

CURRICULUM VITAE



Name : Dr. Audesh Bhat
Designation : Assistant Professor
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AREA OF RESEARCH

- Molecular Biology, Cancer Biology, Diabetes, Genetic Diversity.

EDUCATIONAL QUALIFICATIONS

- **Ph.D (Biotechnology)** - 2008, University of Jammu, J&K, India/ JNU, New Delhi, India.
- **M.Phil (Biotechnolog)** - 2005, University of Jammu, J&K, India.
- **M.Sc. (Zoology)** - 2000, University of Kashmir, J&K, India.

DETAILS OF EMPLOYMENT

- **Assistant Professor:** July 2016 - Present, Centre for Molecular Biology, Central University of Jammu, J&K, India.
- **Senior Scientific Writer:** December 2014 - July 2016, Novartis Healthcare Ltd, Hyderabad, Telangana, India.
- **Research Officer:** January 2013 – November 2014, University of Saskatchewan, Canada.
- **Postdoctoral Fellow:** March 2008 - December 2012, University of Saskatchewan, Canada.
- **Postdoctoral Fellow:** January 2007 - February 2008, Washington University, USA.
- **Lecturer:** July 2000 – August 2002, SP Higher Secondary School, Rehari, Jammu, India.

TECHNICAL SKILLS

- **Cell Biology:** Human and mouse cell culture; Mouse embryonic stem cell culture; Cell Count as well as Cumulative Population Doublings (CPDs); Phenotype Observation; Cell-line generation; Competent cell preparation; MTT assay; Cell-cycle analysis (FACS); Cell-Synchronization; SA- β -Gal cell staining Light; fluorescent and confocal microscopy.
- **Molecular Biology:** Isolation and purification of genomic DNA, plasmid DNA, total RNA, total protein and nuclear protein, cDNA preparation; PCR and PCR-based analysis such as RT-PCR, TRAP-PCR, Nested-PCR, Site-directed mutagenesis; Nucleic acid hybridization techniques including Southern, Northern blotting. Pulse Field gel electrophoresis; Electrophoretic Mobility Shift Assay (EMSA); Telomere Restriction Fragment Length (TRF) analysis; Length polymorphism; Single strand length polymorphism. Gene recombination and gene transfer; Gene knockdown and Over-expression in mammalian cells (including lentivirus and retrovirus systems); Immunocytochemistry; Immunohistochemistry; ELISA; Co-immunoprecipitation; Chromatin Immunoprecipitation; Chromosome preparation; Q-FISH; Co-FISH; Mononuclease assay.

- **Animal Experiment:** i.c.v administration of drugs in chicken; Separation and homogenization of tissue & organs of chicken; Isolation of cells from chicken tissue.
- **Equipments:** DNA sequencer (ABI 3100); Real time PCR (Bio-rad & ABI-prism); Confocal microscope; Gel Doc; Gene Pulser Xcell Electroporation System (Bio-rad); Nanodrop; Flow Cytometer (Beckman Coulter); HPLC (Bio-rad); Pulse Field Gel Electrophoresis system; PCR; Emulsion PCR system (Bio-rad).
- **Computer Skills:** Microsoft office; Photoshop; Bioinformatics; Biostatistics; OLIGO; Primer3; CLUSTAL X & W; Arliquin; DNASP4; MEGA; Phylip; NTSYS; TreeView; SEQSCAPE; FlowJo; TFL-Telo; SPSS and PRISM.

RESEARCH PUBLICATIONS

Citation Index: Citations = 725; h-Index = 12; i10-Index = 13

- 1 Under review in The FEBS Journal **Bhat A**, Zhou S, Xiao W. *Rev7, the accessory subunit of Pol ζ , undergoes UV-induced and Cul4-sepdependent degradation.*
- 2 International Journal of Cardiology. **2016**, 15(223):581-589. ISSN: **0167-5273** Dhar A, Udumula MP, Medapi B, **Bhat A**, Dhar I, Malapati P, Babu MS, Kalra J, Sriram D, Desai KM. *Pharmacological evaluation of novel alagebrium analogs as methylglyoxal scavengers in vitro in cardiac myocytes and in vivo in SD rats.* (IF 4.68)
- 3 Life Science. **2016**, 1(146):8-14. ISSN: **0024-3205** Dhar A, Dhar I, **Bhat A**, Desai KM. *Alagebrium attenuates methylglyoxal induced oxidative stress and AGE formation in H9C2 cardiac myocytes.* (IF 2.68)
- 4 Pharmacology. **2016**, 97(1-2):2-30. eISSN: **1423-0313** Udumula MP, Medapi B, Dhar I, **Bhat A**, Desai K, Sriram D, Dhar A. *The Small Molecule Indirubin-3'-Oxime Inhibits Protein Kinase R: Antiapoptotic and Antioxidant Effect in Rat Cardiac Myocytes.* (IF 1.53)
- 5 Cell Cycle. **2015**, 14(24):3929-38. eISSN: **1551-4005** **Bhat A**, Maher VM, McCormick JJ and Xiao W. *Rev7/Mad2B depletion causes mitotic arrest and mitotic spindle defects in human cells.* (IF 3.95)
- 6 Journal of Cellular Biotechnology. **2015**, 1(1):53-61. eISSN: **2352-3697** Bahal R, Lakhani P, **Bhat A**, Kondiparthi L, Dhar I, Desai K, Dhar A. *Protein Kinase R and the metabolic syndrome.*
- 7 Pharmacy Pharmacology International Journal. **2015**, 2(2):00015. ISSN: **2373-6367** Dhar A, Reddy P, **Bhat A**, Desai K, Dhar I. *Double stranded RNA dependent protein kinase (PKR) and Type 2 diabetes.*
- 8 Nucleic Acids Research. **2013**, 41(4):2328-39. **Bhat A**, Andersen PL, Qin Z, Xiao W. *Rev3, the catalytic subunit of Pol ζ is required for maintaining fragile site stability in human cells.* (IF 9.11)

eISSN:1362-4962

- 9 Acta Biochem Biophys Sinca. **2011**, 43(12):919-29. **eISSN:1745-7270** Jia Li, Bhat A, Xiao W. ***Regulation of Nucleotide Excision Repair through Ubiquitination.*** (IF 2.19)
- 10 Molecular Immunology. **2010**, 47(6):1337-46. **ISSN:0161-5890** Bhat A, Gomis S, Potter A, Tikoo SK. ***Role of Hsp90 in CpG ODN mediated immunostimulation in avian macrophages.*** (IF 3.37)
- 11 Cell Cycle. **2009**, 8(14):2198-210. **eISSN:1551-4005** Gupta A, Yang Q, Pandita RK, Hunt CR, Xiang T, Misri S, Zeng S, Pagan J, Jeffery J, Puc J, Kumar R, Feng Z, Powell SN, Bhat A, yaguchi T, Wadhwa R, Kaul SC, Parsons R, Khanna KK, Pandita TK. ***Cell cycle checkpoint defects contribute to genomic instability in PTEN deficient cells independent of DNA DSB repair.*** (IF 3.95)
- 12 Journal of Human Genetics. **2009**, 54(1): 47-55. **eISSN:1435-232X** Sharma S, Rai E, Sharma P, Jena M, Singh S, Darvishi K, Bhat AK, Bhanwer AJ, Tiwari PK, Bamezai RN. ***The Indian origin of paternal haplogroup R1a1* substantiates the autochthonous origin of Brahmins and the caste system.*** (IF- 2.49)
- 13 International Journal of Cancer. **2008**, 123(11):2580-586. **eISSN:1097-0215** Gochhait S, Bhatt A, Sharma S, Singh YP, Gupta P, Bamezai RN. ***Concomitant presence of mutations in mitochondrial genome and p53 in cancer development – a study in north Indian sporadic breast and oesophageal cancer patients.*** (IF 5.53)
- 14 Indian Journal of Urology. **2008**, 24(2): 150-54. **eISSN:1998-3824** Shamsi MB, Kumar R, Bhatt A, Bamezai RN, Kumar R, Gupta NP, Das TK, Dada R. ***Mitochondrial DNA Mutations in etiopathogenesis of male infertility.***
- 15 Plos Genetics. **2008**, 4(9): e1000190, **eISSN:1553-7404** Jones B, Su H, Bhat A, Lei H, Bajko J, Hevi S, Baltus GA, Kadam S, Zhai H, Valdez R, Gonzalo S, Zhang Y, Li E, Chen T. ***The histone H3K79 methyltransferase Dot1L is essential for mammalian development and heterochromatin structure.*** (IF 7.52)
- 16 Journal of Computer-Aided Molecular Design. **2008**, 22(9):647-60, **eISSN:1573-4951** Stephen P, Vijayan R, Bhat A, Subbarao N, Bamezai RN. ***Molecular modeling on pyruvate phosphate dikinase of Entamoeba histolytica and in silico virtual screening for novel inhibitors.*** (IF 3.2)
- 17 Human Genet. **2007**, 122(5):535-40. **eISSN:1432-1203** Rai E, Sharma S, Koul A, Bhat AK, Bhanwer AJ, Bamezai RN. ***Interaction between the UCP2-866G/A, mtDNA 10398G/A and PGC1alpha p.Thr394Thr and p.Gly482Ser polymorphisms in type 2 diabetes susceptibility in North Indian population.*** (IF 5.14)

- 18 Indian Journal of Biochemistry Biophysics. 2007, 44:437-42. eISSN:0975-0959 Kumar R, Bhat A, Bamezai RN, Shamsi MB, Kumar R, Gupta NP, Ammini AC, Aron M, Sharma RK, Dada R. ***Necessity of nuclear and mitochondrial genome analysis prior to assisted reproductive techniques/intracytoplasmic sperm injection.*** (IF 0.87)
- 19 BMC Evolutionary Biology. 2007, 7:232. eISSN:1471-2148 Sharma S, Rai E, Bhat AK, Bhanwer AS, Bamezai RN. ***A novel subgroup Q5 of human Y-chromosomal haplogroup Q in India.*** (IF 3.40)
- 20 Human Genetics. 2007, 121(5):609-14. eISSN:1432-1203 Bhat A, Koul A, Rai E, Sharma S, Dhar MK, Bamezai RN. ***PGC-1alpha Thr394Thr and Gly482Ser variants are significantly associated with T2DM in two North Indian populations: a replicate case-control study.*** (IF 5.14)
- 21 Cancer Letter. 2007, 249(2):249-55. ISSN:0304-3835 Darvishi K, Sharma S, Bhat AK, Rai E, Bamezai RN. ***Mitochondrial DNA G10398A polymorphism imparts maternal Haplogroup N a risk for breast and esophageal cancer.*** (IF 5.99)
- 22 Human Genetics. 2007, 120(6):821-26. eISSN:1432-1203 Bhat A, Koul A, Sharma S, Rai E, Bukhari SI, Dhar MK, Bamezai RN. ***The possible role of 10398A and 16189C mtDNA variants in providing susceptibility to T2DM in two North Indian populations: a replicative study.*** (IF 5.14)
- 23 Journal of Human Genetics. 2005, 50(10): 49-51. eISSN:1435-232X Saha A, Sharma S, Bhat A, Pandit A, Bamezai R. ***Genetic affinity among five different population groups in India reflecting a Y-chromosome gene flow.*** (IF 2.49)
- 24 Journal of Human Genetics. 2005, 50(1): 497-506. eISSN:1435-232X Sharma S, Saha A, Rai E, Bhat A, Bamezai R. ***Human mtDNA hypervariable regions, HVR I and II, hint at deep common maternal founder and subsequent maternal gene flow in Indian population groups.*** (IF 2.49)

NCBI gene submitted: Accession nos: **AY641993-AY641997 and AY642034-AY642040.**

POSTERS/CONFERENCES/WORKSHOPS

1. Audesh Bhat, Parker Anderson, Wei Xiao (2012). *Loss of Rev3, the Polζ catalytic subunit causes fragile site expression in human cells.* International conference on Maintenance of Genome Stability, **Nassau, Bahamas.** Organised by Abcam. (Poster)
2. Audesh Bhat, Parker Anderson, Wei Xiao (2011). *Loss of the Polζ catalytic subunit Rev3 causes genomic instability independently of its regulatory subunit rev7 in human cells.* International conference on Eukaryotic DNA replication and Genome Maintenance, **CSHL, New York, USA.** (Abstract)
3. Indo-US workshop on Epigenetics regulation and Genome Control(2009), **CCMB, Hyderabad, India.**
4. Rakesh Kumar, Audesh Bhat, RK. Sharma, RNK. Bamezai, Rima Dada (2007). *Mitochondrial DNA Mutations and Polymorphism in Idiopathic Asthenozoospermic men of Indian origin.* 56th National Conference of Anatomical Society of India. (Poster)

5. Rakesh Kumar, Audesh Bhat, RK Sharma, RNK Bamezai, Rima Dada (2007). *Mitochondrial DNA mutations and polymorphism in idiopathic asthenozoospermic men of Indian origin*. Annual Congress of the Society of Andrology at Indian Institute of Technology Kharagpur, National Institute of Health and Family Welfare; **New Delhi, India. (Poster)**
6. Rima Dada, Rakesh Kumar, Rajeev Kumar, NP Gupta, Raj Kumar Sharma, Audesh Bhat, RNK Bamezai (2007). *Analysis of sperm and Blood mitochondrial DNA in pathogenesis of oligo asthenoteratozoospermia*. Annual Congress of the Society of Andrology, India. Organised by Indian Institute of Technology Kharagpur, National Institute of Health and Family Welfare; **New Delhi, India. (Talk)**
7. Audesh Bhat, Anjana Saha, Swarker Sharma, Manoj Dhar, RNK Bamezai (2006). *Ancient Molecular Genetic Signatures Indicate the Presence of Anatomically Modern Humans in Kashmir Since Paleolithic Times*. Biosparks– Annual Research festival SLS, JNU, New Delhi, India. **(Poster)**
8. Audesh Bhat, Swarker Sharma, Manoj Dhar, RNK Bamezai (2006). *The Possible Role of 10398A Allele in the mtDNA in causing Type 2 Diabetes Mellitus in Kashmiri Population of North India*. Biosparks- Annual Research festival SLS, **JNU, New Delhi, India. (Poster)**
9. Audesh Bhat, Anjana Saha, Swarker Sharma, Manoj Dhar, RNK Bamezai (2006). *Ancient Molecular Genetic Signatures Indicate the Presence of Anatomically Modern Humans in Kashmir Since Paleolithic Times*. XXXI Annual Conference of Indian Society of Human Genetics and an International Symposium on Human Genomics and Public health. Organized by NCAHG, **JNU, New Delhi, India. (Abstract)**
10. Audesh Bhat, Swarker Sharma, Manoj Dhar, RNK Bamezai (2006). *The Possible Role of 10398A Allele in the mtDNA in causing Type 2 Diabetes Mellitus in Kashmiri Population of North India*. XXXI Annual Conference of Indian Society of Human Genetics and an International Symposium on Human Genomics and Public health. Organized by **NCAHG, JNU, New Delhi, India from Feb27-Mar 01. (Abstract)**
11. Attended International Symposium on *Genetics of Human Evolution and Complex Diseases* (2005), **NCBS, Bangalore, India.**
12. Audesh Bhat, Anjana Saha, Swarker Sharma, RNK Bamezai (2004). *Tale Of Y-Chromosome Distribution In Populations Groups of Indo-European and Dravidian Linguistic Families From Six Indian Regions*. XXIX Annual conference of Indian Society of Human Genetics. **NIMHANS, Bangalore, India. (Poster)**

FELLOWSHIP/AWARD

- Best scientific writer award, Novartis Healthcare Ltd., India. (2016)
- Best scientific writer award, Novartis Healthcare Ltd., India. (2015)
- External reviewer: CSIR-SRF fellowship interview at BITS Hyderabad. (2015)
- Received numerous travel grants.
- SHRF Postdoctoral fellowship, Canada. (2008)
- CSIR Senior Research Fellowship, India. (2004)
- CSIR Junior Research Fellowship, India. (2002)
- CSIR-UGC NET for JRF and Lectureship in Life Sciences, India (2002). Was called for Shama Prasad Mukherjee Test.
- CSIR-UGC NET for Lectureship in Life Sciences, India. (2001)
- Qualified national level “Graduate Aptitude Test in Engineering” India. (2001)

TALKS

- Molecular evidence of human origin. 2002, Dept. of Biotechnology, Jammu University.
- RNA interference. 2003, Dept. of Biotechnology, Jammu University.
- DNA methylation and telomere homeostasis in human cells. 2007, Dept. of Radiation Oncology, Washington University.
- Genetic diversity and human origin. 2008, College of Veterinary Medicine, University of Saskatchewan.
- Regulation of CpG-ODN immune-stimulation in chicken. 2009, VIDO, University of Saskatchewan.
- Loss of the Pol ζ catalytic subunit Rev3 causes genomic instability independently of its regulatory subunit Rev7 in human cells. 2011, Dept. of Microbiology & immunology, University of Saskatchewan.

EXTRACURRICULAR ACTIVITIES

- Volunteered for “Let’s talk science” at Univ. of Saskatchewan, Canada.
- Volunteered for “Leukemia and Lymphoma Society” fund raising event, Canada.
- Volunteered for “Saskatoon regional science fair”, Canada.
- Organizing committee member of an international human health conference, New Delhi.
- Organized a diabetes detection camp at Jammu, India.