**Curriculum Vitae (C.V)**

**HIRA MUBEEN**

Present Address: House No. 46 A Cricketers Colony, New Ghazi Road, DHA Phase 6, Lahore

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**AIM**

I am keen to embark on a career where I can serve in a challenging and dynamic environment towards a successful career by making the best out of my professional abilities and interpersonal skills. I can see myself as an active contributor to a team of dedicated and ambitious researchers working on projects that involve blend of Biological Sciences, Medical Sciences and Computational biology.

**CURRENT POSITION:**

**Associate Professor, Faculty of Science and Technology, Department of Biotechnology,** Jan 2025– Present, University of Central Punjab (UCP), Lahore.

**TEACHING EXPERIENCE:**

**Assistant Professor, Faculty of Science and Technology, Department of Biotechnology,** Nov 2017– December, 2024, University of Central Punjab (UCP), Lahore.

**Assistant Professor, Faculty of Computer Sciences, Department of Systems Biology,** January 2017– Nov 2017, Lahore Garrison University (LGU), Lahore.

**Assistant Professor, Faculty of Life and Health Sciences, Department of Health Biotechnology,** January 2016– January 2017, University of South Asia, Lahore.

**Lecturer, Faculty of Life and Health Sciences, Department of Health Biotechnology,** Sep 2014– January 2016, University of South Asia, Lahore.

**Demonstrator, Department of Biology,** Jan 2014-August 2014, Lahore University of Management Sciences (LUMS)

**PROFESSIONAL EXPERIENCE:**

**Focal Person** – to **Quality Enhancement cell (QEC): SAR, PGPR, PREE and Ripe visit**, January 2018-present, UCP, Lahore

**Assistant Director,** Office of Research innovation and Commercialization (ORIC), Jan 2017– Nov 2017, Lahore Garrison University (LGU), Lahore

**Assistant Editor** of the USA Journal of R & D Journal since July 2015-March 2017

**Managing Editor** of LGU Journal of Life Sciences since, December 2016-November 2017

**Associate Editor**, LGU Academic Journal of Social Sciences, December 2016-November 2017

**RESEARCH EXPERIENCE:**

**Research Associate, Department of Biology,** November 2013-August 2014, Lahore University of Management Sciences (LUMS).Opposite Sector U, DHA, Lahore 54792

**Research Assistant, Centre of Agriculture Biochemistry and Health Biotechnology (CABB).** April 2013 – October 2013**,** University of Agriculture, Faisalabad, Pakistan.

**Research Intern, Health Biotechnology division, Gene Isolation Lab.** March 2008 – August 2008. National Institute for Biotechnology and Genetic Engineering, P.0. Box 577, Jhang Road, Faisalabad, Pakistan.

**EDUCATION:**

**Ph.D. (Biotechnology and Bioinformatics, 2017-2023)**

Government College University, Faisalabad, Pakistan

**MPhil (Biotechnology, 2012)**

National Institute for Biotechnology and Genetic Engineering, P.0. Box 577, Jhang Road, Faisalabad, Pakistan

**Major SUBJECTS Studied during MPhil:**

Molecular Biology, Health Biotechnology, Biochemistry, Immunology, Cell Biology, Genomics and Proteomics, Microbiology and Bioinformatics, Genetics, Recombinant DNA Technology

**BS (Hons) Bioinformatics, 2009**

Government College University, Faisalabad, Pakistan

**Major SUBJECTS Studied during BS (Hons):**

Introduction to Bioinformatics Introduction to Biochemistry, Genetics, Molecular Biology, Microbiology, Functional Genomics, Proteomics, Immunology, Introduction to Computers, Database Management System, Communication Skills

**Higher Secondary School Certificate, 2006**

Government College for Women, Madina Town Faisalabad, Pakistan

**Secondary School Certificate, 2004**

Sacred Heart High School, Faisalabad, Pakistan

**Awards and Honors**

**Commonwealth Fellow – ACU Summer School:** *Sustainability, Sports, and Regeneration*, 2022, Organized by the Association of Commonwealth, UK.

**Pride of Performance Award**

Awarded at the 3rd International Conference on Biotechnology, 2017, held at the University of South Asia, Lahore. Received from “**Dr. Abdul Qadeer Khan” (Sitara-e-Imtiaz)** in recognition of academic and professional excellence.

**SUBJECTS TAUGHT**

Genetics, Cell Biology, Molecular Biology, Immunology, Introduction to Biotechnology, Introduction to Biochemistry, Introduction to Bioinformatics, Principles of biotechnology, Research Methodology, Health Biotechnology, Advanced rDNA Technology, Genetic Engineering, etc.

**Curriculum Designed**

BS Biotechnology, BS Bioinformatics, MS Biotechnology

**Ph.D. Thesis Title:**

Elucidation of genetic basis of congenital heart disease and hereditary eye disorders in consanguineous Pakistani families

**M.Phil Thesis Title:**

Characterization of some dicot Gene Promoters for their expression in *Nicotiana tabacum.*

# B.S. (Hons) Thesis Title:

Dynamic Web Development for genetic studies of “BLOOD DISORDERS”

**PUBLICATIONS**

1. L Tanveer, S Batool, **H Mubeen**, I Shahid. [Enhancing the therapeutic potential of FDA-approved ifosfamide and 5-fluorouracil through rational chemical modifications for endometrial cancer treatment](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:CHSYGLWDkRkC), Medical Oncology 42 (8), 1-12, 2025.
2. A Zafar, Z Rahman, **H Mubeen**, S Sarwar, S Fatima. [PURIFICATION AND CHARACTERIZATION OF A LACCASE ENZYME PRODUCED BY CO-CULTURING OF LOCALLY ISOLATED ASPERGILLUS NIGER AND ASPERGILLUS ORYZAE](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:_xSYboBqXhAC), Pak. J. Botany, 2025.
3. Ibtsam Ghulam Nabi, Madiha Khan, **Hira Mubeen**. [Antimicrobial Resistance: Challenges and Innovative Solutions](https://www.benthamdirect.com/content/journals/nemj/10.2174/0102506882352704250127093311), New Emirates Medical Journal, 2025.
4. A Abid, M Naveed, T Aziz, MA Shabbir, **H Mubeen**, AA Khan, AF Alsmari. [In-vitro and in-vivo assessments of greenly synthesized iron oxide nanoparticles from Cascabela thevetia plant extract for the treatment of ventricular septal defect](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:abG-DnoFyZgC), South African Journal of Botany 177, 363-376, 2025.
5. A Abid, MA Shabbir, **H Mubeen**, K Javed, I Shabbir[A call to action for global solutions to air quality crisis: Urgent actions and innovative solutions needed](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:NhqRSupF_l8C), Journal of the Air & Waste Management Association 75 (1), 1-2, 2025.
6. Ammara Saeed, Asima Naz, Saba Ahmad, **Hira Mubeen**, Pakiza Liaqat, Ayeeza Asghar, Diagnostic Accuracy Of Immunohistochemistry For Diagnosis Of Helicobacter Pylori Infection In Gastric Biopsies Received In Sir Gangaram Hospital Lahore, The Research Of Medical Science Review, 191-196,2025.
7. Asma Zafar, Ziaur Rahma, **Hira Mubeen**, Saira Sarwar, Samreen Fatima, Madood Makhdoom, Anosha Ashraf, Ghulam Sakina, Muhammad Nauman Aftab. Purification And Characterization Of A Laccase Enzyme Produced By Co-Culturing Of Locally Isolated Aspergillus Niger And Aspergillus Oryzae, Pak. J. Bot., 57(4), 2025.
8. DA Baird, **H Mubeen**, C Doganli, JB Miltenburg, OK Thomsen, Z Ali, [Rare homozygous cilia gene variants identified in consanguineous congenital heart disease patients](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:rO6llkc54NcC). Human Genetics, 1-17, 2024.
9. Amina Abid, Muhammad Aqib Shabbir, **Hira Mubeen**, Khushbakht Javed & Iqra Shabbir A call to action for global solutions to air quality crisis: Urgent actions and innovative solutions needed, 75:1, 1-2,2024.
10. **H Mubeen**, A Masood, A Zafar, ZQ Khan, MQ Khan.[Insights into AlphaFold’s breakthrough in neurodegenerative diseases](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:dfsIfKJdRG4C)**,** Irish Journal of Medical Science (1971-), 1-12, 2024
11. Fatima Sajjad, Ahmer Jalal, Amir Jalal, Zulekha Gul, **Hira Mubeen,** Seemal Zahra Rizvi**.** Multiomic analysis of dysregulated pathways in triple negative breast cancer, Asia-Pacific Journal of Clinical Oncology, June 2024.
12. MQ Khan, **H Mubeen**, ZQ Khan, A Masood, A Zafar, JI Wattoo, AU Nisa. [Computational insights into missense mutations in HTT gene causing Huntington’s disease and its interactome networks](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:M05iB0D1s5AC)

Irish Journal of Medical Science (1971- 192 (3), 1435-1445, 2023

1. **H Mubeen**, M Farooq, AU Rehman, M Zubair, A Haque. [Gene expression and transcriptional regulation driven by transcription factors involved in congenital heart defects](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:35N4QoGY0k4C). Irish Journal of Medical Science (1971-), 1-1, 2022.
2. MQ Khan, **H Mubeen**, ZQ Khan, A Masood, A Zafar, JI Wattoo, AU Nisa. [Computational insights into missense mutations in HTT gene causing Huntington’s disease and its interactome networks](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:M05iB0D1s5AC). Irish Journal of Medical Science (1971-), 1-11, 2022
3. M Shafique, A Masood, **H Mubeen,** N Iqbal, F Deeba, R Jabeen, M Zain. (2022). [Prevalence and In-silico Analysis of Cardiac Enzyme and Serum Lipid Enzyme in Acute Coronary Syndrome patients](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:ldfaerwXgEUC), Frontiers in Chemical Sciences 3 (1), 1-15, 2022.
4. A Zafar, S Yousaf, MN Aftab, A Hamid, JI Wattoo, A Masood, **H Mubeen**. [Purification and characterization of a novel pullulanase enzyme from Bacillus thuringiensis for detergent industry](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:RYcK_YlVTxYC), Revista Mexicana de Ingeniería Química 21 (1), Bio2699-Bio2699, 2022.
5. A Zafar, Z Rahman, **H Mubeen**, J Makhdoom, J Tariq, Z Ali, A Hamid. [Heterologous expression, molecular studies and biochemical characterization of a novel alkaline esterase gene from Bacillus thuringiensis for detergent industry](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:HoB7MX3m0LUC). RSC advances 12 (53), 34482-34495, 2022
6. R Yaqoob, A Noureen, **H Mubeen,** JA Ujjan, WM Achakzai, S Saddozai, N Saleem. [Functional importance and anti-tumor activities of Ribosome Inactivation Protein (RIPs)](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:ns9cj8rnVeAC), Annals of the Romanian Society for Cell Biology, 18747-18763, 2021.
7. A Masood, **H Mubeen**, N Iqbal, A Bashir. [Cloning and transcriptional analysis of RuBisCO hybrid promoter](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:NMxIlDl6LWMC), Pak. J. Bot 53 (3), 933-940, 2021.
8. Zunaira Afzal Naveed, Xiangying Wei, Jianjun Chen. [The PTI to ETI Continuum in Phytophthora-Plant Interactions](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:blknAaTinKkC), Frontiers In Plant Science, 2020.
9. Ammara Masood, **H Mubeen**, Nadia Iqbal. [Evaluation and Insilico Analysis of Genes Involved in Hypothyroidism: Analysis of Genes Involved in Hypothyroidism](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:maZDTaKrznsC). Pakistan Journal of Scientific and Industrial Research, 2020.
10. **H Mubeen**, Ammara Masood, Mushtaq A. Saleem, Javaid Iqbal Wattoo. [Insilico study of genes involved in Congenital Hypothyroidism](https://scholar.google.com.pk/citations?view_op=view_citation&hl=en&user=aY5u_YYAAAAJ&sortby=pubdate&citation_for_view=aY5u_YYAAAAJ:iH-uZ7U-co4C). Journal of Pakistan and Medical Association, 2020.
11. **H Mubeen**, Ammara Masood, Mushtaq A. Saleem, Javaid Iqbal Wattoo, Ammara Nasim, Shahid Raza. Identification and Analysis of DNA binding specific Transcription factor binding sites in sucrose synthase promoter. Pakistan Journal of Botany, 2019.
12. Pakeeza Rubab, **H Mubeen** \*, Ammara Masood, Javaid Iqbal Wattoo, Sobia Kanwal, Rida Sajid. Identification, analysis and evaluation of Starch Branching Enzyme gene promoter from *Oryza Sativa*. Pakistan Journal of Botany, 2019.
13. Rubab Zahra Naqvi, **H Mubeen** , Ammara Masood, Asia Khatoon and Aftab Bashir. Isolation and evaluation of constitutive sucrose phosphate synthase gene promoter from tomato, Pak. J. Bot., 49(3): 1105-1112, 2017.
14. Ammara Masood, Nadia Iqbal, Hira Mubeen, Rubab Zahra Naqvi, Asia Khatoon and Aftab Bashir. Cloning and expression analyss of D-hordein hybrid promoter isolated from barley (HORDEUM VULGARE L.) Pak. J. Bot., 49(3): 1085-1095, 2017.
15. **H Mubeen**, Ammara Naseem , Ammara Masood , Shahid Raza & Naureen Naeem Cis-acting regulatory elements and transcription factors as a key regulator in plant gene expression, Biologia (Pakistan), 2019.
16. AMMARA MASOOD\*, MARIA JAVED, IQRA MOAZZAM BAIG, **H Mubeen**, JAVED IQBAL WATTOO, SUMBAL MAHMUD. In-silico study of genes involved in congenital hypothyroidism. Journal of the Pakistan Medical association JPMA, 2019.
17. Ambash riaz, Shahid Raza & **H Mubeen** 3.Identification and cloning of Cry1AB gene from *Bacillus thuringiensis,* Biologia (Pakistan), 2019.
18. **H Mubeen**, Rubab Zahra Naqvi, Ammara Masood, Muhammad Waseem Shoaib, Shahid Raza. In silico mutation analysis of human, beta globin gene in sickle cell disease patients, Published in IJRMS, Volume 4, Issue 5, p: 1673-1677, May 2016.
19. **H Mubeen**, R.Z. Naqvi, A. Masood, M.W Shoaib, S. Raza. Gene transformation: Methods, Uses and Applications. Published in Journal of Pharmaceutical and Biological Sciences, Volume 4, Issue 2, 2016.
20. **H Mubeen**, Aftab Bashir*,* Ayesha Ameen,Shahid Raza. Expression analysis and Agrobacterium mediated transformation of tubulin promoter in *Nicotiana Tabacum* Published in African Journal of Biotechnology (AJB).
21. **H Mubeen**, Muhammad Waseem Shoaib, Sadaf Shoaib, Saima Jabeen, Sahrish Farooqi and Shahid Raza. Analysis of Multiple Sclerosis HLA- DRB1 gene. **International Journal of Recent Advances in Multidisciplinary**, Vol. 03, Issue 02, pp.1245-1248, February, 2016.
22. **H Mubeen**, Sadaf Shoaib, Muhammad Waseem Shoaib. Multiple sclerosis: Genetic factors, risk and prevalence. International Journal of Medical and Health Research, Volume 2, Issue 3: Page No. 55-57, March 2016.
23. **H Mubeen**, Muhammad Waseem Shoaib and Shahid Raza. In silico analysis and comparison of alpha tubulin gene with other tubulin families, Journal of advances in biology and biotechnology, Volume 7, Issue 4, Page 1-7, 2016.
24. **H Mubeen**, Shahid Raza. In Silico approach to identify transcription factor binding sites and Cis-regulatory elements in tubulin gene promoter, Published in IJSRP, Volume 6, Issue 5, p: 31-33, 2016.
25. **H Mubeen**, Muhamad Waseem Shoaib and Shahid Raza. Identification, Analysis and Comparison of alpha tubulin gene orthologues and protein domains, Journal of advances in biology and biotechnology, Volume 8, Issue 4, 2016.
26. Shahid Raza and Hira Mubeen. Analysis of Cytochrome P51A1 gene, its sequence variants and protein domains *Int. Res. J. Biological Sci.,* 5(8), 17-21, August (2016).
27. **H Mubeen** and Shahid Raza. Comparison and Phylogenetic Analysis of HIV retroviral Gag Poly Protein precursors *Int. Res. J. Biological Sci.,* Vol. 5(9), 1-6, September (2016).
28. Ammara Masood, Nadia Iqbal, **H Mubeen**, Rubab Zahra Naqvi, Asia Khatoon and Aftab Bashir. Cloning and expression analysis of alcohol dehydrogenase (*Adh*) hybrid promoter isolated from  
    *Zea mays,* Published in African Journal of Biotechnology, Vol. 15(42), pp. 2384-2393, 19 October, 2016.
29. Shahid Raza and **H Mubeen**. Computational analysis of genomic regions of human Insulin receptor gene. Published in Journal of advances in biology and biotechnology, Volume 8, Issue 4, 2016.
30. Ammara Masood, Nadia Iqbal, Rubab Zahra Naqvi, **H Mubeen**. In silico comparative genomic analysis of Escherichia coli E24377A and Escherichia coli. Published in International Journal of Medical and Health Research, Volume 2; Issue 3; March 2016; Page No. 03-10.
31. Muhammad Waseem Shoaib, Saima Jabeen, Sadaf Shoaib, **H Mubeen** and Shahid Raza. Analysis of GLUT10 Glucose Transporter gene in Type 2 Diabetes using computational tools. , Published in USA Journal of R&D, Volume II, Issue, 2016.
32. Muhammad Waseem Shoaib, Saima Jabeen, Sadaf Shoaib and **H Mubeen**. Human Genetic variations and their importance, Published in J Pharm Biol Sci 2016; 4(4): 134-136.
33. Sahrish Farooqi, **H Mubeen**, Shahid Raza. Prevalence of HIV in Pakistan. American Journal of Pharmacy and health research, 2015, Volume 3, Issue 12.
34. **H Mubeen**, Aftab Bashir, Sahrish Farooqi, Shahid Raza Characterization, transformation and stable expression analysis of sucrose synthase gene promoter in Nicotiana Tabacum. International Journal of Advanced Research (2016), Volume 4, Issue 1, 1214- 1218.
35. Ammara Masood, Nadia Iqbal, **H Mubeen**, Rubab Zahra Naqvi, Asia Khatoon and Aftab Bashir. Cloning and expression analysis of alcohol dehydrogenase (*Adh*) hybrid promoter isolated from *Zea mays,* Published in African Journal of Biotechnology, Vol. 15(42), pp. 2384-2393, 19 October, 2016. DOI: 10.5897/AJB2016.15366.
36. Rubab Zahra Naqvi, **H Mubeen**and Shahid Raza. .Role of plant promoters and their Cis regulatory elements in Gene Expression Regulation, Published in European Journal of Pharmaceutical and Medical Research ejpmr, 2016,3(1), 347-352. (I.F : 3.6)
37. Muhammad Waseem Shoaib, Shahid Raza and **H Mubeen**. Application of high density SNP marker Arrays (Published in IJBR)
38. Shahid Raza, Muhammad Waseem Shoaib, Saima Jabeen, Sadaf Shoaib and **H Mubeen**. Human Genetic variations and their importance, Published in J Pharm Biol Sci 2016; 4(4): 134-136.
39. **H Mubeen**, Sadaf Shoaib, Muhammad Waseem Shoaib and Shahid Raza. Multiple sclerosis: Genetic factors, risk and prevalence. Published in International Journal of Medical and Health Research, Volume 2, Issue 3: Page No. 55-57, March 2016.
40. **H Mubeen**, Muhammad Waseem Shoaib and Shahid Raza. In silico analysis and comparison of alpha tubulin gene with other tubulin families, Published in Journal of advances in biology and biotechnology, Volume 7, Issue 4, Page 1-7, 2016.

**PATENTS FILLED**

Patent: A screening method for the detection of diseased genetic variants causing congenital heart disease.

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Farooq, Dr. Muhammad Shoaib, Dr. Saima Jabeen

(Phase II Revisions: Accepted)

Patent: A screening approach for elucidation of rare homozygous variants actionable in cardiac anomalies

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Farooq, Dr. Muhammad Shoaib, Dr. Saima Jabeen

(Phase II Revisions: Accepted)

Patent: A Method for Sorting De Novo Damaging Variants In Exomes Of Congenital Heart Disease Patients

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Shoaib, Dr. Saima Jabeen, Dr. Sadaf Shoaib

(Phase II Revisions: Accepted)

Patent: A method for Prioritization of single nucleotide variants through Whole exome sequencing

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Shoaib, Dr. Saima Jabeen, Dr. Sadaf Shoaib

Patent: Method for finding rare homozygous damaging variants in cardiac genes

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Shoaib, Dr. Saima Jabeen, Dr. Sadaf Shoaib

Patent: A method for risk assessment of Copy number variations in Cardiac anomalies

**Inventor:** Hira Mubeen; **Co Inventor:** Dr. Muhammad Shoaib, Dr. Saima Jabeen, Dr. Sadaf Shoaib

**CONFERENCES Organized and Attended**

* Participated and organized “1st International conference on Bio Energy challenges and opportunities in Pakistan”‏ USA Lahore, October 2014.
* Participated and organized “2nd International conference on Bio Energy challenges and opportunities in Pakistan”‏ USA Lahore, February 2016.
* Trainer/Demonstrator: “Training/Workshop on Genomics, Proteomics and Bioinformatics tools and software’s” CABB, FEB-MAY, 2014.
* Participated and organized “National Training workshop on Molecular Analysis of Transgenic Plants” NIBGE Faisalabad, October 26-27, 2011.
* Participated in “3rd International conference on Bio Energy challenges and opportunities in Pakistan”‏ USA Lahore, February 2017.
* Participated in “2nd International conference on Bio Energy challenges and opportunities in Pakistan”‏ USA Lahore, February 2016.
* Participated in “1st International conference on Bio Energy challenges and opportunities in Pakistan”‏ USA Lahore, October 2014.
* Participated as a trainer in Hands on training on Application of Genomics in Plant Breeding and Bioinformatics, University of Agriculture, Faisalabad, Feb - April, 2014.
* Participated in “International conference on Applications of Molecular Biology in Medicine and Agriculture" BAQI QAU, Islamabad, June 2013.
* Participated in “SAARC Regional conference on new frontiers in Agricultural Genomics and Biotechnology”, organized by NARC held in Marriott Hotel, Islamabad June 2012.
* Participated “National Training workshop on Molecular Analysis of Transgenic Plants” October 26-27, 2011.

**Trainings Organized/Conducted:**

1. Train the Trainers: **“Trainer”** in UCP teaching excellence Program, September 16, 2021
2. **“Trainer”** in 4th National Hands on Training Workshop on Advanced Bioinformatics & Recombinant Biotechnology, UCP, 15-16 August 2022
3. **“Trainer”** in 5th National Hands on Training Workshop on Advanced Bioinformatics & Recombinant Biotechnology, UCP, 30th to 31st  August 2023
4. **“Trainer”** in 6th National Hands on Training Workshop on Advanced Bioinformatics & Recombinant Biotechnology, UCP, 21st 22nd August, 2024
5. **Lab Training:** Organizer: 6th 2- days Lab Introductory Hands on Training/Workshop, September 26-26, 2024
6. **ASM training Organizer:** Research proposal Competition (Microbes and Sustainable Development Goals), October 29, 2024, UCP and ASM.

**Workshops and Seminars ATTENDED**

1. 16th One Day **Nano-biotechnology Model Display and Public Health Awareness**.23rd February 2019.
2. 17th One Day International Symposium on “**Recent Trends in Life Sciences: Mechanism and Genetics of Antimicrobial Resistance in Human Protozoan Parasites”.** March 29, 2019.
3. 18th One Day Symposium on “**World Food Safety Day Celebration”** Joint Collaboration of Punjab Food Authority and Faculty of Life Sciences.17th June, 2019.
4. 19th **One Day Biosafety Training for Young Researchers.** 24th June, 2019.
5. 20th Event "Three Days Hands-on Training Workshop "Recombinant**Biotechnology and Bioinformatics**" 25-27 June 2019.
6. 21st event on “Three Days “**Healthy Pakistan Celebrations”** in Collaboration with Punjab Food Authority and Faculty of Life Sciences, University of Central Punjab. 7th August 2019-9th August, 2019 at Al-Hamra Hall Lahore.
7. 22nd event on One Day **“Bio-Waste Management Training”** with collaboration of FLS and Pakistan Biological Safety Association on August 31, 2019 by Ms. Sadia Zia and Dr. Ziaur Rahman. Certified Trainers of Pakistan Biological Safety Association (PBSA).
8. 23rd event on One Day Workshop on **“Primer Designing for Postgraduate Research Students”** on 11th September 2019 by Dr. Muhammad Naveed and Dr. Muhammad Azmat Ullah Khan.
9. 24th event on Three Days **“Faculty Development Program”** from September, 17 and 18, 2019 by Dr. Muhammad Azmat Ullah Khan and Dr. Amina Arif.
10. 25th event on One Day Symposium regarding **“Biochemical Techniques used in Diagnostics Labs”** on 20th September 2019 by Dr. Muhammad Afzal.
11. 26th event on One Day Workshop on **“Bioassay for Bioactive Compounds Isolates from Medicinal Plants”** on 3rd October 2019 by Dr. Muhammad Afzal.
12. 28th event on **Practical training session on publication writing and citation management using endnote**, October 10, 2019, by Ms Salma Batool and Ms Izza Shahaid.
13. Bioinformatics Model Competition and presentation, UCP, **5-02-2020.**
14. Faculty development program, UCP, **08-09-2020.**
15. An International conference on structural biology. An insight into every dimension of advanced structural biology research, Webinar, **28-06-2020.**
16. 25th World Congress. Innovative risings in Biotechnology and novel drug discovery modalities to combat the pandemic: Covid-19, Webinar, **15-06-2020.**
17. Virtual training on structural informatics and NGS data, Webinar, **12-05-2020.**

**Special Skills**

Very hard working energetic, innovative, team player and always willing to learn. Experienced manager, organizer and leadership qualities.

# TECHNICAL SKILLS

Well versed with various modern molecular and gene editing techniques and equipment’s including:

* Molecular Biology Techniques viz
* DNA extraction,
* Cloning
* PCR amplification
* DNA Gel Electrophoresis
* RNA Extraction
* Agrobacterium mediated transformation
* Transgene Analysis
* Histochemical *GUS* Analysis
* Agroinfiltration
* Protein Purification
* Microscopy
* Endogenous gene silencing
* cDNA Analysis

**BIOINFORMATICS TOOLS AND SOFTWARE’S FOR ANALYSIS**

* Expertise in Python
* RNA SEQ data analysis
* Functional genomic dataset
* Crisper Cas-9 Gene editing
* Finding therapeutic targets and drug design
* Mutation Identification and validation
* Handling Exome sequencing dataset
* Variant filtering and sorting analysis
* Large scale genomics data analysis
* Protein-protein Interaction analysis
* Multi-omic data analysis

**LANGUAGES:**

English, Urdu, Punjabi

**REFERENCES:**

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Forman Christian College, University

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Phone: +923206687953

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| --- | --- | --- |
| **THESIS AND DESSERTATION SUPERVISED:** | | |
| **Student’s Name** | **Thesis Title** | **Degree** |
| Samia Saleem | Characterization and In-planta Evaluation of Microbially Synthesized iron Nanoparticles as Potential Plant Probiotics | MS |
| Maria Azhar | Elucidation of the genetic basis of ischemic heart disease and *in vivo* assessment of post-ischemic inflammatory response for potential drug development | MS |
| Nagina Rafiq | Molecular characterization and in vivo assessment of toxicity of iron toxicity based nano particles | MS |
| Amna Saleem | Elucidation of genetic basis of candidate genes and their implication for potential drug design | MS |
| Fatima Asif | Investigating mutations associated with transcriptional control unit in familial ventricular septal defect | MS |
| Muhammad Haseeb Ahmad | Molecular and Computational Analysis of Genetic Basis of Cardiac Defects in selected families of Punjab, Pakistan | MS |
| Azba Imtiaz | Molecular and Computational Analysis of Genetic Basis of Cardiac Defects in selected families of Punjab, Pakistan | MS |
| Saira Sarwar | Laccase production from locally isolated *Aspergillus Niger* and *Aspergillus Oryzae* | MS |
| Sehar Sikandar | Molecular characterization and insilico analysis of Rheumatic heart disease and ischaemic heart disease | MS |
| Pakeeza Rubab | Molecular characterization and insilico analysis of genetic basis of atrial septal defect in Pakistani families | MS |
| Mewish Aslam | Preparation and analysis of synthetic food product for cure of diabetes | MS |
| Fatima Sughra | Cloning and expression of Lipase gene from Bacillus Cereus into Escherichia Coli (BL21) | MS |
| Ayesha Javaid | Comparative analysis and evaluation of potential drug targets associated with protein kinases | M.Sc. |
| Abeera Imtiaz | Genetics and prevalence of congenital heart disease | M.Sc. |
| Kinza Israr | Molecular aspects and uses of promoters in gene expression regulation | M.Sc. |
| Zunaira Najeeb | Heart defects: Prevalence, risk factors and genetics | M.Sc. |
| Faryal Shahid | Preparation of energy drink using natural resources | M.Sc. |
| Syeda Farwa | Therapeutic effect of natural resources on hair growth | M.Sc. |
| Rida Fatima | Analysis of Transcription factors involved in diabetes mellitus | M.Sc. |
| Iqra Zulfiqar | Prevalence and genetics of sporadic and congenital heart diseases | M.Sc. |
| Sehar Karamat | Prevalence of anemia in Pakistani population | M.Sc. |
| Ayesha Jamil | Genetic improvement of yield potential and functional approaches in barley | M.Sc. |
| Nargis Khalid | Extraction of orange colour from natural resources | M.Sc. |
| Maliha bint e Awan | Epidemiology and genetic basis of genes involved in retinitis pigmentosa | M.Sc. |
| Nimra | Analysis of different activates of aflatoxins | M.Sc. |
| Amna Saleem | In silico analysis of GATA causing ventricular septal defect | M.Sc. |
| Nazish Shafqat | IN SILICO ANALYSIS OF GENES INVOVED IN TETRALOGY OF FALLO | M.Sc. |
| Huma Qamar | Agrobacterium tumefacians: A promising and efficient transformation technique | BS |
| Sehrish Kiran | In silico analysis of potential target sites associated with protein kinases | BS |
| Sehrish Zaheer | Prevalence and clinical manifestation of thalassemia: A review | BS |
| Gul Zareen | Potential risks associated with GMO’s: A review | BS |
| Muafia | Hepatitis: Prevalence, epidemiology and future challenges | BS |
| Mishal | Analysis of Constitutive and inducible plant gene promoters | BS |
| Anam Murtaza | Extraction of Natural Dye from Aspergillus flavus for fabric dyeing | BS |
| Hadiya Arif | Investigation of Potential Phytochemicals inside Saussurea Lappa | BS |
| Arooj Fatima | Analysis and characterization of salivary gland tumors to differentiate between Aden lymphoma and other malignant tumors of salivary glands | BS |
| Ayesha Afzal | ANALYSIS OF LACTOSE INTOLERANCE IN CHILDREN | BS |
| Musab Bin Umair | IN SILICO MUTATION ANALYSIS OF LOCAL AND IRAN SARS-CoV-2 STRAINS AND PREDICTION OF POTENTIAL NSP12 AND NSP9 INHIBITORS | BS |
| Laiba Kainat | CHARACTERIZATION AND ANTI-FUNGAL ACTIVITY OF SOIL BACTERIAL ISOLATES ISOLATED FROM RIVER RAVI,LAHOR | BS |
| Mahwish Mushtaq | In-silico Analysis of Mutations in Candidate genes of Childhood Asthma | BS |

**Internship Students Supervised:**

Supervised more than 50 BS Biotechnology Internship students

**Placement of Internship Students:**

Placement of more than 40 BS students in collaboration with different research labs