

CURRICULUM VITAE



PERSONAL INFORMATION

Name	SAIMA IFTIKHAR, PH.D
Institute & Postal address	School of Biological Sciences, University of the Punjab, Lahore, Pakistan, PO. 54590
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Nationality	Pakistani
Date of birth	10 th July, 1980

WORK EXPERIENCE

Principal Experimental Officer (BS-19)

Dates (from – to)	3 rd Dec 2019-To date
Name of organization	School of Biological Sciences, University of the Punjab, Lahore,
Main activities and responsibilities	Research and Teaching of MPhil and PhD students, DNA Sequencing and Genotyping, Research project

Senior Experimental Officer (BS-18)

Dates (from – to)	1 st June 2015- 2 nd Dec 2019
Name of organization	School of Biological Sciences, University of the Punjab, Lahore,
Main activities and responsibilities	Research and Teaching of MPhil and PhD students, DNA Sequencing and Genotyping, Research project

Experimental Officer

Dates (from – to)	1 st April 2010- 31 st May 2015
Name of organization	School of Biological Sciences, University of the Punjab, Lahore, Pakistan
Main activities and responsibilities	responsibilities

Teachin	g to MPhil and PhD students and DNA Sequencing
Research Officer	
Dates (from-to)	1 st July 2009 – 15 th March 2010
Name of Organization	School of Biological Sciences, University of the Punjab, Lahore, Pakistan
Main Activities and Responsibilities	DNA Sequencing

EDUCATION

Ph.D	Biological Sciences (Molecular Biology), School of Biological Sciences, University of the Punjab, Lahore, Pakistan, 2010 Thesis: Cloning, Expression and Purification of Antigenic Proteins of Hepatitis B Virus (HBV)
M.Sc.	Botany, (Gold Medalist), Department of Botany, University of the Punjab, Lahore, Pakistan, 1999–2001 Thesis: Callogenesis and organogenesis in local cultivars of potato (Kiran and Johar)
B.Sc.	Pre-medical; Zoology, Botany & Chemistry), Islamia College for Women, Cooper Road Lahore. 1997–1999
F.Sc.	Pre-medical; Biology, Chemistry, Physics, Islamia College for Women, Cooper Road Lahore. 1995–1997
Matric	Biology, Chemistry, Physics, Govt Girls High School, Pasrur, Sialkot

RESEARCH PROJECTS

Principal Investigator	Characterization of Immunogenic Regions of Dengue Virus for Potential Vaccine
Funding Agency	Higher Education Commission of Pakistan
Year	2018
Status	Ongoing
Amount (Rs)	6.17 million

HONORS AND AWARDS

- HEC approved PhD supervisor
- Gold Medalist during M.Sc (University of the Punjab, Lahore, Pakistan)
- Scholarship holder throughout academic career
- First position in chemistry during B.Sc
- First position in matric at tehsil level and achieved Gold Medal and cash prize
- Training abroad in DNA Sequencing and Fragment analysis by Thermo Fisher Scientific, Dubai (7-9 May, 2018)
- Superintendent SBS Girls Hostel, University of the Punjab, Lahore, Pakistan

PUBLICATIONS

- N-terminal deletion of Tk1689, a subtilisin-like serine protease from *Thermococcus kodakaraensis*, copes with its cytotoxicity in *Escherichia coli* Nouman Rasool; Naem Rashid, Ph.D; **Saima Iftikhar**; Muhammad Akhtar, published in Journal of Bioscience and Bioengineering
- *Escherichia coli* signal peptidases recognize and cleave the signal sequence of xylanase from a newly isolated *Bacillus subtilis* strain R5. Amir Jalal,

- Naeem Rashid, Nasir Ahmed, **Saima Iftikhar** and Muhammad Akhtar. Published in Biochemistry (Moscow)
- Structural and Quantum Mechanical Computations to Elucidate the Altered Binding Mechanism of Metal and Drug with Pyrazinamidase from *Mycobacterium tuberculosis* due to Mutagenicity. Nouman Rasool, **Saima Iftikhar**, Waqar Hussain. Published in Journal of Molecular Graphics and Modelling
 - Construction and recombinant expression of *Pseudomonas aeruginosa* truncated exotoxin A in *Escherichia coli*. Hina Qaiser, Farheen Aslam, **Saima Iftikhar**, Adeen Farooq. Published in Cellular and Molecular Biology
 - Dengue proteins with their role in pathogenesis, and strategies for developing an effective anti-dengue treatment: A Review. Sitara Nasar, Naeem Rashid, **Saima Iftikhar**. Journal of Medical Virology
 - Recombinant Human Proinsulin Expression in *E.Coli* by Altering 5' Untranslated and Translated Region. Farheen Aslam, Kinza Latif, Waseem R, Shaghuftha Naz and **Saima Iftikhar**. Published in Gene Technology
 - Molecular Detection and Expression of Azurin: An Anti-Cancer Protein from Local Isolates of *Pseudomonas* species. Farheen Aslam, Adeen Farooq, Hina Qaiser, **Saima Iftikhar**, Faiza Saleem and Shaghuftha Naz. Published in Gene Technology
 - Genomic sequencing and Recombinant Expression of Proinsulin isolated from Cow and Buffalo in Pakistan. Farheen Aslam, Hooria Younas, **Saima Iftikhar** Published in African Journal of Biotechnology
 - Variability in the immunogenic preS region of Pakistani Hepatitis B virus isolates. **Saima Iftikhar**, Muhammad Akhtar. Published in Virus Diseases
 - Serodiagnosis of Hepatitis B Virus using PreS antigen from Pakistani Isolate SBS001. **Saima Iftikhar**, Muhammad Akhtar. Submitted in Journal cellular and Molecular Biology

ABSTRACTS PUBLISHED IN CONFERENCE

Characterization of NS1 protein of dengue virus for vaccine development (2019). Muhammad Faisal, Sitara Nasar and **Saima Iftikhar**. Poster presented and abstract published in ICPU international conference on Recent innovations in Molecular sciences

GENE SEQUENCES SUBMITTED IN GENBANK

- **Iftikhar,S.**, Rasool,N. and Akhtar,M. Hepatitis B virus isolate PSBS001 large S protein (S) gene, partial cds.Submitted on 12-May-2011. **Accession No.JF957160.NCBI GenBank Resource**, <https://www.ncbi.nlm.nih.gov/nuccore/352963313>.
- **Iftikhar,S.**, Rasool,N. and Akhtar,M. Hepatitis B virus isolate PSBS002 in Pakistan population. Submitted on 21-June-2011. **Accession No. JN165098. NCBI GenBank Resource**, <https://www.ncbi.nlm.nih.gov/nuccore/JN165098>.
- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS003 large S protein (S) gene, partial cds. Submitted on 11-June-2012. **Accession No.JX173071. NCBI GenBank Resource**, <https://www.ncbi.nlm.nih.gov/nuccore/401880554>.
- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS004 large S protein (S) gene, partial cds. Submitted on 11-June-2012. **Accession No. JX173072. NCBI GenBank Resource**, <https://www.ncbi.nlm.nih.gov/nuccore/401880556>.
- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS005 large S protein (S) gene, partial cds. Submitted on 11-June-2012. **Accession No. JX173073. NCBI GenBank Resource**, <https://www.ncbi.nlm.nih.gov/nuccore/JX173073>.

- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS006 large S protein (S) gene, partial cds. Submitted on 12-June-2012. **Accession No. JX173074. NCBI GenBank Resource,** <https://www.ncbi.nlm.nih.gov/nuccore/JX173074>.
- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS007 large S protein (S) gene, partial cds. Submitted on 12-June-2012. **Accession No. JX173075. NCBI GenBank Resource,** <https://www.ncbi.nlm.nih.gov/nuccore/JX173075>.
- **Iftikhar,S.** and Akhtar,M. Hepatitis B virus isolate PSBS008 large S protein (S) gene, partial cds. Submitted on 12-June-2012. **Accession No. JX173076. NCBI GenBank Resource,** <https://www.ncbi.nlm.nih.gov/nuccore/JX1730756>.

STUDENT SUPERVISION

- **Muhammad Faisal** M.phil (2019). Expression and Purification of NS1 protein from Dengue Virus
- **Samrina Hussain.** MS (2019). Molecular detection of genes mutations in possible genetic elements (CEBPA, NPM1) in Leukemia patients
- **Zaib Sadiq.** MS (2019). Molecular detection of genes mutations in possible genetic elements (WTI, IDH1) in Leukemia patients
- **Sidra Jamil.** MS (2018). Characterization of Alkaline Hydrolases from Alkaliphile
- **Afreen Bakht.** MS (2018). Exploitation of Microbes for degradation of Plastic
- **Adeen Farooq.** MS (2016). Molecular Detection and Expression of Azurin: an Anticancer Protein From Local Isolate of Pseudomonas SP.
- **Hina Qaiser.** MS (2016). Construction and Recombinant Expression of Anticancer Exotoxin A (PE 38 KDEL) in *E.Coli*
- **Kainat Waheed.** MS (2015). Purification and characterization of DNA polymerase 1 from *geobacillus sp.*
- **Sumaira Akbar.** MS (2014). Cloning, expression and characterization of DNA polymerase 1 from *geobacillus sp*
- **Kinza Latif.** MS (2013). Expression enhancement of proinsulin gene by altering the 5' untranscribed as well as transcribed region.

WORKSHOPS & CONFERENCES

- Workshop on “ problem-based learning” in Genomics and proteomics in Health & Agriculture organized by **Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB)** at the School of Biological Sciences, University of Punjab, Lahore, Pakistan during November 19, 2005
- Participation as an active member of Scientific Committee, working in organizing 18th **Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB)** Symposium being held at Lahore during November 20-23, 2005
- Contributed as an active member of organizing committee of an international symposium on "Nanochemistry of Enzymes" held in School of Biological Sciences, University of the Punjab, Lahore on September 20–21, 2006.
- Participated in the annual congresses of **Pakistan Society of Hepatology** and won the shield and cash prize for outstanding research paper presentation
- Participation as a member, organizing committee and instructor in First National Workshop on **DNA RECOMBINANT TECHNOLOGY** on April 22-29,2013

- Participation as a member, organizing committee and instructor in Second National Workshop on **DNA RECOMBINANT TECHNOLOGY** on April 25-30,2016
- Participation in **4th In-Service faculty training program**, university of the Punjab, on (Monday 21- Friday 25 November,2016)
- Participation as a member, organizing committee and instructor in National Workshop on **DNA RECOMBINANT TECHNOLOGY** on April 3-8,2017
- Participation as a member, organizing committee and instructor in National Workshop on **RECOMBINANT PROTEIN PRODUCTION** on November 06-11,2017
- Participation as a member, organizing committee and instructor in National Workshop on **RECOMBINANT PROTEIN PRODUCTION** on November 12-17,2018

- Participation as a member, organizing committee and instructor in National Workshop on **RECOMBINANT PROTEIN PRODUCTION** on November 11-16, 2019

RESEARCH INTERESTS & EXPERTISES

- Molecular Biology, Infectious diseases, Virology, Protein chemistry,
- Ability to operate and cope with the problems of DNA sequencing
- Ability to operate and cope with the problems of HPLC system.
- Analysis of proteins on Mass Spectrophotometer.
- Experience of Preparing various PhD modules
- Practical training of molecular biology at School of Biological Sciences

TEACHING EXPERIENCE

- Molecular Biology Practical lab (SBS-510) , 2010 to date, Mphil and PhD students
- DNA-Protein Module (SBS-704) 2016 to date, PhD students
- Analytical Techniques (SBS-706) 2016 to date, PhD students
- Signal Transduction (SBS-702), Cloning (SBS-703), Protein Structure (SBS-705) modules 2011 to 2016, PhD students

