

Neurosciences Newsletter

House Magazine of

INDIAN ACADEMY OF NEUROSCIENCES

(Registered Under Societies Registration Act XXI 1860 Regn. No. 79106)

December 2013

Message



MESSAGE FROM THE PRESIDENT

Dear Members,

It has been a great honor for me to serve as President of IAN and see its continued dynamic growth. The year 2013 has ended with many academic activities and encouraging news for the Academy. The grand success of the 31st Annual meeting of IAN organized at National Academy of Sciences, India (NASI), Allahabad, was a testimony to the growth and popularity of the Academy. I take this opportunity to thank the Local Organizing Committee led by Drs UC Srivastava, Krishna Misra and Neeraj Kumar for efficiently organizing the excellent scientific and cultural program. Like previous years, the DBT sponsored pre-conference workshop held at NASI and IBRO-APRC Associate School held at Banaras Hindu University were highly appreciated by the participants. The inaugural remarks by Dr VM Katoch, Director-General, ICMR, and Secretary, Ministry of Health, Government of India, have indicated the full support of funding agencies to strengthen the activities of the Academy.

The recommendations made during the panel discussion in a special session on 'Neuroscience Education' will be very helpful in igniting young minds and generating human resources throughout the country. With the increasing aging human population and existing environmental impact on lifestyle, it is our moral duty and demand of the day to translate the lessons learnt from the lab to clinics so that the society maybe benefited. This requires a very close collaboration between clinicians and basic neuroscientists. We also need new techniques and perspectives from outside the traditional boundaries. It is heartening to know that a large number of students from different disciplines are interested to pursue their research career in neuroscience. Therefore, to have more trained personnel and resources and to strengthen basic research and education in neuroscience, it is necessary to support more departments and Centers of excellence. It is encouraging to note that the funding agencies like DBT, DST, ICMR, CSIR, UGC and DRDO have identified neuroscience as a thrust area and are promoting research. The Academy looks forward for their continued support and is keen to work with them to achieve its objectives and ultimately to improve the quality of healthcare and serve the society satisfactorily.

At the end, I wish to reiterate my gratitude to predecessors for their mentorship and thank all those who work to make our Academy a vibrant and purposeful organization. It is the dedicated efforts of council members, meeting organizers, editorial members, and all others that ensure we accomplish the mission of IAN. Finally, I welcome the new IAN Council members and look forward for their support in the activities of the Academy.

With warm greetings and best wishes for a very happy, healthy and prosperous new year,

Mahendra K. Thakur, Ph.D.
President
Indian Academy of Neurosciences
Email: <mktian2007@gmail.com>

Report

Dear Colleagues,

The International Symposium on Emerging Trends and Challenges in Neuroscience organized as a part of XXXI Annual Conference of Indian Academy of Neurosciences from October 25 – 27, 2013 at Allahabad was a great success. The event witnessed enthusiastic gathering of neuroscientists and researchers from different parts of the country and abroad. The deliberations in the conference focussed on newer avenues like neurodiagnostics, epigenetics and neuroprotection with translational approach. In view of increasing incidences of neurodegenerative disorders in the population world over, it was felt that temper of translational and clinical research be promoted in the country. Further, it was discussed that more facilities to store the brain and biological samples of the patients suffering from neurological disorders be developed in the country. There was a great thrust to encourage and motivate young scientists to take up research in challenging areas of neuroscience to provide the best to the mankind and for a healthy society. Pre-conference workshop on Scientific Communication and Grant Writing, sponsored by the Department of Biotechnology, New Delhi was another attraction. Professor Michael Zigmond, an eminent neuroscientist and Dr. Beth Fisher from University of Pittsburgh, USA were part of the faculty in this workshop that was also graced by the presence of Dr. Bindu Dey, Advisor, Department of Biotechnology, New Delhi. Another workshop on Research Audit was also held in continuity. Around 50 participants from universities, medical colleges, research laboratories and foundations attended both the workshops. A meeting of the General Body was held on October 25, 2013 at Vighyan Parishad, Allahabad.

Soon after the IAN conference at Allahabad, an Indo-US Symposium on Impact of Early Life Adversity on Developing Brain was organized on October 29, 2013 by Dr. Abbas A. Mahdi at King George's Medical University, Lucknow. An Update on Primary Headache Disorders was also organized jointly by Indian Academy of Neurosciences, Lucknow Branch and Headache Subsection, Indian Academy of Neurology on November 11, 2013 by Professor Rakesh Shukla, Past President of the Academy. Although the Academy has active local chapters at different places in the country, regular activities are necessary to infuse enthusiasm and trigger the talent among the young researcher. Theme based Symposia and Workshops may be organized under the auspices of the local chapters and experts



(members of the Academy) in the area may be invited. The local chapters may also take the opportunity and join hands with the National Brain Research Centre, Manesar in organizing awareness sessions for the masses on brain related disorders and holding interactive meet with the children and neuroscientists as a part of Brain Awareness Programmes organized every year. The conveners are requested to inform us about the activities to update these on the IAN website. In February 2013, the Federation of Asian-Oceanian Neuroscience Society (FAONS) sponsored travel of few IAN student members to attend the annual meeting of Australian Neuroscience Society at Melbourne. Japan Neuroscience Society will also be inviting nominations for IAN student members to sponsor their participation at the 37th Annual Meeting of the Japan Neuroscience Society at Yokohama from Sept 11 – 13, 2014 through a competitive selection process. These developments reflect visibility of IAN in Asian-Oceanian region. Young researchers may avail the opportunity to apply for travel fellowships for conferences and workshops outside India. This will help them to interact with the peers and sharpen their skills.



Please note that the XXXII annual conference of Indian Academy of Neurosciences will be held at National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru from November 1-3, 2014. The details of the conference will be mailed to you in due course of time by Dr. BSS Rao, the Organizing Secretary of the conference. Please mark the dates in your calendar for attending this interesting conference with your research students and colleagues. Proposals for holding symposia / workshops during the conference at Bengaluru, nominations for electing fellows and executive members are invited. You may send the proposal / nomination before the last date. Further, we request you to forward information on your achievements/ honours/ awards for inclusion in the next issue of the Newsletter and to update on the IAN website. Change(s) in address/emails, if any may be informed to Dr. A.K.Agrawal, Treasurer, of the Academy to update in the Membership Directory at his email ID - aka33@rediffmail.com

With this, we take this opportunity to extend best wishes for a very happy, prosperous and productive 2014 few days ahead.

Vinay K. Khanna, Ph.D.
Secretary, HQ

Pankaj Seth, Ph.D.
General Secretary

Congratulations!!

B.K. Bachhawat Memorial Life Time Achievement Award – 2014



Dr. P. Satish Chandra
Director & Vice Chancellor
National Institute of Mental Health and
Neurosciences, (NIMHANS)
Hosur Road
Bangalore – 560 029, India

KT Shetty Memorial Oration - 2014



Dr. B. S. Shankaranarayana Rao
Additional Professor
Department of Neurophysiology National
Institute of Mental Health &
Neurosciences (NIMHANS), Hosur Road
Bengaluru – 560 029, India

Newly Elected Fellows



Dr. Aditya B. Pant
Senior Scientist
In vitro Toxicology Division
CSIR – Indian Institute of Toxicology
Research (CSIR - IITR)
MG Marg, Post Box No. 80
Lucknow – 226 001, India



Dr. Dipak K. Sarkar
Professor II, Department of Animal
Sciences, Director, Endocrine Program
Rutgers, The State University of New
Jersey, Endocrine Research Facility
Room 104, 67 Poultry Farm Road
New Brunswick, NJ 08901

Ravindra & Lalita Nath Memorial Travel Awards – 2013

1. **Oishimaya Sen Nag**, Department of Biochemistry, Institute of Post Graduate Medical Education and Research, 244 A.J.C Bose Road, Kolkata - 700 020, Email: mailme.oishimaya@gmail.com
2. **Anirban Ganguly**, 162A / 66 / 1, Lake Gardens, Kolkata – 700 045
Email: anigang2006@yahoo.com
3. **Nabanita Ghose**, Research Scholar, Department of Zoology, University of Calcutta, Kolkata, Email: nabanitaghosh89@gmail.com
4. **Priyanjalee Banerjee**, Senior Research Fellow, Department of Biochemistry, IPGME&R, Kolkata, Email: priyanjalee1@gmail.com
5. **Susmita Sil**, Junior Research Fellow, University Grants Commission, Neurophysiology Laboratory, Department of Physiology, University of Calcutta, Kolkata, Email: sil.susmitasil@gmail.com
6. **Satabdi Ghosh**, Department of Physiology, University College of Science and Technology, University of Calcutta, 92, Acharya Prafulla Chandra Road, Kolkata – 700 009, Email: satabdicu@gmail.com
7. **Parul Bali**, 3036, Neuroscience Research Lab., Research Block B, Department of Neurology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh 160012, Email: parulbali49@yahoo.com
8. **Sridhar B**, 3036, Neuroscience Research Lab., Research Block B, Department of Neurology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh 160012, Email : sri.bammidi@gmail.com
9. **Keshav Thakur**, 3036, Neuroscience Research Lab., Research Block B, Department of Neurology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh 160012, Email: kthakur.26@gmail.com
10. **Preenon Bagchi**, Research & Development Head Bioinformatics, AZYME Biosciences Private Limited, # 1188/20,3rd Floor, 26th Main, Opp. Ragigudda Temple Arch, 9th Block, Jayanagar, Bangalore – 560069, Email: prithish.bagchi@gmail.com

Newly Elected Honorary Fellows - 2013



Dr. Vishwa Mohan Katoch
Secretary, Government of India
Department of Health Research
(Ministry of Health & Family Welfare) &
Director General, Indian Council of Medical Research
New Delhi – 110 029



Dr. Michael J. Zigmond
Department of Pharmacology
Chemical Biology
Professor of Neurology
7016 Biomedical Science Tower 3
3501 5th Ave, Pittsburgh, PA 15260

Tulsabai Somani Educational Trust Award – 2013

Ritabrata Banerjee, Raja Peary Mohan College, Uttarpara, Kolkata; Role of neurotrophins in pathophysiology of suicide

Dr. D.M. Kar Prize – 2013

Shaily Malik, Molecular and Cellular Neuroscience, National Brain Research Centre, Manesar; Role of p21 in chronic HIV-Tat and morphine induced cell cycle arrest in human neural stem/progenitor cells

S.S. Parmar Research Foundation (USA) Prize – 2013

Trupti Shirole, Bombay College of Pharmacy, Mumbai; Evidence of 4-methyl esculetin induced protection in aluminium induced cognitive-deficit in rats by possible biochemical, behavioral and microscopic analysis

Sippy Singh, Department of Zoology, University of Allahabad, Allahabad; Seasonal dynamics in neurons of corticoid complex of female *psittacula krameri*

Best Paper Award from the Organizers – 2013

Pranav Prasoon, Department of Anatomy, All India Institute of Medical Sciences, New Delhi; Increased expression of both somatostatin and somatostatin receptor 2 following acute pain in rats

Divya Saxena, Centre for Converging Technologies, University of Rajasthan, J.L.N. Marg, Jaipur-302004; Design of a simple model system to study the molecules involved in the regenerating central nervous system of the earthworm, *eisenia fetida*

Jyotsnamoyee Raghunath Bhattacharya Prize – 2013

Vijay Paramanik, Department of Zoology, Banaras Hindu University, Varanasi; Estrogen receptor b and its domains interact with casein kinase 2, phosphokinase C, and n-myristoylation sites of mitochondrial and nuclear proteins in mouse brain. The Journal of Biological Chemistry 287 (2012) 22305–22316.

John Miller Travel Award – 2013

Gillipsie Minhas, Neuroscience Research Laboratory, Department of Neurology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh - 160012, Email: <mailto:20gillipsie@gmail.com>

Kaushal Sharma, Neuroscience Research Laboratory, Department of Neurology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh - 160012, Email: <kksukv@gmail.co>

Dr (Ms). Shashi Wadhwa, formerly at All India Institute of Medical Sciences, New Delhi bestowed with BK Bachhawat Lifetime Achievement Award - 2013



Dr (Ms). Shashi Wadhwa graduated from Jabalpur Medical College, MP in 1970. She completed her postgraduate studies towards MS Anatomy and Ph.D. degree at the All India Institute of Medical Sciences, New Delhi where she also worked till her

superannuation as Professor and Head of the Department of Anatomy and Dean. She has taught and trained a large number of undergraduates and postgraduates of MSc, MS and PhD since 1972 at AIIMS. She has 67 International and 37 National research publications, 27 Chapters in books and has edited/co-edited 13 books and monographs. She took additional charge of Electron microscope Facility under the DST's SAIF program in 1998 and steered it to its present status. This facility provides expert help in transmission and scanning electron microscopy, energy dispersive x-ray spectroscopy (EDS) for the elemental analysis and immuno- electronmicroscopy for diagnostics and research in biology catering to almost 300 users per year from different parts of the country. In addition, training was provided to researchers, technicians and students every year. Her efforts led to further upgrading the facility with high resolution TEM and 3D tomographic imaging for the users. Her major research interests have been in developmental neurobiology, quantitative morphology and stereology as well as electron microscopy. Her notable contributions on quantitative, immunochemical and ultrastructural studies on the human fetal brain have helped in the better understanding of processes involved in the development of these regions. The critical time periods in their development have been highlighted during which these are susceptible to alterations in the microenvironment of the fetus. These studies have provided baseline data for comparison with pathological material and animal experiments. Her laboratory has also investigated the effects of patterned sound and chronic noise on developing chick auditory pathway and the hippocampus. Differential behavioral response and quantitative morphological, ultrastructural and neurochemical basis of mechanism of the effects of prenatal loud music and noise have been reported. Such paradigms may help understand beneficial effects or deficits and disorders related to language acquisition and learning in children.

Dr (Ms) Wadhwa is a Fellow of the Indian Academy of Science, National Academy of Science (India), National Academy of Medical Science, Electron Microscope Society of India, Indian Academy of Neuroscience and Founder Fellow of Anatomical Society of India. She is the recipient of the Dr. H.K. Chatterjee Memorial Gold Medal, 1983 (ASI), Shakuntala Amir Chand Prize, 1988 (ICMR), Shanti Swarup Bhatnagar Prize, 1991(CSIR) and Prof. Shamer Singh Memorial Oration, 2002 (ASI). She also received the FAONS best poster award at Seoul in 2002. She is a member of IBRO, SfN (USA), International Society for Stereology and life member of various National Societies and bodies.

Dr. Nihar Ranjan Jana, National Brain Research Centre, Manesar bestowed with KT Shetty Memorial Oration - 2013



Dr. Nihar Ranjan Jana is presently working as Scientist VI at National Brain Research Centre (NBRC), Manesar. Dr. Jana obtained his Ph.D. from Visva-Bharati University in 1996. After completing

his Post – doctoral training at RIKEN Brain Science Institute, Japan, he joined NBRC in 2001. His laboratory is primarily interested in exploring the role of E3 ubiquitin ligases (an important regulatory enzyme in ubiquitin-proteasome system) in cellular protein quality control and how loss of function of quality control ubiquitin ligases leads to neuronal dysfunction or neurodegeneration observed in various neurological disorders. His laboratory has shown that ubiquitin ligase Ube3a function as cellular protein quality control ubiquitin ligase and therefore may be implicated in the biology of neurodegenerative disorders involving protein aggregation. Using Huntington's disease as model, he demonstrated that Ube3a promotes the clearance of mutant disease proteins and thereby rescue neurodegeneration. He further found that removal of Ube3a from Huntington's disease mice brain increases aggregates load and accelerates disease progression. These findings indicate that Ube3a might be a potential therapeutic target not only for Huntington's disease but also for other neurodegenerative disorders involving protein aggregation. His laboratory also demonstrated defect in the cellular protein quality control system in Lafora disease (a progressive myoclonus epilepsy) and also identified a novel target of Lafora disease, ubiquitin ligase, malin that could provide new insight in understanding the disease pathogenesis.

His group is also trying to identify novel targets of Ube3a that could explain its potential link with autism and Angelman syndrome (an autism spectrum disorder). They have found that Ube3a-maternal deficient mice (model mice for Angelman syndrome) are under chronic stress because of defective GR signaling and chronic stress could lead to cognitive deficits and increased anxiety like behaviour in these mice.

Dr. Jana is elected fellow of National Academy of Sciences, India and West Bengal Academy of Science and Technology. He is a recipient of DBT's National Bioscience Award for (2008).

Next Conference at Bengaluru

The XXXII annual conference of Indian Academy of Neurosciences will be held at the National Institute of Mental Health and Neurosciences, (NIMHANS), Bengaluru, India from November 1-3, 2014. Dr. B. S. Shankaranarayana Rao is the Organizing Secretary. The preliminary details of the conference are available on the IAN website www.neuroscienceacademy.org.in. Suggestions, if any for the conference may be sent to Dr. Rao on the following address by **April 30, 2014**,

Dr. B. S. Shankaranarayana Rao, Additional Professor, Department of Neurophysiology, National Institute of Mental Health & Neurosciences (NIMHANS), Hosur Road, Bengaluru – 560 029, India, Email: bssrao@nimhans.kar.nic.in

Call for Proposals for Symposia

Proposals for symposia and workshops on cutting edge areas of neuroscience are invited for consideration for XXXII conference of Indian Academy of Neurosciences from November 1-3, 2014. at Bengaluru, India. The duration of the symposium / workshop will be around 2 hours with 4-5 presentations of 20 minutes by the experts in the area. A written proposal not exceeding 2 pages with background and rationale alongwith list of speakers be forwarded to the Organizing Secretary and a copy of the same to Dr. Pankaj Seth, General Secretary and Dr. Vinay K. Khanna, Secretary HQ latest by **April 30, 2014**. Suggestions, if any for the programme may also be forwarded.

Awards for Young Neuroscientists

To recognize the contributions of young researchers working in the area of neurosciences and encourage them, the Indian Academy of Neurosciences has instituted following awards/prizes.

Tulsabai Somani Educational Trust Award (For best oral presentation by the young neuroscientist below 40 years of age at the annual conference).

Dr. D.M. Kar Prize (For best oral presentation by the young neuroscientist below 35 years of age at the annual conference).

Professor S.S. Parmar Research Foundation Award (For best poster presentation by young neuroscientist below 35 years of age at the annual conference).

Jyotsnamoyee - Raghunath Bhattacharya Prize (For published research paper in the field of basic neurosciences. Paper should have been published during the past 2 years).

Individuals willing to be considered for the awards may apply directly or get themselves nominated. The details of the awards are on the IAN website. Further information, if any may also be obtained from Dr. Vinay K. Khanna, Secretary HQ and Principal Scientist, CSIR – Indian Institute of Toxicology Research, MG Marg, Lucknow – 226 001, Email <vkkhanna1@gmail.com>

Last date of receiving nominations is August 16, 2014.

Nominations for Fellowship

The Academy recognizes scientists who have excelled in neurosciences by electing them as Fellows. A life member or honorary member of the Academy with at least 10 years of research experience in the field of neurosciences can be nominated. Nominations on prescribed format available at the website or from the Secretary (HQ), supported by three Fellows of the Academy are invited alongwith complete Biodata. A soft copy and seven hard copies of nominations complete in all respects should be sent to Professor Subrata Sinha, Dean, Indian Academy of Neurosciences and Director, National Brain Research Centre, NH 8, Nainwal Mode, Manesar – 122 050, Email <director@nbrc.ac.in> and a copy of the same to Dr. Vinay K. Khanna, Secretary HQ and Principal Scientist, CSIR – Indian Institute of Toxicology Research, MG Marg, Post Box No. 80, Lucknow – 226 001, Email <vkkhanna1@gmail.com> latest by **August 16, 2014**.

Note: Seven complete set of nomination papers along with CV should be sent to the Dean and a copy of the same to the Secretary HQ before the last date. Soft copy of the material in CD should also be sent along positively. Incomplete nominations will not be entertained. Nominations received after the last date will be considered next year.

Travel Awards

Applications are invited for Ravindra and Lalita Nath Memorial Travel Fellowships and John Miller Travel Awards. Students and young researchers below 35 years of age presenting a paper at the annual conference at Amritsar are eligible to apply. The awards will be available on competitive basis. Up to 8 travel awards consisting of actual travel reimbursement by AC-3 Tier upto the maximum of Rs. 1,500/- will be awarded in case of Dr. Ravindra & Lalita Nath Memorial Travel Awards. In case of John Miller Travel Award, up to 2 travel awards will be awarded consisting of actual travel reimbursement by 2nd Class-3Tier and will not exceed Rs. 600/- each. Requests alongwith abstract of the paper may be sent to the Organizing Secretary Dr. B. S. Shankaranarayana Rao, Additional Professor, Department of Neurophysiology, National Institute of Mental Health & Neurosciences (NIMHANS), Hosur Road, Bengaluru – 560 029, India, Email: bssrao@nimhans.kar.nic.in and a copy of the same to the Treasurer Dr. A.K. Agrawal, Developmental Toxicology Division, CSIR – Indian Institute of Toxicology Research, MG Marg, Post Box No. 80, Lucknow – 226 001 by **August 16, 2014**.

New Executive Committee

President

Dr. Mahendra K. Thakur
Varanasi

Vice Presidents

Dr. Subhash C. Pandey
Chicago, USA

Dr. Sasanka Chakraborty
Kolkata

Dean

Dr. Subrata Sinha
Manesar

General Secretary

Dr. Pankaj Seth
Manesar

Secretary HQ

Dr. Vinay K. Khanna
Lucknow

Secretary International Affairs

Dr. Debomoy K. Lahiri
Indianapolis, USA

Treasurer

Dr. Ashok K. Agrawal
Lucknow

Chief Editor

Dr. Akshay Anand
Chandigarh

Members

Dr. Rajat Sandhir
Chandigarh

Dr. T.S. Roy
New Delhi

Dr (Ms). Laxmi T. Rao
Bangalore

Dr (Ms). Vidita Vaidya
Mumbai

Dr. (Ms). Shashi B. Singh
New Delhi

Dr. RV Omkumar
Thiruvananthapuram

IBRO and FAONS Representative

Dr. Prahlad K. Seth
Lucknow

Immediate Past President

Dr. Rakesh Shukla
Lucknow

Immediate Past General Secretary

Dr Mahendra K. Thakur
Varanasi

Forthcoming Meetings

9th FENS Forum on Neuroscience 2014, July 5 – 9, 2014, Milan, Italy

Website: <http://www.fens2014.neurosciences.asso.fr>

20th Biennial Meeting of the International Society for Developmental Neuroscience (ISDN) and the 5th Annual NeuroDevNet Brain Development Conference (NeuroDevNet), July 19 – 24, 2014, Montreal, Canada

Website: <http://www.isdn-conference.elsevier.com>

12th International Conference on Cognitive Neuroscience (ICON), July 27 – 31, 2014, Brisbane, Australia, Website:
<http://www.icon2014.org>

37th Annual Meeting of the Japan Neuroscience Society (JNS), September 11 – 13, 2014, Pacifico Yokohama, Yokohama, Japan
Website: <http://www.neuroscience2014.jp>

Annual Meeting of Society for Neuroscience 2014, November 15 – 19, 2014, Washington D.C., United States

Website: <http://www.sfn.org>

2014 Cognitive Neuroscience of Mindfulness, April 11 – 15, 2014, University of Bangor, North Wales, UK

Website: <http://www.cmprconference.com>

21st Annual International "Stress and Behavior" Neuroscience and Biopsychiatry Conference, May 16 – 19, 2014, St. Petersburg, Russia

Website: <http://www.stressandbehavior.com>

Activities at Local Chapters

Bangalore

❖ Organized Guest Lectures & Interactive Sessions – Dr. G.N. Pandey, USA, January 9 & 11, 2013; Dr. James C. Chelliah, UK, February 7, 2013; Dr. Shane O' Mara, Ireland, February 9 & 11, 2013; Dr. S. Prasad, Varanasi, May 13, 2013; Dr. M.K. Unnikrishnan, Manipal, June 29, 2013; Dr. Rajasekaran, USA, September 3, 2013 at NIMHANS, Bengaluru.

Gwalior

❖ Organized workshop on Scientific Communication and Grant Writing at School of Studies in Neuroscience, Jiwaji University, Gwalior, October 30, 2013.

Kolkata

❖ Organized a Symposium and a Colloquium at Calcutta of School of Tropical Medicine, Kolkata, September 6, 2013.

Lucknow

❖ Organized Indo-US Symposium on Impact of Early Life Adversity on Developing Brain at King George's Medical University, Lucknow, October 29, 2013.

❖ Organized an Update on Primary Headache Disorders jointly by Indian Academy of Neurosciences, Lucknow Branch and Headache Subsection, Indian Academy of Neurology at Scientific Convention Centre, King George's Medical University, Lucknow, November 11, 2013.

Varanasi

❖ Organized IBRO-APRC Associate School of Neuroscience at Department of Zoology, Banaras Hindu University, Varanasi, October 19 – 23, 2013.

Nominations for B. K. Bachhawat Memorial Life Time Achievement Award & KT Shetty Memorial Oration

Nominations for **B. K. Bachhawat Memorial Life Time Achievement Award** and **KT Shetty Memorial Oration for 2015** are invited. The nominee must be a Fellow / Life Member of the Indian Academy of Neurosciences. He/ She should have at least 10 years standing in the area of Neurosciences. The contributions in Neuroscience in India will be judged by i. Research publications ii. Awards iii. Contributions to growth of Neuroscience in India.

Nominations alongwith complete Bio-data and supporting documents should be sent to Professor Subrata Sinha, Dean, Indian Academy of Neurosciences and Director, National Brain Research Centre, NH 8, Nainwal Road, Manesar – 122 051, Email <director@nbr.ac.in> and a copy of the same to Dr. Vinay K. Khanna, Secretary HQ and Principal Scientist, CSIR – Indian Institute of Toxicology Research, MG Marg, Lucknow – 226 001, Email <vkkhanna1@gmail.com> positively by **August 16, 2014**.

Nominations received after the last date will be considered next year.

Nominations for the Executive Committee

Nominations for the position of President (1), Dean (1), and Members (2) are invited on the prescribed format enclosed herewith. The nominations should be sent either to Dr. Vinay K. Khanna, Principal Scientist, Developmental Toxicology Division, CSIR - Indian Institute of Toxicology Research, MG Marg, Lucknow – 226 001, Email <neuroscienceacademy@gmail.com> or Dr. Pankaj Seth, Additional Professor, National Brain Research Centre, NH 8, Nainwal Road, Manesar – 122 051, Email <pseth@nbr.ac.in> so as to reach them positively by **August 16, 2014**.



INDIAN ACADEMY OF NEUROSCIENCES

Format for Annual Election / Nomination

Nomination for the post of:

Name:

Address:

Membership No.:

Proposer:

Name:

Membership No.:

Signature

Secunder:

Name:

Membership No.:

Signature

Note: Proposer and Secunder should be the member of IAN. Last date of receiving nominations – August 16, 2014.



INDIAN ACADEMY OF NEUROSCIENCES

Format for Nomination of Fellows

Name:

Address & Designation:

Qualification:

(Degree and post graduation)

Membership in Academy:

Life

Date of joining Academy

Significant Contributions
in the field of Neurosciences:
(About 200 words, attach annexure)

Most Significant Publications
During the last five years
*(Please give the titles and attach
copies of three publications)*

Proposed by

Supported by

Name _____

Signatures _____

Address _____

Note: Proposer and Secunder should be Fellows of the Academy.

Three complete set of nomination papers and CV should be sent to the Dean and a copy of the same to the Secretary HQ before the last date. Soft copy of the material in CD should also be sent along positively.

Incomplete nominations will not be entertained. Nominations received after the last date will be considered next year.

Last date of receiving nominations – August 16, 2014.

Publication: The Times Of India Pune; Date: Oct 17, 2013; Section: Times City; Page: 6;



Out-of-the-box education project ignites young minds

Aims To Make Undergrads Inquisitive, Take Up Research

Ananya Dutta | TNN

Pune: The absence of quality research in higher education system in the country could be a sore point among science enthusiasts, but a year-old initiative of the Homi Bhabha Centre for Science Education (HBCSE) at the Tata Institute of Fundamental Research (TIFR) is now offering some hope, and results.

The initiative, Collaborative Undergraduate Biology Education (CUBE), has tried to instill the spirit for scientific inquiry among young minds. "Having taught college students all my life I know that most students do not get their hands on actual research until they reach PhD level. Their only experience in labs is following instructions for experimental set-ups in a cook-book like fashion. They know what results they are supposed to get, but they are not exercising a spirit of inquiry," said M C Arunan, visiting professor at the HBCSE, who conceived CUBE.

The programme puts undergraduate students through a five-week workshop where they are encouraged to ask probing questions and are tested on their observation skills (when do Gulmohar flowers bloom?). They are also familiarized with research apparatus and simple organisms such as earthworms and snails that may be used for experiments.

"You know an organism like drosophila has been so important to the study of genetics and every biology student is familiar with experiments conducted on it for years. But most students have never even seen a drosophila, let alone handle it," Arunan said.

At the end of the five-week period, the participants are asked to go back to their college laboratories where they must maintain a colony of organisms - earthworms, snails, drosophila among other.

"Handling earthworms or snails acts as the trigger for questions for students, some of which result in research proposals. Many students then got back to us wondering

Dissecting the CUBE...

- Giving students hands-on training on scientific research
- Encouraging them to ask questions such as how fast does an earthworm's brain process information, do birds with better motor skills have better cognitive power
- Making students handle live organisms - all biology students study drosophila in genetics, most have never seen one in real life
- Promoting collaborative research - sharing ideas, findings as well as laboratory resources
- No selection criteria apart from interest in scientific research



...And its result

160 college students from Mumbai, Jaipur, Goa, Patna being trained | **12** research projects underway | **1** research paper on the regeneration of nerve tissue by earthworms

SOME PROJECTS UNDERWAY

- Molecular changes in earthworms during the regeneration of nerve tissue and its possible implications in treating human maladies such as Alzheimer's and Parkinson's disease
- Discovering the changes in the brain of snails during the process of learning in a bid to understand learning and memory in humans
- Studying the external stimulus under which an organism like daphnia changes colour

Project encourages college collaborations

Divya Bhatia, a student at the Centre for Converging Technologies (CCT) in Jaipur has never met Ritesh Chowdhury, who studies at the CHM College in Ulhasnagar. The two will meet for the first time at the annual conference of the Indian Academy of Neuroscience later this month, where they will be presenting papers on their research.

Such collaboration among students is a key

aspect of Collaborative Undergraduate Biology Education (CUBE) programme, as it ensures that they don't miss out on their studies even as their research work continues.

For Jaykishan Advani, a second year student at the VES College in Chembur, collaboration with some school students who are also a part of the programme resulted in a big breakthrough in their research.

if they can study a particular aspect - how does decision-making occur in the snail's brain, what are the proteins produced in the regeneration of an earthworm," Arunan said.

There are already some interesting research projects emerging. Some students are conducting learning and memory experiments with snails even as another group is studying the molecular basis of regeneration of nerve tissue of earthworms, while a third has been able to determine the exact oxygen concentration at which a group of daphnia changes from a colourless water flea to bright red.

The only mandatory part of the programme is that students must maintain a group of organisms, ones can be easily picked from the backyard, are inexpensive to maintain and have a genetic homology with human beings. This way, the results of their findings can be extended to practical uses, said

Shraddha Ghumre, a research scholar at HBCSE.

Ghumre points out that the importance of research in science education has been identified as a key area in several quarters including the Yashpal Committee report. She said while there are initiatives in place, they are mainly to encourage partnerships with the industry. The apprenticeship model, for instance, encourages students to work as interns in the industry where they pick up skills and techniques required there. But then it serves the interest of the industry and doesn't promote critical scientific literacy.

Arunan and his colleagues are grooming about 160 students in about a dozen research projects, but there are ambitious plans to scale it up to a national initiative in about 20,000 colleges in the country. And Arunan has a plan in place to achieve this. "You only need to have 500 colleges acting as nodes to which another 40 colleges can be af-

filiated to," Arunan said, adding he will be applying to the Union government for funds to initiate research projects in all these colleges.

"The project should not be limited to certain elite institutions. It is the suburban and rural colleges that need this kind of a programme far more than the best colleges in the cities," he said.

CUBE has already brought together colleges, irrespective of their reputations. Students from St. Xavier's in Mumbai are collaborating with a lesser known CHM College in Ulhasnagar and working seamlessly on the same research project.

"We realized that the elite institutions would not have any problem with the set-up for the project, but other colleges may lack the infrastructure. So we conceived a start-up grant that students can apply for after submitting a research proposal that can kickstart the project," Arunan said.

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