

NEUROCON 2017

19th – 22nd January

International Conference on “Growth, Senescence and Mortality of Neurons: From Traditional Medicine to Cutting Edge Technology.”

Organized by Department of Biochemistry

Neurocon 2017, the 5th meeting of the Neurocon family held from 19th to 22nd January, 2017 at Golden Retreat, Haldia organized by Department of Biochemistry, IIMSAR. Our previous neurocon meetings have established a tradition of focused discussion on a theme related to neuronal growth, proliferation, senescence and degeneration both at the basic and translational levels through participation of neurobiologists, neurochemists, electrophysiologists, molecular biologists and clinical neurologists. This year a major emphasis was on neurodegenerative diseases like Alzheimer’s disease and Parkinson’s disease as well as the cognitive decline of normal brain ageing. With a steadily growing population of aged persons all across the globe, the importance of research on age-related brain disorders can hardly be over emphasized especially when the medical remedies against these conditions are so inadequate. It perhaps is logical to accept that aging is irretrievable, and therefore it is also imperative to find ways and means for ‘Healthy Aging’ in general and ‘Healthy Brain Aging’ in particular.

In this particular symposium we had focused not only on the developments of modern medicine and Neurobiology, but also on exciting observations coming out of research on traditional medicine and therapy. Scientific sessions and conferences were primarily interested in the technical content of the lectures and speeches, but one redeeming feature of Neurocon is that experiments on formats of presentations to make the proceedings attractive to all through a process of inclusive participation of the audience. We had 'Panel Discussion by Students', 'Rapid-Fire Session by senior scientists' and 'Post Dinner Round Table Discussion' along with symposium lectures, three types of short oral presentations ('Early Career Scientists' Forum', 'Budding Scientists' Forum' and 'Proof of Concept/Preliminary Data'). Almost 100 students participated from many prestigious research institutions/universities from different corners of the country. 15 international delegates from different parts of the globe and nearly 30 Indian speakers attended this symposium.

PROGRAMME SCHEDULE

INAUGURATION (19.01.2017)

6:30 - 6:35 PM	1. Welcome Address by the Organizing Secretary: Prof. Sasanka Chakrabarti
6:35 - 6:40 PM	2. Inaugural Song
6:40 -6:45 PM	3. Inaugural Address and Lamp Lighting: Prof. Shail K Sharma
6:45 - 6:55 PM	4. Address by the Chairman, ICARE: Hon'ble Sri Lakshman Seth
6:55 - 7:00 PM	5. Address by the Principal: Prof. Sarojkrishna Bhattacharyya
7:00 - 7:05 PM	6. Address by the Guest of Honour: Dr. Rita Banerjee
7:05 - 7:20 PM	7. Felicitations of Dr. Walter E Muller and Dr. K N Subba Rao
7:20 - 7:25 PM	8. Vote of Thanks by the Jt.Organizing Secretary: Dr. K P Mohanakumar
7:30 - 8: 20PM	9. Scientific Session
8:30 onwards	10. Welcome Dinner

DAY 1
(20.01.2017)

8:00 – 9:00 AM	Breakfast
9:00 - 9:40 AM	Felicitation lecture by Dr.Walter E. Muller
9:40 - 10:55 AM (30 + 25*2)= 80 minutes	<u>SESSION I: MITOCHONDRIA IN PATHOPHYSIOLOGY</u> 1. <u>Dr.D.P. Burma Memorial Lecture:</u> Dr. K. P. Mohankumar: “ Crosstalk between mitochondrial and nuclear genomes in neurons” 2. Dr. Isaac Onyango : “ Mitochondria in the pathophysiology of Alzheimer’s disease” 3. Dr. Pankaj Seth : “HIV-1 modulates properties of Neural stem cells”
10:55 – 11:10 AM (15 minutes)	Panel Discussion
11:10 - 11:30 AM	Tea Break
11:30 - 1:10 PM (25*4=100 mins)	<u>Session II : GENES, DRUGS AND ENVIRONMENT ON NEURODENERATIVE DISEASES</u> 1. Dr. B. D. Banerjee : “Gene Environmental Interaction and etiology of diseases: An artifact or reality?” 2. Dr. Gurcharan Kaur : “Unwinding Nature’s Recipe’s For Health.” 3. Dr. Mousumi Mutsuddi : “KH domain of Spoonbill suppresses non-coding Spinocerebellar Ataxia 8 associated neurodegeneration by depleting pathogenic SCA8 RNA in Drosophila.” 4. Dr. Mahendra Thakur : “Neuropsin emerges as a novel target for memory decline during amnesia and aging”

1:10 – 2:40 PM	Lunch
2:40 – 3:40 PM (4*15 mins= 60 mins)	Early Career Scientists' Forum 1. Dipanwita Sadhukan 2. Kushumika Gharami 3. Vibha Pandey 4. Rebecca Banerjee
3:40 – 3:55 PM (15 mins)	Panel Discussion
3:55 – 4:25 PM (30 mins)	Review Session I Dr. Sumantra Das : “Current Approaches Towards Developing Effective Therapy For Substance Abuse”
4:25 – 4:40 PM (15 mins)	Rapid Fire (Dr. B.S.S. Rao, Dr. Shail Sharma, Dr. Mahendra Thakur)
4:40 – 4:55 PM	Tea Break
4:45 – 6:45 PM (4 * 25 mins)= 100 mins	<u>Session III : NEUROLOGICAL DISEASES- CAUSES AND CORRECTIONS</u> 1. Dr. Federico Sesti : “Oxidation of KCNB1 Potassium Channels Causes Neurotoxicity and Cognitive Impairment in Mouse Model of Traumatic Brain Injury” 2. Dr. Peter Crouch : “Copper malfunction in amyotrophic lateral sclerosis: new opportunity for therapeutic intervention” 3. Dr. Akshay Anand : “Expression levels of LIPC, TIMP-3, SLC16A8, IER in serum of Indian AMD patients” 4. Dr. B. S. S. Rao : “Novel Therapeutic approaches to the treatment of Temporal lobe epilepsy”
6:45 – 7:00 PM	Panel Discussion

<p>7:00 – 8:15 PM (3 speakers* 25mins) = 75 mins</p>	<p><u>Session IV : NEURODEGENERATION AND TOXICITY</u></p> <ol style="list-style-type: none"> Dr. Surendra K. Trigun : “Sirtuins and Neuro-inflammation led Excitotoxic Brain Disorder” Dr. Krishnananda Chattopadhyay : “ Small molecule based investigation on different stages of alpha synuclein aggregation” Dr. Ishan Patro : “Stress during sensitive periods of brain development leads to life long alterations in behaviour and cognitive abilities”
<p>8:15 – 8:30 PM (15 mins)</p>	<p>Panel Discussion</p>
<p>8:30 – 10:00 PM</p>	<p>Dinner</p>
<p>10:00 – 11:00 PM</p>	<p>Post Dinner Round Table Discussion</p>

DAY 2
(21.01.2017)

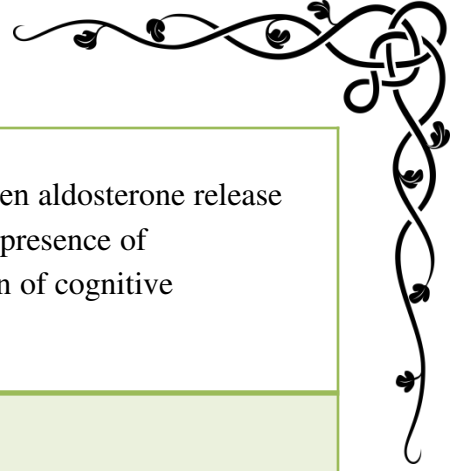
<p>8:00-9:00 AM</p>	<p>Breakfast</p>
<p>9:00 – 10:30 AM (30 mins + 25mins* 2)= 80 mins</p>	<p><u>Session V : BRAIN AGING AND PREVENTION</u></p> <ol style="list-style-type: none"> <u>Dr. Rajshankar Memorial Lecture: Dr. Ehud Cohen</u> : “Neuronal caveolae orchestrate aging and proteostasis at the organismal level” Dr. Lee. W. Lim : “Brain pacemaker and memory enhancement :Investigations of neural and molecular mechanisms in the aged brain” Dr. Anand Kondapi : “Neuronal senescence and DNA repair”

10:30 – 10:45 AM	Panel Discussion
10:45 -11:00 AM	Tea Break
11:00- 11:30 AM (30 mins)	Review Session II: Dr.George Reiser : “Hereditary neurodegenerative disease Infantile neuroaxonal dystrophy (INAD) and Ca ²⁺ mis-regulation: Neurons and astrocytes in INAD mouse models show characteristic mitochondrial deficits and alterations in neuronal transmitter-induced Ca ²⁺ signaling.
11:30 – 11:45 AM	Rapid Fire (Dr. Isaac Onyango, Dr. Sasanka Chakrabarti, Dr. S.K. Das)
11:45 – 12:15 PM	Review Session III Dr. Atanu Biswas : “ Rapidly progressive dementia”
12:15 – 12:30 PM	Rapid Fire (Dr. Prashun Roy, Dr. Neelanjana Paul, Dr. Kunlin Jin)
12:30- 2:00 PM	Lunch
2:00 – 4:15 PM (10 speakers * 13 mins) = 130 mins	Budding Scientists’ Forum
4:15 – 4:45 PM (30 mins)	Review Session III : Prof. K.L.Mukherjee Memorial Lecture Dr. Raghu Vemuganti : “Non-coding RNAs as therapeutic targets to prevent secondary brain damage”
4:45 – 5:00 PM (15 mins)	Rapid Fire (Dr. Ehud Cohen, Dr. Mousumi Mutsuddi, Dr. R. Usha)

<p>5:00 – 5:15 PM</p>	<p>Tea Break</p>
<p>5:15 – 6:55 PM (4 speakers* 25 mins) = 100 mins</p>	<p><u>Session VIII : NEURODEGENERATION- NOVEL APPROACH</u></p> <ol style="list-style-type: none"> 1. Dr. B. N. Srikumar : “Role of hippocampal neurogenesis and long-term potentiation in the reversal of chronic stress-induced cognitive deficits by bromocriptine” 2. Dr. Nisha Patro : “Impact of protein malnutrition on the gliogenesis in a developing rat brain” 3. Dr. Kunlin Jin : “Combining Injectable Plasma Scaffold with Mesenchymal Stem/Stromal Cells for Repairing Infarction Cavity after Ischemic Stroke” 4. Dr. Tal Burstyn Cohen : “Multilevel regulation of neural stem cell homeostasis by PROS1”
<p>6:55 – 7:15 PM</p>	<p>Panel Discussion</p>
<p>7:15 – 7:45 PM (30 mins)</p>	<p>Review Session IV Dr. Sasanka Chakrabarti : “Molecular pathways of α-synuclein mediated degeneration of SHSY5Y cells: Use of protein-protein interaction database”</p>
<p>7:45 – 8:00 PM (15 mins)</p>	<p>Rapid Fire (Dr. K.P. Mohankumar, Dr. Marco Bisaglia, Dr. Tanushree Banerjee)</p>
<p>8:00 – 9:30 PM</p>	<p>Dinner</p>
<p>9:30 – 11:00 PM</p>	<p>Round Table Discussion</p>

DAY 3
(22.02.2017)

8:00 – 9:00 AM	Breakfast
9:00 – 10:15 AM (3 speakers* 25 mins) = 75 mins	<u>Session IX : PARKINSON’s DISEASE – MECHANISMS AND TREATMENT</u> <ol style="list-style-type: none">1. Dr. Tanushree Banerjee : “PARK7 downregulation under cellular stress leads to upregulation of insulin/IGF signalling pathway in neuronal cell lines: implications in the pathogenesis of neurodegenerative diseases”2. Dr. Phalguni Anand Alladi: “Nigral correlates and motor behavior in mice strains with differential susceptibility to MPTP – Modeling the differential prevalence of Parkinson’s disease”3. Dr. Marco Bisaglia : “Redox state alterations in Parkinson’s disease: is the use of antioxidants a valuable therapeutic strategy?”
10:15 – 11:45 PM (11 s * 8mins) = 88 mins	Proof Of Concept / Preliminary Results
11:45 – 12:00 PM	Tea Break
12:00 – 1:45 PM (5 speakers * 25 mins)= 125 mins	<u>Session X : UNDERSTANDING BRAIN FUNCTIONS: FROM MOLECULES TO COMMUNITY</u> <ol style="list-style-type: none">1. Dr. Shyamal K. Das : “A community Study of Prevalence, Incidence and mortality of dementia in the city of Kolkata, India”2. Dr. Prasun Roy : “How the Brain Strives to Heal Towards a Healthy Lifespan for a Greying World”3. Dr. R. Usha : “Genetic Analysis on Autism Spectrum Disorder: A Correlation with Serotonin Transporter Gene, <i>SLC6A4</i>”4. Dr. Barun Mukhopadhyay : “Cognitive Function and its Socio-demographic Correlates among the Rural Elderly of West Bengal, India”



	5. Dr. Sarama Saha: “Cross talk between aldosterone release and modification of lipoproteins in presence of hyperglycemia, a common association of cognitive dysfunction”
1:45 – 2:00 PM	Panel Discussion
2:00 – 3:00 PM	Lunch
3:00 – 4:00 PM	Valedictory Session

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DELEGATES

Akshay Anand	PGIMER, Chandigarh
Anand Kondapi	University of Hyderabad
Atanu Biswas	Bangur Institute of Neurosciences (BIN), Kolkata
B.D. Banerjee	University of Delhi, South Campus
B.N. Srikumar	NIMHANS, Bangalore
BSS Rao	NIMHANS
Ehud Cohen	Hebrew University, Jerusalem
Federico Sesti	Rutgers University, New Jersey
Georg Reiser	University of Magdeburg
Gurcharan Kaur	Guru Nanak Dev University, Amritsar
Isaac Onyango	Gencia Corporation, USA
Ishan Patro	Jiwaji University, Gwalior
K.P. Mohanakumar	Inter University Centre for Biomedical Research & Super Specialty Hospital, Mahatma Gandhi University Campus at Thalappady
Kalluri Subba Rao	INSA Honorary Scientist
Krishnananda Chattopadhyay	IICB, Kolkata
Kunlin Jin	University of North Texas Health Science Center
Lee W. Lim	University of Hong Kong
Mahendra K. Thakur	Banaras Hindu University (BHU)
Marco Bisaglia	University of Padova, Italy
Mousumi Mutsuddi	BHU
Neelanjana Paul	IIMSAR, Dr. B.C.Roy Hospital
Pankaj Seth	NBRC, Manesar

Peter Crouch	University of Melbourne, Australia
Phalguni Anand Alladi	NIMHANS, Bangalore
Prasun Roy	NBRC
Raghu Vemuganti	University of Wisconsin
Rita Banerjee	Member Secretary, DST
Sarama Saha	AIIMS, Rishikesh
Sankha Subhra Chakrabarti	Institute of Medical Sciences, BHU
Shyamal K. Das	Bangur Institute of Neurosciences (BIN)
Subrata Chattopadhyay	BARC, Mumbai
Sumantra Das	Ex HOD, Cell Biology and Physiology Division, IICB, Kolkata
Surendra K. Trigun	BHU
Tal Burstyn-Cohen	Hebrew University, Jerusalem
Tanushree Banerjee	Savitribai Phule Pune University
R. Usha	Manovikas Kendra Biomedical Research Centre
Rita Banerjee	DST, Scientist F
Vinay K. Khanna	Indian Institute of Toxicology Research (IITR)
Walter E. Müller	Goethe University