

# NITIKA BADJATIA

Post-doctoral fellow

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## Education

INSTITUTION	DEGREE	BEGINNING DATE (mm/yy)	ENDING DATE (mm/yy)	FIELD
University of Connecticut Health Center	Ph.D.	08/09	08/15	Biomedical Science
Devi Ahilya University, Indore, India	M.Sc.	07/06	05/08	Life Sciences
Devi Ahilya University, Indore, India	B.Sc.	07/03	06/06	Biotechnology

## Honors and Awards

2008 – Junior Research fellowship – Indian Council of Medical Research

2009 – Tuition Remission and Graduate Assistantship, University of Connecticut Health Center

## Publications

1. **Badjatia N**, Park SH, Ambrósio DL, Kirkham JK, Günzl A (2016). Cyclin-Dependent Kinase CRK9, Required for Spliced Leader trans Splicing of Pre-mRNA in Trypanosomes, Functions in a Complex with a New L-Type Cyclin and a Kinetoplastid-Specific Protein. *PLoS Pathog* 12(3):e1005498. PMID: 26954683.
2. Ambrósio DL, **Badjatia N**, Günzl A (2015). Characterization of the spliceosomal PRP19 complex of trypanosomes. *Mol Microbiol* 95:885-901. PMID: 25524563
3. Günzl A, Kirkham JK, Nguyen TN, **Badjatia N**, Park SH (2015). Mono-allelic VSG expression by RNA polymerase I in *Trypanosoma brucei*: expression site control from both ends? *Gene* 556:68-73 Review, PMID: 25261847
4. **Badjatia N**, Nguyen TN, Lee JH, Günzl A. (2013) *Trypanosoma brucei* harbors a divergent XPB helicase paralog that is specialized in nucleotide excision repair and conserved among kinetoplastid organisms. *Mol Microbiol* 90:1293-308. PMID: 24134817
5. **Badjatia N**, Ambrósio DL, Lee JH, Günzl A. (2013) Trypanosome cdc2-related kinase 9 controls spliced leader RNA cap4 methylation and phosphorylation of RNA polymerase II subunit RPB1. *Mol Cell Biol* 33:1965-75. PMID: 23478263
6. Satyam A, Singh P, **Badjatia N**, Seth A, Sharma A. (2011) A disproportion of TH1/TH2 cytokines with predominance of TH2, in urothelial carcinoma of bladder. *Urol Oncol* 29:58-65. PMID: 19837616
7. **Badjatia N**, Satyam A, Singh P, Seth A, Sharma A. (2010) Altered antioxidant status and lipid peroxidation in Indian patients with urothelial bladder carcinoma. *Urol Oncol* 28:360-67. PMID: 19171490

## Published Abstracts and Meeting Presentations

1. **Badjatia N**, Ambrósio DL, Günzl A. (2014) Characterization the cdc2-related kinase 9 (CRK9) complex, an essential enzyme for spliced leader *trans*-splicing of nuclear pre-mRNA in trypanosomes. Molecular Parasitology Meeting XXV, Woods Hole, MA, USA (Oral presentation)
2. **Badjatia N**, Ambrósio DL, Lee JH, Günzl A. (2013) Analysis of a cyclin-dependent kinase that controls deviating gene expression mechanisms in the lethal human parasite *Trypanosoma brucei*. 30<sup>th</sup> Annual Graduate Student Research Day, University of Connecticut Health Center, USA. (Oral presentation)
3. **Badjatia N**, Ambrósio DL, Nguyen B, Günzl A. (2013) Characterization of cdc2-related kinase 9 (CRK9), a key enzyme in trypanosome gene expression. Kinetoplastid Molecular Cell Biology Meeting V, Woods Hole, MA, USA. (Oral presentation)

4. **Badjatia N**, Nguyen T, Lee JH, Günzl A. (2013) Trypanosomes possess a distinct XPB helicase for nucleotide excision repair which functions independently of a TFIIH complex. Kinetoplastid Molecular Cell Biology Meeting V, Woods Hole, MA, USA. (Poster)
5. **Badjatia N**, Ambrósio DL, Lee JH, Günzl A. (2012) Trypanosome cdc2-related kinase 9 controls spliced leader RNA cap4 methylation and phosphorylation of the RNA polymerase II subunit RPB1. Molecular Parasitology Meeting XXIII, Woods Hole, MA, USA. (Oral presentation)
6. **Badjatia N**, Lee JH, Nguyen T, Pease J, Günzl A. (2011) Analyzing the functional role of a divergent XPB helicase paralog. Kinetoplastid Molecular Cell Biology Meeting IV, Woods Hole, MA, USA. (Poster)
7. **Badjatia N**, Lee JH, Nguyen T, Pease J, Günzl A. (2010) Analyzing the functional role of a divergent XPB helicase paralog conserved in trypanosomatids. Molecular Parasitology Meeting XXI, Woods Hole, MA, USA. (Poster)
8. **Badjatia N**, Satyam A, Seth A, Sharma A. (2009) Oxidant/Antioxidant status in bladder cancer patients. Annual meeting of the Society of Free Radical Research-India VIII, Lucknow, India. (Poster)

## Research experience

**Postdoctoral fellow**                      **Center for Eukaryotic Gene Regulation**                      **June 2015-Present**  
**Department of Biochemistry and Molecular Biology**  
**Penn State University, PA, USA**

Laboratory of Dr. B. Franklin Pugh

Analysis of chromatin structure genome-wide using MNase-seq and ChIP-exo technologies.

**Ph.D. Student**                              **Department of Genetics and Genome Sciences**                      **Jan 2010-May 2015**  
**UConn Health, Farmington, CT**

Laboratory of Dr. Arthur Günzl

Analysis of a cyclin dependent kinase that is essential for SL RNA transcription and splicing in *Trypanosoma brucei*.

- Protein complex characterization using Tandem affinity purification and linear sucrose gradient ultracentrifugation, recombinant protein purification in bacterial and eukaryotic systems.
- Molecular biology techniques such as Chromatin Immunoprecipitation (ChIP), Real-time PCR (qPCR), RNA interference.
- Phylogenetic analysis using multiple sequence alignment tool ClustalΩ and Seaview.

**Junior Research Fellow**                      **Department of Biochemistry**                      **Aug 2008-July 2009**  
**AIIMS, New Delhi, India**

Laboratory of Dr. Alpana Sharma

Molecular analysis of gene markers in urine cytology of patients with transitional cell carcinoma of urinary bladder.

- Received Junior research fellowship, one of the only 120 such fellowships awarded annually in India by Indian council of Medical Research, Govt. of India.
- Clinical study based on cancer patient samples involving regular interaction with clinicians and patients.

**M.Sc. Student**                              **Department of Biochemistry**                      **Jan 2008-June 2008**  
**AIIMS, New Delhi, India**

Laboratory of Dr. Alpana Sharma

Master's thesis: Antioxidant status and lipid peroxidation in Indian patients with urothelial carcinoma of bladder.