



# AZIZ UR REHMAN SAFI

**Manager IPC /Microbiologist**

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*Member of the American Society for Microbiology [ASM ID: 25839053]*

*HSP Future Fellow 2023 [Health Security Partners, US]*

## Summary

A highly skilled and detail-oriented early stage researcher in medical and molecular microbiology. Possessing excellent communication and leadership abilities, with a solid track record of 7 years of professional international and national experience. Proficient in various microbiological techniques, genomics, and proteomics, including rtPCR, 2D-SDS, Immunoprecipitation, Immunoaffinity Chromatography, Mass Spectrometry, Gene expression analysis, Scientific writings, and Bioinformatics tools.

Throughout my career, I have held significant roles such as IPC Officer at THQ Hospital NW, Molecular Biologist at a COVID-19 Hospital in Peshawar, Research Officer-ORIC at Peshawar Medical College, and Researcher at Aarhus University in Denmark, among others. I am eager to continue making meaningful contributions in these areas. My passion lies in research, teaching and in field work.

Driven by a strong sense of responsibility, I approach my work with unwavering dedication and enthusiasm. I am motivated by the opportunity to explore new frontiers of knowledge, skills, and technology that have the potential to reshape our way of life.

## Skills

Manuscript Writing| Research Methodology | Research data analysis| LMS| Microsoft Applications| Management| Good Knowledge of Quality Standards| Concept Based Teaching| Curriculum Assessment| Bacterial Genetics and Proteomics| Gel electrophoresis| Immunoblotting| Immunoprecipitation (IP)| 2D-SDS| Mass spectrometry| Molecular Biology| Molecular Diagnostics| Molecular Immunology| Multi-Disciplined| PCR primer design| Phylogenetics| Prism| Real Time rtPCR| Skyline| SPSS

## Experience

### June 2022–June 2023 **Manager Infection Prevention & Control {IPC}**

THQ Hospital, Mir Ali, North Waziristan, SARHAD

As an Infection Prevention & Control Manager in THQ Hospital Mir Ali, North Waziristan, my responsibilities were to design and implement IPC protocols and standards for the prevention and control of infections and proper disposal of hospital's waste. Developing and implementing policies relating patient safety and quality of care were also included in my responsibilities.

### July 2020-May 2022 **Microbiologist**

COVID-19 Hospital, Nishtarabad, Peshawar, MERF

Leading lab staff in diagnostics tests like pathogens identification, culture sensitivity, rtPCR, microscopy, hematology, urine analysis, biochemistry, serology and report generation in IPMS database for COVID-19 and other admitted patients. Conducting risk assessments for the identification of potential hazards and then implementing strategies to mitigate those risks were also included in my responsibilities.






### Nov 2020 – Feb 2022 **Research Manager-ORIC**

Peshawar Medical College [PMC], Pakistan

As a Research Manager in ORIC-PMC, my main responsibilities were to manage research activities like seminars, workshops, proposal writing and grants acquisition. Also worked as section editor for the Journal of Postgraduate Medical Institute [JPMI].

- Apr 2019 - Oct 2019  **Researcher**  
Aarhus University, Aarhus, Denmark  
As a visiting researcher in MBG AU, performed 16S rRNA gene sequencing, 2D-SDS immunoblotting, Nano-Drop quantification, Mass Spectrometry linked with different bioinformatics tools like Analyst, UniProt, Protein Pilot, PeakView, Skyline and MEGA-X to characterize immuno-reactive proteins of S. typhi.
- Mar 2018 - Mar 2019  **Research Associate**  
Kohat University of Science and Technology, Pakistan  
As a Research Associate in HEC NRP funded project, my responsibilities were to conduct research work, maintain audit and prepare technical and fiscal reports for the project.
- May 2016 - May 2017  **Lab Demonstrator**  
National Internship Program, Pakistan  
In the Microbiology department KUST, worked as lab demonstrator and helped in research experiments with BS and MS students.
- Sep 2014 - Sep 2015  **Research Associate**  
Kohat University of Science and Technology, Pakistan  
For the PSF funded project, I performed research work, maintained audit and prepared technical and fiscal reports for the project.

## Education

- 2023  **Ph.D. in Medical Microbiology**  
Kohat University of Science & Technology Pakistan  
CGPA: 3.95/4.00
- 2015  **M.Phil. in Medical Microbiology**  
Kohat University of Science & Technology Pakistan  
CGPA: 3.51/4.00
- 2013  **Bachelor of Science (Hons) in Microbiology**  
Kohat University of Science & Technology Pakistan  
CGPA: 3.32/4.00
- 2009  **Intermediate/A-Level Pre Medical**  
Government College Peshawar, Pakistan  
Percentage: 70%
- 2007  **Matriculation/O-Level Science Group**  
Municipal Inter College Peshawar, Pakistan  
Percentage: 78%

## Awards

- ❖ Awardee of Rs. 1.5 million grant under “International Research Support Initiative Program” by Higher Education Commission Pakistan for research in Aarhus University, Denmark.
- ❖ Awarded with “Letter of Appreciation” by The Advanced Studies & Research Board (ASRB) for best preparation and presentation of Research Synopsis.
- ❖ Awarded with “Certificate of Excellence in Reviewing” by the “Journal of Advances in Biology & Biotechnology” and “Asian Journal of Advanced Research and Reports” for the year 2018 and 2019 respectively.
- ❖ Awarded with “Certificate of Training Completion on Biorisk Management” by Association for Biorisk Management and Health Security Partners on October 31, 2019.
- ❖ Awarded with “Certificate of participation” in training workshop on “Concepts in Global Health, Emerging Infectious Diseases, One Health, Biorisk Management, and Dual Use Research of Concern” by Health Security Partners in Baku Azerbaijan in June 2023.

## Publications

1. **Safi, A. U. R.**, Bendixen, E., Rahman, H., Khattak, B., Wu, W., Qasim, M. (2022). "Molecular identification and differential proteomics of drug resistant *Salmonella Typhi*". *Diagnostic Microbiology and Infectious Disease*, 115883. <https://doi.org/10.1016/j.diagmicrobio.2022.115883>.
2. **Safi, A.U.R.**, Salih, M.M., Rahman, H., Khattak, B., El Askary, A., Qasim, M., (2022) "Immunoaffinity-based mass spectrometric characterization of immunoreactive proteins of *Salmonella Typhi*". *Saudi Journal of Biological Sciences*, 30(01) p.103502. <https://doi.org/10.1016/j.sjbs.2022.103502>.
3. Khattak, F.A., Khan, T.A., Hussain, M., Khan, S.N., Ullah, N., Rehman, B., Qasim, M., **Safi, A.U.R.**, Ishfaq, M. and Afaq, S. (2022) "Analysis of associated risk factors among recurrent cutaneous leishmaniasis patients: A cross-sectional study in Khyber Pakhtunkhwa, Pakistan". *Journal of Infection and Public Health*, 15(11), pp.1175-1179. <https://doi.org/10.1016/j.jiph.2022.09.010>
4. Yasin, N., Rahman, H., Sarwar, Y., Qasim, M., Nisa, I., Mirza, M. R., Khan, N., **Safi, A.U.R.**, & Alzahrani, K. J. (2021) "*Salmonella Typhi* from Northwest Pakistan: Molecular Strain Typing and Drug Resistance Signature" *Microbial drug resistance (Larchmont, N.Y.)*, <https://doi.org/10.1089/mdr.2020.0304>.
5. Azra, A., Kaleemullah, M., Khattak, B., Asma, N., **Safi, A.U.R.**, & Farhan, Y. (2019) "Comparative Efficacy of Domestic Garlic (*Allium Sativum*) and Neem (*Azadirachta Indica*) against *Haemonchus Contortus* in Small Ruminants" *Applied Ecology and Environmental Research*, 17,5, 10389-10397.
6. **Safi, A.U.R.**, B. Khattak, Z. U. D. Sindhu, M. Attaullah, Q. Jamal, T. A. Khan and I. A. Khan (2018) "Biological Control of *Haemonchus Contortus* by Fungal Antagonists in Small Ruminants" *Applied Ecology and Environmental Research*, 16, 5, 5825-5835.
7. Y. Nusrat, A. Jabeen, I. Nisa, U. Tasleem, H. Khan, **Safi, A. U.R.**, M. Hussain and M. Qasim (2018) "A review: Typhoid fever" *Journal of Bacteriology and Infectious Diseases*, 2,2, 1-7.
8. U. Siraj, M. Miraj, N. Ahmad, **Safi, A.U.R.** (2016) "Survey of Prevalence of *Plasmodium Vivax* & *Falciparum* of Adult Population of Hussai, Village of District Mardan, Khyber-Pakhtunkhwa Pakistan" *Journal of Applied Environmental and Biological Sciences*, 7, 108-113.
9. **Safi, A.U.R.**, Subhanullah, Attaullah, B. Khatak, N. Akbar, M. Asif, N. Khan (2015) "Isolation and Identification of Bacteria from Transformer Oil Contaminated Soil" *British Microbiology Research Journal*, 6, 207-214.
10. Khan, J., Rehman. M., **Safi, A.U.R.**, Z. Rehman (2014) "Prevalence of Mastitis and its Correlation with Brucellosis among Bovine" *Journal of Bio-Molecular Sciences*, 2, 86-92.

## Projects

- ❖ Molecular characterization of immunoreactive proteins of blood born *Salmonella Typhi* in Pakistan
- ❖ Development of rapid serodetection test for accurate and affordable diagnosis of typhoid fever in Pakistan
- ❖ Biomarkers elucidation for the serodiagnosis of multidrug resistant *Mycobacterium Tuberculosis*: An immunoproteomics approach
- ❖ Biological control of *Haemonchus Contortus* by fungal antagonists in small ruminants
- ❖ Isolation and identification of bacteria from transformer oil contaminated soil

## Languages

English

Expert

Urdu

Expert

Pashto

Expert

Hindi

Intermediate

## References

Would be provided upon request