

Satellite Symposium
for the Indian Academy of Neurosciences (IAN) Annual Conference
(Online)
Jointly organized by the Indian Academy of Neurosciences (IAN)
and
Department of Physiology, University of Calcutta
CPEPA-Centre for "Electrophysiology and Neuroimaging including Mathematical
Modelling," University of Calcutta
November 10, 2021

Title of your symposium

Translational Neurophysiology & Cognition

Theme of your symposium

Transdisciplinary approaches of research in higher brain function can reveal the neurophysiological basis of cognitive sciences for health and diseases. The research fields including *in vitro* cell culture method, *in vivo* experiments with animals and humans, and bioinformatics/computational evaluations can contribute ample of evidences in support of the structural and functional aspects of brain to define cognition. Our mission covered the scientific sessions with the focus of the "Clinical case studies", "Psychobehavioural approaches" and "Molecular interactions to systems biology".

Name of the speakers and their topic that covered.

	Name of the speaker	Title of the talk	Keywords of the topic covered
1.	Dr. Hrishikesh Kumar (Neurologist, INK, Kolkata)	Brain simulation in Lewy body disease	Parkinson disease (PD); case studies; Deep brain stimulation; non-invasive technique and its neurophysiological basis for recovery of motor movement in PD patients
2.	Dr. Atanu Biswas (Neurologist & Prof., BIN, IPGME&R, Kolkata)	COVID19 and cognitive impairment	Symptomatic analysis of neurological problems in COVID19; MRI studies and structural/functional changes in brain areas; possible neuro-pathophysiology of COVID-19
3.	Dr. Laxmi T. Rao (Prof., Neurophysiology, NIMHANS, Bengaluru)	Causes and consequences of anxiety-induced changes in cognition and behavior	Animal (rodent) model of anxiety; fear and anxiety association; Electrophysiological assessment of brain activation related to fear & anxiety.
4.	Dr. Manas Kumar Mandal (Prof., Humanities & Social Sci., IIT-Kgp)	Cognitive Neuroscience: a translational approach	Cognitive neuroscience & higher brain function; transdisciplinary approach and the translational nature of cognitive science; dementia; SWOT analysis of the present status of cognitive neuroscience in the country.

5.	Dr. Amal Bera (Prof., Biotechnology, IIT-Madras)	Pannexin-P2X7 receptor interaction and its role in Parkinson's Disease	Role of Pannexin and P2X7 receptor in Parkinson's Disease (PD), Experimental evidences in support of cell survival by limiting calcium influx through P2X7 receptor; possibilities of P2X7 receptor targeted treatment strategy for PD
6.	Dr. Basant K. Tiwary (Prof., Bioinformatics, Pondicherry University)	Molecular co-evolution of cognition & speech in human	Concept of molecular coevolution of cognitive ability and speech in human; Nature of selection on the speech gene <i>FOXP2</i> ; Computational evidence that <i>FOXP2</i> has evolved under the influence of relaxed selection (i.e. relaxation of purifying selection) in the human lineage.

No registered participants

Total: 175

IAN members: 14

Non-IAN members: 102

Undergraduate/Graduate: 59

Students presentation and award information

(I) PhD student: 8 candidates submitted abstract

1. Selected/awarded for best abstract: 3 abstracts for 10 min presentation each
3 PhD students presented their talks (highlighted in table below)
2. Other 5 abstracts considered for 5 min presentation each
3 PhD students out of 5 presented their talks

(II) MSc students: 1 candidate submitted abstract and presented 10 min talk

Model of work	Institute	Method applied	Title of the work	
Human	Amity University Noida (U.P.)	Questionnaire	Clinicoepidemiological study of Postpartum depression in women from Northern India	
	National Institute of Biomedical Genomics, Kalyani	Bioinformatics/ Computational, qPCR	A study of genomic copy number variations reveals NLGN1 is over represented in primary angle closure glaucoma patients	Selected/awarded
Rat	Dept.of Physiology, University of Calcutta	Molecular analysis Behavioural tests	The optimum dose of streptozotocin (STZ) required for induction of memory impairments and neuroinflammation following intracerebroventricular (ICV) injection	Selected/awarded
	Dept.of Physiology,	Molecular analysis	Thyroid Hormone Action in Synapse under ROS-induced Stressed Condition	

	University of Calcutta			
Mice	Dept. of Physiology, University of Calcutta	Molecular analysis Behavioural tests	Combination treatment of ciprofloxacin and dexamethasone reduces the severity of <i>S. aureus</i> induced brain abscess via neuroendocrine-immune interaction of TLR-2 and glucocorticoid receptor leading to behavioral improvement	
Chick	Department of zoology. S.S.J. Campus, Almora. Kumaun University, Nainital.	Histology	Effect of acute-stress on neuronal characteristics of the dorsolateral forebrain of 30-day-old chick, <i>Gallus domesticus</i>	Selected/awarded
	Department of zoology. S.S.J. Campus, Almora. Kumaun University, Nainital.	Histology	To evaluate the effect of unpredictable chronic mild stress in the hippocampal complex of 30 days old chick.	Not presented
Cell line	CSIR-CDRI, Lucknow	Molecular analysis	Effect of Angiotensin Converting Enzyme 2 Activation on LPS Induced Inflammation in Microglia	Not presented

Organizers experience

The online meeting continued uninterrupted with very organized manner and finished in time. The meeting inaugurated with “University song” (written by Nobel Laureate Rabindranath Tagore on 1937) of University of Calcutta followed by the Inaugural speech of honourable Pro-Vice Chancellor (Academy Affairs), University of Calcutta. The inaugural program was made more gleeful with deliberation of speech by Dr Pralhad K Seth (Founder of IAN and IBRO-FAONS Representative - IAN), Dr. Pankaj Seth (General Secretary-IAN) and Dr. Jayasri Das Sarma (convener IAN-2021). The Departmental introduction was delivered by Prof. Somnath Gangopadhyay, Department of Physiology and Dr. Pritha Mukhopadhyay, CPEPA-centre, under University of Calcutta. Average 70 participants attended throughout the program. Participants interacted with invited speakers after end of each talk through online chat box and the speakers provided their answers online immediately. Total eight PhD scholars and one M.Sc. student presented their talks very nicely. The program was delightfully fulfilled by joint venture of all concerned faculty members of the University of Calcutta.