

MUHAMMAD AKRAM

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OBJECTIVE

To work in a team-oriented R&D environment leveraging my expertise in molecular biology and to seek challenging assignment and responsibility, with an opportunity for growth and career advancement as successful achievements .

POSTAL ADDRESS

Office: Centre for Applied Molecular Biology, 87-West Canal Bank, Thokar Niaz Baig, Lahore-53700, Pakistan

Residence: House No. E-729/28 Tower Street, Mehboob Colony Chungi Amar Sidhu, Lahore Pakistan

EDUCATION

M.Sc. Chemistry (Specialization in Organic Chemistry) 2005
University of the Punjab Lahore

AREAS OF INTEREST

- Molecular Genetics, Genetic Association Studies
- DNA Sequencing and Genotyping
- Human Recombinant Proteins

SCIENTIFIC AND RESEARCH EXPERIENCE

- Worked on “*Some Enzymatic Reactions of Carbonyl compounds*” in GC University Lahore as my M.Sc research work in 2005.
- Two years working experience in Pak-China Manufacturing (Ali Akbar Group) as a **Quality Control Chemist** with additional duties in R&D from 2006 to 2008.
- I joined Centre for Applied Molecular Biology as Research Officer in 2008. Group wise scientific and research activities are

BIOPHARMACEUTICAL LAB (2008-2013)

My scientific and research activities in Biopharmaceutical Lab as a group member are

- Recombinant protein purification using AKTA Explorer and AKTA Pilot purification systems.
- Expression studies, fermentation and purification of different human recombinant

proteins.

- Optimizing reaction conditions for PEGylation of human recombinant proteins and purification of mono PEGylated proteins at lab scale.
- Different quality control tests for recombinant proteins.

DNA Core Facility (2014 to date)

1) Research and Development

- Working on “*Genetic association of different SNP variants of gene ADAM33 with asthma patients of Lahore’s population*” as a team member.
- Working on different survey based studies to “*Estimate asthma prevalence and risk factors associated with asthma phenotypes in Pakistan*”.

2) Commercial Services

Providing commercial services to DNA Core Facility for DNA Sequencing and DNA Genotyping as well.

INSTRUMENTATION SKILLS AND MOLECULAR BIOLOGY TECHNIQUES

Good command on following scientific equipments and molecular biology techniques

- AKTA PILOT Purification System
- AKTA Explorer Purification System
- Genetic Analyzers (ABI-3730 and ABI 3130)
- High Performance Liquid Chromatography (HPLC)
- Gas Chromatograph (GC)
- UV-Vis Spectrophotometer
- PCR
- Conductivity Meters and pH Meters
- Karl Fischer Moisture Analyzer
- Peptide Mapping
- SDS-PAGE
- Agarose Gel Electrophoresis
- Iso-electric Focusing
- Western Blotting
- Sequencing PCR

- Genotyping and DNA Fragment Analysis
- DNA/RNA extraction both using commercial kits as well as manual methods

BIOINFORMATICS SKILLS

Good command on different bioinformatics tools used for DNA sequencing analysis and DNA fragment analysis and primer designing such as

- Sequencing Analysis
- GeneMapper
- Chromas
- Primer3

Also have a good command on different software used for basic statistics, LD & Haplotype Structure determination, statistical analysis of genetic markers including microsatellite data, single nucleotide polymorphism (SNP) data, and genetic association analysis

- IBM SPSS Statistics 20
- Haploview 4.2
- Power Marker v 3.25
- SHEsis

WORKSHOPS, TRAININGS AND CONFERENCES

- Participated in a conference on “DNA Day & NAYS Emerging Ideas Conference” organized by National Academy of Young Scientists (NAYS) and Centre of Excellence in Molecular Biology with sponsorship of The Emerging Nations Science Foundation (ENSF) on 25th April 2013.

PUBLICATIONS

- Ahmed, N., H. Bashir, A. U. Zafar, M. A. Khan, S. Tahir, F. Khan, M. I. Khan, **M. Akram** and T. Husnain (2014). "**Optimization of conditions for high-level expression and purification of human recombinant consensus interferon (rh-cIFN) and its characterization.**" Biotechnol Appl Biochem.