



## Aqsa Qurban

**Nationality:** Pakistani **Date of birth:** 18/10/1997 **Gender:** Female (Married)

**Phone number:** (+92) 3035407849 **Email address:** [aqsaqurban22@gmail.com](mailto:aqsaqurban22@gmail.com)

**Home:** C-9, Wapda Engineering Academy, Steam Power Station, Faisalabad

### ABOUT ME

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I am an aspiring and highly motivated early career researcher with an enthusiasm to carve a path towards a successful research career in Biotechnology.

I am looking forward to working in an organization that offers a creative, dynamic, and professional environment, where my education, training, professional skills, and proven abilities can be fully applied. I want to be a productive member of an organization where I can implement my knowledge and practical experiences.

### EDUCATION AND TRAINING

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#### **MS/MPhil Biotechnology**

**UMT, Lahore** [16/10/2018 – 01/01/2020 ]

**Address:** Lahore (Pakistan)

**Field(s) of study:** Biotechnology

**Thesis:** In-Silico Tools in Determination of Pathogenicity of Low-Frequency Variants in *MAN1B1*

Recombinant DNA Technology, Principles of Forensic Science, Advances in Biotechnology, Genomics, Proteomics, Metabolomics, Renewable energy Resources, Protein Structure and Function Engineering, Advances in Fermentation Technology and Advanced Bioinformatics

#### **BS Biotechnology**

**IBB, University of the Punjab** [ 26/10/2014 – 01/07/2018 ]

**Address:** Lahore (Pakistan)

**Field(s) of study:** Biotechnology

**Thesis:** Study to Check Efficacy of Essential Oil of Two *Melaleuca* Species in the Treatment of Infectious Diseases

Genetics, Molecular Biology, Food Biotechnology, Health Biotechnology, Agriculture Biotechnology, Microbiology, Nanotechnology, Environmental Biotechnology, Biosafety and Bioethics, Industrial Biotechnology, Immunology, Cell Biology, Biochemistry, Cell and Tissue culture, Downstream technology, and Biomaterial.

### PROJECTS

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#### **In-silico Tools in Determination of Pathogenicity of Low-Frequency Variants in *MAN1B1***

[01/01/2018 – 01/01/2020]

The study included 18 different bioinformatics and machine learning technologies to assess the pathogenicity and functional impact of missense variants of *MAN1B1*. Missense techniques were used to determine the high pathogenicity of 41 *MAN1B1*nsSNPs. With the use of molecular modelling, the harmful effects of mutations on the *MAN1B1* protein are displayed. The study highlighted the significance of bioinformatics methods for predicting potential pathogenic mutations to account for the structural and functional disruption of the *MAN1B1* gene.

## **Study to Check Efficacy of Essential Oil of Two *Melaleuca* Species in the Treatment of Infectious Diseases**

[01/01/2017 – 01/01/2018 ]

The goal of this study was to assess the antibacterial efficacy of *Melaleuca* oil extract against bacterial strains in the treatment of infectious illnesses. The antibacterial activity against 10 pathogens, including seven different *E. coli* strains, two strains of *Klebsiellapneumonia*, and one strain of *Enterococcusfaecalis*, was assessed using the agar well diffusion method. Due to the measurement of a well defined zone of inhibition, *Melaleuca* plant essential oils demonstrated effective antibacterial efficacy against various bacterial strains. *Melaleuca* species extracts have been discovered to have chemical compounds that are effective in the treatment of a variety of infectious disorders, including UTI, acne, and other skin conditions.

## **WORK EXPERIENCE**

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### **Internee**

**UHS (University of Health Sciences)**[ 18/07/2017 – 18/08/2017 ]

**City:** LAHORE

**Country:** Pakistan

Practiced the following biochemical skills

- Media composition
- ELISA
- SDS-PAGE
- Gel electrophoresis
- Cell culture
- Data analysis

### **Medical Lab Technologist**

**Chughtai Labs**[ 04/05/2019 – 30/12/2020 ]

**City:** Lahore

**Country:** Pakistan

-Worked in biochemistry, hematology, and microbiology lab

-Operated, maintained, and cleaned diagnostic equipment and tested approximately 100-159 patient samples daily

-Acquired the following hard skills

- Equipment calibration
- Equipment troubleshooting
- Equipment maintenance
- Specimen collection
- Specimen preparation
- Microscope operation
- Specimen analysis
- Record keeping
- Blood collection
- ELISA
- Media preparation and stool disease analysis
- Urine and blood testing

### **Medical Delegate associate**

**Nestle**[ 04/05/2019 – 30/12/2020 ]

**City:** Lahore

- Responsible for the ethical detailing of Nestlé Infant Nutrition products in assigned territory by clearly communicating to medical / paramedical contacts accurate information about these products, their features and benefits, and their appropriate use whenever mothers are unable or choose not to breastfeed their babies, and within guidelines as set by NME Nutrition in compliance with WHO International Code of Marketing of Breast-Milk substitutes, Nestlé Instructions and local country codes.
- Promoted Nestlé's belief that Breastfeeding is Best for Babies and that Breastfeeding is recommendable over all other feeding alternatives for infants;
- Provided reliable information on infant nutrition and infant feeding practices for medical/ paramedical contacts in areas that interest or affect them in their regular practice, according to current cycle detailing objectives and materials, becoming a reference advisor on these topics;
- Participated in the organization and running of on Product Knowledge, Nutrition or related topics medical / paramedical scientific meetings including their sponsorship meeting, guest lecturer invitation;·
- Identified and maintained relevant information on all contacts in assigned territory via master list, including classification on interest and importance, and by regular call cards completion;
- Monitored and reported to the Medical Field Manager on activities of our competitors including new competitor products, communication strategies, etc.
- Maintained proper records and registers of all correspondence and actions undertaken in daily activities;
- Ensured strict adherence and compliance on all activities undertaken to the WHO International Code of Marketing of Breast-Milk substitutes and Nestle Instructions and local country codes;
- Complied with Nestlé's strictest requirements that they will not seek contact with, or give advice to pregnant women, or mothers of infants and young children regarding Infant Formula in their business capacity.

**Clinical trial officer**

***SurryaAzeem Teaching Hospital***

**City:** Lahore

**Country:** Pakistan

- Responsible for accepting clinical trial instructions and securing the proper materials for each trial.
- Assisted experts in conducting clinical trials on the patients of COVID
- Responsible for keeping track of data gathered during a study and creating the trial file

Acquired following skills

- Good Clinical Practice (GCP)
- Clinical Trial Management System (CTMS)
- Clinical Trials.
- Electronic Data Capture (EDC)
- CRO Management.
- Clinical Development.
- Clinical Monitoring.
- Clinical Operations

**Teacher Assistant**

***UMT***

**City:** Lahore

**Country:** Pakistan

- Helped teachers create lesson plans
- Worked with small groups of students to enhance the learning process
- Provided solid advice and insights in the field of expertise
- Analyzed complex situations, identified key issues, and delivered fresh perspectives and innovative solutions.
- Set up necessary material for classes (e.g. projectors, practicals)
- Tracked student attendance and class schedules
- Reviewed material taught in class with individual students with learning challenges
- Escorted and supervise students in field trips and research projects
- Assisted teachers with various tasks, like grading assignments

**Molecular Biologist**  
**University of Punjab**

**City:** Lahore

Gripped following hard skills

- Polymerase Chain Reaction (PCR)
- Gel electrophoresis
- DNA Sequencing.
- DNA analysis
- Western Blotting.
- Cell Culture.
- Cloning
- DNA Extraction
- Bioinformatics Data analysis
- Protein Expression analysis
- qPCR/ RT-PCR

## **PUBLICATIONS**

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### **1. CLIMATE-RESILIENT FOREST ECONOMICS: ADAPTING TREE SPECIES ROTATION FOR CHANGING TIMES**

*Journal name:* International Journal of Agricultural Extensionl (2024: Volume 13 Issue 04, January Issue)

Impact Factor-N/A

HEC Approved

**Authors details:** Muhammad G. U. Hashmi\*, Sidra Fatima, Mubasher Zia, Muhammad Azmat, Ahsan Shabbir, Waqas Yousaf,Fidaa Aslam, Bushra Abid, **Aqsa Qurban**, Imran Zafar

DOI: [10.33687/ijae.011.03.4812](https://doi.org/10.33687/ijae.011.03.4812)

### **2. EXPLORING PLANT RESEARCH WITH THE HELP OF VITAL BIOINFORMATICS DATABASES AND ONLINE RESOURCES**

*Journal name:* Journal of Population Therapeutics & Clinical Pharmacology (2023: Volume 03 Issue 03, Decemberl Issue

Impact Factor-N/A

HEC Approved

**Authors details:** Noreen Fatima, Haris Abdul Rehman, Mah Noor Hassan, Iqra Naeem, Babur Ali Akbar,Muhammad Nabeel Aslam, Zanib Fatima5, **Aqsa Qurban**, Muhammad Umar, TayyabaArif

DOI: 10.53555/jptcp.v3i1i5.6359

### **3. An Analysis of Bibliometric Research on Sumatriptan (Imitrex, Tosymra) Linked to Migraine Relief: Sumatriptan and Migraine Relief**

*Journal name:* [Futuristic Biotechnology](#) (2023: Volume 03 Issue 03, Decemberl Issue)

Impact Factor-N/A

HEC Approved

**Authors details:** Muhammad Umar, Muhammad Osama Malik , Shahid Iqbal , **Aqsa Qurban\*** , Aqsa Sadiq , Syeda Sana Zanib3and Maham Taimoor Tarar

DOI: [10.54393/fbt.v3i03.70](https://doi.org/10.54393/fbt.v3i03.70)

### **4. Determine the curing effects of Silybummarianum (milk thistle) administered orally to non-alcoholic fatty liver disease (NAFLD) patients for six months**

*Journal name:* Pakistan Biomedical Journal (2023: Volume 06 Issue 04, April Issue)

Impact Factor-N/A

HEC Approved

**Authors details:** **Aqsa Qurban\***,Hamid Khan, Fizza Ali, Saba Abbas, Syeda Amber Hameed, Nousheen Hussain

DOI: <https://doi.org/10.54393/pbmj.v6i04.869>

**5. Plant Pathology & Microbiology Study to Check Efficacy of Essential Oil of Two *Melaleuca* Species in the Treatment of Infectious Diseases**

***Journal name: Journal of Plant Pathology Microbiology (2020: Volume 11, Issue 9)***

Journal CiteScore: 18.194

Journal Impact Factor: 1.85

**Authors details: Aqsa Qurban\***, Ayesha Ameen, Huda Ishfaq

**DOI:** 10.35248/2157-7471.20.11.516

**6. Bacterial Identification by 16S Ribotyping: A Review**

***Journal: BioTechnology: An Indian Journal (2020: Volume 16, Issue 2)***

Journal CiteScore: 5.06

Journal Impact Factor: 4.66

**Authors details: Aqsa Qurban\*** and Ayesha Ameen

**DOI:** 10.37532/0974-7435.2020.16(2).204

**7. RESEARCH PROGRESS OF AP2/ERF TRANSCRIPTION FACTOR FAMILY IN IMPORTANT CROPS**

***Journal : International Journal of Phytopathology (2022: Volume 11, Issue 2)***

X-Category

HEC Recognized

Scopus indexed

Impact factor 0.19

**Authors details:** Athar Hussain, Ali Raza, Ayesha Ameen, Haris A. Rehman, Hafiz Khawar, Jazib A. Irfan, Wajih Maqsood, Saqib Ali, Najeeb Khan, Muhammad S. Nawaz, **Aqsa Qurban**

**DOI:** 10.33687/phytopath.011.02.4259

**8. Association of Genetic Variants rs1888747 and rs10868025 of FRMD3 Gene with Diabetic Nephropathy in Pakistani Patients**

***Journal: Pakistan journal of medical and health Sciences (2022: Volume 16, Issue 12)***

Y-Category

HEC Recognized

SJR Indexed

Impact factor 0.12

**Authors details:** Farkhanda Sharif, Mah Noor Hassan, Haris Abdul Rehman, Rida Malik, Syeda Safina, Ayesha Ameen, Syeda Anamta Hashmi, Sumaira Hanif, **Aqsa Qurban**

**DOI:** <https://doi.org/10.53350/pjmhs2022161268>

**9. Genomic studies on growth promoting Peptides and their production**

***Journal :Bioscience Research (2022: Volume 19, Issue 03)***

Y-Category

HEC Recognized

Web of Science Indexed

Impact factor : N/A

**Authors details:** Sakhawat Ali, **Aqsa Qurban\***, Hafiza Rumesa Yaqoob, Haris Abdul Rehman, Areen Saeed, Muhammad Rashid Khalid Bajwa, Muhammad Tariq and Kanza Batool

**DOI:** [https://www.isisn.org/BR-19-3-2022/1562-1572-19\(3\)2022BR22-201.pdf](https://www.isisn.org/BR-19-3-2022/1562-1572-19(3)2022BR22-201.pdf)

**10. A Study to Check the Nitrogen Used Efficiency (NUE) by Utilizing Large Assortment of Strategies for yield improvement of Cotton**

***Journal : Bioscience Research (2022: Volume 19, Issue 02)***

Y-Category

HEC Recognized

Web of Science Indexed

Impact factor : N/A

**Authors details:** Muhammad Usman , Muhammad Arslan Butt , Hafiz Khawar , Rehmat Kabir , Israr Ahmad , Muhammad Amir Muawiya , Muhammad Hussnain Babar , Kanza Batool , Muhammad Hasnain, Muhammad Aslam and **Aqsa Qurban\***

**DOI:** [https://www.isisn.org/BR-19-2-2022/1185-1191-19\(2\)2022BR22-167.pdf](https://www.isisn.org/BR-19-2-2022/1185-1191-19(2)2022BR22-167.pdf)

**11. Study to Identify the Signalling Cascade behind Expression Level of *PTEN* and *RB1* gene in Breast Cancer**

***Journal: Reports on Global Health Research (2022, ISSN: 2690-9480)***

Not HEC Recognized  
Google scholar Indexed  
Impact factor: 3.2

Authors details: Haris Abdul Rehman, Mah Noor Hassan, Muhammad Umar, **Aqsa Qurban\***, Hafiz Khawar, Iqra Jamil, NajeebUllah Khan, Syeda Anamta Hashmi, Fidaa Aslam  
DOI: 10.29011/2690-9480

## 12. Biofortification: A New Approach to Enhance the Nutrition in Maize Crop

*Journal: Annals of the Romanian Society for Cell Biology ( 2022, ISSN:1583-6258, Vol. 26, Issue 1, Pages. 1283 – 1295)*

Y-Category  
HEC Recognized  
Scopus Indexed  
Impact factor : 0.1

**Authors details:** Kanza Batool , Muhammad Ramzan , **Aqsa Qurban** ,Muhammad Hussnain Babar , Ayesha Ameen , Hadiqa Faizul Rasul , Muhammad Aslam , Muhammad Irfan , Muhammad Hasnain  
DOI: N/A

## 13. Prevalence and Antimicrobial Susceptibility Pattern of *Enterobacteriaceae* Isolated from Hospitals Wastewater

*Journal: Pakistan journal of medical and health Sciences (2022: Volume 16, Issue 11)*

Y-Category  
HEC Recognized  
SJIR Indexed  
Impact factor 0.12

**Authors details:** Muhammad Rizwan, Habib Ullah, AnjalaAyoub, Haris Abdul Rehman, Muhammad Umar, **Aqsa Qurban**, Muhammad Aslam, Usama, Maria Kausar, Aamna Syed  
DOI: <https://doi.org/10.53350/pjmhs20221611459>

## WRITE-UP SKILLS

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### Article write up

Over the past few days, I've completed more than 50 write-ups for clients across the nation, including research proposals and synopses

## MEMBERSHIPS OF JOURNALS

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### Editing manager and chief of editor

**Editingmanager** of journal of food chemistry and nutrition,

<https://esciencepress.net/journals/index.php/JFCN/about/editorialTea>

**Editorinchief** of biotechnology and bioprocess research,

<https://manuscriptscientific.com/eb-members/17>

## CONFERENCES AND SEMINARS

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### 1. 8th Invention to Innovation Summit 2019

[ Centre of Excellence in Molecular Biology , University of Punjab ]

*Actively participated as organizer and active listener in 8th Invention to Innovation Summit*

### 2. Biosafety Program In Pakistan (2019)

[ Centre of Excellence in Molecular Biology , University of Punjab ]

*Attended Biosafety session on Four Primary Controls of Biosafety through American Society For Microbiology and Safer Behaviours 52 Weeks of Biosafety Program In Pakistan*

### 3. Advances in Molecular Biology of Plants and Health Sciences (2018)

[ CEMB, University of Punjab ]

*Attended three days International Symposium on Advances in Molecular Biology of Plants and Health Science*

#### **4. Trends and Prospects on Molecular Biosciences (2017)**

[ Institute of Biochemistry and Biotechnology, University of Punjab ]

*Attended Two day International Conference on Trends and Prospects on Molecular Biosciences*

#### **5. Markhor's Wilderness Youth Program 2017**

*Volunteered Markhor's Wilderness bases youth leadership conference*

#### **6. IT Conference by Chief Minister youth Mobilization Committee**

[ Government College University]

*Organized conference on IT Industry arranged by Chief Minister youth Mobilization Committee at Government College University*

#### **7. Multiscan GO Workshop 2016**

[ Institute of Biochemistry and Biotechnology, University of Punjab ]

*Actively Participated in the Multiscan GO Workshop of hands on training*

#### **8. Infectious Diseases, Prevention and Control 2016**

[ Undergraduate Department (UGB) , University of Punjab ]

*Attended One day International Symposium on Infectious Diseases, Prevention and Control*

#### **9. Technospark Event 2016**

[ Chemistry Department , University of Punjab ]

*Participated in Technospark Event of confidence building by different tasks*

### **REFERENCES**

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#### **Dr Muhammad Ali**

Assistant Professor,

Department of life sciences, University of Management and Technology, Lahore

+92 331 5468482

#### **Miss Ayesha Ameen**

Research and Innovation Officer

University of Management and Technology, Pakistan

[Ayesha.ameen@umt.edu.pk](mailto:Ayesha.ameen@umt.edu.pk)

Phone : +92 305 4095036

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## RESEARCH AND TECHNICAL SKILLS

### Softwares

- gnomAD database
- PhD SNP
- SIFT
- Meta SNP
- Mutation Accessor
- MutPred
- mcSM
- DUET
- DynaMut
- SDM
- Cupsat
- MAESTERO
- SPiCE
- Spliceman
- Variant Effect Predictor
- Scanprosite
- UCSF Chimera
- YASARA
- i-tasser
- Ryan Software

### Analysis

- Data Mining
- Functional Analysis
- Stability Analysis
- Splice site Analysis
- PTM Analysis
- Molecular Modeling
- Construction of 3D structure of a protein
- Disc Diffusion Method
- Well Diffusion Method
- Running of Bioreactors
- Analysis of Zone of Inhibition
- Oil Extraction of Plant species

## RESEARCH INTERESTS

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### Drug Designing

I've always wanted to establish a medication for the benefit of humanity since I'm a biotechnologist. As part of my final year research project in Bachelor's, I focused on infectious diseases, their strains, and the effectiveness of essential oils in combating them.

Similar to this, I chose a hereditary condition for my MS research project that is yet incurable. Since there is no cure for genetic abnormalities, I made the decision to do a thorough analysis of the most pathogenic variants of the intellectual impairment disorder. In order to analyse new variants, I used a variety of methods. However, the legitimacy of silicon work is always required for drug design. Exome sequencing in the lab was required to validate the new Variants, but sadly, this technique is not available in Pakistan..



### **The gap from 2021 to 2023**

After covid, I have done job for 06 months at SurryaAzeem teaching hospital from November 2021 to April 2022.

After that contract basis job, I am doing write-ups of research articles, review articles, and other projects up till now by staying at home.

### **ResearchGate Link**

<https://www.researchgate.net/profile/Aqsa-Qurban>