

Dr. SAJJAD ALI SHAH

Assistant Professor (BPS-19)

Department of Biotechnology
Bacha Khan university charssada

Email Address: sajjadbiotec@gmail.com

Permanent Address: Village: Amandara p/o Batkhela, District: Malakand, Khyber Pakhtunkhwa.

Date of Birth: 02-02-1985

OBJECTIVES

To gain a position that utilizes my skills and enhances my qualification in order to cope with the upcoming century's challenges in my particular area of interest. Achievement of given responsibilities for better results to become an active and leading part of the society. Enthusiastic to learn, understand applied knowledge and skills in the field of Genomics, Nanotechnology, Molecular Biology and Biotechnology. Committed to impart best knowledge and skills to the community by growing with advancements in the field of Molecular Biology and Biotechnology.

AREAS OF COMPETENCE

I have good knowledge of Molecular Biology, Biotechnology, Nanotechnology and Computer skills. I have competence with modern molecular biology techniques like DNA fingerprinting, PCR, PAGE, ABIPRISM 3130XL Genetic Analyzer, Gene sequencing and Genotyping. I have significant general computer experience. Using many advanced Molecular Biology/ Bioinformatics softwares but learning new ones is certainly no problem.

ACADEMIC QUALIFICATION

Doctor of philosophy (Molecular biology and Biotechnology)

UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES LAHORE
INSTITUTE OF BIOCHEMISTRY AND BIOTECHNOLOGY
2010-2014. **Marks/CGPA:**417/520, 3.71/4.

Master of philosophy (Molecular biology and Biotechnology)

UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES LAHORE
INSTITUTE OF BIOCHEMISTRY AND BIOTECHNOLOGY
2008-2010. **Marks/CGPA:** 771/900, 3.96/4.

BS (Hons) (Biotechnology)

UNIVERSITY OF MALAKAND DIR LOWER
2003-2007. **Marks/%age:** 3084/4025, 76.62

Higher Secondary School: Pre-medical

GOVT. DEGREE COLLEGE THANA
2001-2003. **Marks/%age:** 740/1100, 67.27.

Secondary School: Science group

OXFORD EDUCATION ACADEMY BATKHELA
1999-2001. Marks/%age: 645/850, 75.88

WORK EXPERIENCE

Assistant Professor (BPS-19) from 05-05-2016 up to date...

Department of Biotechnology
Bacha Khan university charssada

Lecturer (BPS-18) from 10-05-2012 to 04-05-2016

Department of Biotechnology
Bacha Khan university charssada

Research Associate from August-2011----May. 2012.

"Microarray Based Genotyping of Child Hood Absence Epilepsy in Punjab Population"
Institute of Biochemistry and Biotechnology
University of Veterinary and Animal Sciences, Lahore

Research Associate from Feb. 2011----August. 2011

"Identification of Molecular Marker in the Fecundity of Sheep and Goat Breeds of Pakistan"

Institute of Biochemistry and Biotechnology,
University of Veterinary and Animal Sciences, Lahore. A

ADMINISTRATIVE EXPERIENCE

- 1) Deputy Registrar from 02 September 2015- April 2017, 2017-2018
- 2) Senior Warden from 2015 upto date....
- 3) Departmental Examination Incharge from 2012 upto date..
- 4) Director QEC from 2018 up to date

Member of Different Statutory Bodies/Committees

- 1) Elected Member of Academic council
- 2) Member of the Board of studies
- 3) Member of the graduate study committee
- 4) Member of the semester Rules Review committee
- 5) Member of inspection committee
- 6) Proctorial Board
- 7) Selection Board scrutiny Committee
- 8) As secretary in syndicate & selection Board
- 9) Member of workload committee
- 10) Member of Board of faculty
- 11) Member of Finance and Planning Committee

RESEARCH EXPERIENCE:

1) RESEARCH PROJECT WON:

“COMPARATIVE GENOMICS OF HELICOBACTER PYLORI ISOLATES FROM DIFFERENT ADDICTED GROUPS/ PATIENTS IN KHYBER PAKHTUNKHWA AND EVALUATE EFFECT OF VARIOUS MEDICINAL PLANT EXTRACTS AND ITS NANOPARTICLES ON IT” funded by HEC of RS.1.99 million.

2) Ph.D Research

“Molecular Genetic study of Oculocutaneous Albinism in Pakistani Population”.

Laboratory of Prof. Dr. Masroor Ellahi Babar, IBBt, UVAS Lahore, Pakistan

3) MPhil Research

"Study of Autosomal Recessive Non-syndromic Mental Retardation Locus by Linkage Analysis".

Laboratory of Prof. Dr. Masroor Ellahi Babar, IBBt, UVAS Lahore, Pakistan

ACHIEVEMENTS AND KEY SKILLS:

- 1st Position (Silver Medal) in MPhil Molecular Biology and Biotechnology, UVAS, Lahore.
- 2nd Position (Silver Medal) in BS(Hons) Biotechnology
- Good leadership skills developed by working on different projects at UVAS

COLLABORATIONS AT NATIONAL AND INTERNATIONAL LEVEL:

- 1) Research Collaboration with Department of Molecular biology and Biotechnology, Virtual University of Pakistan.
- 2) Research Collaboration with Human Molecular Genetics Laboratory at Department of Biotechnology, BUIITEMS Quetta.

RESEARCH PUBLICATIONS

1) **S. A. Shah**, S. U. Din, N. Raheem, S. Daud, J. Mubeen, A. Nadeem, M. Tayyab, D. M. Baloch, M. E. Babar and J. Ahmad (2014). Identification of a novel mutation (p.Ile198Thr) in gene TYR in a Pakistani family with nonsyndromic oculocutaneous albinism. *Clinical and Experimental Dermatology*, 39(5): 646–648.

- 2) **S. A. Shah**, N. Raheem, S. Daud, J. Mubeen, A. A. Shaikh, A. H. Baloch, A. Nadeem, M. Tayyab, M. E. Babar and J. Ahmad (2015). Mutational spectrum of the TYR and SLC45A2 genes in Pakistani families with oculocutaneous albinism, and potential founder effect of missense substitution (p.Arg77Gln) of tyrosinase. *Clinical and Experimental Dermatology*, 40(7): 774–80.
- 3) T. Hussain, M. E. Babar, H. Sadia, M. Shaheen, A. Nadeem, A. Ali, A. Wajid and **S. A. Shah**. (2013). Mitochondrial and microsatellite markers based Genetic Diversity Analysis in Damani and Nachi Goat Breeds of Pakistan. *Pakistan Veterinary Journal*. 33(4):520-522.
- 4) Masroor Ellahi Babar, Asif Nadeem, Tanveer Hussain, Abdul Wajid, **Sajjad Ali Shah**, Amjad Iqbal, Zeeshan Sarfraz and Muhammad Akram. (2012). **Microsatellite marker based genetic diversity among four varieties of Pakistani Aseel Chicken**. *Pak Vet J*, 32(2): 237-241.
- 5) Wajid, M. E. Babar, T. Hussain, A. A. Anjum, **S. A. Shah**, K. Abbas. 2013. The Future prospective of Genomic Biotechnology in animal breeding their Potential for livestock production in Pakistan. *Journal of Animal and Plant Sciences*. 23(4): 944-955.
- 6) Z. Ahmed, M. E. Babar, T. Hussain, F. I. Awan, A. Wajid, **S. A. Shah**, M. M. Ali. 2014. Assessment of Genetic Diversity in Kail sheep breed of Azad Jammu and Kashmir, Pakistan using microsatellite markers. *Pakistan Journal of Animal and Plants Sciences*. 24(5): 1329-1333.
- 7) Masroor Ellahi Babar, Tanveer Hussain, Haleema Sadia, Misbah Shaheen, Asif Nadeem, Akhtar Ali, Abdul Wajid and **Sajjad Ali Shah** (2011). Molecular Characterization, Evaluation and Conservation of Indigenous Goat Breeds of Pakistan. *RBI 8th Global Conference on the Conservation of Animal Genetic Resources, October 4-8, 2011 Tekirdag, Turkey*.
- 8) Babar, M. E., T. Hussain, W. A. Khan, A. Fatima, R. Saif, M. M. Manzoor, A. Nadeem, A. Ali, **S. A. Shah** and A. Wajid. 2013. Genomic Exploration of Pakistani Buffalo- our Black Gold. *Buffalo Bulletin*. 32(sp.Issue):658-661.
- 9) T. Hussain, M. M. Manzoor, A. Wajid, A. Nadeem, A. Ali, **S. A. Shah**, K. Abbas, M. De Donato and M. E. Babar. 2013. High conservation of SRY gene in Buffalo compared to other Bovids. *Buffalo Bulletin*. 32(sp.issue 2): 666-670
- 10) Babar, M. E., T. Hussain, A. Wajid, A. Nawaz, A. Nadeem, **S. A. Shah**, M. A. Shahid, N. Ahmad, K. Javed, M. Abdullah. 2015. Mitochondrial Cytochrome-b and D-loop Sequence Diversity in Mareecha and Bareela Camel Breeds of Pakistan. *The Journal of Animal and Plants Sciences*. 25(2): 591-594.
- 11) Saeed, A., M. E. Babar, M. Irshad, A. Nadeem, T. Hussain, **S. A. Shah** and T. Ahmad. 2014. Paternal Lineage Analysis in Sahiwal, Cholistani and Dajal Cattle Breeds of Pakistan through SRY gene. *Global Veterinaria*. 12 (4): 508-511.

12) Anwar Saeed, **Sajjad Ali Shah**, Muhammad Irshad, Zulfiqar Ahmad, Muhammad, Muhammad Idrees, Saeed Hassan, Tauseef Ahmad. 2013. Human Stem Cell as Therapeutic Agent for Renal Disorders. European Academic Research - Vol. I, Issue 9.

13) Zafar Ali, Masroor Ellahi Babar, Jamil Ahmad, Muhammad Zubair Yousaf, Muhammad Asif, and **Sajjad Ali Shah** (2011). Molecular investigation of mental retardation locus gene PRSS12 by linkage analysis. *Indian J Hum Genet.* May-Aug; 17(2): 65–69.

14) **A Review on Human Peripheral Nerve Regeneration using Stem Cells.** Muhammad Zubair Yousaf, **Sajjad Ali Shah**, Anwar Saeed, Khalid Mahmood Anjum and Muttiurrehman Khan. Asian J Med Res | Jan-Mar 2012 | Vol-1 | Issue-1.

15) Zafar Ali, Masroor Ellahi Babar, Jamil Ahmad, **Sajjad Ali Shah**. 2012. The study of gene GJB2/DFNB1 causing deafness in humans by linkage analysis from district Peshawar. *Indian journal of human genetics.* 2(18): 217-221.

16) Sumaira Shah, Sirajud Din, Adnan Khan, Rehmanullah, **Sajjad Ali Shah** (2017). Green Synthesis and Antioxidant Study of Silver Nanoparticles of Root Extract of *Sageretia thea* and Its Role in Oxidation Protection Technology. *J Polym Environ*, DOI 10.1007/s10924-017-1129-8.

17) Javeria, Masroor Ellahi Babar, Akhtar Ali, Asif Nadeem, Abdul Wajid, **Sajjad Ali Shah**, Sadaf Rashid, Muhammad Wasim and Muhammad Abdullah (2017). Association between the COMT Gene and Obsessive Compulsive Disorder: A Case-Control Study. *Pakistan J. Zool.*, Vol. 49, Iss. 5, pp 1921-1924.

18) **Sajjad Ali Shah**, Anwar Saeed, Muhammad Irshad, Masroor Ellahi Babar, Tanveer Hussain, Abdul Wajid, Nazakat H Memon and Muhammad Idrees (2018). Oculocutaneous Albinism in Pakistan: A Review. *J Cancer Sci Her.* Volume 10(9) 253-257

19) Hasnain Jan, Ayesha Naeem, **Sajjad Ali Shah**, Wali Muhammad, Muhammad Asad Ullah, Shah Faisal, Hazrat Usman, Ayyaz Khan, Sifatullah (2018). Prevalence and comparative analysis of HBs, HCV, CRP, T.B and H. pylori in drug addicted individuals from local population of Charsadda, Khyber Pakhtunkhwa, Pakistan. *International Journal of Biosciences.* Vol. 12, No. 4, p. 443-451.

20) Wali Muhammad, Shah Faisal, Muhammad Haroon, Kiran Mujahid, Abdullah, Aneesur Rahman, **Sajjad Ali Shah**, Sifatullah, Hasnain Jan and Muhammad Azhar (2018). Incidence of helicobacter pylori, diabetes and various biochemical markers in hepatitis c virus infected patients in Mardan, Pakistan. *JEZS* 2018; 6(1): 991-994

21) Jan, Hasnain, Shah Faisal, Ayyaz Khan, Shahzar Khan, Hazrat Usman, Rabia Liaqat, and Sajjad Ali Shah. "COVID-19: Review of Epidemiology and Potential Treatments Against 2019 Novel Coronavirus." *Discoveries* 8, no. 2 (2020).

22) Farhan Ullah, Ibrar Khan, **Sajjad Ali Shah**, Sadiq Azam, Shah Faisal and Hashir Muzamil. Mutational Analysis of TYR Gene Causing Oculocutaneous Albinism in Families from District Peshawar. Int J Hum Genet, 19(4): 170-178 (2019).

23) **Sajjad Ali Shah**, Masroor Ellahi Babar, Jamil Ahmad and Zafar Ali. Linkage Analysis of Autosomal Recessive Non-syndromic Mental Retardation Locus in Pakistani Families. Int J Hum Genet, 19(3): 152-157 (2019).

MEMBER RESEARCH TEAMS

- Single nucleotide polymorphism (SNP) detection in BMP15 gene of local sheep and goat breeds of Pakistan. Institute of Biochemistry & Biotechnology, UVAS. Higher Education Commission, Pakistan.
- Genetic Diversity of Pakistani Sheep and Goat Breeds by Analysis of Mitochondrial D Loop. Institute of Biochemistry & Biotechnology, UVAS. Higher Education Commission, Pakistan.

SEQUENCE SUBMITTED IN NCBI (6 sequences)

A sequence of “*Bubalus bubalis* Haplotype NR-1 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946519)

A sequence of “*Bubalus bubalis* Haplotype NR-2 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946520)

A sequence of “*Bubalus bubalis* Haplotype NR-3 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946521)

A sequence of “*Bubalus bubalis* Haplotype NR-4 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946522)

A sequence of “*Bubalus bubalis* Haplotype NR-5 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946523)

A sequence of “*Bubalus bubalis* Haplotype NR-6 cytochrome b gene, partial cds, mitochondria” (NCBI Accession no: JF946524)

WORKSHOPS, CONFERENCES AND TRAININGS

- Training on “Quality Assurance & Governance” May 23-25, 2017, Funded by the Tertiary Education Support Program (TESP) of HEC.
- Workshop by Microbiology Department on “**Cloning of Recombinant pUC-18 Plasmid into E.coli (DH 5-alpha Strain)**” (September 12-17, 2011) at University of Veterinary and Animal Sciences, Lahore.
- International conference on “**Conservation of Animal Genetic Resources**” (14-15 September 2011) at University of Veterinary and Animal Sciences, Lahore

- National Workshop on “**Molecular Diagnostics**” (January 11-12, 2011) at University of Veterinary and Animal Sciences, Lahore
- Conference and Exhibition on **National Biotechnology Exhibition and Seminar 2010** (October 20-21, 2010) at University of Veterinary and Animal Sciences, Lahore
- 1st National symposium on “**Biotechnology; Recent Advances**” (21-24 May, 2007) at Department of Biotechnology, University of Malakand.

RESEARCH TECHNIQUE, SOFTWARES & COMPUTER SKILLS

Molecular biology:

- DNA isolation and purification (from blood, tissue, hair, semen and culture), RNA extraction, Plasmid extraction, PCR & its various modifications/applications, Multiplex PCR, Agarose gel electrophoresis & Polyacrylamide gel electrophoresis (PAGE) and documentation, spectrophotometry, Culture media, Karyotyping and Microscopy etc
- **ABIPRISM 3130XL Genetic Analyzer**
DNA Sequencing
DNA Genotyping

Bio-informatics tools:

- BioEdit, BLAST, Primer 3, Chromas, Oligo Calc, PopGene 3.2, Power STAT 2.1, DNA and protein sequence alignments and analyses, Multiple Alignment, DNA sequencing and genotyping analysis, phylogenetic analysis, MEGA 5.05, Blast2 Sequence and Cyllic.

Computer Skill:

- Microsoft Windows applications, Word-Processors, Spread Sheets (Excel), Databases-NCBI, UCSC genome browser and Internet Explorer

LANGUAGES & INTEREST

Urdu, Pashto & English
Cricket, Football, Volley-ball, Badminton.

REFERENCES

Prof. Dr. Masroor Ellahi Babar

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Dr. Tanveer Hussain

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