

IJAZ BUSHRA

CV



PERSONAL INFORMATION

Name	IJAZ BUSHRA
Address	448-A BLOCK SABZA ZAR LAHORE, PAKISTAN
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E-mail	bijaz@cemb.edu.pk , bijaz_009@yahoo.com
Nationality	Pakistani
Date of birth	31st October, 1980

WORK EXPERIENCE

2015-todate

- Name and address of employer
 - Type of business or sector
 - Occupation or position held
- Main activities and responsibilities

Assistant Professor

Centre of Excellence in Molecular Biology, University of the Punjab

Public sector

Research/Teaching

- Write up of grant projects.
- Working on the project:
 - Role of non-coding RNA in HCV disease pathogenesis'
 - Investigation of hepatoprotective role of flavonoids and Saponins mediated pathways in liver fibrosis and cirrhosis
 - Investigating the role of lncRNA in metastatic ability of Invasive Breast Cancer
- Lab management
- Involvement in maintenance of standard operational procedures (SOP)
- Involvement in the quality control management of the laboratory
- Involvement in the troubleshooting of various instruments under usages
- Supervision of M.Phil and Ph.D scholar experimental work

2010-N0v 2015

- Name and address of employer
 - Type of business or sector
 - Occupation or position held
- Main activities and responsibilities

Lecturer

Centre of Excellence in Molecular Biology, University of the Punjab

Public sector

Research/Teaching

- Worked on the project 'Gene expression profiling: effect of knock down of HCV genes using siRNA and its effect on host genome
- Gene Expression Profiling of HCV genes by cDNA Microarray and RT-PCR
- cDNA Microarray (Sample preparation to final analysis)
- Microarray Data Analysis

2006-2010

- Name and address of employer
 - Type of business or sector
 - Occupation or position held
- Main activities and responsibilities

Research Officer

Centre of Excellence in Molecular Biology, University of the Punjab

Public sector

Research

- Gene Expression analysis in HCV associated liver fibrosis and Cirrhosis
- Construction of cDNA Libraries of Human genome
- Epidemiology based study of HCV in Local Pakistani Population
- Lab Management

EDUCATION AND TRAINING

• Jan 2010- Feb 2015

- Name and type of organisation providing education and training
 - Principal subjects
 - Title of thesis

• Jan 2004- Dec2006

- Name and type of organization providing education and training
 - Principal subjects
 - Title of thesis

• Sep2001-Dec2003

- Name and type of organization providing education and training
 - Principal subjects
 - Title of thesis

Ph. D

National Centre of Excellence in Molecular Biology (CEMB), University of the Punjab Lahore, Pakistan

Molecular Biology

Gene expression profiling: knock down effect of HCV genotype 3a genes on host genome in human liver cells.

M. Phil

National Centre of Excellence in Molecular Biology (CEMB), University of the Punjab Lahore, Pakistan

Molecular Biology

To study the gene expression analysis of HCV infected patients blood samples in comparison to normal and HBV

M. Sc

Department of Zoology, University of the Punjab Lahore, Pakistan

Zoology

To study the Embryotoxicity of Malathion in Developing Chick from 3rd to 21st day embryo

AWARDS

1. HEC M. PHIL MONTHLY ALLOWANCE (2004-2006)
2. HEC INDIGENOUS FULLY FUNDED PH.D SCHOLARSHIP (2010-2014)
3. PUNJAB UNIVERSITY PERFORMANCE EVALUATION AWARD (2016)
4. APASL YOUNG SCIENTIST TRAVEL AWARD (2017)
5. PUNJAB UNIVERSITY PERFORMANCE EVALUATION AWARD (2017)

RESEARCH GRANTS

1. PI HEC SRGP (SCREENING OF CYCLOPEPTIDES AS ANTI-HCV THERAPY)
2. PI HEC SRGP (ROLE OF lncRNA IN METASTATIC ABILITY OF INVASIVE BREAST CANCER)
3. PI HEC NRPU (INVESTIGATION OF HEPATOPROTECTIVE ROLE OF FLAVONOIDS AND SAPONINS MEDIATED PATHWAYS IN LIVER FIBROSIS AND CIRRHOSIS) AMOUNT OF 4.2 MILLION RUPEES

SOCIAL SKILLS AND COMPETENCES

I am working in public sector university teaching and doing research. I have been interacting with students in their extracurricular activities too. I was the part of a large group where I worked in team as well as an individual on different projects. Now running my own group and I have students one of which is a foreign student from Cameroon.

I have been the part of organizing team and also a resource person of different seminars and workshops in which people from all over the country and also abroad joined and a healthy interaction developed.

Local and foreign delegates visit CEMB and as a team leader we communicate with delegates.

I am also the member of sports committee at CEMB, Pakistan, involved in arranging badminton matches.

ORGANISATIONAL SKILLS AND COMPETENCES

Member procurement committee at CEMB

Member technical committee of Events at CEMB

Member Annual reports writing and designing of CEMB

Member sports committee at CEMB

PI of the three Higher Education Commission, Pakistan awarded research projects

TECHNICAL SKILLS AND COMPETENCES

Molecular Biology Techniques:

Microarray: cDNA Microarray printing and hybridization using Genomic Solution Microgrid Station and hybridizer and scanning using UC4 Scanner, Microarray data analysis.

Molecular/Recombinant DNA Techniques: siRNA synthesis and transfection, Polymerase chain reaction (PCR), Real Time PCR, Sequencing, Gel electrophoresis (SDS-PAGE & Agarose), Cloning Techniques, Genotyping of hepatitis C and Hepatitis B Virus.

Biochemical: RNA extraction, Genomic DNA extraction, ELISA, Protein purification, Western blotting

Microbiological Techniques: Disinfections and sterilization, Lab safety, Specimen collection and processing, Smear examination, Cultures and isolation of microbes, Biochemical examination, Cell culturing etc.

Mammalian Cell culturing system: Worked on Hela, Huh-7, HepG2, MDBK, MCF7, MDAMB-231 and CHO cell line

Computer Skills:

Biological Databases: NCBI, UNIPROT, EXPASY

Sequence Alignment & Analysis Tools: BLAST, ClustalW

Modeling Tools: Swiss Model,

Bio-statistical Soft wares: SPSS 16, Image J, Graphpad Prism

Microarray Tools: Hybridization, Image processing and Data Analysis

LECTURES DELIVERED

Delivered a talk on Trend of “Trend of Expression of Proliferative and Cancer Inducing Genes in Fibrosis to Cirrhosis in HCV 3a Infected Patients Liver Biopsy Samples” in three day International Symposium on advances in molecular Biology of Plants and health sciences, held at CEMB

- Delivered a talk on “Combinatorial RNAi approach against HCV” in 2nd International Conference on drug Development Natural and Synthetic at Centre for advanced drug research COMSATS held on 23-25 August, 2015.
- Delivered a talk on “Real-Time PCR: Revolutionizing Detection and Expression Analysis of Genes” in two days workshop on “Hands on training on Real Time PCR” September 6-8, 2014

CONFERENCES ORGANIZED

- 1) Organized the 3rd International Symposium on Advances in Molecular Biology of Plants and Health Sciences” organized by and held at Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore. During 19-21 December 2018.
- 2) Organized the 2nd International Symposium on Advances in Molecular Biology of Plants and Health Sciences” organized by and held at Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore. During 21-23 November 2017.
- 3) Organized an International Training Course on “Microarray for Gene Expression.” Organized by Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore, Pakistan. February 14-17, 2017.
- 4) Organized International Training Workshop on “New Trends in Molecular Diagnosis of Genetic Diseases held at Centre of Excellence in Molecular Biology (CEMB), University of the Punjab Lahore, Pakistan, during May 25-29, 2015.
- 5) Participation as an organizer and resource person at “ 2nd International Training Workshop on DNA Microarray for Gene Expression & Training Workshop on Biosafety in Biomedical Research. Organized by Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore , Pakistan in collaboration Biosafety Association of Pakistan (BSAP), University of Karachi, Karachi, Pakistan, 07-11 March, 2011
- 6) Participation as an organizer and resource person and organizer at International Training Workshop on “Microarray for Gene Expression.” Organized by Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore, Pakistan, April 22-25, 2014.

LANGUAGES

Mother Language: Urdu

Foreign languages: English (Medium of Teaching)

PUBLICATIONS

1. Ijaz B, Ahmad W, Das T, Shabbiri K, Husnain T, Hassan S, HCV infection causes cirrhosis in human by step-wise regulation of host genes involved in cellular functioning and defense during fibrosis: identification of bio-markers, *Genes & Diseases*, <https://doi.org/10.1016/j.gendis.2019.04.007>.
2. Rehman S, Ashfaq UA, Ijaz B, Jabeen Z, Riazuddin S (2019). Comparison of Anti-HCV Activity of Multiple Punica granatum Extracts and Fractions in Virus-infected Human Hepatocytes. *Curr Pharm Biotechnol*. doi: 10.2174/1389201020666190104141900. [Epub ahead of print]
3. Rana MA, Ijaz B, Daud M, Tariq S, Nadeem T, Husnain T (2018). Interplay of Wnt β -catenin pathway and miRNAs in HBV pathogenesis leading to HCC. *Clin Res Hepatol Gastroenterol*. pii: S2210-7401(18)30216-X. doi: 10.1016/j.clinre.2018.09.012. [Epub ahead of print]
4. Rehman S, Ashfaq UA, Ijaz B, Riazuddin S (2018). Anti-hepatitis C virus activity and synergistic effect of *Nymphaea alba* extracts and bioactive constituents in liver infected cells. *Microb Pathog*. 121:198-209. doi: 10.1016/j.micpath.2018.05.023. [Epub ahead of print]
5. Sumbal S, Javed A, Afroze B, Zulfiqar HF, Javed F, Noreen S, Ijaz B (2018). Circulating tumor DNA in blood: Future genomic biomarkers for cancer detection. *Exp Hematol*. pii: S0301-472X(18)30294-7. doi: 10.1016/j.exphem.2018.06.003. [Epub ahead of print]
6. Nadeem T, Khan MA, Ijaz B, Ahmed N, Rahman ZU, Latif MS, Ali Q, Rana MA (2018). Glycosylation of Recombinant Anticancer Therapeutics in Different Expression Systems with Emerging Technologies. *Cancer Res*. 78(11):2787-2798. doi: 10.1158/0008-5472.CAN-18-0032
7. Daud, M., Rana, M.A., Husnain, T., Ijaz B (2017). Modulation of Wnt signaling pathway by hepatitis B virus. *Arch Virol* doi:10.1007/s00705-017-3462-6
8. Mushtaq, M.W, Kanwal, F., Batool, A. Jamil T, Zia-ul-Haq M, Ijaz B, Huang Q, Ullah Z (2017). Polymer-coated CoFe₂O₄ nanoassemblies as biocompatible magnetic nanocarriers for anticancer drug delivery. *J Mater Sci* 52: 9282-9293. doi:10.1007/s10853-017-1141-3
9. Noreen S, Batool F, Ijaz B, Hussain M, Bilal F (2017). Influence of conventional and modern scheme of extraction and solvents on phytochemicals and biological activities of *Sphaeranthus indicus*. *Pure and Applied Biology*. 6 (3):776-785
10. Tariq S, Ijaz B, Gull S, Rehman S, Muhammad SA, Husnain T (2017). Tectona grandis as potential inhibitor of HCV NS5A protein: in vitro and in silico study. *Hepatol Int* 11 (Suppl 1):S107
11. Kausar H, Gull S, Ahmad W, Awan JS, Sarwar TM, Ijaz B (2017). Role of alternative phosphorylation and O glycosylation of erythropoietin receptor in modulating its function: an in silico study. *Turk J Biol*. 41: 816-825 doi:10.3906/biy-1704-3
12. Ahmad W, Ijaz B, Shabbiri K, Ahmed F, Rehman S (2017). Oxidative toxicity in diabetes and Alzheimer's disease: mechanisms behind ROS/ RNS generation. *J Biomed Sci*. 24(1):76. doi: 10.1186/s12929-017-0379
13. Rehman S, Ijaz B, Fatima N, Muhammad SA, Riazuddin S (2016). Therapeutic potential of Taraxacum officinale against HCV NS5B polymerase: In-vitro and In silico study. *Biomed Pharmacother*. 2016 Aug 8;83:881-891. doi: 10.1016/j.biopha.2016.08.002.
14. Javaid MS, Latief N, Ijaz B, Ashfaq UA (2017). Epigallocatechin Gallate as an anti-obesity therapeutic compound: an in silico approach for structure-based drug designing. *Nat Prod Res*. 14:1-5. doi:10.1080/14786419.2017.1365074.
15. Ahmed F, Mahmood N, Shahid S, Hussain Z, Ahmed I, Jalal A, Ijaz B, Shahid A, Mujtaba G, Mustafa T (2016). Mutations in Human Interferon α 2b Gene and Potential as Risk Factor Associated with Female Breast Cancer. *Cancer Biother Radiopharm*. 31(6):199-208. doi: 10.1089/cbr.2016.2046.
16. Noreen S, Hussain I, Tariq MI, Ijaz B, Iqbal S, Qamar-UI-Zaman, Ashfaq UA, Husnain T (2015). Portulaca oleracea L. as a Prospective Candidate Inhibitor of Hepatitis C Virus NS3 Serine Protease. *Viral Immunol*. 28(5):282-9
17. Shahid I, Gull S, Ijaz B, Ahmad W, Ansar M, Asad S, Kausar H, Sarwar MT, Khan MK, Hassan S (2013). Stable Huh-7 cell lines expressing non-structural proteins of genotype 1a of hepatitis C virus. *J Virol Methods*. 189(1):65-9
18. Ahmad W, Ijaz B, Hassan S (2012). Gene expression profiling of HCV genotype 3a initial liver fibrosis and cirrhosis patients using microarray. *J Transl Med*, 10 (1):41.
19. Asad S, Ijaz B, Ahmad W, Kausar H, Sarwar MT, Gull S, Shahid I, Khan MK, Hassan S (2012). Development of persistent HCV genotype 3a infection cell culture model in huh-7 cell. *Virol J*. 10:9:11
20. Jahan S, Khaliq S, Siddiqi MH, Ijaz B, Ahmad W, Ashfaq UA, Hassan S (2011). Anti-apoptotic effect of HCV core gene of genotype 3a in Huh-7 cell line. *Virol J*. 23;8:522
21. Kausar H, Gull S, Ijaz B, Ahmad W, Sarwar MT, Iqbal Z, Nawaz Z, Riazuddin S, Hassan S

- (2011). Huh-7 cell line as an alternative cultural model for the production of human like erythropoietin (EPO). *J Transl Med*.1;9:186
22. Jahan S, Samreen B, Khaliq S, Ijaz B, Khan M, Siddique MH, Ahmad W, Hassan S (2011). HCV entry receptors as potential targets for siRNA-based inhibition of HCV. *Genet Vaccines Ther*. 6;9:15
 23. Ahmad W, Ijaz B, Javed FT, Gull S, Kausar H, Sarwar MT, Asad S, Shahid I, Sumrin A, Khaliq S, Jahan S, Pervaiz A, Hassan S. A (2011). Comparison of four fibrosis indexes in chronic HCV: Development of new fibrosis-cirrhosis index (FCI). *BMC Gastroenterol*,11:44
 24. Ahmad W, Ijaz B, Gull S, Asad S, Khaliq S, Jahan S, Sarwar MT, Kausar H, Sumrin A, Shahid I, Hassan S (2011). A brief review on molecular, genetic and imaging techniques for HCV fibrosis evaluation. *Viol J*, 88(1):53
 25. Jahan S, Khaliq S, Ijaz B, Ahmad W, Hassan S (2011). Role of HCV Core gene of genotype 1a and 3a and host gene Cox-2 in HCV-induced pathogenesis. *Viol J*, 8(1):155
 26. Ijaz B, Ahmad W, Javed FT, Gull S, Hassan S (2011). Revised cutoff values of ALT and HBV DNA level can better differentiate HBeAg (-) chronic inactive HBV patients from active carriers. *Viol J*, 27; 8: 86
 27. Ijaz B, Ahmad W, Javed FT, Gull S, Sarwar MT, Kausar H, Shahid I, Asad S, Khaliq S, Jahan S, Sumrin A, Hassan S (2011). Association of laboratory parameters with viral factors in patients with hepatitis C. *Viol J*, 8:361
 28. Khaliq S, Jahan S, Ijaz B, Ahmad W, Asad S, Pervaiz A, samreen B, Hassan S (2010). Inhibition of core gene of HCV 3a genotype using synthetic and vector derived siRNAs. *Viol J*, 7:318
 29. Khaliq S, Jahan S, Ijaz B, Ahmad W, Asad S, Hassan S (2011). Inhibition of HCV 3a genotype by siRNAs targeting envelop genes. *Arch Virol*,156(3):433-442
 30. Ahmad W, Shabbiri K, Ijaz B, Asad S, Gull S, Fouzia K, Kausar H, Sarwar MT, Shahid I, Hassan S (2011). Claudin-1 required for HCV virus entry has high potential for phosphorylation and o-glycosylation. *Viol J*, 8:229
 31. Sarwar MT, Kausar H, Ijaz B, Ahmad W, Ansar M, Sumrin A, Ashfaq UA, Gull S, Asad S, Shahid I, Hassan S (2011). NS4A protein as a marker of HCV history suggests that different hepatitis C virus genotypes originally evolved from genotype 1b. *Viol J*, 8:317
 32. Jahan S, Khaliq S, Samreen B, Ijaz B, Khan M, Ahmad W, Ashfaq AU, Hassan S (2011). Effect of combined siRNA of HCV E2 gene and HCV receptors against HCV. *Viol J*, 8:295
 33. Ahmad W, Shabbiri K, Ijaz B, Asad S, Nazar N, Nazar S, Fouzia K, Kausar H, Gull S, Tahir Sarwar MT, Shahid I, Hassan S (2011). Serine 204 phosphorylation and O- β -GlcNAc interplay of IGFBP-6 as therapeutic indicator to regulate IGF-II functions in viral mediated hepatocellular carcinoma. *Viol J*, 8:208
 34. Khan M, Jahan S, Khaliq S, Ijaz B, Ahmad W, Samreen B, Hassan S (2010). Interaction of the hepatitis C virus (HCV) core with cellular genes in the development of HCV-induced steatosis. *Arch Virol*,155(11):1735-53
 35. Khaliq S, Khaliq SA, Zahur M, Ijaz B, Jahan S, Ansar M, Riazuddin S, Hassan S (2010). RNAi as a new therapeutic strategy against HCV. *Biotechnol Adv*, 28(1):27-34
 36. Ahmad W, Ijaz B, Javed FT, Jahan S, Shahid I, Khan MF, Hassan S (2010). HCV genotype distribution and possible transmission risks in Lahore, Pakistan. *World J Gastroenterol*, 14: 4321-4328
 37. Ahmad W, Ijaz B, Javed FT, Kausar H, Sarwar MT, Gull S, Asad S, Shahid I, Hassan S. HCV genotype specific correlation with serum markers: higher predictability for genotype 4a (2011). *Viol J*, 8: 293-301
 38. Javed FT, Ijaz B, Ahamd W, Jahan S, Khaliq S, Hassan S (2010). Correlation of serum HCV titer, ALP and Bilirubin levels with liver fibrosis stages. *IJAVMS*, 4(2): 56-62
 39. Sumrin A, Ahmad W, Ijaz B, Sarwar MT, Gull S, Kausar H, Jahan S, Asad S, Riazuddin S (2010). Purification and medium optimization of alpha amylase from *Bacillus Subtilis* 168. *Afr J Biotech*, 10(11): 2119-2129
 40. Jahan S, Khaliq S, Afzal N, Mujtiba G, Ahmad W, Ijaz B, sumrin A, Ishfaq A U, Hassan S (2011). Regulation of Apoptosis by HCV. *IJAVMS*, 5(4): 438-443
 41. Asmatullah and Ijaz B. Embryotoxicity of Malathion in developing chick (2004). *Punjab University J Zoology* 19: 1-8