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**Qualifications:** **Post-doctorate (Biotechnology) 2016**  
EMBRAPA Genetic Resources and Biotechnology.  
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#### **Research Interest:**

Molecular and structural biology, gene cloning and protein structural modeling of Hepatitis C virus and human proteins, solving protein structure using X- ray crystallography and other biophysical technique, characterization of bacterial and viral proteins, drug discovery and vaccine design at the interface of wet and dry lab, novel proteins production using recombinant DNA technology and their characterization.

#### **Research Publications**

1. **PNPLA3 and TM6SF2 genetic variants and hepatic fibrosis and cirrhosis in Pakistani chronic hepatitis C patients: a genetic association study.** Bisma Rauff, Badr Alzahrani, Shafiq A. Chudhary, Bilal Nasir, Saqib Mahmood, Munir Ahmad Bhinder, **Muhammad Faheem** and Ali Amar. **BMC Gastroenterology** (2022). DOI: [10.1186/s12876-022-02469-6](https://doi.org/10.1186/s12876-022-02469-6)
2. **A case report of dengue shock syndrome complicated with multiorgan failure and hepatitis E virus superinfection.** Kinza Waqar, Hashaam Akhtar, Muhammad Mujeeb Khan, Muhammad Umar, Bisma Rauff & **Muhammad Faheem**. **Future Virology** (2022). DOI: [10.2217/fvl-2021-0239](https://doi.org/10.2217/fvl-2021-0239)
3. **Breast Cancer Resistance Likelihood and Personalized Treatment Through Integrated Multiomics.** S Mehmood, M Faheem, H Ismail, SM Farhat, M Ali, S Younis, MN Asghar. **Frontiers in Molecular Biosciences** (2022). DOI: [10.3389/fmolb.2022.783494](https://doi.org/10.3389/fmolb.2022.783494)
4. **Structural and functional characterization of disease-associated NOTCH4: a potential modulator of PI3K/AKT-mediated insulin signaling pathway.** Muhammad Khalid Anwar; Umbreen Ahmed; Zaira Rehman; Ammad Fahim; Syed Babar Jamal; **Muhammad Faheem**; Rumeza Hanif. **Applied NanoScience** (2022). DOI: [10.1007/s13204-021-02281-w](https://doi.org/10.1007/s13204-021-02281-w)
5. **Engineering of phenylalanine dehydrogenase from Thermoactinomyces intermedius for the production of a novel homoglutamate.** Muhammad Tariq, Muhammad Israr, Muslim Raza, Bashir Ahmad, Azizullah Azizullah, Shafiq Ur Rehman, **Muhammad Faheem**, Xinxiao Sun, Qipeng Yuan. **PLOS One** (2022). DOI: [10.1371/journal.pone.0263784](https://doi.org/10.1371/journal.pone.0263784)
6. **Crystallographic approach to fragment-based hit discovery against Schistosoma mansoni purine nucleoside phosphorylase.** **Muhammad Faheem**; Napoleão Fonseca Valadares; José Brandão-Neto; Domenico Bellini; Patrick Collins; Nicholas M. Pearce; Louise Bird; Juliana Roberta Torini; Raymond Owens; Humberto M Pereira; Frank Von Delft; João Alexandre Ribeiro Gonçalves Barbosa. **Biochemical Journal** (2021). DOI: [10.1042/BCJ20210041](https://doi.org/10.1042/BCJ20210041)
7. **Development of Multivalent Vaccine Targeting M Segment of Crimean Congo Hemorrhagic Fever Virus (CCHFV) Using Immunoinformatic Approaches.** Maaza Sana, Aneela Javed, Syed Babar Jamal, Muhammad Junaid, **Muhammad Faheem**. **Saudi Journal of Biological Sciences** (2021). DOI: [10.1016/j.sjbs.2021.12.004](https://doi.org/10.1016/j.sjbs.2021.12.004)

**Google Scholar Link:** <https://scholar.google.com/citations?user=1qeH0HUAAAAJ&hl=en&oi=sra>

**Research Grants (30.317 million PKR)**

<b>Project Title</b>	<b>PI/Co-PI</b>	<b>Amount PKR million</b>	<b>Funding</b>	<b>Duration Years</b>
<b>Development of Recombinant Subunit Tetravalent Vaccine against Dengue virus.</b>	PI	9.586	NRPU-HEC	3
<b>Laboratory scale production of anti-cancerous thermostable recombinant L- asparaginase.</b>	PI	0.99	IRF-NUMS	2
<b>Antimicrobial Peptides from Marine Sponges Against Multi Drug Resistant Bacteria (AMP-MDR)</b>	Co-PI	7.60	NRPU-HEC	3
<b>Expression pattern analysis of 49 human ABC-Transporter proteins and their inhibition in patient derived brain tumors cell lines via ABC-specific inhibitors, cancer chemotherapeutics and siRNA to develop novel treatment strategies.</b>	Co-PI	10.90	NRPU-HEC	3
<b>High-throughput screening of inhibitors for SARS-CoV2 using multi-dimensional drug design.</b>	Co-PI	0.795	IRF-NUMS	2
<b>Discovery and Pre-clinical validations of potential drugs for treatment of Brain Cancer via Drug Re-purposing.</b>	Co-PI	0.5	IRF-Khyber Medical University, Peshawar	2