



# Muhammad Haris

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## ABOUT ME

Dedicated and ambitious biotechnology student at Government College University Faisalabad (GCUF) with a strong academic background and a passion for research and environmental activism. My experience spans tissue culture research, leadership roles in the Green Youth Movement Club, and the development of a web-based drug database for hypertrophic cardiomyopathy. With proficiency in biotechnological techniques, web development, and project management, I strive to combine my scientific knowledge and leadership skills to drive positive change in academic and environmental sectors.

## EDUCATION AND TRAINING

### BS Biotechnology

**Government College University Faisalabad (GCUF)** [ 23/11/2021 – Current ]

Final grade: 3.73

### Fsc (Pre-medical)

**Kips College (D-Campus)** [ 25/08/2019 – 20/10/2021 ]

Final grade: 1087/1100

### Matriculation

**Al Mustafa Grammar High School** [ 16/04/2017 – 30/07/2019 ]

Final grade: 991/1100

## WORK EXPERIENCE

### Research Assistant

**Plant Tissue Culture Lab, Department of Bioinformatics and Biotechnology, GCUF** [ 05/09/2024 – Current ]

- Working on maize tissue culture, aiming to develop identical cell lines from a single callus induced from a single embryo.
- Developing and refining techniques to optimize plant growth conditions and cellular uniformity.
- Leading a research project focused on growing plants using nanoparticle-treated wastewater from industries.
- Conducting experiments to assess the impact of nanoparticle treatments on plant health and development.

### Internship

**Ayub Agricultural Research Institute (AARI), Faisalabad** [ 01/07/2024 – 30/08/2024 ]

- Conducted DNA extraction using the CTAB method.
- Performed DNA quantification with a Nanodrop Spectrophotometer.
- Carried out Polymerase Chain Reaction (PCR) techniques.
- Engaged in Polyacrylamide Gel Electrophoresis (PAGE) and Agarose gel electrophoresis.
- Practiced tissue culture techniques.
- Enhanced skills in the latest biotechnological techniques for more efficient task execution.

## **Research Intern**

**Plant Tissue Culture Lab, Department of Bioinformatics and Biotechnology, GCUF** [ 25/04/2023 – 30/06/2024 ]

- Spearheaded plant tissue culture experiments and trials, refining protocols for optimal results.
- Developed proficiency in media preparation, ensuring nutrient-rich environments for plant growth.
- Enhanced laboratory infrastructure by upgrading equipment and facilities.
- Conducted extensive research to advance plant tissue culture methodologies.

## **President**

**Green Youth Movement (GYM) Club, GCUF** [ 09/2024 – Current ]

- Leading the strategic planning and direction of the club to ensure alignment with environmental sustainability goals.
- Fostering a collaborative environment among members, encouraging active participation and innovation.
- Developing and implementing policies and procedures to enhance the professionalism and organizational efficiency of the club.
- Overseeing the execution of green initiatives, ensuring they are impactful and effectively managed.
- Representing the club in meetings with external stakeholders and organizations to build partnerships and secure support.

## **Thematic Leader**

**Green Youth Movement (GYM) Club, GCUF** [ 03/2024 – 09/2024 ]

- Coordinate communication between club members, students, and external organizations.
- Organize and manage environmental events and activities.
- Inspire and motivate students to participate and take on leadership roles.
- Initiate and oversee green projects on campus and in the community.
- Raise awareness about environmental issues through campaigns and programs.
- Maintain records and prepare reports for transparency and accountability.

## **Literature Secretary**

**Green Youth Movement (GYM) Club, GCUF** [ 09/2023 – 09/2024 ]

- Orchestrated diverse events as the Literature Secretary of the Green Youth Movement Club, fostering environmental consciousness among members.
- Took charge of literature-related tasks, including content creation and dissemination for the society's publications and online platforms.
- Organized induction drives to attract new members and expand the reach and impact of the Green Youth Movement Club.

## **INDIVIDUAL PROJECTS**

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[ 06/2023 – 07/2024 ]

**Development of Web-based Database Cataloging Drugs Available for Hypertrophic Cardiomyopathy (HCM)**

- Collected and meticulously analyzed drug data to ensure accurate and up-to-date information.
- Acquired proficiency in SQL, HTML, CSS, JavaScript, and PHP to develop the database.
- Developed a responsive and user-friendly web interface to facilitate easy access to drug information. Successfully deployed the database, which is now live and accessible to users.
- Enhanced the project's functionality and user experience through continuous learning and application of web development best practices.

Link: [www.hcmpk.online](http://www.hcmpk.online)

[ 07/2024 – 10/2024 ]

## **Comparative Analysis of Biologically and Chemically Synthesized Iron Nanoparticles on Wheat Growth Under Wastewater Stress**

- Conducted a research project assessing the impact of treated wastewater on wheat growth, incorporating biologically and chemically synthesized nanoparticles.
- Analyzed physiological responses, including shoot length, root length, and fresh/dry weight of wheat plants under various treatments.
- Evaluated biochemical parameters such as chlorophyll content and enzymatic activities (SOD, CAT, POD) to determine plant health and stress responses.
- Aimed to demonstrate the viability of nanoparticle-treated wastewater as a sustainable agricultural resource.

[ 01/2024 – 06/2024 ]

## **Callus Induction and Maintenance Of Maize Immature Embryos Through Tissue Culture**

- Initiated and consistently maintained callus cultures from maize immature embryos.
- Utilized advanced tissue culture techniques to achieve successful callus induction.
- Optimized growth conditions to sustain healthy callus cultures over time.
- Applied meticulous aseptic methods and media preparation protocols

[ 08/2023 – 01/2024 ]

## **Sterile In-vitro Germination and Regeneration of Maize Immature Embryos through Tissue Culture**

- Successfully germinated and regenerated maize immature embryos in a controlled tissue culture setting. Demonstrated proficiency in aseptic techniques, media preparation, and plant regeneration protocols.
- Applied advanced knowledge of plant biotechnology to achieve optimal growth conditions and ensure high regeneration efficiency.
- Contributed to research and development projects aimed at improving crop yield and resilience.

## **PUBLICATIONS**

[2024]

### **HCMdrugs: A web-based database cataloging the drugs available for the treatment of Hypertrophic Cardiomyopathy** (Submitted)

M Haris, F Azeem, S Rahman

## **DIGITAL SKILLS**

Html / CSS / MySQL / PHP Framework Laravel / JS / Sequence Analysis / Phylogenetic Analysis / In silico PCR / In Silico Primer Designing / In-silico vector designing

## **Biotechnology**

DNA Extraction / PCR/qPCR / PCR and RT-qPCR / Biochemical enzyme analysis / physiological plant health analysis / Tissue Culture / Gel electrophoresis / Cell-culture / Protocol development

## **Soft Skills**

Management Skills / Leadership / Strong communication

## **ONLINE INTERNSHIPS**

[ 13/05/2024 – 17/05/2024 ]

### **One-week Online Hospital Internship Program**

Medigood Hospital Internships

## ONLINE COURSES

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[ 08/09/2024 ]

### **Forensic science and Fingerprints**

OpenLearn | The Open University

[ 08/09/2024 ]

### **Gene Testing**

OpenLearn | The Open University

[ 21/05/2024 ]

### **Introduction to Molecular and Cellular Biology**

Saylor Academy | The Online Academy

[ 21/04/2024 ]

### **Introductory Biology by MIT**

Cursa | Online Learning Platform

[ 21/04/2024 ]

### **Introduction to Pharmacology**

Cursa | Online Learning Platform

[ 21/04/2024 ]

### **Drug Development Process: Combating Pain**

OpenLearn | The Open University

[ 21/04/2024 ]

### **Infection and Immunity**

OpenLearn | The Open University

[ 08/04/2024 ]

### **Becoming A Great Leader - Leadership Skills**

DisasterReady | Cornerstone OnDemand Foundation

[ 07/04/2024 ]

### **An Introduction to Human Rights**

Amnesty International | Human Rights Academy

## CONFERENCES AND SEMINARS

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[ 21/08/2024 – 22/08/2024 ] University of Central Punjab, Lahore

### **6th Hands-On National Training Workshop On Advanced Bioinformatics and Recombinant DNA Technology**

[ 18/08/2024 ] Human Care Foundation

### **One-day International Online Workshop Engaging Youth In Mitigating and Combating Climate Change**

[ 25/07/2024 ] Webinar

### **One-day International Workshop on AI and Machine Learning For Drug Discovery**

[ 19/07/2024 – 21/07/2024 ] The American Society For Microbiology

### **Online Workshop on Bioinformatics for Microbiology**

[ 07/06/2024 ] Institute of Microbiology (MOI), Government College University Faisalabad

## **One-day Seminar On Microbial Biofilms: Current Dilemmas & Promising Advances**

[ 30/05/2024 – 02/06/2024 ] USA (Hybrid Mode)

## **9th Edition of International Youth Conference (IYC9)**

[ 28/02/2024 – 29/02/2024 ] Centre of Excellence in Molecular Biology, Lahore

## **International Conference on Current Trends, Prospects, and Opportunities in Vaccine Research**

[ 20/12/2023 ] Government College University Faisalabad

## **One-day Seminar on Plantation for Sustainable Healthy Environment**

[ 18/12/2023 – 19/12/2023 ] Government College University Faisalabad

## **6th International Conference on Applied Zoology (ICAZ-2023)**

[ 12/12/2023 ] Department of Biochemistry, University of Agriculture, Faisalabad

## **One-day National Hands-on Training Workshop on Basic Tools of Bioinformatics for Molecular Biology and Biomedical Research**

[ 05/12/2023 ] Government College University Faisalabad

## **One-day Symposium on Soil Health for Agricultural & Environmental Sustainability**

[ 26/09/2024 – 29/09/2024 ] USA (Hybrid Mode)

## **10th Edition of International Youth Conference (IYC10)**

[ 27/09/2024 ] Bioinformatic Agency

## **Online Molecular Docking Workshop**

[ 04/10/2024 – 06/10/2024 ] Al-Faoz Educational Foundation

## **3-day Molecular Docking Workshop**

## **SOCIETIES AND ORGANIZATIONS**

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[ 25/09/2023 – Current ]

## **Green Youth Movement (GYM) Club**

[ 20/05/2023 – Current ]

## **American Society For Microbiology**

## **EVENTS ORGANIZED**

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[ 01/09/2024 – Current ]

## **Organizer of One Student-One Tree Plantation Drive**

Government College University Faisalabad

[ 14/08/2024 – 31/08/2024 ]

## **Organizer of Independence Plantation Drive**

Government College University Faisalabad

[ 15/05/2024 ]

## **Organizer in One-Day Symposium On Nanotechnology For Sustainable Environmental Applications**

Sufi Barkat Hall, Main Campus | Government College University Faisalabad

[ 05/12/2023 ]

## **Chief Organizer in Free Blood Group Testing Camp 2023**

Zakir Hussain Block, Main Campus | Government College University Faisalabad

[ 14/11/2023 ]

## **Organizer in One-day Awareness Seminar & Walk On Causes, Impacts and Solutions of Smog in Pakistan**

Sufi Barkat Hall, Main Campus | Government College University Faisalabad

[ 25/10/2023 ]

## **Organizer in One-day Hands-on Training Workshop on Kitchen Gardening**

STC Hall, New Campus | Government College University Faisalabad

[ 27/10/2022 – 28/10/2022 ]

## **Chief Organizer in Free Blood Group Testing Camp 2022**

Zakir Hussain Block, Main Campus | Government College University Faisalabad

[ 27/09/2023 – 29/09/2023 ]

## **Organizer of Eco-Tourism for Raising Awareness About Environmental Cleanliness And Conservation**

Islamabad-Khanaspur

## **COMPETITIONS**

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[ 03/03/2021 ]

### **Essay Writing Competition**

Kips College (D-campus)

[ 11/01/2021 ]

### **Speech Competition**

Kips College (D-campus)

[ 06/04/2020 ]

### **Career Counseling Competition**

Kips College (D-campus)

## **RECRUITMENT AND CAMPAIGN MANAGEMENT**

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[ 22/02/2024 ]

### **Induction Drive 2024, Green Youth Movement (GYM) Club**

Led the recruitment process, overseeing campaign planning, execution, and the interviewing of prospective members to ensure a robust and dynamic club membership.

## **SOCIAL ACTIVITIES**

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[ 26/02/2024 – 21/03/2024 ]

### **Plantation Drive 2024**

Government College University Faisalabad

[ 14/11/2023 ]

### **Awareness Walk On Impacts Of Smog In Pakistan**

Government College University Faisalabad

[ 27/10/2023 ]

### **Global Sustainability Awareness Walk**

Government College University Faisalabad

[ 21/03/2023 ]

## Awareness Walk On World Forest Day

Government College University Faisalabad

### VOLUNTEERING

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[ 23/03/2020 ] Kips College (D-campus)

**Green Pakistan Day**

### LANGUAGE SKILLS

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**Mother tongue(s):** Urdu

**Other language(s):** English

### DOCUMENTS AND CERTIFICATES

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**To verify the documents, kindly visit the following link:**

Link: [https://drive.google.com/drive/folders/1x75tfStGS363no7\\_hBccFYoY0m4PErRD?usp=sharing](https://drive.google.com/drive/folders/1x75tfStGS363no7_hBccFYoY0m4PErRD?usp=sharing)

### RECOMMENDATIONS

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**Name: Dr. Farrukh Azeem** | Associate Professor, Supervisor

Haris is a dedicated individual who excels in both academic and research endeavors. His commitment to academic excellence and his active engagement in research projects demonstrate his intellectual rigor and passion for scientific inquiry. Haris' strong analytical skills and persistent drive to advance his knowledge make him a standout scholar in his field.

Email: [farrukh@gcuf.edu.pk](mailto:farrukh@gcuf.edu.pk) | Phone number: (+92) 3337704350

**Name: Prof. Dr. Sabir Hussain** | Focal Person Oversight Committee, Green Youth Movement (GYM) Club

Haris is a strong leader and can accomplish well academically. His commitment, initiative, and capacity to motivate others render him an invaluable resource for our society. I heartily endorse Haris for any role that calls for a dynamic leader who possesses extraordinary team-building, leadership, and impact-making abilities.

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