Department of Zoology
Dr. Harisingh Gour Vishwavidyalaya, Sagar-470003 MP, India
(A Central University)

Azadi Ka Amrit Mahotsav

International Webinar
on

Neurobiology of Behavior: the Challenge and the Promise

December 15-16, 2021

Patron
Prof. Neelima Gupta
Vice Chancellor
DHSGSU, Sagar

Convener
Prof. Janak Dulari Ahi
Department of Zoology

Organizing Secretaries
Dr. Raj Kumar Koiri
Department of Zoology
&
Dr. Divya Rawat
Department of Zoology

December 15, 2021

Prof. Jelena Radulovic
(GIAN, Foreign Faculty, 2020)
Albert Einstein College of Medicine
Rose F. Kennedy Center, Bronx, NY 10461
"Translating animal bio behavioral research to human psychology and psychopathology"

Prof. Shukla Prasad
Department of Zoology, Institute of Science
Banaras Hindu University
Varanasi – 221005, India
" Molecular and neurobiological basis of hypoxia-induced cognitive impairment and neuroprotective effects of *B. monnieri* extract "

Dr. Santosh Singh
Department of Zoology
Guru Ghasidas Vishwavidyalaya. Bilaspur (C.G.), 495009
"Neurochemistry of Hepatic encephalopathy: A Metabolic Brain Disorder"

Dr. Akash Gautam
Center for Neural & Cognitive Sciences
School of Medical Science
University of Hyderabad
Hyderabad-500 046, India
"Role of immediate early genes in regulating the learning and memory processes"

Dr. Kiran Pandey
Alberini Lab, Center for Neural Science
New York University, United States
"Role of autophagy in memory formation"

December 16, 2021

Prof. Meena Kumari
Department of Anatomy and Physiology
College of Veterinary Medicine,
Kansas State University, Manhattan, KS 66506, USA
"Multifunctional proteins and their impact in neuronal physiology and addiction"

Dr. Deobrat Dixit
Sanford Burnham Prebys Medical Discovery Institute La Jolla, CA, USA.
"Epitranscriptomics: A new RNA code for the regulation of gene expression"

Dr. Prashant Kumar Modi
Center for Systems Biology and Molecular Medicine
Yenepoya Research Centre
Yenepoya (Deemed to be University)
Mangalore -575018, India
"Application of Multi-Omics technology in deciphering brain functions and diseases?"

Prof. Oliver Stiedl
VU Medical Center
Department of Health, Safety and Environment
VU University Amsterdam
North Holland, Netherlands
"Behavioral, autonomic and neurophysiological phenotyping of animal models - from health to neuropsychiatric disease (with its translational value and limitations)."

Registration Free

Oral presentation : Last date of abstract submission is December 06th 2021

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REGISTRATION LINK : https://docs.google.com/forms/d/e/1FAIpQLSf-0oS2uTP69O43wLkAasHIhYcme9QJIE5mGDGN0yf8JyiidA/viewform?usp=sf_link

International Webinar on Neurobiology of Behavior: the Challenge and the Promise for Translational Research (December 15-16, 2021)

Webinar Schedule: December 15, 2021 (According to Indian Standard Time)

Inaugural Session 8:30 am-9:00 am	Lightning of the Lamp Welcome address : **Prof. Janak Dulari Ahi, Convener** Address by the Dean : **Prof. P.K. Khare, Dean, School of Biological Sciences** Inaugural address of the Chief Guest : **Prof. Neelima Gupta, Hon'ble Vice Chancellor** Vote of Thanks : **Prof. Subodh Kumar Jain, Head, Department of Zoology**	
Time	**Speaker and Title of the talk**	**Chairperson and Rapporteur**
9:00 am -11:00 am **Keynote lecture**	**Prof. Jelena Radulovic (GIAN, Foreign Faculty, 2020)** Albert Einstein College of Medicine, Rose F. Kennedy Center, Bronx, New York, USA **"Translating animal bio behavioral research to human psychology and psychopathology"**	**Session 1** **Chairperson:** **Prof. Subodh K. Jain** **Rapporteur:** **Dr. Rashmi Srivastava**
11:00 am – 12:00 pm **Invited talk**	**Prof. Sukala Prasad** Department of Zoology, Institute of Science, Banaras Hindu University, Varanasi, India **"Molecular and neurobiological basis of hypoxia induced cognitive impairment and neuroprotective effects of *B. monnieri* extract"**	
LUNCH BREAK		
1:30 pm - 4:00 pm **Oral presentation**	**Session 2: Oral presentation** **Chairperson: Dr. Malvika Sikdar, Rapporteur: Dr. Divya Rawat**	
4:00 pm - 4:30 pm **Invited talk**	**Dr. Aniruddha Mitra** Department of Zoology, Sarojini Naidu College for Women, Kolkata, India **"The taste of smell – Drosophila detects odors through taste neurons of proboscis"**	**Session 3** **Chairperson:** **Prof. Versha Sharma** **Rapporteur:** **Dr Yogesh Bhargava**
4:30 pm - 5:15 pm **Invited talk**	**Dr. Akash Gautam** Center for Neural & Cognitive Sciences, University of Hyderabad, Hyderabad, India **"Role of immediate early genes in regulating the learning and memory processes"**	
5:15 pm – 6:00 pm **Invited talk**	**Dr. Santosh Singh** Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India **"Neurochemistry of Hepatic encephalopathy: A Metabolic Brain Disorder"**	
6:00 pm – 7:00 pm **Invited talk**	**Dr. Kiran Pandey** Alberini Lab, Center for Neural Science, New York University, USA **"Role of autophagy in memory formation"**	

Webinar Schedule: December 16, 2021 (According to Indian Standard Time)

Time	Speaker and Title of the talk	Chairperson and Rapporteur
9:00 am -10:00 am **Invited talk**	**Prof. Meena Kumari** Department of Anatomy and Physiology, College of Veterinary Medicine, Kansas State University, Manhattan, USA **"Multifunctional proteins and their impact in neuronal physiology and addiction"**	**<u>Session 4</u>** **Chairperson:** **Prof. Shweta Yadav** **Rapporteur:** **Dr. Payal Mahobia**
10:00 am -11:00 am **Invited talk**	**Dr. Deobrat Dixit** Sanford Burnham Prebys Medical Discovery Institute, La Jolla, California, USA **"Epitranscriptomics: A new RNA code for the regulation of gene expression"**	
11:00 am -12:00 pm **Invited talk**	**Dr. Prashant Kumar Modi** Center for Systems Biology & Molecular Medicine, Yenepoya Research Centre, Mangalore, India **"Application of Multi-Omics technology in deciphering brain functions and diseases?"**	
LUNCH BREAK		
1:30 pm - 2:00 pm **Invited talk**	**Dr. Surabhi Bajpai** Department of Bioscience and Biotechnology, Banasthali University, Rajasthan, India **"Astaxanthin reduces oxidative stress and alleviates diabetic neuropathy in STZ induced diabetic mice"**	**<u>Session 5</u>** **Chairperson:** **Dr. Ashwani Kumar** **Rapporteur:** **Dr. Rajaneesh Anupam**
2:00 pm -4:00 pm **Invited talk**	**Prof. Oliver Stiedl** VU Medical Center, Department of Health, Safety and Environment, VU University Amsterdam, Netherlands **"Behavioral, autonomic and neurophysiological phenotyping of animal models - from health to neuropsychiatric disease (with its translational value and limitations)"**	
4:00 pm -4:15 pm	**Valedictory session**	**Dr. Raj Kumar Koiri: Report reading and vote of thanks**

Technical and Webinar Support Team: Rayees Ahmad Naik, Tanmaya Rani Sethy, Nidhi Gupta, Lekhan Lodhi, Roshni Rajpoot, Vinodinee Dubey and Debabrata Das.

Report

The International webinar on **"Neurobiology of Behavior: the Challenge and the Promise for Translational Research**" was held on 15th and 16th December, 2021 in the Department of Zoology, Dr Harisingh Gour Vishwavidyalaya, Sagar. The **convener** of the webinar was **Prof. Janak Dulari Ahi** and the **Organizing Secretaries were Dr. Raj Kumar Koiri and Dr. Divya Rawat.** The number of registered participants were 220 from throughout the country and abroad.

Discovering basic causal relationships between nervous system function and behavior is paramount to the process of developing novel treatments for central nervous system diseases.

Psychiatry research, that is, forward translational attempts to explain how neuronal activity, beginning at the molecular level, 'translates' to the production of behavior, and to utilize this information to develop new or better pharmacological and behavioral treatments for psychiatric illnesses.

Translational research bridges basic sciences and clinical entities. Disease mechanisms and therapeutic targets are identified in basic experimental research by integrating clinical concepts. Validation in the clinical setting conveys significance to these findings, advancing knowledge and creating novel and improved therapeutic tools and strategies.

The promises were summarized as the potential to wisely apply an explosion of laboratory science to real-world clinical challenges: the so-called translational research paradigm of the bench-to-bedside transformation but the expedited movement of biomedical advances from the laboratory to clinical trials is only the first phase of the translational process.

The second phase of translation, wherein innovations are moved from the bedside to real-world practice, is equally important, but it receives far less attention.

It is the best of times because translational research in neuroscience has now evolved to a point where our fact base and new techniques offer us and the next few generations of researchers a wonderful opportunity to advance our knowledge of neuropsychiatric disorders and neural circuit-based domains of function in the service of better understanding and treating trenchant, complex neuropsychiatric, neurological, and neuro developmental problems.

The main challenges were discussed as how to integrate huge amounts of new facts (knowledge) into comprehensive and realistic translational models and derivative interventions for these disorders (wisdom).

Our eminent speakers had taken us not only through the challenges but through the promises as well of this novel field of research.