

AYESHA SADDIQA

Nationality: Pakistani **Date of birth:** 02/06/1999
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Gender: Female
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RESEARCH INTEREST

Innovative researcher with a strong foundation in Life Sciences and a specialized interest in Microbiology, Immunology, and Cell & Molecular Biology. I excel at bridging the gap between systemic physiology and molecular mechanisms, with proven expertise in toxicological modeling and histomorphometric analysis. Distinguished by a dual-competency in rigorous biostatistics and visual communication, I possess the analytical precision required for complex biomedical research. A published author and collaborative leader, I am committed to advancing human and animal therapeutics through a mechanistic understanding of cell biology and infectious disease.

EDUCATION AND TRAINING

Master of Philosophy in Zoology (MPhil)

University of Gujrat, Hafiz Hayat Campus, *Pakistan* [Nov/2022 – Dec/2024]

Final Grade: CGPA: 3.86 / 4 (82%)

Thesis: Effect of *Papaver Somniferum* L. Supplementation on Growth Performance, Blood Profile, LFT and Tissue Redox Parameters of Male Rabbit

Master of Sciences in Zoology (MSc)

University of Gujrat, Hafiz Hayat Campus, *Pakistan* [Oct/2019–Oct/2021]

Final Grade: CGPA: 3.59 / 4 (78.17%)

Bachelors of Science (BSc) [Zoology, Botany, Psychology]

University of Gujrat, Hafiz Hayat Campus, *Pakistan* [July/2016–August/2018]

PROJECTS (*Academic & Research Experience*)

Lead Researcher: Poppy Seed Study (MPhil) | 2022 – 2024

Dose- and Time-Dependent Biphasic Modulation of Physiological Responses by Poppy Seed Supplementation in Rabbits (Under-review for publication)

[Department of Zoology, University of Gujrat, Pakistan, 14/03/2024 – 10/01/2025]

Research Assistant | 2022 – 2024

Dual Benefits of Garlic Essential Oil: Superior Individual Efficacy and Enhanced Synergism with Ginger Essential Oil in Improving Growth, Liver Redox Activity, and Immunity in Rabbits (Under-review for publication)

[Department of Zoology, University of Gujrat, Pakistan, 14/03/2024 – 10/01/2025]

Research Assistant | 2022 – 2024

Construction of CRISPR-CAS9 Cassette for Bacterial Genome Insertion Through Homologous Recombination

[Department of Zoology, University of Gujrat, Pakistan, 10/02/2024 – 15/02/2025]

PUBLICATIONS

- Saddiqa, A., Yaseen, R., Hassan, M. *et al.* Bridging the Gap Between Herbs and Pharmaceuticals: The Science Behind Herbs' Medicinal Properties and Potential in Modern Drugs. *Rev. Bras. Farmacogn.* 35, 861–877 (2025). <https://doi.org/10.1007/s43450-025-00674-4>. **(First Author)**
- Ethanollic Chicory Leaf Extract Enhances Hematological Profile, Gut Microbiota, and Intestinal Morphology in Rabbits **(Accepted for publication, 2nd Author)**

TECHNICAL & LABORATORY SKILLS

In Vivo Expertise: Advanced handling, surgical dosing, and ethical longitudinal monitoring of rabbit and murine models.

Laboratory & Assays: Hematological & biochemical profiling, ELISA, quantitative histomorphometry (ImageJ), microbial isolation, culturing and identification, bio-risk (Level-2) mitigation, mass spectrophotometry, FTIR, UV-vis spectroscopy, GC-MS, HPLC, Gel-electrophoresis, DNA& RNA extraction, RNA-seq, PCR, enzyme kinetics chromatography, gram staining, microscopy, microbial antioxidant assays, microtomy, histology, extraction and isolation of seeds.

Biostatistics & Computational: Expert proficiency in SPSS, Statistix and Python for complex modeling (Linear Mixed Models, Two-Way ANOVA) and data validation. Other includes Endnote, Mendeley, Microsoft Office, and ArcGIS.

Scientific Communication: Advanced scientific data visualization and publication-ready figure preparation utilizing Canva, Adobe Illustrator, Inkscape.

PROFESSIONAL EXPERIENCE

Research assistant **2024 - continue**
Laboratory of animal Physiology, Hematology and Immunology, Department of Zoology, University of Gujrat.

- Manage and execute in vivo experimental trials, ensuring strict adherence to laboratory protocols.
- Perform comprehensive sample processing and advanced biostatistical analysis for diverse biological studies.
- Contribute directly to experimental design, methodology, and manuscript preparation for peer-reviewed publications.

E-commerce business owner & marketing manager **2023 - 2024**

- E-commerce management and growth for health and beauty products.
- Digital marketing strategy development and execution for online sales and brand visibility.
- Product management and optimization for improved conversion rates and customer engagement.

Freelancer services **2020 - 2023**

- Work as a Graphic Designer and scientific content writer on online platforms.
- Proven experience in developing brand identities, creating cohesive visual stories, and designing marketing materials that capture audiences' attention.
- Experienced in simplifying complex topics into clear articles, reports, and educational materials.

Subject teacher **Jan 2018 – Jan 2019**
Dar e Arqam Schools Kharian Campus

- Delivered comprehensive lessons, fostering understanding and interest in the subject matter.
- Designed and implemented effective teaching strategies tailored to diverse learning needs.
- Assessed student performance and provided constructive feedback to encourage improvement.

Senior coordinator **Jun 2018 - Jan 2019**
Dar e Arqam Schools Kharian Campus

- Supervised and coordinated academic and administrative activities to ensure smooth operations.
- Provided leadership and guidance to faculty, promoting effective teaching practices.
- Monitored student progress and implemented strategies to enhance academic performance.

LANGUAGE SKILLS

English: Proficient (IELTS academic 6.5)

Urdu / Punjabi: Native/Bilingual

ACADEMIC HONORS & AWARDS

Silver Medalist in MPhil Zoology

[University of Gujrat, Hafiz Hayat Campus, Pakistan, 2022-2024]

Third-place Holder in MSc Zoology

[University of Gujrat, Hafiz Hayat Campus, Pakistan 2019-2021]

2nd Position Holder in Exhibition on Insect Ecology and Bio-waste management

[University of Gujrat, Hafiz Hayat Campus, Pakistan, 12/02/2023]

CONFERENCES & PROFESSIONAL DEVELOPMENT

MCE Webinar on Making Cell Therapy Affordable and Accessible: Off-the-Shelf CAR γ T Cells Generated Using CRISPR/AAV

[Virtual Mode, The Ohio State University, 22/10/2025]

Honor Certificate as Scholar Council Member

[ETERNO PRESS, 14/08/2025-31/12/2025]

International Webinar to Combat Human Malnutrition

[Hybrid Mode, Organized by University of Layyah Pakistan, HARRAN ÜNİVERSİTESİ Turkey, 12/01/2024]

Certificate of Participation in Thesis Poster Presentation Competition

[University of Gujrat, Hafiz Hayat Campus, Pakistan 2024]

Participant at 2nd International Conference of Sciences

[Rawalpindi Women University, Pakistan, 15/11/2023]

Participate in Seminar on Molecular Genetic Landscape of Oculocutaneous Albinism

[Department of Zoology, University of Gujrat, Hafiz Hayat Campus, Pakistan, 20/12/2022]

Certificate of Appreciation in Webinar on Water Conservation

[Active Citizenship Project by British Council, 12/04/2021]

Training on Bio-risk management

[Molecular Biology Lab, University of Gujrat, Hafiz Hayat Campus, Pakistan, 15/02/2023-16/02/2023]

TECHNICAL COMPETENCIES & TRAINING

Diploma in Graphic design

[Institute of Computer Education, Lalamusa, 02/09/2021]

Let's Break the Chain of COVID-19 Infection

[Mohammed Bin Rashid University of Medicine and Health Sciences, UAE, 19/04/2020]

E-commerce and Marketing Strategy

[Online from Onion and technology, Pakistan, 10/01/2023]

REFEREES

1. Associate Professor (Supervisor)

Name: Dr. Razia Iqbal Jafri

Phone number: (+92) 3338422798

Email: razia.iqbal@uog.edu.pk

Department of Zoology, University of Gujrat, Pakistan

2. Associate Professor

Name: Dr. Kiran Aftab

Phone number: (+92) 3214276576

Email: dr.kiran@uog.edu.pk

Department of Zoology, University of Gujrat, Pakistan

3. Associate Professor

Name: Dr. Syed Zakir Hussain Shah

Phone number: (+92) 3060660060

Email: dr.zakirhussain@uog.edu.pk

Department of Zoology, University of Gujrat, Pakistan