

Mitali Bose, MSc, Ms CNIM

55 FOSTER RD , SWAMPSCOTT, MA 01907

Ph No. 214-709-4205 ;mitali.bose@specialtycare.net ; H1B status , EAD

EDUCATION

CERTIFICATION IN NEUROPHYSIOLOGIC INTRAOPERATIVE MONITORING (CNIM) 2009-2029

University of Texas At Dallas

Dallas , Tx

Ms in Neuroscience

2005-2006

GPA 4.0/4.0

Research Assistantship

Student worker at Disability Center for one semester

University of Hyderabad

Hyderabad, India

Msc Biochemistry

2000-2002

Merit Scholarship—2001 to 2002

Krishnadevaraja University

Kurnool, India

Bsc Biochemistry

1997-2000

PROFESSIONAL EXPERIENCE

Specialty care- Northeast Region – Boston , MA

2017- Present.

- **Clinical training specialist** – Train new training fellows on basic spine modalities to achieve the goal of monitoring a case independently. Train SNPs on advanced modalities. Participate in research opportunities.
- **Senior Surgical Neurophysiologist III** - Expertise in complex surgeries – Mapping craniotomies , skull base craniotomies , Craniotomies, Aneurysm clippings ,AVM resections, Thoracic aortic aneurysm, Motor cortex Lesion resection , Scoliosis , All spine.

Sentient medical Systems – Northeast Region-Boston, MA

2008-2016

- **Senior Surgical Neurophysiologist** – Expertise in complex surgeries – skull base craniotomies , Craniotomies, Aneurysm clippings , Thoracic aortic aneurysm, Motor cortex Lesion resection , Scoliosis , All spine.
- **Modalities** – SSEPs, TcMEPs, EEG, Emgs, BAERs, CNAP, Phase Reversal, Motor Mapping, D-waves, Midline spinal cord mapping , Dorsal Rhizotomies.
- **Clinical Training Specialist** – Trained new hires to achieve the goal of monitoring a case independently. (7 trainees -all independent).

Research Assistant I 2007-2008

Center for Basic Neuroscience

UT Southwestern Medical Center

Joho Lab- Principal Investigator: Rolf Joho

- Techniques: Immunohistochemistry, Genotyping, PCR, RTPCR, primer design, Animal husbandry, perfusions, confocal microscopy, Western Blotting, Agarose gel electrophoresis, SDS page Electrophoresis, Adobe Photoshop image processing, Mammalian cell culture, transfection, X-ray crystallography, Elisa, Protein purification, column chromatography.

Research Assistant 2006-2007

School of Behavioral and Brain Sciences, University of Texas at Dallas

Laboratory of Cell and Synaptic Physiology-- Principle Investigator: Marco Atzori, Ph.D.

- Techniques: Biocytin Staining, Golgi-Cox Staining, Subcutaneous and Intravenous administration of drugs, Morphological analysis of Neurons, Sigma Plot analysis.

Research Internship 2006

Nuclear Medicine Center of Texas Southwestern Medical

Principle Investigator: Michael D. Devous Sr., Ph.D.

- Techniques: Mat lab, MRIcro, Neuron Tracing, SPSS

POSTERS AND

PUBLICATIONS

- Brain mapping during resection of high-grade brain arteriovenous malformation.
Kappel AD, **Bose M**, Toczyłowski M, Patel NJ. **Neurosurg Focus Video. 2025 Jan 1**
- Motor mapping-guided resection of a brainstem recurrent pilocytic astrocytoma. Guo X, **Bose M**, Galvin CP, Bi WL. **Neurosurg Focus Video. 2025 Jan 1**
- Interhemispheric Transcallosal Approach for Resection of a Pineal Region Third Ventricular to Brainstem Tumor: 2-Dimensional Operative Video. Guo X, **Bose M**, Toczyłowski M, Fonseca A, Bi WL. **Oper Neurosurg. 2025 Feb 21**
- The Role of Intraoperative Neurophysiologic Monitoring on Surgical Decision Making and Neurologic Outcomes in Pediatric Patients With Intramedullary Spinal Cord Tumors.
Papadakis JE, Mosher A, Slingerland AL, Albanese JS, Staffa SJ, **Bose M**, Toczyłowski M, Fehnel KP. **J Clin Neurophysiol. 2025 Feb 26.**
- Interpretation and Strategy to Resolve Neuromonitoring Changes Associated With Brain Sag
Mitali Bose, CNIM*, Matthew Toczyłowski, CNIM*, Xiaopeng Guo, MD, PhD†§, David D. Liu, MD‡, Thomas Epplin-Zapf, CNIM*, W. Bryan Wilent, PhD||, Wenya Linda Bi, MD, PhD ‡
Operative Neurosurgery 00:1–14, 2024
- Multimodal-Assisted Resection of Right Insular Glioblastoma: A 2-Dimensional Operative Video. Guo X, Torio E, **Bose M**, Golby AJ, Bi WL. **Oper Neurosurg. 2024 Dec**
- *Therapeutic Impact of Traction Release After C5 Nerve Root Motor Evoked Potential (MEP) Alerts in Cervical Spine Surgery* William B. Wilent, PhD,* John M. Rhee, MD,† James S. Harrop, MD,‡ Thomas Epplin-Zapf, MS,* **Mitali Bose**, MS,* Eric A. Tesdahl, PhD,* Jeffrey Cohen, MD, PhD,* and Anthony K. Sestokas, PhD*(**Clin Spine Surg 2020**)
- Effect of the environment on the dendritic morphology of the rat auditory cortex **Mitali Bose**, Pablo Muñoz, Swagata Roychowdhury, Justin A. Nichols, Vikram Jakkamsetti, Benjamin Porter, Rajasekhar Byrapureddy, Humberto Salgado, Michael P. Kilgard, Francisco Aboitiz, Alexies Dagnino-Subiabre, Marco Atzori, **Synapse 2009**
- *Rescue of Motor Coordination by Purkinje Cell- Targeted restoration of Kv3.3 channels in*

Kcnc3-Null Mice requires Kcnc1 Edward C. Hurlock, **Mitali Bose**, Ganon Pierce and Rolf H. Joho
J Neuroscience 2009

- *Muscarinic M₂ and M₁ receptors reduce GABA release by Ca²⁺-channels modulation through activation of PI₃K/Ca²⁺-independent- and PLC/ Ca²⁺-dependent-PKC* **J Neurophysiol (June 20, 2007)** Humberto Salgado, Timothy Bellay, Justin Andrew Nichols, **Mitali Bose**, Laura M Martinolich, Linda Perrotti, and Marco Atzori
- *Firing pattern of neurons from the Tectal Longitudinal Column.* Justin Nichols¹, Ankur Patel¹, **Mitali Bose**¹, Antonio Vinuela², M. Auxiliadora Aparicio², Enrique Saldana², Marco Atzori¹, ¹University of Texas at Dallas, ²Universidad de Salamanca; The Association for Research in Otolaryngology, Colorado, 2007
- *Auditory Environment, Stress, and Brain Plasticity.* Nichols JA, **Bose M**, Jakkamsetti VP, Kilgard MP, Atzori M. in The Neurobiology of Stress: an Evolutionary Approach, Research Signpost, (Eds. F Aboitiz and A Dagnino-Subiabre), **2007**.
- *Adrenergic modulation reveals two functionally different inhibitory pathways in the auditory cortex of the rat.* Humberto Salgado¹, Ankur Patel¹, Justin Nichols¹, **Mitali Bose**², Marco Atzori¹
¹University of Texas at Dallas, Richardson, TX ²UT Southwestern, Dallas, TX ARO meeting, Phoenix, **february 2008**
- *Immunoquantification of the voltage-gated potassium channel Kv3.2 in the prefrontal cortex of schizophrenia tissue.* Masaya Yanagi, **Mitali Bose**, Bryan Potts, Ana Stan, Kelly Lewis, Subroto Ghose, Rolf H. Joho, Carol Tamminga; Departments of Psychiatry and Neuroscience, UT Southwestern Medical Center at Dallas, TX **SNF 2008**
- *Volumetric Measures Of Leukoariosis in The Assessment of Vascular Risk Factors for Alzheimer's disease.* M.D. Devous, Sr., P. Srinivasan, **M. Bose**, A. Ardelean, D. Koovakkattu, C. Marquez de la Plata, C. Moore, R. Diaz-Arrastia, **Society for Neuroscience, Atlanta, Georgia, 2006**.
- *Auditory Environment, Stress and Brain Plasticity.* Nichols JA, **Bose M**, Jakkamsetti VP, Kilgard MP, Atzori M. in The Neurobiology of Stress: an Evolutionary Approach, (BOOK CHAPTER) **Research signpost, (Eds. F Aboitiz and A Dagnino-Subiabre), 2007**

Presentations

- **Cushings Teaching Seminars Part1 –Part 2**
Harvard Medical School - Neurosurgery Residency program- April 2019 ; May 2020
- **Sensitivity and specificity of Transcranial Motor Evoked Potentials in Craniotomies** - publication date-Jun 25, 2019 publication description FL-ASET
- **Anesthesia and Intra-operative neuromonitoring**
publication date Jan 7, 2019 publication description -Beverly Hospital
- **Case Presentations - Examples of Changes due to Anesthesia**
Jun 2018 -Anesthesiology residency Program, Harvard Medical school
- **Basics of Intra-operative Neuromonitoring**
Mar 2018 Harvard Medical School - Neurosurgery Residency program
- **Examples of Technically Exquisite Monitoring of Motor Eloquent Cortex During Tumor Resections in Anesthetized Patients** .Publication in 2018 ASET
- **Continuous assessment of trigeminal pathway integrity under general**

anesthesia -Publication in 2023 ASNM - first prize for scientific achievement in a case series.

- **Impact of subcortical mapping for tumors abutting the corticospinal tract**
- Publication in 2023 ASNM - Second prize for scientific achievement in a case series
- **Efficacy of Visual Evoked Potentials in pre-chiasmatic and post-chiasmatic lesion resections** -Publication in 2023 ASNM - Eposter
- **Novel Stimulating montage for improvement of Corticobulbar Motor evoked postentials (CoMEPS) relaiability during skull base craniotomies** - Publication in 2023 - EPoster
- **Application of D-waves in Infratentorial craniotomies for continuous long tract monitoring during resection of foramen magnum tumor** - Publication in 2023 ASET.
- **Intraoperative Neurophysiology Technical Nuances for midbrain tumor resections** - Grand rounds for Specialty care.
- **Advanced Intraoperative Neurophysiology to aid in resection of eloquent area brain Arteriovenous Malformation-** Publication in 2024 ASET, Eposter at ASNM 2024 as well as platform presentation .
- **Corticobulbar Motor Evoked potentials – A comprehensive review-** Eposter at ASNM 2024
- **Selective Dorsal Rhizotomy in Diplegic versus Quadriplegic Patients: Intraoperative Electrophysiology.** Poster at ASNM 2025
- **Neonatal/Pediatric Case Presentation** - Invited talk - **ASNM 2025**
- **BAER;VEP;CN EMG;CoMEP- Workshop** - Invited Talk - **SIONCON 2025**
- **Dorsal Rhizotomy and IONM** - Invited Talk -**SIONCON 2025**
- **Intraoperative Monitoring of Brainstem Reflexes** - Invited Talk **SIONCON 2025**