

# IRFAN KHAN

GENETIC COUNSELOR | MOLECULAR BIOLOGIST | PROGRAM MANAGER | NONPROFITS EXPERT | HEALTH & SAFETY OFFICER

## CONTACT

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## SPECIALIZED SKILLS

- Genetic Counseling (family screening, patient guidance, prevention strategies)
- Thalassemia Prevention & Management Programs
- Molecular Diagnostics: Illumina Sequencing, PCR, ELISA, DNA/RNA/Protein Isolation
- Bioinformatics: R, Python, Biopython, MegaX, Phylogenetics, Phylodynamics, Biorender
- Program & Project Management (health, education, community development)
- Fundraising & Donor Engagement
- Partnerships with NGOs, and Government Bodies
- Event Management
- Public Health Campaigns & Awareness Sessions
- Data Analysis & Reporting (SPSS, AI tools, digital dashboards)
- Community Outreach & Volunteer Management

## ACADEMIC SKILLS

- Advanced Laboratory Techniques: DNA/Plasmid Isolation, Microbial Studies, Antibiotic Resistance Research
- Next-Generation Sequencing (NGS) for genetic variant identification
- Gene Expression Studies & Molecular Pathology
- Research Writing, Scientific Publications, and Conference Presentations
- Knowledge of Genetics, Oncology, Pharmacology, and Genetic Engineering
- Bioinformatics Applications: Genomic Data Analysis, Big Data (Biopython, RStudio)
- Scientific Communication & Seminar Organization
- Academic Teaching & Curriculum Design

## PROFILE

Experienced Genetic Counselor & Certified Program Manager with expertise in molecular biology, public health, and nonprofit leadership and NGOs Development. Skilled in genetic diagnostics, bioinformatics, and program design, with a proven track record of raising millions for nonprofits, leading thalassemia prevention campaigns, and developing community education initiatives. Active member in international scientific communities.

## PROFESSIONAL EXPERIENCE

### Resource Mobilization Officer (CSR)

2025 - 2026

#### READ Foundation-Islamabad

Served as Resource Mobilization Officer (CSR) at READ Foundation, leading corporate partnership development, fundraising initiatives, and stakeholder engagement. Secured strategic collaborations with universities, corporate donors, and development partners to support education programs. Designed and implemented resource mobilization strategies, strengthened CSR networks, and contributed to sustainable funding growth for large-scale educational projects.

### Head of Health Department

Promoted

#### Dosti Welfare Organization

Led preventive healthcare, awareness, and education programs as Head of the Health Department at Dosti Welfare Organization. Initiated major projects including Thalassemia Free Pakistan, Genetic Disorders Prevention Program, and School Eye Screening initiatives. Trained 450+ Master Trainers to sustain community health campaigns and founded the National Seminar on Genetic Disorders (NSGD) series, successfully organizing five nationwide editions.

### Head of Fundraising & Partnerships

Promoted

#### Dosti Welfare Organization

Led international donor engagement through GlobalGiving, Benevity, and GoFundMe, securing funding for health and education programs. Strengthened institutional linkages by signing MoUs with nine universities in KP and building partnerships with national and international NGOs. Designed sustainable fundraising and partnership strategies to support long-term program growth and impact.

### Program Manager & Specialist

Promoted

#### Dosti Welfare Organization

Designed and led innovative education and community development initiatives, including the Dosti One Room School, My Home My School (COVID-19 response), and School on Wheels programs for underserved children. Managed the Ending Illiteracy in Pakistan project by conducting needs assessments, supervising field teams, strengthening partnerships, and ensuring timely, impact-focused implementation.

# COURSES

## Project Management & Leadership

- Foundations of Project Management – Google (2025)
- International Organizations Management – University of Geneva (2025)
- Project Management – University of Colorado Boulder (2025)
- Project Management: Foundations and Initiation – University of Colorado Boulder (2025)
- Project Planning and Execution – University of Colorado Boulder (2025)
- Leadership and Team Management – Skillup (2025)

## Genetics, Genomics & Molecular Biology

- Introduction to Genomic Technologies – Johns Hopkins University (2025)
- Genetic Epidemiology – University of Colorado (2021)
- Methods of Molecular Biology – St. Petersburg Polytechnic University, Al Farabi Kazakh National University (2021)
- Understanding Cancer Metastasis – Johns Hopkins University (2021)
- Thoracic Oncology – University of Michigan (2021)
- The Science of Stem Cells – American Museum of Natural History (2020)
- Introduction to Breast Cancer – Yale University (2020)
- Genetic Counselling – Wellcome Connecting Science (2021)

## Biotechnology & Life Sciences

- Industrial Biotechnology – The University of Manchester (2022)
- Western Blotting Course – Bio-Rad Laboratories (2022)
- Algae Biotechnology – UC San Diego (2021)
- Biomedical Visualisation – University of Glasgow (2021)
- DNA Decoded – McMaster University (2021)
- Drug Development – UC San Diego (2021)
- The Science of Medicines – Monash University (2021)

## Epidemiology & Public Health

- Essential Epidemiologic Tools for Public Health Practice – Johns Hopkins University (2021)
- Bacterial Genomes: Antimicrobial Resistance in Bacterial Pathogens – Wellcome Genome Campus (2021)
- Bacterial Genomes: Disease Outbreaks and Antimicrobial Resistance – Wellcome Genome Campus (2021)
- Bacterial Genomes: From DNA to Protein Function – Wellcome Genome Campus (2021)
- Specialized Research & Tools
- Cre-lox Technology in Mouse Modeling – The Jackson Laboratory (2021)
- CRISPR-Cas9 – The Jackson Laboratory (2021)
- Managing Mental Health and Stress – Coventry University (2021)

## Project Leader

2023 - 2025

### Global Education Campaign USA

I have worked with the Global Education Campaign as a Project Leader on GlobalGiving, where I successfully led crowdfunding initiatives and mobilized support for impactful educational projects. This was a project-based job where I delivered the results.

## Genetic Counselor

2021 - 2025

### Dosti Welfare Organization

Led the “No More Thalassemia in Pakistan” project, which combined genetic counseling, cost-effective screening research, and awareness campaigns to reduce the disease burden. My work included arranging medical camps, conducting school and community awareness sessions, and providing individualized counseling to patients and their families. I also contributed to research on developing affordable genetic screening kits for hemoglobinopathies, bridging the gap between scientific innovation and public health needs.

## Senior Genetic Counselor

2021 - 2022

### Zwandoon Welfare Organization

Served as Senior Genetic Counselor, where I led thalassemia diagnostic laboratory services and provided specialized counseling to patients and families. My role involved coordinating diagnostic testing, interpreting genetic results, and guiding families through prevention and management options, ensuring both medical and psychosocial support.

## Genetic Counselor

2020 - 2021

### Dosti Development Consultant

At Dosti Development Consultant (SMC) in 2020, I worked as a Genetic Counselor, delivering personalized counseling services to individuals and families with genetic disorders. I advised on inheritance patterns, prevention strategies, and available treatment pathways, while also providing consultancy to strengthen community-level awareness around genetic health.

## Research Assistant

2017 - 2019

### University of Peshawar

Research Assistant in the Molecular Biology Lab, where I conducted DNA extraction, plasmid isolation, antibiotic resistance, and microbial studies. My contributions supported published research and enhanced understanding of bacterial resistance mechanisms, laying the foundation for my academic and professional growth in genetics.

## Student Internship

2018 - 2019

### Khyber Medical University

I joined as a Research Intern on a WHO project, focusing on micronutrient quantification. I applied ELISA and RT-PCR techniques to analyze vitamins and minerals, contributing to global research standards while strengthening my laboratory skills.

## Research Intern

2019 - 2020

### Hayatabad Medical Complex, MTI Peshawar

During my internship at Hayatabad Medical Complex (2019), I gained hands-on hospital experience in diagnostic services, working in hematology and microbiology departments. I participated in OPD and sample collection, performed laboratory tests, and supported accurate diagnosis for patient care.

## Science Teacher

2016 - 2017

### Al-Hamra Public School & College

I taught science subjects to senior classes and designed laboratory experiments. This role allowed me to enhance my teaching, communication, and classroom management skills while fostering students' interest in science.

## LANGUAGES

- English
- Urdu
- Arabic
- Pashto

## REFERENCE

Available upon request



## EDUCATION

### M.Phil- Molecular Biology and Genetics

2022 - 2025

*Institute of Basic Medical Sciences| Khyber Medical University, Peshawar, Pakistan*

### Bachelor of Science- Biotechnology

2017 - 2021

*Centre of Biotechnology and Microbiology| University of Peshawar, Khyber Pakhtunkhwa, Pakistan*

### Diploma- Pathology

2021 - 2022

*Online, European Open University*

### Occupational Health & Safety Certifications

2021 - 2022

- NEBOSH International General Certificate in Occupational Health & Safety – NEBOSH, UK – 2022
- IOSH Managing Safely Certification – Institution of Occupational Safety & Health (IOSH), UK – 2025
- OSHA Occupational Safety & Health Certification – OSHA – 2026



## PUBLICATIONS AND SCIENTIFIC PRESENTATIONS

- The Thyroid Gland's Glycosylation: Aspect of Glycoprotein Function in Thyrocyte Physiology and Thyroid Disorders. DOI: <https://doi.org/10.53350/pjmhs22166986>.
- Morphological Identification and Resistance Profile of Antibiotic and Heavy Metals-Resistant Bacteria in Hospital Sewage of Peshawar. DOI: [www.als-journal.com/](http://www.als-journal.com/) ISSN 2310-5380/ September 2023.
- Analysis of Antibiotic Sensitivity of Salmonella Typhi Isolated Dom from Tap Water at District Peshawar. DOI: <https://www.researchgate.net/publication/376306106>.
- Presentation: The Burden of Genetic Disorders in Pakistan. Department of Life Sciences, Sarhad University of Science and Technology (SUIT)  
Presentation: Precision-Enhanced and Economically Viable Genetic.
- Disorder Diagnosis via Optimized Next Generation Sequencing: A Thalassaemia Case Study, Pakistan Association of Pathologists (PAP23) 44th conference



## TRAININGS AND SPECIALIZATIONS COURSES

- Google Project Management Specialization – Google (2025)
- Program Management Course – University of Colorado Boulder (2025)
- Thalassaemia Prevention and Management – Thalassaemia International Federation (2021)
- Basic Bioinformatics Course – Khyber Medical University (2023)
- International NGO Management – University of Geneva (2025)
- Trainings: Safe Handling of High-Consequence Pathogens (UK Health Security Agency), Integrated Pest Management (USAID), CRISPR Pro Workshop (Codon Corps), PPE Training for Health Workers (Govt of Pakistan)