

## Chhanda Bose

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Ph. D. (1989) Gorakhpur University Gorakhpur, India (Zoology)  
M.Sc. (1980) Gorakhpur University, India (Zoology)  
B.Sc. (1978) Awadh University, Faizabad, India (Botany, Chemistry, Zoology)

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### Positions and Honors

Pool Scientist Award—from Council of Scientific and Industrial Research (CSIR) New Delhi, India, (1996- 1998)  
Research Associate Award—from Council of Scientific and Industrial Research (CSIR), New Delhi, India (1990-1996)  
Junior and Senior Research Fellow Award—from University Grants Commission, (UGC), New Delhi, India (1982-1989)

### Academic Appointments

03/19-present Research Associate Professor, Division of Hematology and Oncology, Internal Medicine, Texas Tech University H

01/90-5/96      Research Associate (CSIR) Division of Biochemistry  
Central Drug Research Institute, Lucknow, India  
11/8-11/89      Junior/Senior Research Fellow, University Grants Commission, New Delhi, at  
Gorakhpur University, India

### **Grant Support**

07/2019 -12/31/2019  
abSynapTex PAS-17-065  
Small Inhibitor Therapeutic Target for Alzheimer's disease.

01/01/2010-12/31/2011

UAMS Translational Research Institute (TRI) Pilot Study

The UAMS Center for Clinical and Translational Research (CCTR) Investigator-initiated award

Novel therapy to slow progression of diabetic nephropathy using deferiprone

Role: Co-PI

### **Committees/Administrative responsibilities**

**2008-2019** Faculty Interviewer, Office of Student Admissions, College of Medicine,  
University of Arkansas for Medical Sciences

**2008-2019** Member of Dr. Bhuvan's Endowment Committee, UAMS

**2012-2019** Member of animal use committee, (IACUC), Central Arkansas Veterans  
Healthcare System, Little Rock, AR

### **Professional Societies membership**

**2002-2007** Gerontological Society of America

**2009-2016** American Society of Nephrology (USA)

**1993-present** Indian Society of Parasitology



**11. Bose C, Zhang H, Udupa KB, Chowdhury P. (2005) Activation of p-ERK1/2 by nicotinedupa**



5.

the 42<sup>nd</sup>



24. **Bose C**, Agarwal SK, Chatterji RK, Srivastava VML. Effect of carboline antifilarials compounds on metabolism in *L. a*. Twelfth National Congress of Parasitology, Panjim Goa, India, Jan. 23-25, 1995.
25. Zaidi A, Singh SP, **Bose C**. Effect of diaminoalkane antileishmanial compound on metabolic activities of *L. a a a*. Eleventh National Congress of Parasitology, Udaipur, India, Jan 23-25, 1994.
26. **Bose C**, Agarwal SK, Chatterji RK, Srivastava VML. Carboline antifilarials: Effect on sugar metabolism in *L. a*. Eleventh National Congress of Parasitology, Udaipur, India, Jan 23-25, 1994.
27. **Bose C**, Chatterji RK, Srivastava VML. Effects on carbohydrate metabolizing enzymes in *L. a*. 63<sup>rd</sup> Annual Meeting of Society of Biological Chemists (India) CDRI, Lucknow, India, Dec. 19-22, 1993.
28. **Bose C**, Chatterji RK, Srivastava VML. Diaminoalkane antifilarials: Effect on sugar metabolism in *L. a*. 62<sup>nd</sup> Annual Meeting of Society of Biological Chemists (India) CDRI, Lucknow, India, Dec. 19-22, 1992.
29. **Bose C**, Chatterji RK, Srivastava VML. Effect of carboline antifilarials on sugar metabolism in *L. a*. CSIR Golden Jubilee Symposium on Tropical Diseases: Molecular Biology and Control Strategies (India), Central Drug Research Institute, Lucknow, India. Feb. 17-20, 1992.

## Research Experience

### Projects working on are:

March 2019—present

Internal Medicine Department, Texas Tech University for Health Science Center, Lubbock, TX

**Explore the role of RLIP76 (a mercapturic acid pathway transporter), and proteins that regulate this pathway (p53 and HSF1) in carcinogenesis and cancer therapy.** This project addresses the overarching challenges of: (a) Identify what drives breast cancer initiation; determine how to prevent it; and (b) Identify mechanisms of effective treatment regimens to refine or replace them with ones that are more effective, less toxic, and impact survival, *I V a V*. The projects are:

1. **Treatment of triple negative breast cancer xenografts:** Nu/Nu Athymic Nude female mice (NOD/scid) injected sub-cutaneous with TMD231-

2. **Rlip depletion by antisense phosphorothioate oligodeoxynucleotide (APO) R508 and/or 2HF,** *I V V*. Nu/Nu athymic nude mice are used to create subcutaneously implanted human cancer xenografts of cultured human cancer cells from non-small cell and melanoma cell lines with differing functionality of the P53, ALK-kinase or B-Raf genes.
3. **Prevention of chemical carcinogenesis** by utilizing female C57Bl6 mouse model to assess the chemo preventative activity of 2HF.
4. **Prevention of Spontaneous Carcinogenesis:** Study the effect of chemo preventative substances in MMTV-ErbB2/P53<sup>-/-</sup> (p53 null) and MMTV-ErbB2/P53<sup>+/-</sup> mouse models.
5. **Small Inhibitor Therapeutic Target for Alzheimer's disease.** Studying the efficacies of a small molecule 'DDQ' in amyloid beta precursor protein transgenic mice for Alzheimer's disease.

**Projects undertaken are:**

**November 2016-February 2019**

**University of Arkansas for Medical Sciences, Little Rock, AR**

Studied and examined the role of CD163<sup>+</sup>/CXCR4<sup>+</sup> cells expressing bone matrix proteins in vascular calcification in patients with chronic kidney disease, by analyzing the total PBMC isolated from the blood to identify other circulating cells responsible for the development of vascular calcification and diabetic nephropathy in

Studied the role of MAPK and its correlation with cholesterol metabolism and LDL receptor expression in young and old C57black/6 and BDF-1 mouse models, and in early and late passage human skin fibroblasts .

Executed studies aimed to understand the role of erythropoietin and nicotine on MAPK (MEK/ERK, MEKK/JNK and JAK/STAT pathways) signaling in various cancer cell lines by performing cell-based assays (cell cytotoxicity, MTT, cell-cycle analysis, cell proliferation BrdU CCK8 and apoptosis by Nexin and Tunnel assays) by flow cytometry and calorimetrically utilizing

**1991-1996**

**Central Drug Research Institute, Lucknow, India**

**Post-doctoral fellow, Division of Biochemistry**

Successfully identified a panel of four biochemical parameter targets of drug designing for the in vitro screening of anti-filarial drugs (Glycolytic enzymes, energy metabolism, protein synthesis, and DNA replication and transcription process). Established the rat model for filarial infection (parasite burden). Maintained various filarial infections in rodent host and studied the role of various cytokines and oxygen-

**Flow cytometry:** Extensive working experience with multi-channel flow cytometry panel (BD FACS Caliber, Flow Jo, and Guava EasyCyte mini) for the analysis of intracellular cytokines, T and B cell activation including staining of fresh and cultured human PBMCs from clinical samples, mouse splenocytes, lymph nodes. Lyse no-wash staining of human and mouse whole blood. Antibodies titration and other critical reagents, optimized fluorochrome selection in antibody panels, for intra and extra cellular FC staining. Optimized mouse mixed lymphocyte reactions and binding assays and performed cell separations with MACS columns. Cell sorting with FACS ARIA cell sorter.

**Immunochemistry and pathology:** Immunohistochemistry, immunofluorescence and fluorescence in-situ hybridization (ISH), Tunnel assay, H&E, PAS, Prussian blue staining, for many biomarkers in human and mice tissues and cells. Routine fixing, staining and quantification, fluorescence and microscopy.

**Molecular Biology:**

- 2016-** Rohit Seth, Post-doctoral fellow, (College of Medicine, University of Arkansas for Medical Sciences, Nephrology Division, Little Rock, AR).
- 2016-** Alena V Savenka, Research Assistant, (College of Medicine, Pharmacology & Toxicology University Of Arkansas for Medical Sciences, Little Rock, AR).
- 2010-** Robert Stafford Justus, Tech. II, (Veteran Health Science Center, Little Rock, AR),  
**2012** and, Nephrology Division, UAMS, Little Rock, AR).
- 2014-** Oleg Karaduta, Research Assistant, (College of Medicine, University of Arkansas for  
**2015** Medical Sciences, Nephrology Division, Little Rock, AR).
- 2010-** Merrick Christopher, Medical student (College of Medicine, University of Arkansas for  
**2011** Medical Sciences, Little Rock, AR).
- 2009** Alla Ramani, Research Associate, (University of Arkansas for Medical Sciences, Little Rock, AR, Donald W. Reynolds Institute on Aging)
- 2008** Debarti Ray, M.D., Research Assistant (Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR).
- 2007** Maheswari Rajasekaran- Graduate (Ph.D) student (University of Arkansas for Medical Sciences, LR, AR, Donald W. Reynolds Institute on Aging)
- 2007** Azida Walker, Ph.D., Post-doctoral fellow (Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR).
- 2006** Nick Greenwood, -Medical student (College of Medicine, University of Arkansas for Medical Sciences, Little Rock, AR).
- 2004-** Hailing Jhang, M.D., Research Assistant (Department of Physiology and Biophysics  
**2006** University of Arkansas for Medical Sciences, Little Rock, AR).
- 2004** Shewta Shetty, M.D., Medical Fellow (Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR).
- 2003** Priya Gupta, M.D., Medical Fellow (Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR)
- 2002** Arvind P. Jamakhandi, Graduate (Ph.D)

- 1996-1997** Meenakshi Saini, Graduate (Ph.D) student, (National Institutes of Immunology, India).
- 1994-1995** Alima Zaidi, Graduate (Ph.D) student, (Central Drug Research Institute, Lucknow, India).
- 1996** Manisha Kakkar, Graduate (Ph.D) student, (Central Drug Research Institute, Lucknow, India).