

- ❖ Nida Ali Syed and Zantasha Khalid.
Role of angiotensin converting enzyme insertion/deletion polymorphism in glaucoma.
- ❖ Zahra Mahmood.
Linkage analysis of limb girdle muscular dystrophy.
- ❖ Huda Shakil and Maria Ifraz Abbasi.
Investigating the cytotoxicity of gold nanoparticles on cancer cell lines.
- ❖ Rahim Bano.
Identification of genes involved in hereditary vitiligo.
- ❖ Nimrasabir and Ayesha gulrez.
In silico screening for the identification of novel inhibitors by molecular docking.
- ❖ Abida batool and Sammia Atique.
In silico screening for the identification of novel anti Alzheimer inhibitors by molecular docking, pharmacophoremodelling and virtual screening.
- ❖ Maryam Tahir and Sidrah Anjum.
Scrutiny of human schwannomin involved in neurofibromatosis type 2 using approaches in bioinformatics leading to insilicounravelling of its structural, functional and evolutionary aspects.
- ❖ Shagufta Shafique and Sumbul Shahana.
Three dimensional structure prediction and phylogenetic analysis of genes involved in ARNSID.
- ❖ Quart-ul-ain and Hina Khalid.
Estimation of Missing values in DNA microarray dataset and its analysis.
- ❖ ZurahBibi, Uzma Ali and Saba Munawar.
Association of the tumor suppressor gene p53 with the lung cancer.
- ❖ Saba Nawaz Abbasi, AsmaAbro and SheemaSameen.
The study of genetic predisposition of heart diseases in Pakistan.
- ❖ Yusra Sajid, Javaria Ashraf and Mehrin Gul.
Study of human Y chromosome and identification of novel Y –STRs Markers.
- ❖ Zaira Rehman
Insilico characterization of swine H1N1 virus binding with human SA-a-2, 6-Gal receptor: insight into antiviral drug/vaccine targets.

Research Grants

- ❖ A Study Elucidating Contribution of Liver Cirrhosis in Hepatocellular Carcinoma through Tissue-Gene Interaction. Funding Agency: PSF (Allocated Amount: Rs. 7.9 Million).
- ❖ Genotyping and mutational screening of ectodermal appendages disorders in Pakistani population, Funding agency HEC (Amount Allocated Rs. 0.5 Million).
- ❖ Mapping of Gene Underlying Human Hereditary Skeletal Dysplasia” (Amount allocated funding agency HEC (Amount Allocated Rs. 4.6 Million).
- ❖ Evaluation of Cytotoxicity and Genotoxicity of metal and their oxide nanostructures to be used as potential Anticancer therapeutics, Funding agency HEC (Amount Allocated Rs. 6.4 Million).
- ❖ Upgradation and strengthening the laboratory, Institutional Strengthening, Funding agency HEC (Amount allocated Rs. 3.0 Million).
- ❖ 1st International Conference on Advancements in Biotechnology and Biocomputing, Funding agency HEC (Amount Allocated Rs. 1.0 Million).
- ❖ 1st International Conference on Advancements in Biotechnology and Biocomputing, Funding agency PSF (Amount Allocated Rs. 0.2 Million).
- ❖ Striving Together for Thalassemia Free Pakistan, Funding agency HEC (Amount Allocated Rs. 0.1 Million).

OTHER ACTIVITIES AND ACHIEVEMENTS

- ❖ Reviewed the manuscript submitted to Tumor Biology, Titled: “Apoptotic effect of tannic acid on fatty acid synthase over-expressed human breast cancer cells”.
- ❖ Editorial board of International Journal of Applied Sciences (IJAS) as a peer reviewer of the journal.
- ❖ Acted as an in charge of the participants of the “World Diabetes Day Activity”, on 11th November, 2015 at the Presidency.

Thesis Reviewed

GulabSher: Molecular Characterization of inherited skeletal and cutis laxa syndromes.

Rashid Minhas: Cis-acting control of human developmental regulator GLI2.

Nausheen Bibi: Determination of novel substrate candidates for protein kinases to explore their functional implications in cancer therapeutics.