

**CHRIST (Deemed to be University),
Central Campus, Bangalore
School of Psychological Sciences,
Department of Psychology**

Report on Neuroscience Lecture Series – A Brain Buzz event



CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE • INDIA

NEUROSCIENCE LECTURE SERIES

DR. VIJAYALAKSHMI K.

M.Sc., Ph.D.
Additional Professor of
Neurophysiology at
NIMHANS

*Importance of in-vivo and in-vitro
model systems in translational
research: Insights from ALS
research at NIMHANS*



DR. BETTADAPURA N SRIKUMAR

Additional Professor,
Department of
Neurophysiology at
NIMHANS

*Novel Drug Discovery for
Neuropsychiatric Diseases - From
molecules to humans*



DATE: 16TH OCTOBER 2024, WEDNESDAY

TIME: 11:45- 1:45 PM

**VENUE: ROOM 628, 6TH FLOOR, R&D
BLOCK**

General Information

Type of Activity	Lecture
Title of the Activity	Neuroscience Lecture Series
Date/s	16th October, 2024
Time	11:45 AM-13:45 PM
Venue	Room 628, R&D Block
Collaboration/Sponsor (if any)	-

Participants profile

Type of Participants	Students from postgraduate psychology programmes
No. of Participants	45

Synopsis of the Activity

Highlights of the Activity	Introduction to novel drug discovery processes for neuropsychiatric diseases, in-vivo and in-vitro model systems of translational research
Key Takeaways	Drug development process, novel drug discovery process, utilizing GluNB for Treatment-Resistant Depression (TRD), current problems in drug discovery; Translational research, Amyotrophic Lateral Sclerosis, experimental models using CSF from ALS particles, involvement of astrocytes and microglia, introduction to chitotriosidase enzyme

Name of Faculty incharge	Dr. Mythri Rajeswara Babu
Designation/Title	Associate Professor
Signature	
Report prepared by:	PG mentors

Summary of the session:

Lecture by Dr. Bettadapura N Srikumar: “Novel Drug Discovery for Neuropsychiatric Diseases - From Molecules to Humans”

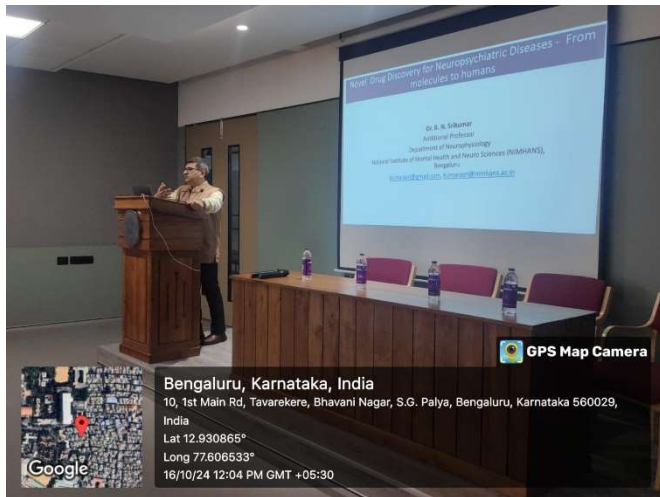
The first session of the lecture series was facilitated by Dr. Srikumar on the topic “Novel Drug Discovery for Neuropsychiatric Diseases - From Molecules to Humans”. Dr. Srikumar highlighted the essential stages in drug discovery, including target identification, establishing link to diseases using human and animal studies, new compound synthesis involving in-vitro and in-vivo screening, lead identification and optimization, assessing in-vivo efficacy, safety pharmacology and toxicology, and finally preparation for first in-human. He also discussed the phases of the drug development process and emphasized the need for innovation in these phases to address neuropsychiatric disorders more effectively. The session specifically mentioned GluNB as a promising therapeutic target for Treatment-Resistant Depression (TRD), marking a significant advancement in understanding TRD's neurobiological mechanisms. Current issues in the drug discovery pipeline including high failure rates in clinical trials, drug efficacy, and safety concerns were also discussed. Dr. Srikumar emphasized the need to bridge the gap between molecular research and patient-centered therapies.

Lecture by Dr. Vijayalakshmi K: "Importance of In-Vivo and In-Vitro Model Systems in Translational Research: Insights from ALS Research at NIMHANS"

The second session of the lecture series was facilitated by Dr. Vijayalakshmi on the topic “Importance of In-Vivo and In-Vitro Model Systems in Translational Research: Insights from ALS Research at NIMHANS”. Dr. Vijayalakshmi focused on Amyotrophic Lateral Sclerosis (ALS), a progressive neurodegenerative disease. Her team at NIMHANS utilizes in-vivo (animal models) and in-vitro (cell cultures) model systems to understand disease mechanisms better and translate them into potential therapies. The lecture covered ongoing research involving Cerebrospinal Fluid (CSF) from ALS patients to study its effects on neuronal cells. This line of research is crucial to decipher how ALS propagates in the brain and spinal cord. The lecture highlighted the critical involvement of astrocytes and microglia in ALS progression. These glial cells are key contributors to the neuroinflammatory response observed in ALS, making them potential therapeutic targets. Dr. Vijayalakshmi introduced research on the Chitotriosidase enzyme, which is being studied for its potential role in neuroinflammation in ALS. Increased levels of this enzyme in ALS patients suggest it could be a biomarker for disease progression or a target for therapeutic intervention. The session was concluded with a discussion on the need for further research on patient-specific cells due to the vast differences in the disease progression among ALS patients.

The sessions provided valuable insights into the complexities of drug development for neuropsychiatric diseases and translational research for ALS.

Photos (Geotagged)

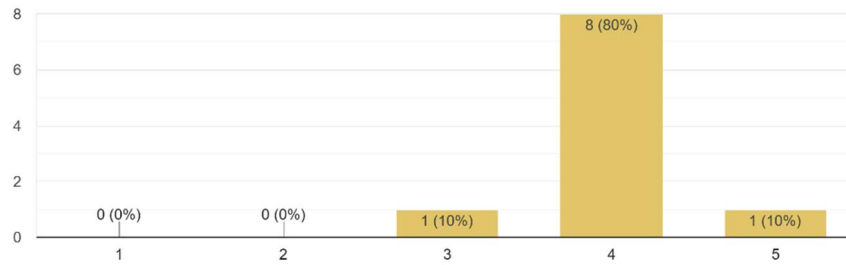


Feedback analysis

Dr. Srikumar's talk

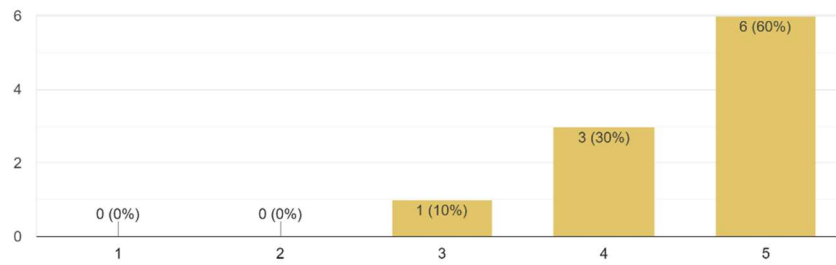
Relevance of the session

10 responses



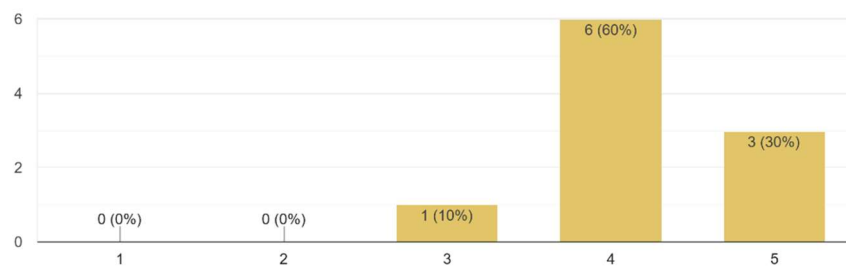
Did the speaker effectively deliver the content

10 responses

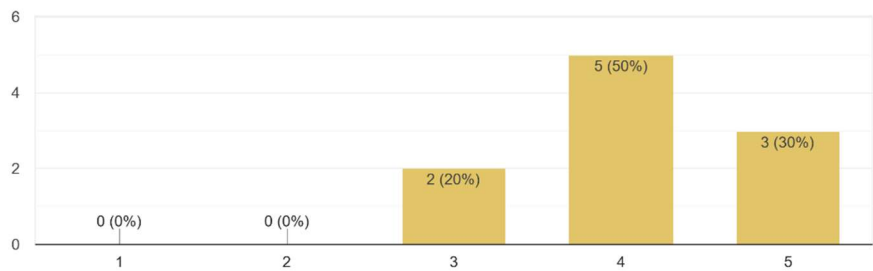


Do you think the content of the session was sufficient?

10 responses

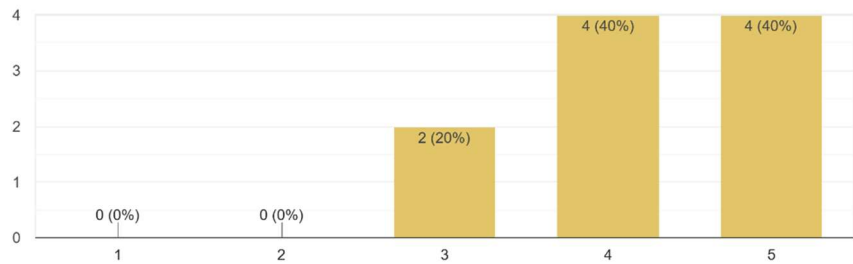


Do you think this will be useful to you in future
10 responses

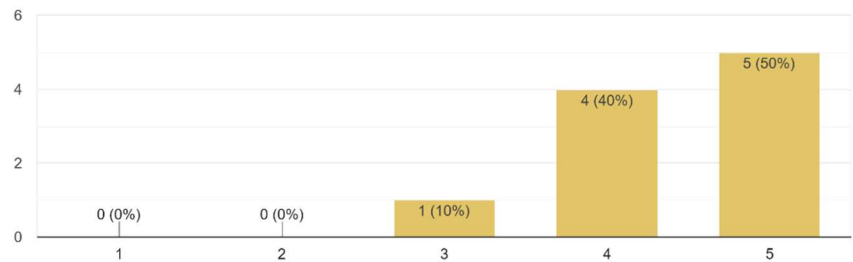


Dr. Vijayalakshmi’s talk

Relevance of the session
10 responses

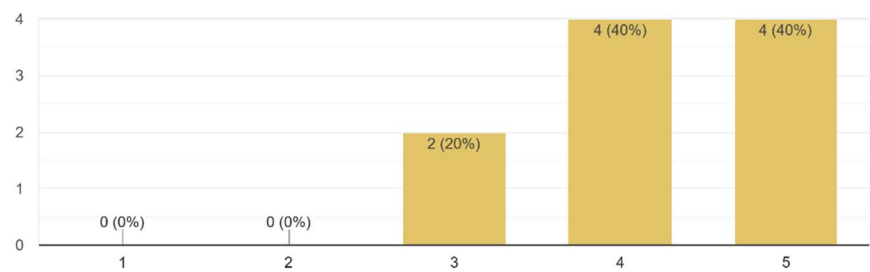


Did the speaker effectively deliver the content
10 responses



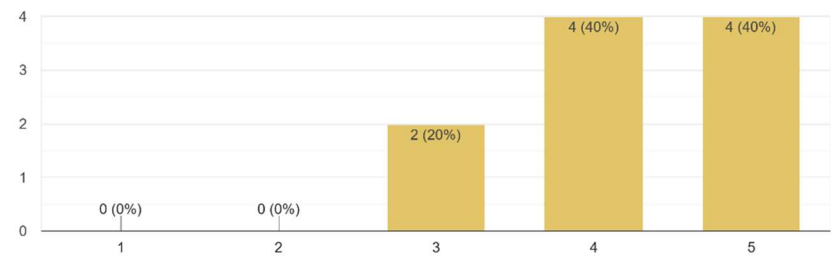
Do you think the content of the session was sufficient?

10 responses



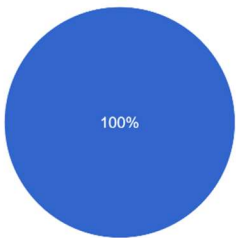
Do you think this will be useful to you in future

10 responses



Are you open to more such sessions being conducted

10 responses



- Yes
- Maybe
- No

Do you have any specific suggestions/comments?

10 responses

No

-

NIL

Please don't conduct it during lunch hours

NO

The content of the sessions was very informative, but sticking to the given time frame would definitely help

There should be a proper gap between consecutive lectures because the content being presented can be too much for a single sitting. Otherwise, it was an excellent session. Helped me to broaden my view point of the field and possible future.

Something related to neuropsychology and not the medical or drug aspect might be better for next time

Impact analysis

Overall the event was well received. Despite having the session during lunch hour students were very keen and interested and enjoyed the lectures. They were overall very informative and students showed enthusiasm and were inquisitive to know more. They wanted to have similar lectures being organized more frequently

Attendance Sheet

Subject teacher's signature: