

MSU BARODA ZOOLOGY RESEARCH/SCIENCES GLOBAL CONNECT

Connecting Ideas • Inspiring Research • Building Global Collaborations

BI-WEEKLY INVITED LECTURE SERIES (ONLINE MODE)

WOMEN IN LEADERSHIP EXCELLENCE AND IN FRONTIER FIELDS OF SCIENCES



Dr. Shilpa Buch

*Professor & Executive Vice Chair for Research and the Director of
the Nebraska Centre for Substance Abuse Research
Department of Pharmacology and Experimental Neuroscience
University of Nebraska Medical Center, Omaha, USA*



Saturday, 12th September, 2026



Time: 8:30 am IST

**Title: Changing Fields, Following
Questions: A Scientific Journey Into
NeuroHIV and Addiction**

Register here : <https://forms.gle/vBrn5txH5oC2j4Yu9>

Deadline: 09th September, 2026



ONLINE

Zoom link will be shared before each session to all the registered participants



OPEN TO

All teaching staff, BSc, MSc and Phd Students



Upcoming Invited Guest Lecture: Dr. Shilpa Buch - Meeting Details & Mandatory Instructions

Dear Participants,

The Department of Zoology is pleased to announce that the upcoming invited guest lecture will feature **Dr. Shilpa Buch, Professor, Department of Pharmacology and Experimental Neuroscience, UNMC, Omaha, USA.**

The session will be conducted in **hybrid mode**, for the **physical attendance arrangements are made at the MSc Lecture Room, Z-65.**

Online participation will be available for only for registered participants.

Session Details

Date: September 12, 2026

Time: 8:30 AM IST

Venue: MSc Lecture Room, Z-65, Department of Zoology

Mode: Hybrid

- **Students who have NOT registered for the lecture are requested to attend the session physically in MSc Lecture Room Z-65.** However, physical attendance will be strictly subject to the seating capacity of the room. Students must not overcrowd the room or occupy seating beyond the designated capacity.
- **Students who have already registered for the lecture may also attend the session physically in MSc Lecture Room Z-65.** Registered participants will be accommodated subject to the available seating capacity.
- Participants are requested to **follow the seating and attendance instructions provided by the organizers** and cooperate with the coordinators at the venue.

Important Instructions

- **Punctuality:** All participants are expected to be present at the venue **at least 10 minutes before the scheduled start time.** The session will begin promptly at 8:30 AM with general announcements and the speaker's introduction.
- **Q&A:** A 15-minute question-and-answer/discussion session will immediately follow the lecture. Questions should be asked only after being acknowledged by the moderator.
- **Conduct:** All participants are expected to maintain **professional and appropriate conduct throughout the session.**

Participants are strongly encouraged to review **Dr. Buch's recent publications** before the session. This will help facilitate a more meaningful and productive scientific discussion during the Q&A.

All students are also requested to **strictly follow the above instructions** and cooperate with the organizers to ensure that the session is conducted smoothly and professionally.

Please find below the synopsis of the lecture to be delivered by Dr. Buch.

Warm regards,

Dr. Prakash Pillai

Head, Department of Zoology

The Maharaja Sayajirao University of Baroda

Vadodara, Gujarat, India

Title : Changing Fields, Following Questions: A Scientific Journey Into NeuroHIV and Addiction

Synopsis of talk

Despite the remarkable success of antiretroviral therapy (ART), HIV has evolved from a fatal disease into a chronic, manageable condition, allowing people with HIV to live longer lives. However, lifelong ART, persistent viral proteins, and substance use - particularly opioids - can contribute to chronic neurotoxicity and exacerbate neuroHIV. The talk will discuss our experimental models of HIV/SIV and opioid exposure, including evidence that morphine increases viral burden in the brain and alters brain gene expression. Using RNA sequencing, we identified dysregulated microRNAs that provide a mechanistic link between HIV, opioids, and extracellular vesicle (EV)-mediated intercellular communication. I will highlight our findings showing that EVs released from morphine-treated astrocytes can transfer microRNAs that injure pericytes and directly activate microglia through Toll-like receptor signaling, while HIV proteins can similarly induce microRNA release that contributes to synaptodendritic injury in neurons. Finally, I will discuss how HIV and opioids intersect with brain aging and neurodegeneration, and how EV-based biomarkers may provide new approaches for understanding, monitoring, and ultimately treating neuroHIV in the aging population.