The National Academy of Sciences, India

NOMINATIONS
Valid for Consideration for Election to Fellowship – 2018

Section of Biological Sciences
BOOK - II

ANIMAL SCIENCES
(Structural, Developmental, Functional, Genetical, Ecological, Behavioural, Taxonomical and Evolutionary Aspects)

MEDICAL & FORENSIC SCIENCES
(Basic and Clinical Medical Sciences, Pharmacology, Anthropology, Psychology and Forensic Sciences, Human genetics, Reproduction Biology, Neurosciences, Molecular Medicine)

5, Lajpatrai Road, Allahabad-211002
The National Academy of Sciences, India

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BOOK - II

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ANIMAL SCIENCES 303 - 351
(Structural, Developmental, Functional, Genetical, Ecological, Behavioural, Taxonomical and Evolutionary Aspects)

MEDICAL & FORENSIC SCIENCES 352 - 458
(Basic and Clinical Medical Sciences, Pharmacology, Anthropology, Psychology and Forensic Sciences, Human genetics, Reproduction Biology, Neurosciences, Molecular Medicine)

5, Lajpatrai Road, Allahabad-211002
# ANIMAL SCIENCES

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# MEDICAL & FORENSIC SCIENCES

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(II)
Immediately following her PhD, Anindita Bhadra has established her own independent research group to work on the Indian stray dog. The dog is far from an established model system but holds great promise. Dogs are everywhere, relatively easy to study, both in the lab and in the field, can be experimentally manipulated easily and are pretty good proxies for humans and other higher animals. Anindita and her students have measured the dog’s time-activity budgets, mortality rates, denning habits and mating seasonality. Through clever experiments they have shown that the dogs can be either social or solitary depending on the environment, that their preference for meat is not innate but has to be learned, that they show both parent-offspring conflict on the one hand and grandmotherly care on the other. They have recently obtained a counter-intuitive result – that mothers are more selfish in sharing food with their offspring when food is rich and more altruistic when food is poor. In the light of the parent-offspring conflict theory which guided their research however, this behaviour is indeed expected. She and her students have demonstrated that stray dogs quickly learn to distrust humans, and that they are more likely to trust humans who show them love, rather than those who give them food. These studies have important implications for understanding the evolution of the dog-human relationship. Thus Anindita is now well on her way to making the Indian stray dog an excellent model system for animal behaviour, ecology, evolution and conservation.

**Proposer:** Prof. H.A. Ranganath, **Seconder:** Prof. R. Gadagkar

**Ten Best Publications:**

Bhatta, Raghavendra (b 1965), Director, ICAR-National Institute of Animal Nutrition and Physiology, Bangalore, Karnataka

Member of the NASI: No  (YON 2018, Animal Sciences)

Dr. Bhatta’s main research area is ‘Climate changes and livestock production’. At present, he is the Project Coordinator of the ICAR funded mega project on ‘Estimation of methane emission under different feeding systems and development of mitigation strategies’. He has developed the All India district-wise inventory on enteric methane emission from livestock based on primary data. This is the first of its kind since it is based on the enteric methane emission based on the latest livestock census (their age, physiological stages etc.), feeding management at different agro-eco zones of the country and methane emission from different diet combinations, unlike earlier approaches wherein IPCC default value (single figure) for the entire country was taken into consideration to develop the inventory. The enteric methane data reported by Dr Bhatta is lower (9.2 Tg/year) as compared to the earlier reports (12-18 Tg/year) indicating the lacunae in those approaches. In addition, he has evolved many simple, eco-friendly strategies for enteric methane amelioration in our livestock. One of them is development of a product “Harit Dhara”. This has been prepared from selected phyto-sources and is the cheapest anti-methanogenic feed supplement. Daily use of Harit Dhara in adult cattle and buffaloes will reduce methane emission to the tune of 700 litres CO2 eq per day, with a BCR ratio of 3:1. With the support from DBT fund, he is developing a vaccine for methane amelioration in cattle and buffaloes.

Proposer: Dr. S Ayyappan, Seconder: Dr. P. K. Ghosh

Ten Best Publications:
Dr. Garg’s group has been engaged in understanding the molecular mechanisms underlying pathobiology of infectious organism for the development of vaccines and to identify new drug targets. He has made seminal contribution towards the development of a vaccine against epsilon-toxin of Clostridium perfringens D, a major cause of veterinary enteric disease (Appl. Microbiol. Biotechnol. 2010, Clin. Vaccine Immunol. 2010). This basic research work has been translated into a technology transfer to an industry for which phases II trials have been completed. Based on structure-function relation, his group identified critical amino acid residues responsible for the toxicity of the epsilon toxin and developed nontoxic recombinant vaccines against the toxin, for which international patents have been granted (Patent Application #1577/DEL/2010, 05-07-2010). Further, using deletion variants of LTB, he has demonstrated the critical role of the N-terminal α1 helix of heat-labile enterotoxin B subunit (LTB) of enterotoxigenic Escherichia coli in its stability (PNAS, 2007). His studies on PE_PGRS proteins of Mycobacterium tuberculosis gave deep insight into their roles in its virulence and latency (FEMS Microbiol. Letters 2011; FEBS Letters 2014; Microbes and Infection 2016). Dr. Garg’s contribution in the area of recombinant proteins of therapeutic importance are noteworthy. He is the first one to deposit gene sequences to the data base from buffalo. His research on recombinant expression of buffalo and human growth hormones in large amounts using bacterial expression systems has led to the technology transfer for their industrial production to an industry (Gene, 1995; PEP, 2000).

**Proposer: Dr. Sher Ali, Seconder: Dr. Anil Suri**

**Ten Best Publications:**


3. Chatrath S, Gupta VK and Garg LC (2014) The PGRS domain is responsible for translocation of PE_PGRS30 to cell poles while the PE and the C-terminal domains localize it to the cell wall. FEBS Lett, 588: 990-994. *(if=3.519, ci=7)*


Dr. Hegde is a biologist working in the field of infectious disease with an illustrious career in epidemiology, genomics, host-pathogen interactions, vaccines and diagnostics. His early research focused on hemagglutination of peste des petits ruminants virus; he was one of the first to characterize this activity of the virus. He then worked on the fundamental biology of peptide binding characteristics of the bovine major histocompatibility complex (MHC) class I molecules; he reported the first allele-specific peptide binding motif of any bovine MHC molecule. Later, he studied the cell biology of immune evasion by human cytomegalovirus, leading to the key contribution on the first two viral inhibitors of the MHC class II pathway of antigen presentation. He also worked on the development and testing in animal models of adenovirus-vectored vaccine to hantaviral disease. Following the establishment of his own independent group, he (a) worked extensively on the epidemiology of bluetongue virus in India, contributing to the understanding of the emergence and movement of the virus strains, and development of molecular diagnostics, (b) ventured into epidemiology and prophylactic measures for bovine mastitis caused by staphylococci, and (c) has been involved in the development and/or testing of several vaccines of importance to humans. In summary, Dr. Hegde has contributed both to the basic understanding of pathogen emergence and biology as well as ways to diagnose and prevent infectious diseases of humans and livestock. He has also contributed to training and teaching several students to enhance human resource generation.

Proposer: Dr. Subeer S. Majumdar, Seconder: Dr. J. Gowrishankar

Ten Best Publications:
Prof. P. C. Joshi has been working on the insect biodiversity in the high altitude areas of western Himalayan region. He has extensively worked on Lepidoptera of Himalayan region including the Nanda Devi Biosphere Reserve, Askot wildlife sanctuary, Mukteshwar forests and Rajaji National Park. Has determined the status of insect pollinators as impacted by various anthropogenic activities and status of oak tasar worm in the Garhwal Himalayan region and role of insect fauna on sustaining a forest ecosystem. Till date he has 121 published research papers to his credit and 06 books (03 text books and 03 edited books). He has completed 10 major research projects sanctioned by various funding agencies like ICFRE, M/ O Environment, Forests and Wild life, University Grants Commission, Uttarakhand State Council of Science and Technology and Govind Ballabh Pant National Institute of Himalayan Sustainable Environment and Development. Has visited 14 foreign Universities in USA, UK, China, Singapore, Malasiya and Thiland to participate in International Conferences and has delivered invited lectures. He has supervised 22 Ph. D. and 32 M. Sc. Dissertations. At present 05 students are registered for their Ph. D. After the establishment of State Industrial Development Corporation in Uttarakhand, he also started collecting data on air pollution in and around the city of Haridwar as Haridwar has been one of the site for SIDCUL. He has made very interesting findings which have been published in high repute journals and have a very high citation rate.

Ten Best Publications:
LALORAYA, MALINI (b 1964), Scientist F, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram

Member of the NASI: No (YON 2018, Animal Sciences)

Dr. Laloraya pioneered the work on redox ramifications in female reproduction. Her novel work documented LH-regulated O2- and SOD in rat ovary to be involved in luteal steroidogenesis(1). Her outstanding work revealed superoxide surge at "window of embryo implantation"(3) under estrogen switch(37) which transforms the endometrial membrane to fluid state(7,25,34). Malini identified NAD(P)H oxidase as superoxide generator(59) under estrogen control(57). Immense superoxide generated by peri-implanting embryos triggers "zona hatching" & superoxide quenchers abrogate embryo hatching & pregnancy(42).Taking leads from her work on estrogen mediated superoxide generation she assessed the estrogen's role in implantation biology. Her work identified estrogen mediated STAT3-MCl1 interaction to regulate epithelial mesenchymal transition(88). She identified CrkL with a LXXLL motif(69) as co-activator of ERα(85). Malini explored molecular cues for embryo implantation revealing endometrial epithelial cadherin expression(77) and downregulated MCP3(71).Her recent work found an indispensable role of DOCK180 in pregnancy via a consolidated impact on decidualization and angiogenesis by regulating AIRE nuclear entry(95) which is critical for implantation sites formation and uterine reprogramming for decidualization(92).In the last decade she has focussed her research on Polycystic ovarian syndrome. Taking cues from the importance of Tregs in sustaining pregnancy and association of recurrent miscarriages with PCOS, she identified lowered Tregs in PCOS due to diminished STAT5B phosphorylation leading to defective IL2 signaling loop(89) and reduced NO(94).Her research efforts have brought to light pivotal aspects of embryo implantation and PCOS which down the lane will assist in infertility management.

Proposer: Prof. Gursaran Prasad Talwar, Seconder: Dr. Ved Prakash Kamboj

Ten Best Publications:
MADAN, TARUNA (b 1968), Scientist E, ICMR-National Institute for Research in Reproductive Health, Mumbai

Member of the NASI: No (YON 2018, Animal Sciences)

Dr. Madan’s group has made a significant contribution to understand the role of innate immunity in infectious diseases and reproductive physiology. Dr. Madan initiated her tryst with surfactant proteins (SP-A and SP-D) while investigating the mechanisms of host-pathogen interactions in murine models of allergic and invasive pulmonary aspergillosis. Immunocompromised mice supported with exogenous SP-D were able to thwart the fatal challenge with spores of fungal pathogen Aspergillus fumigatus. She further elucidated the multifarious roles of immunoregulatory collectin surfactant protein D (SP-D) in female and male reproductive tract using transgenic mice. SP-D is expressed by murine endometrium under the influence of ovarian hormones. SP-D deficient females showed reduced litter sizes and prolonged diestrus. Importantly, SP-D regulates pro-inflammatory response at the feto-maternal interface in murine model of resorption and at parturition. Interestingly, in murine testes, SP-D is regulated by testosterone and is integral to testicular immune privilege. Their studies with SP-D knockout males established a critical role of SP-D in spermatogenesis and sperm function. Administration of recombinant SP-D restored the fertility in LPS model of male infertility. Using her expertise with animal models, her group generated a SCID-NOID mouse model of endometriosis and showed therapeutic effect of a promising novel MSC-based anti-angiogenic gene therapy. In recognition of her contributions, she was awarded, ACBI- Mrs. and Dr. G. P. Talwar Oration Award, 2016, CSIR- Young Scientist, Life Sciences, 2003, and INSA- Young Scientist Medal, Medical Sciences, 1998.

Proposer: Dr. Smita D. Mahale, Seconder: Dr. Krishna B. Sainis.

Ten Best Publications:
Prof. Shibnath Mazumder's long-time research interest has been emergent to develop intervention strategies against important zoonotic pathogens. He successfully used fish-model to understand Aeromonas hydrophila and Mycobacterium fortuitum induced pathogenesis. His group unveiled the novel paradigm where plasmid plays pivotal role in Ahydrphilia- pathogenesis (Aquat. Toxicol., 2007; Microb. Pathog., 2009), and developed translational disease intervention strategy using candidate vaccines against the bacterium (Fish Shellfish Immunol., 2006). Prof. Mazumder’s laboratory was first to report the occurrence of a quinolone- resistance plasmid in A. hydrophila which forced rethinking In controlling the bacterium (PLASMID, 2011). His group uncovered, the role of calcium and its dependent kinases in apoptosis induced by Aeromonas hydrophila and Mycobacterium fortuitum (Plos Pathogens, 2014; PLOS One, 2016; Dev Comp Immunol, 2017). His laboratory also revealed the role of ER-mitochondrial crosstalk in bacterial-pathogenesis in fish (Scientific Reports, 2014; Cell Death Discov., 2018). Recently, they demonstrated how TLR4 topology is exploited for immune-evasion and bacterial persistence, adding new aspect in understanding host-pathogen interactions (Cell Death Discov., 2017). Xenobiotic-immunotoxicity is not well understood yet. Prof. Mazumder’s group delineated the pathways triggering arsenic-induced apoptosis and identified the signature genes involved in the process (Toxicol Appl. Pharmacol., 2009; J Hazard Mater., 2017). Recently, his group elucidated that chronic endosulfan-exposure cause immune commotion wherein the immune-organs per se, generate endosulfan-metabolites, principal components of endosulfan-toxicity (Aquat. Toxicol., 2017). The research accomplishment of Prof. Mazumder is fundamental and ground breaking in nature. His recent series of publications in high visibility journals uncover novel mechanisms of bacterial-pathogenesis and immunity.

Proposer: Prof. Kasturi Datta, Secondor: Prof. Chinmay K. Mukhopadhyay

Ten Best Publications:


Mondal, Sukanta (b. 1970), Principal Scientist, ICAR-National Institute of Animal Nutrition and Physiology, Bangalore

Member of the NASI: Yes (YON 2018, Animal Sciences)

Dr. Mondal made outstanding contributions in reproductive biology which was exemplified by his excellent publications in frontier journals. He cloned and characterized COX-2, PGES, PGFS, osteopontin, galactin, and integrin genes in sheep and delineated the molecular mechanisms involved in maternal recognition of pregnancy. He also cloned and characterized PGES, PGFS and FSH receptor genes in buffalo (Mondal et al., 2008) for the first time in the world. He deciphered molecular basis of climate change impact on embryonic survivability in sheep (Mondal et al., 2014; Mondal et al., 2015). His group identified MRP4 as a functional prostaglandin carrier in bovine endometrium (Nicholas et al., 2011). He is pioneer in studying expression profiling of developmentally important genes to unravel the intricacies of implantation and early embryo development in sheep (Mishra et al., 2016; Mor et al., 2018). He established that elevated level of metabolic stressors induced granulosa cell apoptosis through BAX/BCL-2 pathway and reduced steroidogenic gene expression (Nandi et al., 2015; 2016; 2017). He made notable contribution in understanding the effect of silencing of prolactin (PRL) gene on PRL, PRL mRNA and PRL, PRLR and GH protein expression in poultry (Reddy et al., 2014). He also identified boron as a trace element and its role in immunity and antioxidant responses in rat (Vijay Bhaskar et al., 2016; 2017). He was instrumental in developing technology for augmenting egg production in layer birds by exposing red spectrum of light (675 nm). I strongly recommend him for the award of NASI Fellowship.

Proposer: Dr. Saumen Kumar Maitra, Seconder: Dr. Biswaranjan Maiti

Ten Best Publications:
SINGH, RAJ KUMAR (b 1958), Director & Vice Chancellor, ICAR-Indian Veterinary Research Institute, (Deemed University), Izatnagar (U.P.)

Member of the NASI: No (YON 2018, Animal Sciences)

Dr Raj Kumar Singh has 30 years of research & teaching experience in biotechnology, microbiology and virology. He has made significant contributions in the field of Animal Science by developing vaccines and diagnostics which are commercialized to business houses and state Biologicals. The diagnostics developed for important animal diseases are being used routinely for sero-surveillance in the country. He has developed innovative methods for diagnosis and prophylaxis and got two patents granted besides five national patents in pipeline. He has published >240 research articles and handled several research projects including contract research projects. He has made commendable efforts towards establishing linkages with various national and international organizations for promoting research and has been instrumental in various capacity building programmes and also guided Masters and doctoral students of Animal Biotechnology & Virology. He has established International collaboration with different research laboratories which led to creation of OIE referral laboratories for Equine diseases. He also laid foundation of VTCC which now has collection of >2000 microbes and WGS completed for some pathogens. He has been awarded with many prestigious awards and fellowships including DBT TATA Innovation Fellowship, ICAR Rafi Ahmed Kidwai Award, Team Research Award, Agriculture Research Leadership Award and many others. He is a fellow of National and International Bodies and has served in apex administrative capacities including Director of NRC on Equines, VTCC, NRC Buffaloes and NRC Camels. He is presently holding the position of Director and Vice Chancellor of the Indian Veterinary Research Institute, Deemed University

Proposer: Dr. Subeer S Majumdar, Seconder: Dr. Rishendra Verma

Ten Best Publications:
YADAV, RAJPAL SINGH (b 1958), Scientist (P5 grade) & Head, WHO Pesticide Evaluation Scheme, Vector Ecology & Management, Department of Control of Neglected Tropical Diseases, World Health Organization, Geneva 27, 1211 Switzerland

Member of the NASI: Yes (YON 2018, Animal Sciences)

Dr Yadav’s major field has been vector-borne disease control such as malaria, dengue, kala-azar, filariasis, chikungunya and Japanese encephalitis. He contributed in setting international standards for pesticide management relating to vector control assessing impact of irrigation and rainfall on malaria, health impact assessment of Sardar Sarovar dam; monitoring global trends in use of insecticides and linkages with insecticide resistance; study of legislation and regulatory control of public health pesticides; research on epidemiology of P. vivax; finding heterogeneity in P. falciparum antigens in India and field evaluation of new generation of insecticides. He demonstrated role of indigenous fish in biological control of mosquitoes. He is supporting global monitoring of insecticide resistance. He has published several valuable papers on vector biology, ecology and control. He has made significant contributions in vector control policy setting, developing integrated vector management (IVM) strategy, leading global evaluation of insecticides for vector control as head of WHOPES, and spearheading global capacity development for vector control and product evaluation through a network of GLP-certified centres. He has provided strong support to Indian vector-borne disease control programme while working in India (1984–2008) and now at WHO HQ (since 2009). He has attended many national and international conferences, workshop and symposia and delivered keynote lectures. He has imparted training in vector control in different countries. Dr Yadav’s scientific contribution is globally well recognized and he is a person of repute in his field. He deserves the award of NASI FELLOWSHIP for which I strongly recommend his name.

Proposer: Dr. R. C. Dhiman, Seconder: Dr. Neena Valecha

Ten Best Publications:
BANDYOPADHYAY, PROBIR KUMAR (b 1959), Professor, Department of Zoology, University of Kalyani, Kalyani

*Member of the NASI: Yes (YON 2017, Animal Sciences)*

Dr. P.K. Bandyopadhyay is Professor of Zoology in the University of Kalyani, West Bengal, India. His research interests include taxonomy and biodiversity of Protozoan, Helminth parasites of fishes, birds and mammals. Recently, he put emphasis on the control of protozoan as well as bacterial infection of edible and ornamental fish with the help of locally available plant bio-molecules. He discovered active bio-molecule Oleic acid from Carica papaya which proved to be anti-bacterial activity and found that active bio-molecules, Diallyl tetrasulphide extracted from garlic bulb has antiprotozoan activity. He has published more than 155 research papers in various national and international peer reviewed journals. He acted as Principal Investigators of several research projects funded by the University, ICAR, UGC, DST (W. Bengal), DST (India). Currently he is leading three major research projects funded by the DST (India) and DBT (India). 30 students have been awarded Ph.D. degree under his able guidance. He has visited many countries like, Australia, South Korea, China, Bangladesh and Spain. He was a visiting Professor of Department of Life Sciences, Manipur University, Manipur, India. He was selected for an Educational Exchange Programme, sponsored by UGC, New Delhi. He acted as Co-Ordinator of UGC sponsored Special Assistance Programme. He has edited three proceedings of National conferences. He is a life and executive committee member of ISP (Indian Society of Parasitologists), Member of Asian Congress of Protistologists and member of National Academy of Sciences, India (NASI).

*Proposer: Prof. Wasim Ahmad, Seconder: Dr. H. Pathak*

**Ten Best Publications:**


8. Sarkar, S., Bandyopadhyay, P.K. (2013). A checklist of the species under the genus Monocystis von Stein, 1848 .......... described from oligochate hosts. Zootaxa DOI: http://dx.doi.org/10.11646/zootaxa.3710.4.7 *(if=0.9, ci=01)*


Taxonomic intractability is one of the major problems in metazoan groups that inhabit terrestrial and marine domains. The candidate has effectively used molecular tools to resolve taxonomic intractability in one of the metazoan groups represented by the Phylum Nematoda. Prof. Bhadury has developed DNA barcoding as an effective tool for rapid identification of free-living nematodes across marine realms and for the first time addressed and resolved long standing question in biogeography, in particular cosmopolitan distribution of marine benthic metazoans using molecular microbial tools (Bhadury et al. 2006a, Bhadury et al. 2006b, Bhadury et al. 2008) which could be highly useful for understanding delineating metazoan evolution. More recently, he has conclusively shown that marine phytoplankton are more diverse and harbor cryptic species in global ocean basins that previously thought of and many of these species are unknown from the viewpoint of ecophysiology and resulting coastal primary production (Samanta and Bhadury 2016; Singh and Bhadury 2018 in press). One of the long standing questions pertaining to biogeochemical cycling of arsenic which has immense human health implications in the Bengal Delta Plains (BDP) has been addressed by him. He has now clearly proved the long standing hypothesis, that arsenic mobilization and subsequent contamination of ground water aquifers with As is controlled by dissolved organic carbon pool, in particular petroleum hydrocarbons (Ghosh et al. 2015a, 2015b). With robust experimental evidence he has now shown that arsenite oxidizing bacteria which are key to controlling As toxicity are indeed present in BDP aquifers and that they require DOC for biotransformation of As species (e.g. Ghosh et al. 2014, Ghosh et al. 2015b, Ghosh et al. 2017).

Ten Best Publications:


CHAUHAN, MANMOHAN SINGH (b 1960), Director, ICAR Central Institute for Research on Goats, Makhdoom, Mathura (UP).

Member of the NASI: No (YON 2017, Animal Sciences)

Dr. Manmohan Singh Chauhan, working as Director, has significantly contributed towards the development of simple method for In vitro production (IVF) of embryos in cattle, buffalo, goat and yak; production of 4 embryonic stem cell lines in buffalo and goat; ovum pick up - IVF technology in cattle; animal cloning in buffalo using simple hand guided cloning technology, produced several elite cloned buffaloes. He is ‘Fellow of National Academy of Agricultural Sciences’, ‘Fellow of National Academy of Dairy Sciences of India’. He has been Principal Investigator of 11 mega projects granted to him as Principal Investigator by different agencies such as DBT (Govt. India), NAIP and NF, ICAR, New Delhi. He has guided 8 Doctoral and 9 Master’s students. He is recipient of ICAR-Rafi Ahmed Kidwai Award (ICAR), DBT Overseas Long Term Associate ship Award, ICAR-Team Award, Dr. Labhsetwar Award by ISSRF, Certificate of Merit Award for Exemplary Research by Virginia Tech., USA, Prof. G.P. Talwar Middle Career Scientist Award by ISSRF. During his DBT overseas fellowship program, he worked as PDF for 1 year & 3 months in Virginia Tech, Blacksburg, USA. He has imparted 6 Training for scientists and faculties. He has also organized 3 International Conferences. Over 125 research papers (http://www.ncbi.nlm.nih.gov/pubmed/?term=chauhan+MS+Karnal), 2 books has been published by him. He has visited different laboratories in the USA, Canada and Germany. He is member of many professional societies, member of many peer review committees, Task Force at the national and International level

Proposer: Dr. Dheer Singh, Seconder: Dr. Subeer S Majumdar

Ten Best Publications:

DINESH, DIWAKAR SINGH (b 1959), Scientist-E, Rajendra Memorial Research Institute of Medical Sciences (ICMR), Agamkuan, Patna-800007

Member of the NASI: Yes (YON 2017, Animal Sciences)

Dr. Diwakar Singh Dinesh, Scientist E, Head of Vector Biology and Control Division at Rajendra Memorial Research Institute of Medical Sciences (ICMR), Patna has been working since last 31 years with his significant contribution in popularization of science in the field of Kala-azar in Bihar. He published 64 articles in his credit and established several facts in biology and control of sandflies vector. The midnight was found peak biting period of Phlebotomus argentipes (2001). The most productive mechanical device to collect sandflies was standardised as CDC light traps (2008). Development of resistance against DDT (then insecticide of choice) to sandflies was established (2010) and recognised by National Vector borne Disease Programme as mentioned in their operational guide line and road map (2015). It was replaced by Alpha cypermethrin. The disease is now getting eliminated. The environmental management to control sandflies by destroying the breeding sites was found significant by skirting the base of indoor walls using brick chimney fly ash. (2017). The Plant extract having insecticidal effect was applied for patency. He completed projects sponsored by DBT, European Union, ICMR and intramural projects. He contributed in operational research in making Vaishali model to Govt. of India. He is life member of six national scientific association including NASI. He was awarded with ‘Senior Biomedical Scientist International Fellowship’ of ICMR 2015. He was elected Fellow of ‘The Indian Society for Malaria and other Communicable Diseases’ (FISCD) –2017. The scales of achievements deserve an honor to him.

**Proposer:** Dr. Madhav Gadgil, **Secondor:** Dr. Vishwa Mohan Katoch

**Ten Best Publications:**


7. Dinesh DS, ...Katoch VM (2000). Screening sand flies for natural infection with Leishmania donovani, using a non-radioactive probe based on the total DNA of the parasite. Annals of Tropical Medicine & Parasitology,94: 447-451 (if=0, ci=36)


GUPTA, NEELIMA (b 1955), Professor & Dean Students Welfare, MJP Rohilkhand University, Bareilly

Member of the NASI: Yes (YON 2017, Animal Sciences)

PROF. (MRS) NEELIMA GUPTA, National (1) & State (2) Awardee is an internationally acclaimed taxonomist (blood parasites specific, parasites in general). Several species have been dedicated in her name. Her innovative contributions on morpho-taxonomy, molecular taxonomy, protein profile and scanning electron microscopy are based on 60 species of 22 genera (50 new species, 3 sub species) making her the recipient of the PRESTIGIOUS LIFE TIME NATIONAL AWARD, EK JANAKI AMMAL NATIONAL AWARD ON ANIMAL TAXONOMY (Ministry of Environment & Forests, Government of India).

She is the recipient of more than 38 awards including 2 state awards (Vigyan Ratna and Dr. SAH Abidi Krishi Vaigyanik Puraskar). She has published several papers with leading global scientists. She was awarded the ‘Centre of Excellence’ by the State Government and has executed research projects worth Rs. 1.3 crores. She was invited as Lead Speaker in many national and international conferences (George Washington University, USA, Poland, Egypt, Japan, Singapore, China) and became a global leader having international collaborations with five continents of the globe. She is presently working on fish fauna of river Ramganga (UPCAR research project). Her contributions have unfolded many mysteries of parasites and have greatly benefitted fish farmers and scientists. She has a research experience of 40 years, contributing 6 books, 175 research papers, 300 abstracted in conferences (481). She has presented her findings in 135 symposia (26 international, 109 national). Based on my personal knowledge of her own merits and expertise, she has my strong recommendations.

Proposer: Prof. M Shamim Jairajpuri, Seconder: Prof. Wasim Ahmad

Ten Best Publications:
9. Gupta, Neelima, Bhaskar, M. and Gupta, D.K. (2013): Ecological attributes of Hepatozoan lacertilis Gupta et al., 2011 susceptibility in Indian lizards, Hemidactylus flaviviridis (Gekkonidae) and Calotes versicolor (A (if=0.921 JCR, 0.46 SJR, 6.82 NAAS, ci=1).

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KUMAR, PRADEEP (b 1962), Scientist G, Rajiv Gandhi Centre For Biotechnology, Thiruvananthapuram

Member of the NASI: No (YON 2017, Animal Sciences)

He demonstrated the presence and reorganizations of microdomains in sperm membranes during epididymal maturation, capacitation and acrosome reaction (11, 12, 24, 55, 60, 71 and 102) and that these membrane modifications and dependent on plasma membrane located NOX system (4, 6, 7, 13, 15, 18, 53, 55, 65). He also showed that defective expression of NOX in spermatozoa is associated with human male factor infertility and that neutralizing NOX can interfere with sperm functioning in fertile men (7, 26-29, 45-48, 63, 67). He generated proteome profiles of raft and non-raft proteins of human sperm and identified strong association between the absence of some proteins and male factor infertility (85, 91-93, 96-101). He has developed a prototype protein-chip for molecular diagnosis of male factor infertility. Using the 1st wave of spermatogenesis in mouse as a model, he has generated epigenetic, transcriptome, mirnome and proteome during the onset and progression germline stem cell differentiation in testis and have identified key pathways and regulatory molecules involved in the processes of germline stem cell maintenance, initiation of differentiation and meiotic entry (95). He has develop technology for trans-diifferentiation of spermatogonial stem cell into embryonic stem cell like (ES-like) cells, which could further be converted into ectodermal, mesodermal and endodermal lineages in culture. At present, he is targeting select miRNAs to alter the expression level of several genes in one go and to reprogram germine stem cells in culture to produce haploid cells in vitro.

Proposer: Prof. G.P. Talwar, Seconder: Prof. K. Muralidhar

Ten Best Publications:


Aging predisposes humans to age-related diseases like diabetes, cancer and neurodegenerative disorders. Understanding its molecular basis is key to develop interventions that will prevent these diseases and prolong healthy lifespan. Arnab started his lab in NII seven years ago. Having a strong background in aging biology, Arnab has used a unique combination of genetics, cell biology and genomics to understand how nutrient signaling controls lifespan and modulate aging. He is also one of the few Indian PIs who use Caenorhabditis elegans as a model system. He has identified novel genes that when knocked down convinces animals to believe that food is limiting, even under food-replete condition, to mount a conserved cytoprotective response leading to increased longevity. He has elucidated the complex transcriptional and posttranscriptional regulations of important Forkhead family transcription factors that regulate the aging process. He has shown that Rifampicin analogs can increase life span and delay aging, a finding that has tremendous translation potential. His findings have been published in some of the most respected and leading journals of the field. I believe that Arnab has set up an internationally competitive, collaborative, multidisciplinary program and has several interesting research leads which are bound to generate much excitement in the field. Overall Arnab is showing great potential as a future leader in his chosen area of research and a future fellowship in NASI will help him immensely to foster new collaborations and help him to disseminate his research to a wider and select group of scientific audience.

**Proposer:** Dr. Sagar Sengupta, **Seconder:** Dr. Vinay Kumar Nandicoori

**Ten Best Publications:**


The novel findings in Human Genetics are: (a) identification of 'advanced maternal grandmother's age' and recombinational errors during meiosis as the potential risk factors for chromosomal aneuploidy leading to Downs syndromes; (b) consanguineous uncle -niece marriages as risk factor for congenital heart diseases (CHD) in South India; (c) Identification of new recombination hotspot- pseudoautosomal region 3 (PAR3) between the X and Y chromosomes in humans indicating the new dimensions of sex chromosomal dynamics; (d) Identification of five new genes involved in Dyslexia by copy number variations (CNVs) - microarray analysis; (e) Establishment of novel SNPs in new genes associated with Congenital Heart Diseases, Asthma, Dyslexia and Chromosome nondisjunction; (f) Identification type 2 diabetes mellitus disease risk genes by genome wide CNV scans; (g) Role of ADAM33 interactive pathway in asthma; (h) CNV studies to propose new migratory routes with two settlements and influence on miRNA gene regulation and identified Type 2 diabetes mellitus risk genes; and (i) Establishment of ‘University of Mysore Genome Centre’ database. Significant contributions in Drosophila Genetics include: (a) Genetics of second chromosome specific indirect flight muscle mutants generated in D. melanogaster which have an impact on myofibril assembly and function. (b) Evolution of new introgressed genetic systems, the short-lived and long-lived Cytoraces in the environs of laboratory with high rate of substitution. (c) Whole genome and transcriptome with ChIP-seq analysis of the Cytoraces to demonstrate the 'recombinational speciation' for rapid genomic changes and 'adaptive genome evolution' during the 30 year long-range (600-650 generations) interracial hybridization experiment.

Proposer: Prof. H.A. Ranganath, Seconder: Prof. Mewa Singh

Ten Best Publications:
4. Avinash M Veerappa, Marita Saldanha, Prakash Padakannaya and NB Ramachandra, 2013, Copy Number Variation analysis in humans reveal previously identified X chromosome Transposed Region (XTR) in Y-chromosome to be a pseudoautosomal region 3 (PAR3).Func (if=3.496, ci=22)
PETER, M.C. SUBHASH (b 1961), Dean, Faculty of Science; Director, School of Life Sciences; Hon. Director, Centre for Integrative and Evolutionary Biology; Chairman, Board of Studies in Integrative and Evolutionary Biology; Prof. Dept. of Zoology, University of Kerala, Kariavattom, Thiruvananthapuram.

*Member of the NASI: Yes (YON 2017, Animal Sciences)*

For the past two and half decades Dr. Peter has been doing research in stress physiology and endocrinology mainly in the area of thyroid physiology and stress endocrinology in fish. He has successfully presented evidence for a thyroid hormone (TH)–driven sodium pump regulation in mitochondria-rich cells of fish gills, where TH promotes osmotic competence in varied environments. Extensive work on many fish models provided him with evidences for identifying a role for THs in stress response of fish. A review on this account was published in General and Comparative Endocrinology (GCE, Elsevier) which was one of the hottest articles of 2011. His concept of inter-hormonal interference between THs and cortisol explains the interactions of these hormones with cortisol and adrenaline during stress response in fish. He has later conceptualized a novel phenomenon of ease and ease response as an adaptive mechanism that favors animals to mitigate their stress response. His later research on ease physiology provided him evidences to identify the endocrinology of ease response in fish. He has been involved in Science management and has been serving as Associate Editor of GCE since 2008. He has designed a master's degree programme in Integrative Biology and has organized many International conferences and workshops in this area. He has established an Inter-University Centre for Evolutionary and Integrative Biology iCEIB in the University of Kerala that offers M.Sc and M.Phil courses and Ph.D. programme in Integrative Biology with support of RUSA, Government of Kerala.

*Proposer: Prof. Atanu Kumar Pati, Seconder: Prof. Edathil Vijayan*

**Ten Best Publications:**

6. V.S. Peter, G.S Babitha, S.E Wendelaar Bonga, M.C.S Peter. (2013) Carbaryl exposure and recovery modify the interrenal and thyroidal activities and the mitochondria-rich cell function in the climbing perch Anabas testudineus Bloch. Aquatic Toxicol *(if=3.513, ci=7)*
Dr. Ramesh chose Drosophila nasuta subgroup as research model. He studied intraspecific and interspecific chromosomal variations, biochemical genetics of adult isoenzymes, male accessory gland secretions, larval salivary gland secretions to understand genetic differentiation. He established:

- Homosequentiality of X-chromosomes, while autosomes differ by inversions, transpositions;
- Correlation between isoenzyme allelic variation and taxonomic relationship;
- Absence of correlation between size or number of cells in salivary gland and increased secretion;
- Pattern polymorphism of larval salivary and adult male accessory gland secretions and chromosomal linkage;

He studied fitness, eye pigments, sexual selection, localization of mutations and sperm precedence in D. nasuta and D. n. albomicans, their mutants and established:

- Fitness and sexual selection superiority of certain mutants over wild-type;
- Chromosomal linkage of mutant genes;
- Last mated male sperm precedence in doubly mated females is not ubiquitous;
- Working on learning and memory, screening and validating the influence of phytochemicals on radiation induced damages, biochemical and genetic system of wild-type, transgenic Alzheimer's (AD) and Parkinson disease (PD) models of D. melanogaster, he established:
- Olfactory memory status in young and aged wild-type flies;
- Age-associated changes in neurotransmitter modulators and structural changes in olfactory learning;
- Learning and memory in transgenic AD model;
- Ameliorative effects of natural antioxidants on memory impairment and loss;
- Role and extent of neurotoxicity in PD development;
- Neuroprotective effect and prevention of loss of circadian rhythmicity in transgens;
- Prevention of phosphorylation and aggregation of α-synuclein in PD model;
- Radioprotective potential of phytochemicals against gamma radiation toxicity

**Proposer: Prof. H. A. Ranganath, Seconder: Prof. Mewa Singh**

### Ten Best Publications:

5. Shruti, B and Ramesh, S. R. 2013 “Last mated male sperm precedence in doubly mated females is not ubiquitous: evidence from sperm competition in the laboratory populations of Drosophila nasuta nasuta and Drosophila nasuta albomicans”. J. Genet. 92: 3 (if=1.013, ci=2)
ROY, BISHNUPADA (b 1960), Professor, North-Eastern Hill University, Shillong

Member of the NASI: Yes (YON 2017, Animal Sciences)

I am personally acquainted with the scientific work of Prof. Bishnupada Roy who has more than 31 years of research experience in the field of parasitology involving taxonomy and chemotherapy of helminth parasites. He has described surface topography of more than 30 different species of helminth parasites and has showed that micro-topography of helminth parasites is species specific, thus provided an additional set of criteria of taxonomic value. Prof. Roy contributed extensively in the field of molecular diagnosis by developing species specific primers and DNA barcodes for several food borne zoonotic helminths and also described 3 new species of helminth parasites. Prof. Roy has developed a new technique for processing of soft biological tissues for scanning electron microscopy. The method is in use globally in many SEM Labs because of its significant features - it is simple, rapid and economical. He also established anthelmintic potential of several medicinal plants consumed by different tribes in North-East India to cure intestinal helminth infections. At present his group is trying to unveil the mechanism of action of the isolated active compounds of these plants and also to evaluate their toxic effect, if any, on the consumers in Northeast India. Six students have been awarded Ph.D. under his supervision and 8 more are working for their degree.

Proposer: Prof. Anupam Chatterjee, Seconder: Prof. Nirmalendu Saha

Ten Best Publications:
Sinha, Ravindra Kumar (b 1954), Professor and Head, Department of Zoology, Patna University, Patna

Member of the NASI: Yes (YON 2017, Animal Sciences)

The nominee saved the Ganges dolphin from extinction in India. The fishermen used to kill the dolphins to extract body oil as fish attractant. He discovered an alternative to the dolphin oil from fish scraps which led to significant reduction in the dolphin poaching (Sinha, 2002). He conducted continuous surveys using country boats in the entire length of the Ganges and most of its tributaries in India and Nepal to assess the distribution range, population status, ecological requirements and threats to the dolphin (Smith et al. 1994; Sinha 1997; Sinha et al., 2000; Sinha 2000, Sinha and Sharma 2003; Sinha and Kannan 2014). Based on the analyses of mitochondrial cytochrome b and nuclear interphotoreceptor retinoid-binding protein (IRBP) gene sequence of the 15 Ganges dolphins, and its closer molecular relationship with the baleen whales, he regarded the species as a "living fossil" (Verma et al., 2004). His research and conservation efforts, attracted the attention of both national and international policy makers, executives and scientific communities. In a positive response, Government of India designated the dolphin as National Aquatic Animal in 2009. He developed a Conservation Action Plan for the Ganges dolphin in 2010 (Sinha et al. 2010), which was enthusiastically accepted by the Government of India. The nominee has been conferred "Padma Shri" in 2016, the Swarna Jayanti Puruskar of the National Academy of Sciences, India in 2000, and the Order of the Golden Ark by His Royal Highness Prince Bernhard of the Netherlands in 1999.

Proposer: Prof. Madhav D. Gadgil, Seconder: Prof. Pradeep Das

Ten Best Publications:
KRISHNAMOORTHY, VENKATARAMAN (b 1955), Ex Director, Zoological Survey of India; Senior Scientific Consultant, National Centre fro Sustainable Coastal Management, MOEFCC, Chennai

Member of the NASI: No (YON 2017, Animal Sciences)

Dr Venkataraman has made significant contributions to animal taxonomy and conservation of endangered animals. His discoveries on Cladocera and coral and coral associated fauna are of biomonitoring and evolutionary significance. His acclaimed work on coral systematics and associated fauna has been immensely contributing to understanding taxonomy, distribution and evolutionary significance. He started his career in freshwater, migrated to potamoplankton and finally dived into the coastal and marine ecosystem especially coral reefs. He is the first Dive Master and has been diving throughout the world since 1998. His pioneering underwater studies on Coral reefs have unraveled the diversity and coral bleaching as well as status after Tsunami. His study on marine biodiversity of India has led to consequential increase in marine biodiversity from 12,372 to 21,663 (coral in particular have increased from 218 in 1998 to 577 species in 2015) adding to an increase of fauna of India from 89,451 to 97,514. With the aid of his book on Hard corals of India, he trained researchers and managers on status, taxonomy as well as underwater monitoring studies on corals. His effort towards Coral restoration by transplantation from Gulf of Mannar to Gulf of Kachchh is a success story. This has made him internationally renowned coral reef researcher. He has discovered a coral species new to science and 351 new records for India. His researches have resulted in outstanding contributions to taxonomy and conservation of corals and associated marine animals in India and in shaping biodiversity laws and policies.

Proposer: Dr. Qaiser Husain Baqri, Seconder: Prof. Wasim Ahmad

Ten Best Publications:

4. Venkataraman, K., C. Raghunathan, C. Satyanarayana, R. Rajkumar, 2016. Invasion of Snowflake Coral, Carijoa riisei (Duchassaing and Michelotti, 1860), in Indian Seas: Threats to Coral Reef Ecosystem, ISSN: 0975-1033; NISCAIR-CSIR, India IJMS Vol.45(1 (if=0.172, ci=1)
7. Mondal, T., C Raghunathan, K Venkataraman, 2017. First report of four species of azooxanthellate scleractinian corals in Indian waters from Andaman and Nicobar Islands Indian Journal of Geo Marine Sciences (NISCAIR-CSIR), India 46 (08): 1627-1631 (if=0.172)
YENUGU, SURESH (b 1972), Associate Professor, School of Life Sciences, Department of Animal Biology, University of Hyderabad, Hyderabad

Member of the NASI: No (YON 2017, Animal Sciences)

The nominee, Suresh Yenugu is an established investigator in the field of Reproductive Immunology. His laboratory has demonstrated that the antimicrobial peptides of the male reproductive tract exhibit synergistic bacterial killing when used in combination with commonly used antibiotics, thus paving the way for developing strategies to reduce the use of antibiotics to treat infections. His in depth studies on the role of antimicrobial genes in the innate immunity of the male reproductive tract under conditions that mimic an infection established an unconventional function for reproductive tract genes beyond sperm function. The epigenetic mechanisms of antimicrobial regulation demonstrated in his studies opened up the possibility of use of molecules that regulate epigenetic changes to potentiate innate immunity. His studies are of clinical importance which will lead to the use of epigenetic modulators alone or in combination with reproductive tract antimicrobial proteins to boost immune response against reproductive tract infections. His research contributions also led to the identification of many male reproductive tract proteins as potential immuno-contraception targets. His studies showed that knocking down testis specific genes affect sperm function and fertility and this is one of his outstanding contributions in the recent days.

Proposer: Prof. Kambadur Muralidhar, Seconder: Prof. Aparna Dutta Gupta

Ten Best Publications:
1. Rajesh A and Yenugu S. shRNA mediated ablation of Prostate and Testis Expressed (Pate) messenger RNA and protein results in impaired sperm function and fertility. Andrology (in press) (if=2.5)
10. Yenugu S, Hamil KG, Birse C.E, Ruben S.M, French F.S, Hall S.H. Antibacterial properties of the sperm-binding proteins and peptides of human epididymis 2 (HE2) family; salt sensitivity, structural dependence and their interaction with outer and cytop (if=4.4, ci=4.2)
AGRAWAL, NIRUPAMA (b 1954), Professor, Department of Zoology, University of Lucknow, Lucknow

Member of the NASI: No (YON 2016, Animal Sciences)

Prof. Agrawal has original contributions in Helminth taxonomy like monogenoideans, digeneans, cestodes and nematodes. She has solved taxonomic problems and established new species, using morphometric analyses (78, 82,83,128) and new genera from marine fishes of Indian east coast (105, 124). Investigations from collections of Great Barrier Reef (91, 92) and South America (99) resulted in description of four new species. Some Indian species were wrongly placed under genera Ancyrocephalus Creplin, 1839 Halio trema Johnston et Tiegs, 1922 or Urocleidus Mueller, 1934. New genera were established to accommodate dactylogyrids, infecting various fishes. They are Sclerocleidoides Agrawal et al., 2001 (to include Ancyrocephalus etropli Gussev, 1963); Mastacembelocleidus (118) (Ancyrocephalus bam Tripathi, 1959, Urocleidus rhynchobdelli Jain, 1959, Urocleidus heteronchorus Kulkarni, 1969, Halio trema tandoni Agrawal and Singh, 1982 and Urocleidus raipurensis Dubey et al., 1992); Chandacleidus Agrawal et al., 2006 (125) (Urocleidus recurvatus Jain, 1961), Xenentocleidus (126) (Urocleidus xenentodoni Jain, 1961) and Sundanonchus (130) (Urocleidus behuri Agrawal et Singh, 1982). Further a new genus Esmocleidus (Ancyrocephalus esomi Gusev, 1963 and A. chakrabarti Gusev, 1976) was proposed (171) to accommodate three species from Esomes. Their phylogenetic position is established using molecular markers. Invasive potential of monogenoids via fish trade is reported (127, 131, 162, 163). Recently, DNA extraction, PCR, electrophoresis and different bioinformatic tools are used to complement the morphometric analyses and evolutionary aspects for monogenoidean and digenean parasites (165, 169, 175). Rhythmicity of digeneans were studied (166, 167,168). She has also contributed monographs on Monogenoidea and Trematode Metacercaria.

Proposer: Prof. R.C.Sobti, Seconder: Prof. Omkar

Ten Best Publications:
1. Agrawal N, Rajvanshi S and Asthana A. 2017. Intraguild interaction among fiveioxenous congeneric Thaparocleidus sp. (Monogenoidea) infecting freshwater shark Wallago attu Bloch and Schneider, 1801. Journal of Helminthology. 91, 718-725 (if=1.6, ci=0)
4. Ray S, and Agrawal N. 2014. Rhythmicity in the emergence of Cercaria tondani Saxena, 1982, a gymnocephalus cercaria from Lymnea stagnalis (Linnaeus, 1758). Biological Rhythm Research. 46: 299-305. (if=0.9, ci=2)
5. A Tripathi, S Rajvanshi, and N Agrawal. 2014. Monogenoidea on exotic Indian freshwater fishes. 2. Range expansion of Thaparocleidus caecus and T. siamensis (Dactylogyridae) by introduction of striped catfish Pangasianodon hypophthalmus (Pangasiida (if=0.6, ci=5)
8. A Timbao, Kritsky DC, Yuan S, Jianying Z, and Shuhua S, and Agrawal, N. 2006 Diplectanids infesting the gills of the barramundi Lates calcarifer (Bloch) (Perciformes: Centropomidae), with the proposal of Laticola n.g. (Monogenoidea: Dipl ectan (if=1.3, ci=21)
10. Agrawal, N and Kritsky, DC. 1998. Neotropical Monogenoidea. 33. Three new species of Ancistrohaptor n.g. (Dactylogyridae, Ancyrocephalinae) on Triportheus spp. (Teleostei, Characidae) from Brazil, with checklists of ancyrocephalines recorded fro (if=1.3, ci=11)
BARAL, RATHINDRANATH (b 1962) Senior Scientific Officer in Assistant Director Grade, Chittaranjan National Cancer Institute, Kolkata, India

Member of the NASI: No (YON 2016, Animal Sciences)

Nominee is dedicated in the research on ‘Cancer Immunology and Immunotherapy’. His research group is trying improve the dysregulated immunity in tumor host by immunomodulation. The group described a novel glycoprotein from neem leaf, designated as ‘Neem Leaf Glycoprotein’. NLGP restricts murine sarcoma, melanoma and carcinoma by systemic immunomodulation in CD8+ T cell dependent manner. Detail immunobiochemical mechanism are being attempted to elucidate. NLGP prevents aberrant angiogenesis and metastasis in cancer and possess unique tumor microenvironment normalizing property. Present focus of the lab includes, characterization of various tumor microenvironmental events (e.g., stromal/stem cell biology, cellular behavior in tumor hypoxia etc.) and structural determination of NLGP. This molecule is in process of clinical translation. In addition, immunomodulation by interferon alpha 2b was also investigated with special effort to the treatment of renal cell carcinoma patients.

Proposer: Prof. Syamal Roy, Seconder: Dr. Uday Bandopadhyay

Ten Best Publications:
DAS, MANOJ KUMAR (b 1957), Scientist E, National Institute of Malaria Research (ICMR), Ranchi

Member of the NASI: No (YON 2016, Animal Sciences)

Dr. M K Das is a trained biomedical scientist in the field of vector borne diseases. He has worked in the remote tribal areas for almost 16 years (Car Nicobar, Andaman & Nicobar Islands) of the country. He was working as the Officer-in-charge MRC Field Station Car Nicobar Island from the year 1990 to 2006. He was deputed to Car Nicobar with a big challenge to control endemic malaria. I am most delighted to feel proud that Dr. Das single handedly planned executed the bioenvironmental malaria control in Car Nicobar and brought down malaria to very low level under the guidance of Late Dr. V P Sharma. This he could do without the use of any insecticide. One of his contributions is the finding of Plasmodium knowlesi from Andaman Nicobar Islands. He is working in the Ranchi, Field Unit of NIMR for the last ten years. He has carried out work on transmission dynamics of malaria, insecticide resistance on malaria vectors, mapping of filariasis in Jharkhand state. His research on Durable Lining, Long Lasting Insecticide Nets (LLINs) leads to the development of novel vector control tools. His studies will help for the elimination of filariasis and malaria from the state vis-à-vis from the country. He has published more than 76 scientific papers in high impact journals. He was awarded ICMR awards for Biomedical research conducted in underdeveloped areas in 2006. He was awarded with the honour of Lt. Governor’s Commendation Certificate at A & N Islands 2015 and also Dr. M.O.T. iyengar Memorial Award 2015 (ICMR, New Delhi).

Proposer: Prof. A. P. Dash, Seconder: Prof. Y. D. Sharma

Ten Best Publications:
HUSSAIN, SYED AINU (b 1960), Scientist G, Wildlife Institute of India, Dehradun

Member of the NASI: No (YON 2016, Animal Sciences)

Dr. Syed Ainul Hussain is internationally acclaimed for his contributions to wildlife sciences. His cutting edge research on otters has led to enhanced understanding of their status, ecology and sociobiology. His work on reproductive success and population vulnerability of gharial has contributed to the understanding of the ecology and biology of this ‘Critically Endangered’ species. His pioneer work on environmental flow contributed significantly in decision making at apex level on water allocation for conservation. His work on seals and penguins in Antarctica provides the baseline for further research. His research on the last remaining population of the critically endangered Eld’s deer or Sangai is unmatched. Dr. Hussain’s research on the movement of breeding waterbirds with special reference to Black-necked cranes and Bar-headed geese has unfolded the mystery of movement pattern of migratory water birds and their ecology in the Tibetan plateau in the wake of increasing anthropogenic pressures and climate change. His scientific contributions to ecosystem level processes such as biomass productivity of wetlands and ecosystem services of the mangrove ecosystems and forested landscapes are highly appreciated. His work on endangered species, ecosystems and their link to biodiversity conservation has helped bridge the gap between ecology and conservation biology.

Proposer: Prof. Mewa Singh, Seconder: Prof. K.S. Rangappa

Ten Best Publications:


MISRA, ADITYA KUMAR (b 1957), Vice Chancellor, Maharashtra Animal and Fishery Sciences University, Futala Lake Road, Nagpur

Member of the NASI: No (YON 2016, Animal Sciences)

Prof. Misra’s pioneering research works on embryo biotechnology in buffalo lead to establishment of embryo transfer (ET) technology in this species that is so important for India and Asia. Consequently, he was invited and sponsored as lead speaker in several national/ international conferences in India and many other top buffalo rearing countries [Italy 2X, Brazil, China, Indonesia, Sri Lanka, Philippines etc.] and became global leader in this field. He produced first buffalo calves following freezing of embryos & non-surgical and surgical embryo transfers in Asia. His group demonstrated first successful vitrification of immature buffalo oocytes; and produced over thousand cattle and over 140 buffalo calves using ET Technology, including a record 11 calves following embryo transfer to 14 recipients (78.6% conception) that was widely acclaimed by media and the Prime Minister. He established OPU-IVF technology in buffalo and Sahiwal cows and was involved in production of first buffalo calf through OPU-IVF in India. The first ONBS project of India/Asia was also successfully implemented by his group at NDDB. He was actively involved in the superovulation of more than 3500 indigenous (Sahiwal, Gir, Kankrej, Red-Sindhi), crossbred and exotic (Holstein and Jersey) cows. Produced over 9700 viable embryos, cryopreserved over 5400 embryos and established over 1400 pregnancies using ET technology. For his outstanding research contribution he has been bestowed with three national awards viz. Rafi Ahmad Kidwai Award and Jawaharlal Nehru Award by the ICAR and Dr. P. Bhattacharya Memorial Award by the National Academy of Agricultural Sciences.

Proposer: Dr. G. C. Mishra, Seconder: Dr. Mohan Wani

Ten Best Publications:
Dr. Pant is well known for his elegant research on the application of human cord blood stem cells (hCBSCs) in developmental neurotoxicity (DNT). He demonstrated the mapping of cellular and subcellular events of differentiation of hCBSCs into morphological and functional neuronal cells. He published these findings in the journal “Stem Cells and Development" in 2012 and shared the volume of the journal with Prof. Shinya Yamanaka and Prof. John B. Gurdon, the Nobel Laureates of 2012-Medicine and Physiology. His DNT research provides deep insights into the complex processes involved in neuronal development, injury and repair mimicking to the human brain during the gestation and early stage of life. He discovered that how the master regulator signaling molecules/ cascades are critical to convert hCBSCs into functional neurons and what exactly happens when things go wrong during the intricate process of neuronal development. His findings uncovered novel links between the xenobiotic metabolizing capabilities and their regulators in hCBSCs derived neuronal cells all through the differentiation. He further developed 3D brain-specific organoids using human stem cells. Besides the laboratory work, he dedicated himself to fostering the science among students through public outreach talks and mentoring pre and post-doctorates. Being GLP Inspector he was instrumental in getting India the status of full adherent OECD member country. Taking his inputs Society of Toxicology, USA has developed a consensus document “Hooka: How dangerous is it?”. Under his mentorship, CSIR-IITR became the first GLP Certified Laboratory in the entire CSIR setup and Second in Government.

**Proposer:** Dr. V.P. Kamboj, **Seconder:** Prof. Krishna Misra

**Ten Best Publications:**


2. AK Singh, et al. (2012). Expression and inducibility of cytochrome P450s (CYP1A1, 2B6, 2E1, 3A4) in human cord blood CD 34 (+) stem cell-derived differentiating neuronal cells. Toxicological Sciences. 2012;129(2):392-410 (if=5.02, ci=20)


RAISUDDIN, SHEIKH (b 1961), Professor, Department of Medical Elementology & Toxicology, Jamia Hamdard, New Delhi

Member of the NASI: Yes (YON 2016, Animal Sciences)

Prof. S. Raisuddin has significantly contributed to the field of toxicology by taking lead in newer areas of research and mentoring over 30 Ph.D. scholars. He has made significant contributions to three major areas of toxicology: biomarkers of exposure and effects and their utility in monitoring and risk assessment, molecular mechanisms of toxicity of endocrine disrupting chemicals (EDCs) and prevention of toxicity of anticancer drugs. His research on biomarkers of exposure to environmental toxicants using fish models has been extensively cited. Using biomarker approach it was shown that oxidative stress biomarkers could be used for monitoring the water quality of river Yamuna. A number of new biomarkers such as protein carbonyls were used for the first time in exposure monitoring and validate in field studies. The other area of his research focuses on prevention of toxicity of anticancer drugs using herbal extracts which are used in Indian systems of medicine. His recent research in this area has focussed on study of urothelial transmembrane proteins (uroplakins) and their expression in response to exposure to anticancer drug cyclophosphamide. These proteins play vital role in membrane integrity and one of the constituents of aged garlic extract, S-allyl cysteine has been shown to provide protection to uroplakins. Research on EDCs has revealed modulatory effects of nutritional factors on their toxicity with special reference to male reproductive system. Recently, he has undertaken research to unravel the molecular interaction of EDCs (bisphenol A) with peroxisome proliferator-activated receptors.

Proposer: Prof. N.K. Ganguly, Seconder: Dr. Seyed Ehtesham Hasnain

Ten Best Publications:

I. Development of molecular diagnosis system, recombinant antigen and monoclonal antibody based CI-ELISA, Ag-ELISA, host-parasite interaction in trypanosomosis in animals (Sengupta et al., 2010; 2012; 2014; 2016, Rudramurthy et al., 2013; 2013; 2017, Ligi et al., 2015; 2016, Krishnamoorthy et al., 2016).

II. First report of bovine neosporosis in cattle and its association with abortion in southern India (Sengupta et al., 2013). Serosurvey of PPR in sheep and goats in southern India (Raghavendra et al., 2008).

III. Development of COFEB diagnostic kit for detection of babesiosis in equines. This is first diagnostic kit for any parasitic disease in animals in India and first equine babesiosis kit in the world (Sengupta & Panisup, 2000). This kit was sold commercially after thorough field validation.

IV. Development and launching of first animal disease forecasting system in the country- NADRES (national animal disease referral expert system) (Prabhudas et al., 2005). Monthly expected outbreak report of animal diseases generated through NADRES are sent to all state govt./UTs sixty days in advance.

V. Identification of a common sharing antigen for diagnosis of bovine tropical theileriosis that presents in both schizont and piroplasmic stages in bovine and having tremendous diagnostic value (Sengupta et al., 1997a, 1997b).

VI. First time report of fauna of strongylid helminthes in Indian wild asses (Sengupta & Dey, 2009).

VII. Exhaustive study on progression of mange in goats and its treatment (Sengupta et al. 1997; Sengupta & Basu 2007; Sengupta et al., 2008; Sengupta & Basu 2008).

Ten Best Publications:


Dr. S. Poopathi, a senior scientist and vector control specialist from Indian Council of Medical Research for fellowship in Indian Academy of Sciences. He has over 27 years of research experience in ICMR, the apex medical organization in our country. He is an eminent scientist in ‘Entomology’. His distinctive scientific performance as reflected in more than 100 publications and almost all have first and corresponding author in reputed journals and three Indian patents. Two products were transferred to ICMR for commercialization. Having trained in Institute Pasteur, France on molecular mechanism of insecticidal resistance, he identified in-vitro binding assay of bacterial toxins and this finding is being widely followed for studying mechanism of resistance in medical and agriculture fields. His thrust areas of research continued to in neglected areas of research in India focusing on control of vector borne diseases. Recently he has isolated 31 new bacterial isolates from natural re-sources for mosquito control. His research proposals had high rating and reflected several grants from DST, DBT, DSTE and ICMR etc. His findings on “Chicken feather waste” as source of bio-pesticide production in mosquito control (Indian Patent No: 255023/2013) and demonstration of de-hairing enzymes in culture supernatants of Bti deserves appreciations. Dr. Poopathi is the recipient of A.B.J. Abdul Kalam Award, ICMR-Award, Technology Achievement Award, Sushruta Best Scientist Award, Recognition Award, Life-time Achievement Award etc. Member in professional bodies, Executive editor and Editorial Board member in more than 27 journals and deserves to be more suitable. I strongly recommend his candidature for Fellowship.

Proposer: Prof. Umesh Chandra Srivastava, Seconder: prof. Tridibes Adak

Ten Best Publications:


TRIPATHI, BHUPENDRA NATH (b 1962), Director, National Research Centre on Equines-National Centre for Veterinary Type Culture, Sirsa Road, Hisar

Member of the NASI: No (YON 2016, Animal Sciences)

This gives me great pleasure to bear testimony to the excellent scientific acumen and technology innovation of Dr Tripathi who has some outstanding contributions in the area of structural genomics and animal health and deserves recognition as a NASI fellow. Dr Tripathi’s extensive research focused on molecular pathogenesis, immunology and diagnosis of bacterial and viral diseases of animals. His pioneering work on M.paratuberculosis earned him international recognition (Ref.3-5). He identified for the first time genes in Salmonella pathogenicity island 2 (SPI-2) that are required for the induction of both systemic and enteric salmonellosis in calves (Ref.1). His research on viruses includes global first lab animal model for equine influenza virus (EIV), structural genomics of EIV, generation of recombinant EIV using reverse genetics and bacterial artificial chromosome (BAC) for equine herpes virus (vaccine development) (Ref. 6,7,10). His recent work includes identification of host cell kinases (SERCA, MNK1, etc) for efficient virus replication so as to target them for development of antiviral drugs (Ref. 8, 9). He is significantly contributing to development of Veterinary Type Culture Repository at NRCE, which holds of more than 3200 animal microbes. Dr Tripathi is recipient of Best University Teacher award, outstanding pathologist award, International Wellcome Trust fellowship for Post-doc work, etc. He is fellow of National Academy of Veterinary Sciences, Indian Assoc. of Vet Pathologists (IAVP), and Indian Society for Immunology and Biotechnology. He is currently Task Force member of DBT, Govt of India, and Director of NRCE, and Project Coordinator, NCVTC, Hisar.

Proposer: Dr. M.L. Madan, Seconder: Prof. Parimal Roy

Ten Best Publications:


Dr. Ritu Trivedi has made outstanding contributions in the area of bone health. Her studies led to the development of a new oral therapy for improved bone health. She has clearly shown that the osteogenic activity of a flavonoid, kaempferol, present in Dalbergia sissoo is comparable to currently used bone forming agent parathyroid hormone (Kumar et al., 2010). She has further shown that the poor bioavailability of kaempferol is significantly enhanced by its nanof ormulation thereby leading to bone mineral density sustenance (Gupta et al., 2013). Her studies clearly reveal that kaemferol present in extract of Dalbergia sissoo is as active as the pure compound, thus being cost effective in clinical use for bone formation. She has further demonstrated that various dalbergin anlogues and neoiflavanoids present in the standardized Dalbergia formulation exhibited bone-forming effects (Kumar et al., 2015, 2017; Choudhary et al., 2016). In order to elucidate its mode of action, she has superbly demonstrated that the formulation (Dixit et al., 2012) enhanced bone formation signals, BMP2 and Wnt/b-catenin. Her studies have established the role of miR874-5p in bone recovery after menopause through inhibiting histone deacetylase (Hdac-1) and increasing expression of osteoblast regulatory genes (Kushwaha et al., 2014; 2016). The inherent properties of Dalbergia sissoo for bone formation and regeneration (Karvande et al., 2017) with increased biomechanical strength and no uterine hyperplasic effects in post-menopausal conditions (Khedgikar et al., 2012, 2017), has led to its positioning as potential medicine for rapid fracture repair by the name REUNION.

Proposer: Dr. Madhu Dikshit, Seconder: Dr. V.P Kamboj

Ten Best Publications:
2. Khedgikar V, Gautam J, Kushwaha P, Kumar A, Nagar GK, Dixit P, Chillara R, Voruganti S, Singh SP, Uddin W, Jain GK, Singh D, Maurya R, Chattopadhyay N, Trivedi R (2012) A standardized phytopreparation from an Indian medicinal plant (Dalbergia sissoo) has led to its positioning as potential medicine for rapid fracture repair by the name REUNION.
JADHAO, ARUN GOVINDRAOJI (b 1960), Professor, Department of Zoology, RTM Nagpur University, Nagpur

Member of the NASI: No (YON 2015, Animal Sciences)

Prof. Jadhao did M.Sc. and Ph.D. in Zoology from Nagpur University, Nagpur. Subsequently, he received prestigious fellowship of Alexander von Humboldt (AvH) Foundation, Germany to pursue postdoctoral training in Germany (1994-96) and further worked at different institutes in Germany. He made significant contributions in the area of neuroanatomy and neuroendocrinology. The nominee made a novel finding which shows the anatomically distinct two brain types in the same gender of the fish species and this has been shown for first time in any vertebrate animals demonstrating the inter-sexual and intra-sexual dimorphisms within the males and within females brain, which predominantly seen in the preoptic and tuberal region. Probably such dimorphisms may responsible for the different reproductive behaviors within the same gender. Further, he made a significant contribution in identifying neuronal descending pathways in the central nervous system (CNS) and demonstrated different neuronal cell populations of the brain that projecting to the spinal cord extending up to 25th segment and also shows regeneration capacity in fish. He also identified the gender differences in the expression of galanin and calcium binding protein in the fish preoptic area which controls the hormonal regulation by the pituitary. He identified several novel peptidergic, aminergic, nitrinergic and calcium binding proteins (CaBPs) containing neurons, some co-expressing these substances, and participating in hypophysial regulation using immunocytochemical and fluorescence techniques. For the first time his group has reported the presence of GnIH in the olfactory system and pituitary gland of fish and frog, confirming its role in the hormonal regulation.

**Proposer:** Prof. P. D. Prasada Rao , **Seconder:** Dr. Subeer S. Majumdar

**Ten Best Publications:**

The nominee Dr. Raghavendra is an established investigator in the area of Entomology & Malariology, made significant contributions to the fields of vector control, insecticide resistance and its management-both of relevance to public health. His Ph.D. work gave, for the first time evidence for the biochemical mechanisms underlying insecticide resistance, differential responses to different classes of insecticides, kinetics of development of resistance among sympatric An. culicifacies sibling species, led to suggesting specific indoor residual spray strategy for vector control. His work on pyrrole class insecticide was acclaimed by WHO, led to innovation of combination LLINs with insecticides. As Indian PI of multi-country WHO research project on universal LLIN coverage for population at risk of malaria with ≥80% coverage, showed impact on transmission of malaria and management of asymptomatic cases, even with loss of 13% susceptibility, provided leads for use of LLINs in the presence of insecticide resistant malaria vectors. A WHO project is initiated to determine diagnostic dosages of neo-nicotinoids for susceptibility testing in mosquitoes for effective management of multiple insecticide resistance. He is associated with WHO, GoI, ICMR on several decision making committees and working groups on vector control policy. His laboratory published work led to co-patenting of a plant extract as promising larvicides. He is scientist-in-charge of WHO collaborating centre for phase I testing of insecticides since 2012 and the facility is being upgraded for GLP compliance. He guided more than 20 PhD/MSc students, published 110 papers in peer-reviewed international journals and 12 articles as book chapters.

Proposer: Dr. Sarala Karumuri Subbarao, Seconder: Prof. Kambadur Muralidhar

Ten Best Publications:


5. Silica nanoparticle: a potential new insecticide for mosquito vector control. *II=2.329, ci=41*


The nominee has made significant contributions in the areas "stress biology and genotoxic stress". His work received first-rate citations (65-pub; 1600 citations; Nature group journals) and award of prestigious international collaborative project (Major:UK-IERI; British Council). He developed and validated Drosophila model transgenic for stress genes for assessing chemicals-induced cellular toxicity for the first time; application in environmental monitoring studies; nanomaterials-safety, environmental chemical detection in different matrices and hsp70 expression as the first-tier bio-indicator of cellular adversity and as a redox-buffer and elucidation of the underlying mechanism (Environ.-Hlth.-Perspect,2003,111; BBA, 2005, 1725, 81; BBA, 2007, 1770, 1382; Ecotoxicology-&-Environmental-Safety,(Highlighted-article), 2008, 1652; Toxicol.-Appl.-Pharmacol., 2009, 235, 226; Life-Sci., 2010, 86, 377; BBA, 2013, 1830,2256; Age,2014, 25, 1139; Free-Radical-Biology-&-Medicine,2015, PMID-25746179,e-pub). Global gene expression profiling studies revealed that beside hsp70, other stress associated genes play role in better stress adaptability displayed by exposed organism. Recently, a mutation in methuselah gene (Class-II-GPCR) was shown for the first time to confer significant rescuing effect on dopamnergic neurons in chemical-induced Parkinson disease model of Drosophila and elucidation of underlying mechanism. Subsequently, metabolome profiling studies showed relevance to human as part of GPCR based drug druging and parallel findings in human PD patients (Chemosphere, 2011, 82, 370; Neurobiology-of-Aging, 2014, 35, 2419, e1-16; PLoS-One,2014, 9,(6),e98886;Molecular-Neurobiology,2015,PMD-25428622,e-pub). In genotoxic stress area, methods for the detection of single-strand-break, double-strand-break and oxidative DNA damage were developed and validated. He was the first to demonstrate (global gene profiling, genetic, miRNA profiling) that complex mechanism of DNA damage in Cr(VI)-exposed organism follows perturbation of non-homologous-end-joining DSB-repair. He also demonstrated that perturbed DNA repair in chemical-(DDVP)-exposed organism is due to faulty pre-and post-replication repair pathways along with alkylating and oxidative DNA damage (Environ. Mol. Mutagenesis,2005,46,189;Environ.-Mol.-Mutagenesis,2008,49,206;Mutation-Res,2011,722,44;Mutation-Res,2011,726,222;Mutation-Res-FMMM,2014,747–748,28;Mutation-Res,2014,766,35;J Hazardous Materials,2015,283,558)

Ten Best Publications :
The nominee has contributed significantly in the field of male reproduction and reproductive toxicity. He developed highly specific radioimmunoassay for clusterin and purified clusterin from ram sera, which gave new direction to clusterin research. He demonstrated that environmental contaminants at very low doses adversely affect male reproduction and proposed a mechanism of action based on generation of ROS and the involvement of mitochondrial- and Fas-FasL-dependent cell death pathways. He demonstrated that Bisphenol A impairs insulin signaling and glucose transport in rat testis thus leading to impaired testicular functions. He has shown that Adjudin, a novel male contraceptive, causes transient induction of oxidative stress accompanying restructuring of adherens junctions in testis and Interleukin-1 alpha is a novel regulator of blood-testis barrier. Using bioinformatics approach he proposed structures of glucose transporters, GLUT-2, GLUT-8 and gap junction protein, connexin 26 for the first time and demonstrated that Bisphenol A interacts with them thereby inhibiting glucose uptake in testis. These studies provided new insights into the mechanism of action of some of the environmental contaminants. Dr. Mathur has significantly contributed to the development of Bioinformatics teaching and research in India. He has led to the development of many open access databases. He is editorial board member of six and reviewer of over 100 national and international journals. He is Fellow of National Academy of Medical Sciences (India) and recipient of Asutosh Mookerjee Memorial Award. Elected as General Secretary (Scientific Activities), Indian Science Congress Association and Vice-President, Asian Association of Andrology, Shanghai.

**Proposer:** Prof. U.C. Srivastava, **Seconder:** Prof. G.K. Srivastava

**Ten Best Publications:**


PRAKASH, SOAM (b 1956), Professor, Dayalbagh Educational Institute, Dayalbagh, Agra

Member of the NASI: Yes (YON 2015, Animal Sciences)

Prof. Soam Prakash, FAZ contributions in the area of Consciousness and evolution of consciousness in microbes, animals and Man as expert, supervisor of Thesis with multidisciplinary research capabilities in Nano Parasitology and Public health research for last 20 years and would be happy to nominate him for fellowship of the academy for the reasons described below: 1. One of the first Indian to supervise thesis on evolution of consciousness (2018) at DEI with vector control expertise to utilize, synthesize silver and gold nano particles for Malaria, Filariasis, Dengue, Chickengunia control. (69 research publications) One of the first Indian to initiate Consciousness research to trace evolutionary aspect of consciousness, providing outstanding support to create center of excellence in formulating consciousness and Nano research center at Dayalbagh Educational Institute. He has published hundred international publications, Guided 10 Ph.Ds in diversified fields like vector control, Nano biotechnology, public health and successfully completed 10 major projects from DST, AICTE, UGC etc. In last 20 years and has been awarded fellowship from Academy of Zoology. Making a hole in the wall, helping underprivileged people, who received 100% employment opportunity. He could managed to chair 37 international conferences, and is reviewing at least 30 international journals, 6 journals of repute on special issues (4) and has been nominated as Editor for many journals of interdisciplinary research. He has visited USA, Finland, France, Canada and UK for giving 34 invited lectures in diversified topics earning awards.

Proposer: Prof. V.P. Sharma, Seconder: Prof. Anand Mohan

Ten Best Publications:
5. Prakash, Soam, Singh, G, Soni, Namita, Sharma, S. (2010). Pathogenicity of Fusarium oxysporum against the larvae of Culex quinquefasciatus (Say) and Anopheles stephensi (Liston) in laboratory. Parasitology Researchvol107, issue 3, 651-655 (if=2.329, ci=29)
Using Drosophila as his model system, Prof. Jagat Kumar Roy has made significant contributions to chromosome organization and regulation of gene expression during development and differentiation. He unraveled the dynamic organization of heterochromatin and its differential replication in larval brain. His group showed regulation of developmental genes in Drosophila by the classical tumour suppressor genes. His elegant demonstration that homeotic transformation following perturbation in a segment polarity gene generates wings in all three thoracic segments (Emerald & Roy 1997, Nature 389:684) explains evolution of insect wings. His current research attempts to understand the molecular pathways regulated by Rab11, a G-protein-coding gene involved in vesicular trafficking. Using sophisticated genetic screens and confocal microscopy, he showed how Rab11 affected diverse cellular functions like membrane morphogenesis, cytoskeletal organization, cell adhesion, etc., as well as morphogenesis, viz., formation of eye, myogenesis and gonadogenesis. His studies also characterized development of malignant tumour in Drosophila brain due to mutation in the dcp2 gene, coding for an RNA degradation protein. Dr. Roy’s recent interest in the molecular etiology of cervix cancer has demonstrated the prevalence of HPV in women in eastern India and has shown that mutation in BRN3A is an important cellular factor in cervix cancer, which opens a novel approach in understanding of its molecular pathogenesis. Besides his sustained research contributions, Prof. Jagat Kumar Roy is one of the most popular teachers among students. His single minded exemplary commitment to teaching and research, and work ethic provide inspiration to students and colleagues alike.

Proposer: Prof. Rajiva Raman, Seconder: Prof. Subhash Chandra Lakhotia

Ten Best Publications:
Captive breeding, larval rearing protocols and gene banking of prioritized threatened food fishes were developed and standardized which was a breakthrough in conserving the rare species. An innovative approach on the concept of State fish was adopted for the first time in India. Contributed significantly in exploring, evaluating and characterizing the current spatio-temporal pattern of fish biodiversity of the river Ganges basin and selected areas of NEH region and developed a set of priority habitat model. New concept of habitat fingerprinting technique through elemental fingerprints of fish otolith was successfully demonstrated. Comparative pattern of reproductive traits and population structure of three Indian Major Carps, Clarias magur and Ompok bimaculatus were demonstrated from 25 different population. Developed spatial GIS maps showing fish occurrence and distribution of Ganga basin for conservation planning. Currently, fish assemblages, habitat complexity of the inland reservoirs and wetlands were assessed and refined technologies of cage culture, pen culture and culture based for fisheries enhancements. Commercialized pen design and CIFRI cagegrow feed for promoting cage culture in reservoirs. Developed climate resilient fisheries adaptation techniques and developed methods/models on selected fishes of Ganga basin in relation to climate change and vulnerability assessment. Discovered a new red variant rohu Labeo rohita, six new species, and published 3 fish diversity Atlas, 2 bulletins alongwith 12 databases, checklists related to Inland fish diversity, fish genomics including DNA barcoding of 72 freshwater fishes. Current h-index as per Google scholar is 21 with above 1300 citations.

**Proposer:** Dr. W. S. Lakra, **Seconder:** Dr. Shailja Bhattacharya

### Ten Best Publications:


CHANDRA, GOUTAM (b 1963), Professor, Department of Zoology, The University of Burdwan, West Bengal.

*Member of the NASI:* No (YON 2014, Animal Sciences)

The nominee, besides conducting wide range filarial survey, has established 3rd quadrant of night (12 midnight - 3 a.m.) as peak period of filarial transmission (Chandra, 1995), method of computing vector survival rate per gonotrophic cycle (Chandra et al., 1996) and Anopheles subpictus (A) a malaria vector (Chatterjee and Chandra, 2000) as epidemiological and vector biological studies. Control of vector borne diseases relies principally on vector control (WHO, 1999). Major breakthrough is establishment of a number of bio-resources like some novel fishes, insects, bacterial strains as mosquito biocidal agents (Chandra et al., 2008, 2013, 2016; Das et al., 2017) and some novel phyto mosquitoicides like steroids, proteins, aliphatic amidides, Glucosiosaunin etc. (Chowdhury et al., 2007, 2008; Ghosh et al., 2008, 2012; Banerjee et al., 2012; Rawani et al., 2012, 2014). Silver nano particles were green synthesized with plant extracts of Drypetes roxburghii, Solanum nigrum and Swietenia mahagoni and their mosquito larvicial activities were established after proper characterization (Haldar et al., 2012; Adhikary et al., 2018). During search of mosquito control agents, isolated some wormicidal, molluscicidal and bactericidal phytochemicals were isolated as byproducts (Bhattacharjee et al., 2006; Chatterjee et al., 2009; Hossain et al., 2012, 2013). In addition, locally isolated Geobacillus thermodenitrificans was proved non-mosquitocidal but a bioremediator of some heavy metals (Chatterjee et al., 2010). Functional response of a fish has been documented for the first time (Ghosh and Chandra, 2017) along with some arthropods (Ghosh and Chandra, 2011; Mondal et al., 2014, 2017) as mosquito predators.

**Proposer:** Dr. Vinod Prakash Sharma, **Secondor:** Prof. Anupam Chatterjee,

**Ten Best Publications:**


7. Chowdhury N, Ghosh A and Chandra G (2008), Mosquito larvicultural activities of Solanum villosum berry extract against the dengue vector Stegomyia aegypti. BMC Complementary and Alternative Medicine, 8:10, doi. 10.1186/1756-9140-8-10. *(if=2.20 (BioMed Central), ci=130)*


CHAUHAN, RAMSWAROOP SINGH  (b 1958), Professor, Veterinary Pathology, GBPUAT Pantnagar, Uttarakhand  
Member of the NASI: No (YON 2014, Animal Sciences)  

During his tenure as academician and scientist, he has written 73 books including 21 manuals and 1 monograph; most of them are very popular among the students world over. He contributed 80 chapters in different books and published 188 research papers in various National and International journals of repute. Besides, he participated in 16 International and 57 National Conferences. He also popularizes the scientific research by publishing 322 semi-technical articles in various magazines. He is life member of 15 scientific bodies and has been in several executive committee such as Chairman, President, Secretary-General, Vice President, Registrar, ICVP, etc. Based on his contributions and scientific achievements, he has been awarded with several prizes, medals and honours including Best Young Scientist Award (1992), IAAVR Award (1996), National Fellow Award (1999), Fellow NAVS (2000), Fellow SIIP (2001), K.S. Nair Memorial Award (1999), Vigyan Bharti Award (2000), Dr. C.M. Singh Trust Award (2002), Dr. Rajendra Prasad Award (2002), Shri Ram Lal Agrawal National Award (2000), Best Teacher Award (2004) by GB Pant University, Pantnagar, Fellow, IAVP (2006), Gopalgaourav, Bharat Excellence Award (2007), Diplomat, ICVP (2008), etc. in recognition of his research and teaching endeavor. He has been the principle investigator of 19 research projects worth millions of Rupees. The scientific contributions of Dr. Chauhan have been recognized internationally as visiting Professor, University of Wageningen, The Netherlands and Temporary Advisor, WHO (Geneva). Dr. Chauhan ambitiously implemented quality management system (QMS) in CADRAD/ CDDL. CADRAD is the first veterinary diagnostic institution in India to get ISO certification. He also implemented uniform diagnostic methodology in all the Disease Diagnostic Laboratories throughout India.

Proposer: Prof U. C. Srivastava, Seconder: Prof G. K. Srivastava

Ten Best Publications: 
GHOSH, SUKLA  *(b 1958)*, Professor, Department of Biophysics, MolBio&BI, University of Calcutta, Kolkata

*Member of the NASI: No (YON 2014, Animal Sciences)*

Dr. (Ms) SUKLA GHOSH is an established investigator in the area of Developmental Biology especially Regeneration Biology. In her post-doctoral work on craniofacial and limb regeneration in newt and salamanders, different tissue specific genes during regeneration were identified resulting in seminal publications (Ghosh et al 1994, 1996, Ferretti and Ghosh 1997). Her study on limb regeneration in axolotl led to functional analysis of genes by successful use of viral vectors (Ghosh et al 2008). On her return to India in 2004, initially at Delhi University and subsequently at the University of Calcutta, she reestablished facilities for working on spinal cord regeneration in Zebra Fish and Axolotl. Not only these models were validated, this work led to publications of high standard on the molecular basis of this process (Hui et al. 2010, Hui et al 2013, Hui et al 2014). A recent work from her laboratory, published in PLoS ONE, uncovered the molecular basis of spinal cord regeneration by transcriptome profiling and in the process identifying several groups of event specific genes, some of which could be targeted for future therapeutic purpose. This is a signal contribution to this field from India. In addition to this the nominee has led the departmental efforts in streamlining and improving the quality of teaching and organizing new funding.

*Proposer: Prof. Kambadur Muralidhar, Seconder: Prof. Samit Bhattacharya*

**Ten Best Publications:**


RAMACHANDRAN, SUNDARARAJ (b 1963), Scientist G, Institute of Wood Science and Technology, Bangalore

Member of the NASI: Yes (YON 2014, Animal Sciences)

Dr. R. Sundararaj, enjoys an established reputation for his outstanding contributions on bio-diversity, biology and management of forest pests. His work on these aspects has received international acclaim not only for its scientific merit, but also for its practical application in controlling insect pests. His election as a Fellow of Royal Entomological Society (London) stands testimony to the world-wide recognition.

He is an authority on taxonomy of Indian whiteflies, erected eight genera, described 139 species new to science and reported twelve species of these pests for the first time from India. Recently he reported the invasion of solanum whitefly on solaceous and medicinal plants; and rugose spiraling whitefly on coconut in south India thereby helped the Ministry of Agriculture and Farmer’s welfare to issue alert and advisory notifications. He has thoroughly investigated the entomofaunal diversity and their interactions in sandal-wood dominated ecosystems and also the insect pests of sandalwood under cultivation. Developed integrated pest management strategies and now, actively involving in training the farmers on the eco-friendly way of managing insect pests of sandalwood. Recently developed an eco-friendly coconut shell liquid extract based formulation for protecting wood and the technique has been filed for patenting. The novelty and uniqueness of these scientific contributions have, indeed, making a scholastic impact in the context of protecting our forest wealth and wood. His contributions on the natural biore sistence of imported timbers are of practical importance in guiding wood industry and wood consumers. Successfully guided 11 Ph.D. students and presently guiding three PDFs.

Proposer: Dr. Lekshmy Narayanan Santhakumar, Seconder: Dr. A. Jagannadha Rao

Ten Best Publications:


SHARMA, RAMESH CHANDRA (b 1954), Professor and Head, Hemvati Nandan Bahuguna Garhwal University, Srinagar Garhwal

Member of the NASI: No (YON 2014, Animal Sciences)

Professor Ramesh C. Sharma, HOD, Environmental Sciences, Hemvati Nandan Bahuguna Garhwal University (A Central University), Srinagar-Garhwal, Uttarakhand has made a significant contribution in the areas of Freshwater Biodiversity (periphyton, phytoplankton, zooplankton, macrozoobenthos and fish) of Himalayan rivers and high altitude wetlands including glacier-fed lakes. Contribution on fish diversity of Uttarakhand Himalaya, their ecological status and fixing of order of priority for their conservation has been made. This is reflected by the publication in the peer reviewed journals with high impact factor and citations. Bioindicators have been identified for assessing the health of the freshwater ecosystems. An outstanding contribution has been made on the assessment of organo-chloride pesticides in soil, surface sediments and human milk in North-East Himalaya. Substantive contribution has been made on sacred groves (traditional ways of conserving biodiversity) of the Himalayan region. In addition to it, contribution on indigenous device (watermills) for sustainable development of renewable energy in Uttarakhand has been made. A very interesting contribution has been made on the scientific green belt development around historical monuments with a case study of the Victoria Memorial, Kolkata based on the air pollution tolerance of plant species in collaboration with Japanese scientist. He is pioneer in studying the hyporheic diversity (biodiversity of surface water and ground water ecotone) of the rivers and lakes of the Garhwal Himalaya and probably the first in India. Professor Sharma has published more than 142 research papers in various national and international peer reviewed journals with high impact factors and citations.

Proposer: Prof. Mohammad Shamim Jairajpuri, Seconder: Prof. S. P. Singh,

Ten Best Publications:

VENUGOPALAN, VAYALAM PURATH (b 1960), Head, Nuclear Agriculture and Biotechnology Division, Bhabha Atomic Research Centre, Trombay, Mumbai

Member of the NASI: No (YON 2014, Animal Sciences)

Dr. Venugopalan is actively pursuing research on biofilms and biofouling. Settlement and growth of microorganisms on surfaces exposed to aqueous milieu has major implications in biomedical and industrial environments. His early work on biofouling on the offshore oil platforms in the Bombay High region augmented our understanding of the problem and led to selection of control options. His work on early stages of bacterial biofilm development threw new light on structural features of nascent biofilms under flow conditions and improved our understanding of their functional significance. His work on application of granular biofilms in wastewater treatment is well-recognized. He has made significant contributions in the use of granular biofilm reactors for biodegradation of organic/inorganic wastes and xenobiotics in wastewater. He has developed a photobioreactor that uses granular phototrophic biofilms for efficient treatment of wastewater. He has studied formation of biofilms in biomedical environments and developed methods to control wound bed biofilms. His scientific contributions in the area of biofouling of seawater intake systems of coastal power plants are well recognized. He has carried out extensive investigations on the impact of antifouling biocides discharged from electric power plants into coastal marine systems. A book on this subject, co-edited by him, is an important contribution to our understanding of operational and environmental issues emanating from the use of seawater as an industrial coolant. Dr. Venugopalan has brought to bear on this important field his varied experience and made substantial and lasting contributions in terms of not only publications but also technologies.

**Proposer: Prof. T. Subramoniam, Seconder: Prof. S. P. Thyagarajan**

Ten Best Publications:

AHMAD, FARHAN JALEES (b 1965), Professor, Department of Pharmaceutics, School of Pharmaceutical Education & Research, Jamia Hamdard, New Delhi-110062

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Prof. Farhan Jalees Ahmad has 26 years of rich experience in Research and Teaching through his fruitful association with Ranbaxy Research Laboratories for six years as Scientist. His domain of research included development, scale-up, technology transfer of pharmaceutical products. He is working in the area of Nanomedicine for the last 15 years. He has developed Technology for the preparation of stable Nano DPI with a lung deposition of more than 60% proved clinically in patients of COPD. Products based on this technology are successfully transferred to Defense Services for use in the armed forces after approval by DCGI. A total of fourteen products are transferred to Defense Services for use in the armed forces. He has been granted projects to a tune of rupees 5.5 crores from National agencies like DBT, CCRUM, AYUSH, UGC, DST and International agencies like FIP and OPCW etc. He is also involved in nationally conceived projects as well. He has earned many accolades including Young Scientist Fast Track from DST, Scientist of the Year-2005 from NESA, UGC Research Award 2011, Bharat Jyoti Award 2011, Pharma Ratan Award 2017 and ABAP Senior Scientist Award 2017. He has a US patent, Two PCT and 24 Indian patents. He has published more than 300 research and review papers, 12 Book chapters, 9 books. He has a total citations of 7963 with H Index of 42 and i-10 index of 160. He has guided around 35 M.Pharm students and about 43 PhD scholars.

Ten Best Publications:
1. Iqbal Ahmad, S Akhter, Mohammed Anwar, Sobiya Zafar, Rakesh Kumar Sharma, Asgar Ali, Farhan Jalees Ahmad, 2017 “Supercritical anti-solvent technique assisted synthesis of thymoquinone liposomes for radioprotection: Formulation optimization, in-vitro” (if=3.649)
4. S Akhter, M Anwar, MA Siddiqui, I Ahmad, J Ahmad, MZ Ahmad and Farhan J ahmad, 2016 “Improving the topical ocular pharmacokinetics of an immunosuppressant agent with mucoadhesive nanoemulsions: Formulation development, in-vitro and in-vivo studies” C (if=3.881, ci=05)
ASHRAF, MOHAMMAD ZAHID (b 1973), Professor, Department of Biotechnology, Jamia Millia Islamia (Central University), New Delhi 110025

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr Ashraf has conducted seminal research on thromboembolic diseases, as evidenced by publications in high impact journals like Blood(2014), PNAS(2017) etc. This will have an immense societal benefit by significantly reducing the burden of thromboembolism. Dr Ashraf elucidated previously unknown cause of thrombosis at altitudes is centrally regulated by a complex network of coagulatory and NLRP3-inflammasome-ILβ mediated inflammatory responses, critically linked through HIF1α. This novel finding was highly recognized worldwide and published in the ‘PNAS’ in 2017; also proposed as potential therapy. Out of the significant outcomes of his translational research, the landmark work internationally recognized, published in ‘Blood-2014. This work received accolade by an Editorial, revealing a novel cause for blood clotting on ascension to mountains. This study proposed a novel protein ‘Calpain’ as a biomarker (IPO:733/DEL/2014) for early diagnosis of thrombosis thereby providing timely treatment to Indian Army Jawans posted at Siachen. In a rare breakthrough, Dr. Ashraf developed a microRNA-145 based therapy for thrombosis. These preclinical findings were validated in human patients, supporting the potential translational significance for development of novel antithrombotics (IPO:1398/DEL/2015); published in EBiomedince-2017, a recently established journal from Lancet. Dr. Ashraf was the key investigator for one of the largest longitudinally prospective cohort study carried out by Indian Army and DRDO (involving 750 Soldiers) that suggested the incidence of thrombosis at altitudes were inferentially higher- a convincible recommendation for Indian Army during operational deployment. He has also established his leadership qualities by carrying out a multicentric-cross-sectional study involving various army Hospitals and DRDO.

Proposer: Dr. Shantanu Sengupta, Secondo: Prof. Talat Ahmad

Ten Best Publications:

BAKHSHI, SAMEER (b 1969), Professor, All India Institute of Medical Sciences, New Delhi

Member of the NASI: Yes

(YON 2018, Medical & Forensic Sciences)

Prof. Bakhshi established pediatric oncology in the cancer center at AIIMS; initiated cord blood stem cell transplantation and has performed more than 20 such transplants besides 230 autologous and allogenic transplants. As chairperson of Indian Pediatric Oncology Group (2015-17), Sameer was instrumental in initiating 12 multicentric studies. He is member secretary of AIIMS ethics committee and an expert in several national/international committees including new drug advisory committee for oncology in DCGI. His contribution to research is evident from his CV wherein he successfully completed several research projects and has published >300 indexed articles. Sameer’s systematic work on neo-chemotherapy in advanced retinoblastoma clearly demonstrated its impact in preventing mutilating orbital exenterations (Ophthalmology-2012, if=8.2). He for the first time demonstrated utility of non-invasive PET scan in predicting outcome in advanced retinoblastoma (JNM-2012, if=6.1). His work on newly proposed MRI-based staging and new response criteria of retinoblastoma have assisted in sub-categorizing advanced retinoblastoma (BJO-2013, if=3.8). The work on relevance of VEGF in residual tumor cells post-neoadjuvant chemotherapy has suggested potential use of anti-angiogenic therapy in retinoblastoma (PBC-2012, if=2.5). Based on his analysis, patients with localized retinoblastoma now need not undergo invasive bone marrow and cerebrospinal fluid examination for staging (JPHO-2011; if=1.5). He was included as part of SIOP-PODC committee for generating retinoblastoma guidelines (PBC-2013; if=2.5). His pioneering novel work on metronomic therapy in refractory cancers has conclusively shown that this therapy works only in non bone sarcoma solid malignancies, and that it has no role in progressive bone sarcomas (JAMA Oncology- 2017, if=16.6).

Proposer: Prof. G.K. Rath, Seconder: Prof. Pramod Kumar Garg

Ten Best Publications:
3. Pillai AK, Sharma KK, Gupta YK, Bakhshi S. 2011; Anti-Emetic of ginger powder versus placebo as an add-on therapy in children and young adults receiving high emetogenic chemotherapy. Pediatr Blood Cancer 56:234-238. (if=2.5, ci=102)
The most innovative contribution of the nominee in my opinion is that his work has unraveled ‘the clinical significance and subclinical relevance of systemic and cellular biomarkers in patients with Type 2 diabetes’. Balu’s research contributions include: Accelerated aging in diabetes as evidenced by telomere shortening and senescence markers; identification of circulatory miRNAs of ‘Asian Indian Phenotype’; identification of ‘druggable’ target epigenetic signature in type 2 diabetes; scientific evaluation of probiotics and herbs with pathway specific mode of action(s); demonstration of detrimental effects of high-fructose diet & endoplasmic reticulum (ER) stress pathway as novel drug target. He has set up the human skeletal muscle and human retinal endothelial cell culture to perform molecular investigations. Balu is currently working on certain unique programs viz., biomarker potential of Extracellular Vesicles, role of gut-microbiota, understanding ‘metabolic obesity’ in Indians, role of dietary advanced glycation end (AGE) products & role of endocrine disruptors in relation to diabetes and its complications - all of which are focused towards identification of novel drug targets with translational applications. His current work also aims to unravel the molecular mechanisms of exercise/yoga lifestyle intervention benefits. Balu serves as an expert member in several boards and committees. Besides an active researcher, he also serves as a Science Communicator. He is a strong supporter of all components of INSPIRE programs, serve as mentor for students of IASc-INDA-INSI Summer Research Fellowship and popularize the concept of “Borderless Biology & Converging Science” through his frequent lectures to the students.
BHARTI, ALOK CHANDRA (b 1974) Professor, University of Delhi, New Delhi.

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Alok Chandra Bharti has made outstanding contributions in basic and applied research particularly in understanding molecular mechanisms of carcinogenesis and made recognizable efforts in developing novel anti-cancer, and anti-HPV therapeutics. His research on transcriptional (dys) regulation mediated by STAT-3, NF-kB and AP-1 during epithelial carcinogenesis elucidated tumor-promoting role of these factors in cell survival and maintenance of stemness responsible for cancer chemoresistance. These transcription factors have emerged as key prognostic and therapeutic targets in cervical, head and neck, esophageal and stomach cancer. Dr. Bharti is also actively involved in development of cost-effective HPV diagnostics for early detection of cervical cancer. He has been involved in development of uniform international standards for HPV DNA diagnostics by WHO, Geneva. In academics, Dr. Bharti has supervised 14 Ph.D. out of them 3 are under progress, He has actively contributed to MD and MDS research of 4 students, Post-doctoral research of 7 fellows and pre-doctoral and master desperations of 47 students. He has been a regular host of Summer Research Fellows and guided over 51 students out of which 21 Academy Summer Research Fellows from three Science Academies (IAS, NASI and INSA).

Proposer: Prof. Bhudev C. Das, Seconder: Prof. Lalit Kumar

Ten Best Publications:

CHANDRA, POODIPEDI SARAT (b 1968), Professor, All India Institute of Medical Sciences (AIIMS), New Delhi

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

After his MBBS with honors, distinction and gold medals, Dr. Chandra did MS in Neurosurgery from NIMHANS, Bangalore. Joined as faculty at AIIMS, Delhi in 1998 and is currently a Professor of Neurosurgery. Main areas of interest include epilepsy surgery and epileptogenetic networks. Other areas include craniovertebral junction anomalies, cerebrovascular and functional surgery. His seminal contribution is on 2 independent neuronal networks in hippocampal sclerosis (published in Nature communication) and the first ever Randomized Control Trial in pediatric epilepsy surgery (published in NEJM) that has impact on modifying and improving surgical strategies. He established a Center of Excellence for Epilepsy that provides state of art surgical treatment for patients with drug resistant epilepsy. He developed research paradigms by correlating surgical, molecular, cellular and electrophysiological studies to find out the nature of epileptogenic networks and also possible biomarkers for epilepsy. New surgical techniques were also developed by him like multi-modal imaging for epilepsy surgery, endoscopic hemispherotomy, endoscopic corpus callosotomy with commissurotomy, DCER technique for cranio-vertebral junction anomalies, absolute alcohol embolization for vertebral hemangioma with short segment fixation and disposable endoscopic carpal tunnel syndrome. Till date more than 25,000 surgeries were performed by him and have contributed widely to the scientific literature on methods he adopted in these surgeries. He has about 200 research papers in National/International peer reviewed journals including in NEJM, Nature communication, Genomics, Epilepsia, and Neurosurgery. He is an eminent teacher and has delivered over 100 lectures nationally and internationally.

Proposer: Prof. N. R. Jagannathan, Seconder: Prof. Chitra Sarkar

Ten Best Publications:


6. Banerjee J, Banerjee Dixit A, Tripathi M, Sarkar C, Gupta YK, Chandra PS [corresponding author]. Enhanced endogenous activation of NMDA receptors in pyramidal neurons of hippocampal tissues from patients with mesial temporal lobe epilepsy: A mech (if=3.6, ci=4)


Prof A. Chowdhary is renowned for her outstanding original contributions that have significantly advanced the knowledge of fungal infections in India. Her work on antifungal resistance in Aspergillus and Candida is recognized globally. She reported for the first time about multi drug resistant Candida auris in several hospitals in India and highlighted the problem of its misidentification and demonstrated molecular mechanisms of antifungal resistance in azoles and echinocandins (Emerg. Infect. Dis. 2013; 19: 1670-3; J Clin Microbiol. 2015; 53: 1823-30; Clin Microbiol Infect. 2016; 22: 277.e1-9 J Antimicrob Agents & Chemother 2018; 73:891-899). The therapeutic option for infection with this yeast is limited was shown in her publications highlighting that all three classes of antifungals available for therapy are ineffective in several patients. Also, whole genome sequence data of Indian isolates pointed to the occurrence of highly related clone, suggesting that its emergence in India is a recent phenomenon (New Microbes and New Infect. 2016; 13:77-82; Clin Infect Dis. 2016: 64:134-140) Following her findings, presently, C.auris is considered to be an emerging super bug worldwide prompting US CDC, European CDC and Public Health London to issue alerts regarding its notification. Her work on invasive aspergillosis due to Aspergillus fumigatus, the commonest mould infection associated with high mortality highlighted for the first time the problem of multi-azole resistance in A. fumigatus in India in azole naïve patients (J Antimicrob Chemother 2012,67;362-6; Front. Microbiol 2016; 6: 1-10). This emergence of azole-resistance in A. fumigatus significantly impacts the therapeutic role of azoles in aspergillosis as it rules out the use of oral antifungals which are the treatment of choice in these patients. (PLoS Pathog. 2013; 9: 10: e1003633) Reports of her extensive environmental surveys pointed out those azole fungicides in the environment induce cross-resistance to medical azoles in A. fumigatus. (PloS ONE. 2012; 7:e52871; J Antimicrob Chemother 2016; 69: 555-7 Mbio. 2015; 6: pii: e00536-15.). Recognizing her significant work on antifungal resistance, she was nominated as expert member of International Expert Opinion to deliberate on treatment of azole resistant aspergillosis (Drug Res Update. 2015; 21-22: 30-40). She is a Fellow of American Academy of Microbiology and Infectious Disease Society of America, and led group in 2016 for development of ESCMID & ECMM guidelines for diagnosis and management of diseases caused by black fungi (Clin Microbiol Infect. 2014; 20: S3: 47-75).

**Proposer: Prof. Amit P. Sharma, Secondor: Prof. S.E. Hasnain**

### Ten Best Publications:


4. Chowdhary A, Kathuria S, Xu J, Meis JF. 2013. Emergence of azole resistant Aspergillus fumigatus strains due to agricultural azole use creates an increasing threat to human health. PLoS Pathog. 9: 10e1003633 (If= 7; Ci= 142)


Jayasri das Sarma is Professor at IISER Kolkata and Adjunct Associate Professor, University of Pennsylvania, USA. She is trained and works in the field of neurovirology and neuroimmunology. She has served Assistant Professor at Thomas Jefferson University, USA (2004–08) successively, she joined IISER Kolkata as Associate Professor, in 2015 she became a Professor. She is working to understand cellular and molecular mechanisms of viral induced inflammation which mimics certain neuropathological and clinical features of human demyelinating disease Multiple Sclerosis (MS). She showed that Mouse Hepatitis Virus (MHV) induced demyelination is concurrent with axonal loss showing microglia mediated myelin stripping. Her findings also reveal that MHV induced demyelination bridges innate immunity with the adaptive and is not driven by B and T cells or made to order antibodies but the robust upregulation of innate immune mediators which is different from the conventional autoimmune model of MS. Recently, her studies demonstrated that MHV infection remodels Connexin43 mediated gap junction intercellular communication in vitro and in vivo both in astrocytes and meningeal fibroblast cells and causes astrogliosis. Also, microtubule-assisted altered trafficking of connexin 43 is associated with depletion of connexin 47. As Connexin 47 is known to be crucial for myelination, Connexin 43 mediated Connexin 47 destabilization could be the underlying mechanism of chronic progressive demyelination. In addition, she is attempting to examine Arsenic exposure on humans as this has huge societal relevance. Her findings have revealed that Arsenic binding to gap junction protein connexin 43 alters cell to cell communication and tissue homeostasis.

Proposer: Prof. Akhil C. Banerjea, Second: Prof. Mitali Chatterjee

Ten Best Publications:


Prof. Madhusudan Das is an outstanding faculty member and scientific administrator of the University of Calcutta. His long term research questions are interdisciplinary and address genetic aspects of different pathophysiological conditions coupled to translational perspective. In 25 years of research, Prof. Das has significantly contributed towards unravelling altered genetic signatures associated with different diseases, such as, hypothyroidism, non-syndromic hearing loss, diabetes, gastric cancer, kidney stone disease. He has discovered unique genomic signatures for early detection of diseases that are relevant for the Indian population. Using samples drawn from West Bengal and Mizoram, he has validated these signatures. He has contributed to the understanding of inter-individual variability of drug efficacy in type II diabetes mellitus. His findings have provided novel markers of better treatment regime. Prof. Das's scientific journey starting as 'Scientist' of Indian Institute of Chemical Biology to the 'Dean of Science' of University of Calcutta is truly remarkable and deserves great appreciation. His scientific dedication, achievement, mentoring and true leadership as the Dean of Science have been phenomenal. His involvement in this long scientific tenure through different national & international projects, personal or collaborative, resulted not only in high impact publications, but also helping the University of Calcutta to maintain its century old scientific accomplishments. I make these statements based on personal knowledge of Dr. Das's scientific accomplishments. I also wish to state that I have co-authored publications with him. I strongly recommend his candidature for the Fellowship of NASI.

Proposer: Prof. Partha Pratim Majumder, Seconder: Dr. Susanta Roychoudhury

Ten Best Publications:


360
I have known Dr. Dixit for the last 10 years and her core research interest is to understand mechanisms governing aberrant endothelial function during pre-diabetes and hyperinsulinemia. Since endothelial dysfunction triggers the onset of macro-angiopathy and is accelerated upon metabolic imbalance, despite her basic science approach, her research is relevant for clinical understanding of cardiovascular diseases. She employs primary cultures of umbilical vein derived endothelial cells (HUVECs) and circulating endothelial progenitor cells (EPCs) as cell culture model systems, in addition to performing molecular biology and biochemistry experiments. She further corroborates her mechanistic findings with clinical observations through her medical collaborators. In the past few years she has established a successful research team in Endothelial Biology at IIT Madras which is evident from her peer-reviewed publications in renowned thematic journals such as Arteriosclerosis Thrombosis and Vascular Biology, Journal of Thrombosis and Haemostasis, Diabetes and Vascular Disease Research, and Journal of Nutritional Biochemistry to name a few. Her work demonstrated that chronic hyperinsulinemia as a consequence of insulin resistance, promotes endothelial inflammation by reducing the bio-availability of nitric oxide (NO) due to eNOS uncoupling and increased activity of Arginase-II. This finding was reconfirmed for endothelial cells derived from Gestational Diabetic mothers. Additionally, she reported that the endothelial differentiation and vasculogenic ability of circulating EPCs is attenuated during pre-diabetes, thus delaying the process of vascular repair. Her group has also demonstrated the anti-atherosclerotic effects of Gentiana lutea root extracts, thereby opening the possibility of identifying new drug leads for management of CVD.

Proposer: Dr. G. Bhanu Prakash Reddy, Seconder: Dr. Sathees C. Raghavan

Ten Best Publications:


Dr. Prashant Garg, MBBS, MS, is an eminent corneal surgeon and researcher, who has effectively combined translational research, in particular infections of the eye and their treatment, with clinical practice. Thought to be among the top 10 corneal surgeons of India, he has been actively involved in what is best described as “bedside to bench and back to bedside”. During the last 20 years, he has focused his research on sight-threatening infection on the eye by microbes- in particular on contact lenses and the cornea- their virulence and drug resistance, diagnosis and treatment of such infections using novel methods. By developing ex vivo models of corneal infections, he has been able to evaluate the efficacy of various diagnostic and therapeutic interventions. Winning grants obtained from the Welcome Trust, Medical Research Council of UK, Newton-Bhabha Fund, and ICMR, he has helped develop (a) a diagnostic contact lens containing specific tags that readily identify gram positive, gram negative bacterial, fungal and such pathogens (thus avoiding the lengthy cell culture based identification) and thus saving time, and (b) using a novel dissolvable polymer micro-needle delivery vehicle to inject besifloxacin into the cornea as an effective treatment mode.

**Ten Best Publications:**


HEMALATHA, RAJKUMAR (b 1962), Director, National Institute of Nutrition, New Delhi.

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Hemalatha has contributed significantly in the realm of Nutrition, infection and gut microbiome with particular emphasis on women and child nutrition. She has conducted several community based intervention/operational research and clinical trials apart from basic studies with funding from government, non-government and international organisations. Early in her career, Dr Hemalatha won recognition for developing a method to assess mild zinc deficiency in children. Her research efforts on pregnant women have generated vital information on the impact of inflammation on fetal growth. In a WHO/UNICEF/NIN collaborative work in 2002, she was the lead participant of the team that evaluated the Safety and Impact of Vitamin A Supplementation with Polio Vaccine in children. She was the principal coordinator for the biological component for a multicentric project on high risk population, funded by BMGF. Her honorary services as Joint Secretary of the Nutrition Society of India are well appreciated. She is an expert member of various task force committees of health ministry, Ministry of Women and Child Development, NITI Ayog, FSSAI, DSIR-SIRO, DGCI-CDSCO etc. Dr Hemalatha is recipient of Ponduri Venkata Ramana Rao Gold Medal, Dr. Rajammal P Devadas memorial award. She is a Fellow of National Academy of Medical Sciences (NAMS) and Fellow of the International Union of Nutrition Sciences (IUNS). Recently she took over as Director of NIN-ICMR. With her extensive contributions and recognition in the field of nutrition sciences we recommend her nomination for election as a Fellow of NASI in Medical & Forensic Sciences.

Proposer: Dr. Mahtab S. Bamji, Seconder: Dr. Kamala Krishnaswamy

Ten Best Publications:


4. Hemalatha Rajkumar, Arthur C. Ouwehand, Sofia D. Forsten et al. (2014): Community-based randomized double blind controlled trial of Lactobacillus paracasei and Bifidobacterium lactis on reducing risk for diarrhea and fever in preschool children (if=2.8, ci=6)


TRIPATHI, SURYA KANT (b 1965), Professor & Head, Department of Respiratory Medicine, King George's Medical University U.P., Lucknow - 226003

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Surya Kant, Professor and Head, Department of Respiratory Medicine, and Department of Pulmonary & Critical Care (Officiating) KGMU, Lucknow has to his credit 13 books, 32 book chapters and 293 research papers. Dr. Surya Kant's article published in an international journal on MDR-TB: An iatrogenic problem is continuously no. 1 article among top 20 articles globally in the domain of TB since 2010. He has guided 138 MD, DNB, PhD and M.Phil students and has supervised 49 research projects and clinical trials. He was conferred the prestigious Lowesche award for his excellent innovation in the field of Asthma. He got the outstanding US patent (Patent no.US 7,514,105 B2) in the field of management of snoring related sleep disorders. He has been awarded 10 national and international fellowships including prestigious fellowship of American College of Chest Physicians. He is the founder chief editor of Lucknow Medical Journal and member, editorial board and reviewers of many national and international journals. Dr. Surya Kant has 28 years of teaching and professional experience and has got many Professional Laurels to his credit. He is the President of Indian Chest Society 2016 -17, Vice President of National College of Chest Physicians, India, and Chairman of UP State Task Force for TB Control and Member, Executive Council of University of Lucknow. He was the President of Medical Science Section of Indian Science Congress Association in 2013-14. His researches have been widely cited in scientific journals, books and reference volumes.

Proposer: Prof. U.K. Misra, Seconder: Prof. R.S. Tripathi

Ten Best Publications:
2. B. Gupta, Kant S*, R. Mishra, Subjective global assessment of nutritional status of chronic obstructive pulmonary disease patients on admission, Int. J Tuberc Lung Dis, 2010;4; 500-505 (if=2.61, ci=4)
4. Shukla RK, Kant S*, Bhattacharya S, Mittal B, Association of Genetic polymorphism of GSTT1, GSTM1 and GSTM3 in COPD Patients in a north Indian population. COPD, Journal of Chronic Obstructive Pulmonary Disease, 2011;8;167-172 (if=2.3, ci=12)
5. AK Maurya, Kant S*, VL Nag, RAS Kushwaha, TN Dhole, Trends of anti-tuberculosis drug resistance pattern in new cases and previously treated cases of extrapulmonary tuberculosis cases in referral hospitals in northern India, J Postgrad Med, 2012; 58;1 (if=1.589, ci=3)
7. AK Maurya, AK Singh, M Kumar, J Umrao, S Kant*, VL Nag, Changing patterns and trends of multidrug-resistant tuberculosis at referral centre in Northern India: a 4-year experience Indian journal of medical microbiology;2013; 31:40-46 (if=1.149, ci=20)
KESAVADAS, CHANDRASEKHARAN  (b 1965), Professor & Head of Radiology, Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram

Member of the NASI: Yes  (YON 2018, Medical & Forensic Sciences)

Dr.C.Kesavadas ,Professor & Head of Radiology at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, has research focus in the field of magnetic resonance imaging and neuroradiology. He and his team developed protocols for performing clinical functional MRI studies in presurgical patients and advanced neuroimaging methods in intractable epilepsy. He and his team evaluated the role of diffusion tensor imaging, susceptibility weighted imaging, perfusion imaging & MR spectroscopy for diagnosis & management of brain tumor, movement disorders, stroke & neurodegenerative diseases, thus bringing many of these newer techniques into clinical realm. His present research is focused on brain connectivity studies using resting state fMRI, brain computer interface & near infra-red spectroscopy. Results of these studies have been published in reputed international journals. He is a well-known teacher in the field of neuroimaging and has been a visiting faculty at several medical institutions and teaching programs in the country. Dr.Kesavadas has research collaborations with technological universities and industry for research & development in the field of medical image processing & machine learning. He has published extensively, with more than 180 publications in reputed indexed journals and has an h-index of 29. He heads or is a member of scientific bodies set up by government and scientific associations. He is editorial board member of several scientific journals. The DBT, Government of India awarded him the National Bioscience Award for Career Development, for his contributions to biosciences, in 2009. He has also received oration award from ICMR.

Proposer: Prof. C.C.Kartha, Seconder: Prof. M. Radhakrishna Pillai

Ten Best Publications:
Prof. Abbas Ali Mahdi has made pioneering contributions in the area of natural products, metal toxicity and Free Radical Biology. He has over three decades of research and teaching experience with 330 publications (having about 6000 citations), including 25 book chapters. He has written five books and has been Editor/Member Editorial Board of many Journals. He has guided dozens of doctoral and masters students and supervised over fifty research projects including the DST – FIST and The World Academy of Science project (Trieste, Italy). His work on protection from free radical mediated cellular injury by herbals in diabetic rats is well recognized. His in depth studies related to perturbation of antioxidant levels consequent to oxidative stress in seminal plasma of infertile men showed remarkable amelioration by some herbal preparations. His studies demonstrated significant improvement in sperm count and motility following inhibition of lipid peroxidation in seminal plasma by M. pruriens in male sterility. He studies further showed that treatment with M. pruriens and W. sominifera significantly ameliorated psychological stress, regulated steroidogenesis and improved semen quality in infertile men. Also, his extensive studies on possible association of aluminium with Alzheimer's disease have demonstrated that Al may be linked with neolipofuscinogenesis, mitochondrial and endoplasmic reticulum stress and these changes may be responsible for the development of age related disorders, such as Alzheimer’s disease. He explored metabolomics to study many diseases, including essential hypertension.

**Proposer:** Dr. Vinay Kumar Khanna, **Seconder:** Dr. Swaran Jeet Singh Flora

**Ten Best Publications:**

MISHRA, PRADYUMNA KUMAR (b 1973), Deputy Director, ICMR-National Institute for Research in Environmental Health, Bhopal

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Pradyumna Kumar Mishra has successfully developed nano-engineered Dendritic cell based biotherapeutics for selective targeting of tumor re-initiating cells in cancers of the female reproductive tract and gastro-intestinal malignancies. These unique nano-engineering vaccines which involves encapsulation of autologous tumor lysates also helps in treating the residual disease following administration of standard therapy in Hepatitis B and Hepatitis C virus malignant infections. As the therapeutic validations of these formulations conducted in restricted settings using limited patients samples have yielded significant positive outcome, the therapeutic approach developed by him appear to be safe, effective and patient-compliant with immense potential for clinical translation. Besides, Dr. Mishra’s laboratory has provided unprecedented molecular understanding into the role of prooxidant-induced carcinogenesis in the population exposed to environmental carcinogens either at acute or chronic levels. These studies from his laboratory are regarded fundamental towards understanding the genomic and epigenomic repercussion of pro-oxidant chemical moieties from an environmental health perspective. Based upon this comprehensive framework of exposure-response relationship, he has designed and validated a pragmatic carcinogenic-risk assessment model that would be able to predict an individual’s risk of developing the disease using circulating epigenomic signatures in air-pollution exposed populations. Moreover, Dr. Mishra has developed two quantitative (real-time) PCR based technologies for rapid identification and characterization of occult hepatitis C virus and latent tuberculosis infection which are now being used for screening the prevalence of sexually transmitted hepatitis C virus infection and genital tuberculosis in semi-urban and rural population, fraught with environmental and economical perils.

Proposer: Prof. N. K. Lohiya, Seconder: prof. Anil Suri

Ten Best Publications:
MOHANAN, PARAYANTHALA VALAPILL (b 1962), Scientist-G, Sree Chitra Tirunal Institute for Medical Sciences and Technology (Govt. of India), Trivandrum

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Mohanan has immensely contributed in the area of toxicology. He has made significant contributions for the development of medical device industry and medical device regulations in India, and India getting GLP membership in OECD countries. He received certificate of appreciation from the Hon. Minister of Science and Technology, Govt. of India for the contribution to India getting full adherent status on GLP from OECD. Mohanan has been teaching toxicology to PhD, MPhil, MTech, Postgraduate diploma/certificate courses. He has completed 7 externally funded (3 DST, 2 DBT, 2 ICMR) research projects as Principal Investigator. He has developed and patented an In vitro pyrogen kit for the measurement of pyrogenicity. As a material toxicologist with 28 years of experience, he has been intimately associated with all the medical devices/technologies developed at Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Govt. of India. Dr. Mohanan obtained BSc, MSc from Calicut University and PhD from Kerala University. He joined SCTIMST in 1989. He was a JSPS Post doctoral Fellow at the University of Tsukuba, Japan from 2000 to 2002. He is a visiting Professor and a Visiting Researcher at Toyo University, Japan. He is the senior most GLP Inspector of the country and a Certified Biological Safety Specialist. He is a Fellow of Society of Toxicology, Fellow of Society of Applied Biotechnology and Fellow of Academy of Sciences for animal welfare. He has authored 159 publications, 4 books chapters and edited 3 books.

Proposer: Dr. Madhu Dikshit, Seconder: Dr. Manoj Prasad

Ten Best Publications:


Dr. Mukhopadhyay’s laboratory works on two important enteric pathogens, i.e. Vibrio cholerae (VC) and Helicobacter pylori (HP). And in both these “areas”, he has made extremely significant contributions. An intriguing problem in cholera epidemiology, is the sudden appearance of new strains causing devastating epidemics, e.g. devastating outbreak in Haiti in 2010 caused by strains very different from those in circulation. His research provided vital clue on this (10,38,42,58); VC genome undergoes constant cryptic changes, which influence their virulence, transmission and spread (10,18,33,45,66,75,127,138). He has shown that accumulation of certain genetic characters often leads to the emergence of a clone, distinct from the “circulating” one and “fitter” in causing epidemic (10,33,38). He was instrumental in developing MAb for rapid detection of VC O139 strains (148).

His pioneering research on HP showed that Indian strains are genetically distinct, which has immense importance as vaccine developed elsewhere in the world may not be effective in India (113,115). His studies on metronidazole resistant HP helped to understand why this drug should be avoided in the treatment of HP infection (90,108). He has further shown that infection of a single host by multiple H. pylori strains increases the probability of peptic ulcer (52). His work also established that dupA gene of HP could be a useful biomarker for duodenal ulcer in India (54). His demonstration that curcumin and ellagic acid are highly effective in the eradication of HP and in the restoration of gastric damage in mice could be of immense therapeutic potential (1,72).

**Proposer:** Dr. Amit Ghosh, **Seconder:** Dr. Hemanta K. Majumder

**Ten Best Publications:**


7. A.K. Mukhopadhyay. 2005. Most Helicobacter pylori strains of Kolkata in India are resistant to metronidazole but susceptible to other drugs commonly used for eradication and ulcer therapy. Aliment Pharmacol Ther. 22: 51-57. (As Corresponding Author) *(if=7.286, ci=65)*


NEGI, VIR SINGH (b 1963), Professor, JIPMER, Puducherry

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

I am pleased to nominate Dr. V.S. Negi for the fellowship of the NASI, Allahabad. Dr. Negi is presently working as Professor and Head, Department of Clinical Immunology at JIPMER, Puducherry. He has contributed significantly to improvement in patient care, teaching, training and research in the field of autoimmune rheumatic disorders in India. Dr. Negi established the ‘Clinical Immunology Diagnostic and Research Laboratory’ through the FIST programme of the DST in 2002 and the Department of Clinical Immunology at JIPMER, Puducherry in 2009. The department provides state of the art treatment facilities in this field of autoimmuno rheumatic disorders and primary immunodeficiency diseases. He is exploring the use of stem cell transplant in autoimmune diseases. Dr. Negi is one of the few clinician scientists in the field of Medicine. His area of interest are Immunogenetics and immunopathology of autoimmune rheumatic disorders. He has a good publication record and has had collaboration with French group. He is running a joint (cotutelle) international PhD program in Clinical Immunology since 2011 with the University of Paris-7, France. He is a regular Visiting Professor to many hospitals in Paris and University of Paris, France. For his contributions in the field of Medicine and Rheumatic diseases, Dr. Negi has been conferred fellowships of the Royal College of Physicians (FRCP), London, American College of Rheumatology (FACR), National Academy of Medical Sciences (FAMS) and Indian college of Physicians (FICP). He has also been honoured by the Indian Rheumatology Association (IRA) with IRA oration for the year 2016.

Proposer: Prof. Amita Aggarwal, Seconder: Dr. Kanjaksha Ghosh

Ten Best Publications:

1. Muralidharan, Niveditha; Mariaselvam, Christina M; Jain, Vikramraj K; Gulati, Reena; Negi, Vir S; 2016, ATIC 347C> G gene polymorphism may be associated with methotrexate-induced adverse events in south Indian Tamil rheumatoid arthritis. Pharmacogeno (if=2.35, ci=5)


3. Muralidharan, Niveditha; Antony, Paul T; Jain, Vikramraj K; Mariaselvam, Christina Mary; Negi, Vir Singh; 2015, Multidrug resistance 1 (MDR1) 3435C> T gene polymorphism influences the clinical phenotype and methotrexate-induced adverse events in Sout (if=2.96, ci=6)


5. Devaraju, Panneer; Reni, Benita Nancy; Gulati, Reena; Mehra, Sonal; Negi, Vir S; 2014, Complement C1q and C2 polymorphisms are not risk factors for SLE in Indian Tamils, Immunobiology, 219 (6), 465-468 (if=2.72, ci=6)

6. Panneer, D; Antony, PT; Negi, VS; 2013, Q222R polymorphism in DNAse I gene is a risk factor for nephritis in South Indian SLE patients. Lupus, 22(10), 996-1000 (if=2.6, ci=8)


NEINIWAL, SANJEEV KUMAR (b 1972), Professor of Ophthalmology, JLN Medical College & Hospital, Ajmer (Rajasthan)

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Dr. Sanjeev Kumar Neiniwal is having good clinical acumen and sincerity towards his work. He is proficient in all ophthalmic diagnostic and therapeutic modalities like FFA, OCT, Ocular USG, doing retinal & YAG Lasers as well as doing advanced vitreoretinal surgeries along with routine cataract and other eye surgeries. Dr. Neiniwal has also shown keen interest in research activities and till now he is having around 125 scientific publications of them 34 are in indexed journals. Dr. Neiniwal had worked as Editor of "DOS Times"; a scientific ophthalmic magazine from 2001-03 published by Delhi Ophthalmological Society (DOS). Dr. Neiniwal has also been awarded as "Distinguished Resource Teacher" 3 times as well as "Dr. R N Sabharwal Medal" 4 times for his academic excellence by DOS. Recently he has got Fellowship of International Medical Sciences Academy (FIMSA) also. It is sure that Dr. Neiniwal will continue to be a sincere, hard working and committed Ophthalmologist and he will be an asset to any organisation he join. So, it is strongly felt that he deserves to be awarded Fellowship by NASI.

Proposer: Prof. Shally Awasthi, Seconder: Prof. Sanjay Kumar Agarwal

Ten Best Publications:

1. Nainiwal SK et al. Eye changes in pregnancy: Many things Can be Missed. IOSR JDMS 2017; Vol 16, Issue 7 Version IX: Pages 1-8. (if= 5.244, IC Value 83.27, ci=Index Copernicus)

2. Nainiwal SK et al. Study of pattern, demographic profile and visual outcome in open globe injuries at tertiary eye care hospital in central Rajasthan, India. IOSR JDMS 2016; Vol 15 (6), Version XV: Pages 51-57. (if= 5.244, IC Value 83.27, ci=Index Copernicus)


PARVEZ, SUHEL (b 1978), Professor and Head, Department of Toxicology, Jamia Hamdard, New Delhi

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Few areas of neuroscience have mobilized as many resources as hunt for cellular substrate of memory. A fundamental question in neurobiology concerns the mechanisms by which synaptic activation triggers transcriptional changes in the nucleus. Prof. Parvez has contributed in elucidating these mechanisms and provided novel insight into the biological basis of information storage in the nervous system (Parvez et al., 2010a). This venture has been rewarded with spectacular breakthroughs, in particular the region specific modulation of long-term potentiation and long-term depression, which are the best-studied models of functional plasticity. Prof. Parvez has also investigated the molecular components and physiological importance of calcium signaling and Calcium-Release-Activated-Calcium channels (CRAC) in signal transduction pathway (Parvez et al., 2008). The goal is to identify the messengers in the signaling cascade at the molecular level and develop pharmacological tools to modulate this ubiquitous signaling mechanism in a therapeutically meaningful manner. The pathophysiological mechanism leading to neurological conditions like Parkinson's disease (PD) and ischemic stroke is still not understood. Apoptotic cell death in the substantia nigra seems to be a crucial factor. The underlying mechanisms may include a defective mitochondrial respiratory chain and/or opening of the permeability transition pore (mtPTP) in the inner mitochondrial membrane. Prof. Parvez’s lab has established the critical role of mtPTP and neuroprotection by using dopamine-D2-agonists and melatonin (Ashafaq et al., 2017, Chaudhary et al., 2017, Waseem et al., 2016a, Waseem et al., 2017). The critical interaction between ion channels was also successfully investigated (Parvez et al., 2010b, Waseem et al., 2016b).

Proposer: Prof. Seyed E. Hasnain, Seconder: Prof. J.K. Batra

Ten Best Publications:


PRASAD, KASHI NATH (b 1954), Professor, Department of Microbiology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow-226014

Member of the NASI: No

(YON 2018, Medical & Forensic Sciences)

Dr. Prasad developed PCR and lymphocyte transformation test (LTT) for diagnosis of Campylobacter jejuni infection in patients with Guillain-Barré syndrome (GBS) and LTT/MTT for neurocysticercosis. He reported first-time that Th1 cytokines-mediated neuronal inflammation led to disease progression in early phase of GBS whereas Th2 cytokines-response during late phase helped in recovery [Arch Neurol 2011; 68:445-52; (selected for editorial commentary)]. Subsequently these observations were demonstrated in model (Med Microbiol Immunol 2012; 201:177-87). He reported first-time association of host factors- TLR4, ICAM1, MMP9 and GST polymorphisms and their altered expressions with seizure occurrence in neurocysticercosis [J Infect Dis 2010; 202: 1219-25 (selected for editorial); Neurology 2012; 78: 618-625; J Neuroimmunol 2014; 276:166-71; Mol Neurobiol 2017; 54:2843-51]. These studies explained first-time why some persons with neurocysticercosis developed seizures, while others remained symptom-free. Dr. Prasad demonstrated PPARγ and Helicobacter pylori CagL D58K59 amino acid polymorphisms as risks for gastric cancer and peptic ulcer (Annals Oncol 2008; 19:1299-1303; Gastric Cancer 2013; 16:435-9). Dr Prasad studied New Delhi metallo-beta-lactamases, 16S-rRNA methyltransferases, and mcr-1-mediated colistin-resistance in Klebsiella pneumoniae (J Antimicrob Chemother 2013; 68:1543-50; Int J Antimicrob Agents 2014; 44:30-37; Antimicrob Agents Chemother 2018; 62:e01885-17). He reported first-time 16S-rRNA methyltransferases, rmtC and rmtF with blaNDM-1 were mobilized on chromosome in Pseudomonas aeruginosa (Emerg Infect Dis 2015; 21:2059-62). He demonstrated first-time antibacterial and biofilm properties of cuprous oxide nanoparticles against Staphylococcus aureus (Antimicr Agents Chemother 2015; 59: 6882-90). He was conferred SR Naik, SC Agarwal, UC Chaturvedi, PN Chhuttani and BK Aikat Orations/Awards by various Academic Societies/Bodies/ICMR.

Proposer: Prof. Umesh Chandra Chaturvedi, Seconder: Prof. Rakesh Kapoor

Ten Best Publications:

SAXENA, SUNITA (b 1952), Ex Director, National Institute of Pathology, Indian Council of Medical Research, New Delhi

Member of the NASI: No  (YON 2018, Medical & Forensic Sciences)

I have known Dr. Sunita Saxena as Director of the National Institute of Pathology and a professional colleague for more than 10 years and have been very impressed with her honesty, sincerity of purpose and devotion to duty. A pathologist by training, she is one of the few molecular pathologists in country using trans disciplinary approaches in understanding the molecular pathogenesis of important cancers in India. Her current research interests include understanding the molecular basis of Breast cancer and Tobacco associated cancers in North east region using genome-wide approaches. She demonstrated convincingly the occurrence of breast cancer in younger women in India and has established two breast cancer cell lines from primary tumors of young breast cancer patients to act as a tool to delineate the molecular carcinogenesis. Her research work has provided important leads for the identification of genetic risk factors, prognostic biomarkers and novel therapeutic approaches for breast cancer and esophageal cancer in Northeast India. She has received Novartis oration and P.N.Wahi Awards of ICMR and Achanta Lakshmiipati Oration from National Academy of Medical Sciences for her work on Breast cancer and Tobacco associated cancers in NE India. Dr. Sunita Saxena has outstanding leadership qualities and also demonstrated excellent administrative skills and taken institute to different heights of success. Her election to the Academy would send a strong message to encourage research by pathologists who are loaded with diagnostic services.

Proposer: Dr. N.K. Mehra, Seconder: Dr. Nasreen Z. Ehtesham

Ten Best Publications:

2. Sunita Saxena; Bharat Rekhi; Anju Bansal; Ashok Bagga; Chintamani C and N.S.Murthy: Clinicomorphological patterns of Breast Cancers Including family history in a Delhi hospital, India- A Cross-sectional study. World Journal of Surgical Oncology (if=1.6, ci=98)
3. Sunita Saxena, Anurupa Chakraborty, Mishi Kaushal Sanjeev Kotwal, Dinesh Bhatnagar, RS Mohil, Chintamani Chintamani, AK Aggarwal, Veena Sharma, PC Sharma, Gilbert Lenior and David Goldgar; Csilla Szabo Contribution of germline BRCA1 and BRCA2 seq (if= 2.198, ci=67)
SINGH, NANDINI CHATTERJEE (b 1969), Professor, National Brain Research Centre, Manesar

Member of the NASI: Yes (YON 2018, Medical & Forensic Sciences)

Dr. Singh, a physicist by training has made significant contributions to the field of cognitive neuroscience and education. She has used her training of mathematical and computational methods to study neurobiological processes underlying language, reading and music particularly in typical and atypical children. Her research on how reading processes develop in the brain of bi-literate children has had a significant impact on learning and education. It has led to the development of the Dyslexia Assessment for Languages of India (DALI). Dyslexia has a worldwide incidence of 10-12% and is attributed to differences in brain wiring and structure. DALI is the first standardized nationally validated skill-based assessment tool for dyslexia available in four regional Indian Languages namely Hindi, Marathi, Kannada and English. DALI has been used across nearly 30,000 children across India. Recently, DALI was adopted by UNESCO and is currently being extended to include more languages and more countries. Dr. Singh’s laboratory is also engaged in understanding communication in children with autism spectrum disorder (ASD). Using creatively designed functional neuroimaging experiments, her laboratory studied brain activity in children with ASD and showed that music and sung speech are salient stimuli, capable of eliciting robust cortical activity in children with autism. This finding has enormous clinical relevance and is currently being used to develop educational applications for children with autism. Dr. Singh also studies emotion in music and her research has demonstrated how different ragas elicit different emotional states using behaviour and brain activity.

Proposer: Prof. P.N. Tandon, Seconder: Prof. Subrata Sinha

Ten Best Publications:

5. Synchronization in coupled sine circle maps N Chatterjee, N Gupte Physical Review E 53 (5), 4457, 1996 (if=2.6, ci=34)
6. Reading different orthographies: an fMRI study of phrase reading in Hindi–English bilinguals U Kumar, T Das, RS Bapi, P Padakannaya, RM Joshi, NC Singh Reading and Writing 23 (2), 239-255 (if=3.98, ci=23)
SINHA, SUKESH NARAYAN (b 1965), Scientist-E, National Institute of Nutrition, Hyderabad

Member of the NASI: Yes (YON 2018, Medical & Forensic Sciences)

Dr Sinha contributed to the field of medical toxicology and particularly towards development of new bioanalytical tools for measuring of toxicants in ambient as well as biological matrices. His innovative contributions have been in varied fields with wide scientific, medical and policy implications. He contributed to development of a new tissue schizontocidal and gametocidal drug (6-methoxy-5,8 di-(4’-amino-1’-methylbutylamino quinoline) which is more active and less toxic than primaquine for treatment of Malaria1. He developed a novel method and established health risk assessment for fixing Maximum Residue Limit (MRL) of pesticides in carbonated beverages (1ppb).2 This was adopted by the Joint Parliament Committee, Government of India to monitor pesticide residues in ingredients like sugar, thereby ensuring better standards and promoting exports contributing to the country’s economy. He also developed a new biomarker (1-napthol) for estimation of acetylcholinesterase enzyme and toxicants for measuring exposure to pesticides and its effect which are crucial for the prognosis in real time to save lives of exposed victims. He reported Adefovir dipivoxil3 is a potent anti-viral drug for treatment of infested dengue viruses. He proposed the draft of maximum levels for total aflatoxins in dried figs including sampling plans for fixing MRLs at international level. He received prestigious Shakuntala Amirchand Award (ICMR) and international fellowships from ICMR &DHR, India and WHO. He has a patent to his credit. He worked in Bio-analytical Toxicology Department, CDC-Atlanta and was a visiting scientist at College of Medicine, Cincinnati University, USA. He honed his skills in toxicology at OPCW Netherlands.

Proposer: Dr. G. BhanuPrakash Reddy, Seconder: Dr. V. Dashavantha Reddy

Ten Best Publications:

5. Sukesh Narayan Sinha, Effect of dissociation energy: Signal to noise ratio on ion formation and sensitivity of analytical method for quantification and confirmation of triazofos in blood samples using gas chromatography–mass spectrometer (if=2.082, ci=10)
9. Sukesh Narayan Sinha, K. Vasudev, M. Vishnu Vardhana Rao, 2012, Quantification of organophosphate insecticides and herbicides in vegetable samples using the “Quick Easy Cheap Effective Rugged and Safe” (QuEChERS) method and a high-performance (if=3.867, ci=49)
SRIVASTAVA, ACHAL KUMAR (b 1966), Professor, Department of Neurology, AIIMS, New Delhi

Member of the NASI: No

(YON 2018, Medical & Forensic Sciences)

Dr. Achal Kumar Srivastava completed his MBBS, MD (Medicine) from M.L.N. Medical College, Allahabad and DM (Neurology) from All India Institute of Medical Sciences, New Delhi. He heads the Clinical Neuropsychology facility and Ataxia clinic at the center and is a member of the Comprehensive Epilepsy care team. He has received Young investigator award for CAG triplet repeat disorder conferences at USA and Italy. He is a recipient of more than 25 paper presentation awards and has more than 80 publications to his credit. He has received outstanding paper presentation award from AINA at American Academy of Neurology conference at San Francisco in 2004. He has keen interest in teaching and has provided guidance and training to more than 70 DM and PhD students in their research work. He was invited by Molecular Biology Division at John Hopkins USA for presentation of his work on spinocerebellar ataxia type 12. He has received best paper award at Neurological Society of India conference at Hyderabad in 1998. He is Editorial board member and Reviewer of several International Journals of repute. Dr. Srivastava was Organizing/Co-Organizing Secretary, Treasurer in various national and international conferences/symposiums. For over 18 years he has done landmark work in the field of ataxias in India and has created a database of around 3500 pedigrees including largest series of SCA patients.

Proposer: Prof. M. V. Padma Srivastava, Seconder: Prof. Sanjeev Sinha

Ten Best Publications:


The previous research of Dr. Sarwat Sultana was on the isolation and identification of plant constituents with the help of sophisticated spectroscopic methods. She has isolated two novel compounds from the plant of Macaranga indica, as Macaflavone I and Macaflavone II, a new isoflavone from Afrormosia laxiflora for the first time in literature which are discussed in the book 'The Flavanoid By T.J Mabry. At present she is working on the molecular mechanisms of natural compound used by indigenous system of medicine based on the available old literature Her work is on the signaling pathways in cancer induction and the amelioration of transcription factors for inflammation, proliferation and oxidative stress in animal models as well as in vitro models. She could also identify the important genes involved in prostate cancer using Micro Array and RTPCR techniques. Selective Androgen Receptor and Selective Estrogen Receptor Molecules from soya plants are used in amelioration of prostate cancer (13). The toxicity of TCE is attributed to the rapid intracellular free calcium (Ca^{2+}) release, increases protein kinase C was reversed by Naringenin in HacaT cells. The inhibition of proliferation by augmenting immune surveillance, silencing acute inflammation, and inducing p53-mediated apoptosis of skin cancer by 3 promising medicinal extracts of Trigonella foenumgraecum, Eclipta Alba, and Calendula officinalis reduced the tumor number, incidence, and multiplicity of, which was confirmed by the pathologic studies that showed regressed tumors. She has shown polymorphism and epigenetic alterations in renal carcinogenesis in North Indians.

**Proposer:** Prof. B.C. Das, **Secondor:** Prof. M. Iqbal

**Ten Best Publications:**


THANGARAJ, KUMARASAMY (b 1963), Senior Principal Scientist, CSIR-Centre for Cellular and Molecular Biology, Hyderabad

Member of the NASI: Yes (YON 2018, Medical & Forensic Sciences)

Thangaraj has made significant original scientific contributions towards the complex origin of Indian populations and its implications in health and disease. His genetic studies, for the first time, provide evidence that the enigmatic tribal populations of Andaman and Nicobar islands are the first modern humans who migrated out of Africa (Current Biology, 2003; Science, 2005). Subsequently, he demonstrated that the contemporary Indian populations descend from two divergent groups: (1) Ancestral South Indians (ASI) - not related to any group outside India. (2) Ancestral North Indians (ANI) - related to Central Asians, Middle Easterners, Caucasians and Europeans. Most importantly, his study provides a firm genetic basis to refute the concept of “Aryan invasion” of the subcontinent (Nature, 2009). Further, his study suggests that these two founder groups (ANI & ASI) have admixed between the past 2000 – 4000 years and that, during the last 2000 years, almost all populations have been practicing endogamous marriages (American Journal of Human Genetics, 2013). Recently, he demonstrated that practice of endogamy has led to high IBD (Identity-by-decent) in one-third of the Indian populations, due to strong founder events; resulting high frequency of population-specific recessive disease. This excellent piece of work has been published in the Nature Genetics (September, 2017) with the cover image and Editorial.

Earlier he has shown that a MyBPC3 mutation, which is responsible for sudden cardiac death (cardiomyopathy), is widely distributed (4.5%) only in India/South Asia (Nature Genetics, 2009); and RAF1 mutations are associated with childhood cardiomyopathy among Indians/Asians (Nature Genetics, 2014).

**Proposer: Dr. Rakesh K. Mishra, Seconder: Dr. R. Sankaranarayanan**

**Ten Best Publications:**


VERMA, MAHESH (b 1957), Director - Principal, Maulana Azad Institute of Dental Sciences, New Delhi

Member of the NASI: No (YON 2018, Medical & Forensic Sciences)

Prof. Mahesh Verma, Director-Principal, Maulana Azad Institute of Dental Sciences and currently officiating President, Dental council of India: has established one of the best Dental Institute cum Hospital in India, setting newer standards, par excellence. An awardee of Padamshree, Dr. B.C.Roy National Award in 2007 and ‘State Award’ by Delhi Govt., Dr. Verma has developed indigenous dental Implant under “New Millenium Indian Technology Leadership Initiative” of Govt of India. The Implant has been patented and human trials are on. Dr. Verma stands out as a professional of rare eminence, a leader in sensitizing and enlightening the people in the prevention of dental diseases and also providing medical care of highest level to the poor and underprivileged: thus a role model for the other professionals. In view of his extra ordinary and exceptional contribution to dental education and research we recommend his nomination for Fellowship of the Academy. Most deserving leader in his field in the country and his indecision in the academy would be a long term asset.

Proposer: Prof. S.K. Sarin, Seconder: Prof. K.C. Upadhya

Ten Best Publications:
BAJPAI, MINU (b 1958), Professor, Dept. of Paediatric Surgery, All India Institute of Medical Sciences, New Delhi.

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Prof. Bajpai has applied molecular studies to clinical research focused on renal diseases affecting children. Although 40-50% hydronephrosis diagnosed antenatally are due to pelviureteric junction obstruction, yet, there is no consensus on defining obstruction and on the optimal management of these patients due to technical limitations in accurately quantifying the degree of obstruction at the uretero-pelvic junction. These children require repeated follow-up investigations before a final diagnosis could be confirmed. Such delay in treatment risks permanent renal injury. In their study Dr. Bajpai has demonstrated that Plasma Renin Activity reflects obstructive stress and precedes parameters of actual renal injury, such as Split Renal Function and Glomerular Filtration Rate. It was reduced and stabilized in all children after surgery. Thus this molecule serves as the critical discriminatory factor between patients who would benefit from medical versus surgical treatment & an early marker, also, with respect to management and prognosis in children with Reflux Nephropathy. His publications formed the basis for recognition of this activated molecule in foetal stage by the Obstetricians in Europe & several centres in USA, such as- Johns Hopkins Institute, Baltimore. The details of this work are available in his 3 Global First reports. His report is the first on Indian Children that ‘D’ allele may be one of the genetic susceptibility factors contributing to adverse renal prognosis in patients with congenital uropathies. The usefulness of genotype extends beyond prognostication & to identification of patients who may benefit from angiotensin converting enzyme inhibitors and angiotensin II antagonists.

Proposer: Prof. Chitra Sarkar, Secondner: Prof. Sanjeev Sinha

Ten Best Publications:
Dr Chandrasekhar Bal who works as Professor and Head of the Department of Nuclear Medicine at All India Institute of Medical Sciences, New Delhi has made outstanding contributions in the field of Nuclear Medicine. His overall impact is very strong in the practice of nuclear medicine, teaching and research. Dr Bal has started DM Programme in Therapeutic Nuclear Medicine at AIIMS, New Delhi for the first time in the World. This programme is envisaged as path-breaking in radionuclide therapy and shall encourage many youngsters to choose a career dedicated to further develop the radionuclide Therapy in India that is now available only in a few metropolitan cities. On the basis of his contributions in the field of Thyroid Cancer Research, two recommendations have been changed in the American Thyroid Association (ATA2015) Guidelines on Thyroid Cancer: one on “Low-dose Radioiodine Ablation” and other one is on “Lobar Ablation”. In order to fulfil the man-power needs of the country, Dr Bal was instrumental in starting MD (Nuclear Medicine) at AIIMS in 1996, MSc (Nuclear Medicine Technology) in 2003 and DM in 2015. The PhD programme of the department is at full swing, currently where 4 students are enrolled under his guidance. He has made a large number of publications with 390 papers in peer reviewed journals with total citations of 3910. His current h-index is 31 and i10-index is 120. He has introduced peptide-based radionuclide PET imaging and therapy in India. This being practiced in many institutions and hospitals in the country.

Proposer: Prof. T P Singh, Seconder: Prof. Chitra Sarkar

Ten Best Publications:

1. C Bal, AK Padhy, S Jana, GS Pant, AK Basu 1996 Prospective randomized clinical trial to evaluate the optimal dose of 131I for remnant ablation in patients with differentiated thyroid carcinoma. Cancer 77(12); 2574-2580. Impact Factor of CANCER: 5 (if=CANCER: 5.649, ci=Google Scholar 192; Web of Science 101)

2. CS Bal, A Kumar, GS Pant 2004 Radioiodine dose for remnant ablation in differentiated thyroid carcinoma: a randomized clinical trial in 509 patients. The Journal of Clinical Endocrinology & Metabolism 89(4); 1666-1673. (if=JCEM: 6.206 , ci=Google Scholar 175; Web of Science 86)


5. CS Bal, A Kumar, RM Pandey 2002 A randomized controlled trial to evaluate the adjuvant effect of lithium on radioiodine treatment of hyperthyroidism. Thyroid 12(5); 399-405. (if=THYROID": 4. 493, ci=Google Scholar 83; Web of Science 52)

6. JA Sosa, R EEilisei, B Jarzab, J Balkissan, S Lu, C Bal, S Marur, A Gamza 2014 Randomized safety and efficacy study of fosbretabulin with paclitaxel/carboplatin against anaplastic thyroid carcinoma. Thyroid 24(2); 232-240. (if=THYROID": 4. 493, ci=Google Scholar 55; Web of Science 35)

7. CS Bal, A Kumar, P Chandra, SN Dvivedi 2004 Is chest x-ray or high-resolution computed tomography scan of the chest sufficient investigation to detect pulmonary metastasis in pediatric differentiated thyroid cancer. Thyroid 14(3); 217-225 (if="THYROID": 4. 493, ci=Google Scholar 54; Web of Science 31)


BANERJEE, SOMA  (b 1970), Associate Professor, Institute of Post Graduate Medical Education and Research, Kolkata

Member of the NASI: No  (YON 2017, Medical & Forensic Sciences)

Dr. Banerjee’s research encompasses molecular mechanism of host-viral interaction to comprehend the complex pathogenesis of Hepatocellular carcinoma and its unresponsiveness towards chemotherapeutics, identification of early predictor of HCC to improve the disease diagnosis and evaluation of newer effective therapeutic modalities for better management of HCC patients. Dr. Banerjee’s seminal discovery along with in depth functional characterization of microRNA-199a-3p as novel therapeutic for HCC has immense potential to transform into clinical care of cancer patients. Her research is also leading to discovery and functional characterization of liver tissue specific microRNA as plasma biomarker for early prediction of HCC in chronic hepatitis B virus infected individuals, is a remarkable addition in the liver cancer field, as existing HCC biomarkers are not suitable for Indian patients. Apart from liver cancer, her research about polymorphisms in deregulated immune response and alcohol metabolism genes with exhaustive functional characterization as early predictor of alcohol induced liver diseases showed strong potential to be used in clinics. She has published her research in peer reviewed international journals such as Carcinogenesis, International Journal of Cancer, Cell death and diseases, Plos one, International Journal of Biological sciences, Gene, PNAS etc. She has received several international and national awards for her achievements in research and also serves as reviewer of several reputed international journals such as Hepatology, Scientific Reports, Plos One, FEBS Letter, RNA Biology etc. I strongly nominate her candidacy for the election as a fellow of the academy.

Proposer: Dr. Susanta Roychowdhury, Seconder: Prof. Abhijit Chowdhury

Ten Best Publications:


BHUMA, VENGAMMA (b 1960), Senior preofessor & Head, Department of Neurology, Sri Venkateswara Institute of Medical Sciences, Tirupathi.

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

The nominee has contributed immensely to the starting of and development of Neurology as a specialty in the backward Rayalaseema area of Andhra Pradesh with best clinical, academic and research activities. The nominee’s work was instrumental in documenting the management practices and utilization of various medical services for epilepsy in different parts of India and also annual economic burden of epilepsy in India. She is involved in the new drug trials related to epilepsy. She published articles in the field of stroke and stem cell research and in the field of bioinformatics. Another pioneering venture undertaken by the nominee is organizing the care of epilepsy at a community level by initiating the “Monthly Free Epilepsy Camp” that is attended by more 450 patients every month where free antiepileptic medications are also given to patients. The successful uninterrupted run of this “Monthly Free Epilepsy Camp” for more than the last 13 years since 1999 incurring an expenditure of more than Rs 1 Crore is a testimony to the commitment, organization skills including financial and programmatic capability of Dr B. Vengamma. She has also shown that in patients with intermediate syndrome due to Organophosphorus compound poisoning, neuromuscular junctional dysfunction is the predominant factor for intermediate syndrome. Her research work has also established that disturbances in trace element homeostasis during the progression of Parkinson’s disease. The nominee is recognized as a postgraduate teacher and guide for students for 47 students since 2003

Proposer: Dr. Asha Juwarkar, Seconder: Prof U.C. Srivastava

Ten Best Publications:
8. Munikumar M, Priyadarshini IV, Pradhan D, Umamaheswari A, Vengamma B. Computational approaches to identify common subunit vaccine candidates against bacterial meningitis. Inter discip Sci 2013;5:155-64 (if=0.853, ci=8)
CHAKRABARTI, SASANKA (b 1954), Professor, ICARE Institute of Medical Sciences & Research, Purva Medinipur, WB

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

The nominee has been working in the areas of brain aging, Alzheimer’s disease (AD) and Parkinson’s disease (PD) for nearly two decades. He has demonstrated how mitochondrial impairment, synaptosomal changes, altered amyloid beta metabolism and learning and memory impairment in aging brain could be ameliorated by a combination of marketed drugs like N-acetylcysteine, α-lipoic acid, and α-tocopherol [Neurochem. Int. (2015) 95, 92-99, Exp. Gerontol. (2014) 50, 19-25]. These results have great translational value and could be potential remedies for age-associated brain deficit or even AD. His recent publication showing the beneficial effect of deferasirox, the iron-chelator used in thalassemia, in rescuing the age-dependent increase in β-amyloid production and accumulation in rat brain has also clear therapeutic implications in AD [J. Alzheimers Dis (2015) 49, 681-693]. He has further shown in details how iron can alter amyloid beta homeostasis at multiple steps within SHSY5Y cells. In contrast to widely accepted view of amyloid β protein as toxic, he has shown in a detailed study a potential beneficial effect of amyloid beta protein [Free Radic. Biol. Med. 56,184-192] and interestingly several recent papers from other labs have also supported this. The nominee has also published several very interesting papers on the etiopathogenesis of Parkinson’s disease using a cell-based model showing the important role of dopamine oxidation products, α-synuclein and mitochondria in neural cell death [BBA (2011) 1812, 663-673, J.Neurochem. (2014) 131, 868-877.] hinting at potential drug targets.

Proposer: Prof. Mitali Chatterjee, Seconder: Prof. M K Thakur

Ten Best Publications:


CHAUHAN, SHYAM SINGH  (b 1958), Professor and Ex Head, Department of Biochemistry, AIIMS, New Delhi-110029

**Member of the NASI:** No  (YON 2017, Medical & Forensic Sciences)


**Proposer: Prof. Anil K. Tyagi, Seconder: Prof. Chitra Sarkar**

**Ten Best Publications:**

CHIPLUNKAR, SHUBHADA VIVEK (b 1954), Director-Advanced Center for Treatment Research & Education in Cancer-ACTREC, Navi Mumbai

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Prof. S.V. Chipulkar, Director, ACTREC is a well known Cancer Immunologist. Her research focuses on understanding immune dysfunctions in cancer patients and development of cell based therapy. She has done pioneering work in understanding the role of gamma delta T cells in tumor immunity. She demonstrated that these cells mediate anti-tumor cytotoxicity by recognition of heat shock proteins (hsp60/hsp70) expressed on oral/esophageal tumors and that patients with acute lymphoblastic leukemias with gamma delta TCR clonality have improved survival. She defined a novel mode of action of bisphosphonates through activation of gamma delta T cells which has relevance in understanding their role in breast cancer patients. Her group was the first to report the role of notch signaling in activation and effector functions of gamma delta T cells (Gogoi and Chipulkar 2014). She showed that activated gamma delta T cells inhibit bone resorption and play an important role in controlling bone metastasis. A novel finding from her lab was that Tgamma delta17 subset contributes to tumor progression and angiogenesis. Her work has provided important leads in understanding basic gamma delta T cell immunobiology and has important implications in cancer immunotherapy. She is currently studying the immunosuppressive networks in tumor microenvironment contributed by Regulatory T cells, MDSCs and mesenchymal stem cells. Her research work is internationally highly acclaimed.

Proposer: Dr. Sharmila A. Bapat, Seconder: Dr. Mohan R. Wani

Ten Best Publications:
Dr Nilay Kant Das graduated in medicine and surgery (MBBS) from Medical College, Kolkata in the year 1998. He has been awarded as ‘University Topper’ while obtaining his post-graduate degree (MD) in Dermatology, Venereology and Leprosy from SSKM Hospital under University of Calcutta. Currently he is pursuing his PhD research on “Clinico-immunological study of Indian Post kala-azar dermal leishmaniasis” in the department of Biotechnology under University of Calcutta and working as ‘Professor’ for Department of Dermatology of Bankura Sammilani Medical College, Bankura. He has been shouldering this responsibility for over last 3 months. Before being promoted to this position has worked as Associate Professor for 4 years period in the Department of Dermatology of Medical College, Kolkata.

His interest in infectious diseases was augmented when he was working as resident in dermatology, where he was deeply involved in a tertiary care setting of a tropical region of the country. The significant amount of workload involved obtaining diagnosis and providing care for patients with infectious diseases. Leprosy and Post kala-azar dermal leishmaniasis (PKDL), which are major public health issues and very unique to Indian subcontinent, became his keen areas of interest. His research aimed towards establishing the clinico-immunological correlation in PKDL and leprosy has great impact in both diagnosis and management of the diseases. His work has received numerous accolades among fellow researchers, clinicians from national, international forums with publications in indexed journals. His work also involves the epidemiological research (field trials) to explore the prevalence, susceptibility and bio-markers of PKDL and leprosy. He has also worked on other infectious conditions, such as—superficial fungal infections, viral warts, herpes zoster; and non-infectious conditions, like arsenicism, urticaria, adverse drug reaction, etc. He has received multiple awards and scholarships in the recognition for his work. Few of them are: the prestigious Sukumar Mukherjee Medal Award, B. B. Ghokhale Medal Award, Dr Badri Narayan Prasad Research Award, L N Sinha award, etc. He is engaged for a long time in the clinical management of patients in outpatient and indoor setting and has extensive experience and expertise in handling full life cycle of treatment for severe, rare, time demanding, and serious diseases. He enjoys teaching and mentoring medical and non-medical undergraduates and post-graduates students, and helps them as supervisor for the work towards completing their thesis. He shoulders the responsibility of editing and reviewing articles submitted to bio-medical journals. He is a key resource for teaching, training, research and supportive supervision of National AIDS control organization (NACO) of India and an admired and outspoken member of the Institutional Ethics Committee of Medical College, Kolkata.

**Proposer:** Prof. Arunava Goswami, **Secondor:** Prof. Kaustuv Sanyal

**Ten Best Publications:**


* Lead Author / † Corresponding author / ‡ Senior Author
DASH, DEBABRATA (b 1958), Professor, Department of Biochemistry, Institute of Medical Sciences, Banaras Hindu University, Varanasi

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

The contributions of nominee over past three decades have carved him a niche in areas of translational nanomedicine and thrombosis. He is credited with design of a novel theranostic platform that combines traditional thrombolytic therapy with state-of-the-art photothermal therapy (gold nanorods irradiated with near-infrared laser) for effective lysis of occlusive pathological thrombi with minimal bleeding complications, thus introducing a smart and safe thrombolytic regimen for future. Nominee has developed a remarkably sensitive impedance-based nano-biosensor to identify/screen individuals with high thrombotic risk. The sensor is based on detection of platelet-derived microparticles in droplet of blood in high-risk individuals. He was first to demonstrate anti-thrombotic propensity of nanosilver for application in coronary stents. He reported thrombogenicity of graphene/nanodiamond and, in counter, synthesized non-toxic nano-isoforms towards safe biomedical applications. Nominee asked the intriguing question ‘how platelets age?’ His study identified Ubiquitin-Proteasome System and Sirtuin Deacetylases as components of putative “Internal Timer” regulating platelet life span, which can be potential therapeutic targets against thrombocytopenia. He validated RhoA-ROCK-MLC (Myosin Light-Chain) axis as anti-Alzheimer drug target in platelet model. Fibrinogen protected neuronal cells as well as platelets from amyloid-β toxicity; thus fibrinogen can be an effective anti-Alzheimer therapeutic tool. Research of nominee is high on translational scale, published in high-impact international journals and widely cited. Nominee is a Fellow of Medical and Science Academies in the country, recipient of ‘JC Bose Fellowship’, ‘Tata Innovation Fellowship’ (DBT), ‘Sun-Pharma Research Award’ and ‘CNR Rao Research Award’, and invited by Rashtrapati Bhavan in recognition of his outstanding research contributions.

Proposer: Prof. Avind Mohan Kayastha, Seconder: Prof. Shyam Sundar

Ten Best Publications:

DEEPAK, KISHORE KUMAR (b 1958), Prof. & Head, Departemnt of Physiology, All India Institute of Medical Sciences, New Delhi.

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Dr KK Deepak contributed in the field of Autonomic research, Non-pharmacological interventions and biomedical technology. He provided electro-encephalographic and clinical evidence of usefulness of meditation in drug resistant ecliptics In late 90s. Later he conducted the research on effect of Yogic interventions in irritable bowel syndrome (IBS). He showed that maximum beneficial effect was in diarrhea predominant IBS which underwent right nostril breathing intervention. He also published the effect of yoga in Inflammatory Bowel disease. His further studies showed the effectiveness of breathing exercises in diabetes mellitus and life style intervention in bronchial asthma. He also worked on EMG biofeedback intervention in hand dystonia. He established the Autonomic Function Lab in the Department of Physiology in 1989. He investigated the effect of several physiological manoeuvres on autonomic functions. Under his supervision more than 40 disease states have been investigated for autonomic and vascular dysfunctions. This resulted in the regular facility in the department for the assessment of autonomic and vascular function testing for referred patients. He has also carried out research in biomedical signal processing for autonomic functioning and validation of indigenous devices in collaboration with technology institutions. He contributed significantly in the field of medical education through research and training. His philosophy has been to translate physiology into clinical application. He has published 121 research papers in journals and 14 chapters in various books.

Proposer: Dr. Y.K. Gupta, Seconder: Dr. Subrat K. Acharya

Ten Best Publications:
1. Deepak KK, Manchanda SK, Maheshwari MC. Meditation improves clinicoelectroencephalographic measures in drug-resistant epileptics. Biofeedback and Self-regulation 1994; 19 (1); 25-40 [PMID: 8167162]. (iif=1.84, ci=77)
GHOSH, DEEPA  (b 1967), Scientist F, Institute of Nano Science and Technology, Mohali

Member of the NASI: No  (YON 2017, Medical & Forensic Sciences)

I have been following Dr.Ghosh's scientific progress for the past 15 years. Her contribution in the development of tissue engineered products at Reliance Life Sciences is laudable. Under her guidance, her group had developed several novel tissue engineered products for the treatment of skin related ailments, cartilage and muscle repair. Many of these products have completed phase-2 trials. Her contribution in this field has been acclaimed and she has been honoured with the prestigious NASI-Reliance award for innovation (2012). The department of Biotechnology had recognized her work and provided support to conduct clinical trials on a tissue engineered cartilage substitute. In her pursuit of developing affordable wound management products, she has developed for the first time in India, low cost hydrogel-based advanced wound management products. These are currently marketed under the ReliHeal® range of products. She was instrumental in the development of a fast-acting thrombin-based haemostat, ReliStat®, which is currently used in surgeries to stop bleeding. During the course of her developmental activities, she has gained immense experience in understanding the medical needs of our country. Her focus on developing low cost therapies for addressing the needs of common man is worth mentioning. Her expertise to take the technology from “bench to bedside” is reflected by the number of products that have been marketed or tested in clinical trials. While her product and design patents demonstrate the novelty of her work, her publications in high impact peer reviewed journals reflect her contribution in the area of basic research.

Proposer: Prof. Swapan Ghosh,  Seconder: Prof. Ashok Ganguli

Ten Best Publications:

HARINARAYAN, CHITTARI VENKATA (b 1957), Director, Institute of Endocrinology, Diabetes, Thyroid and Osteoporosis Disorders, Sakra World Hospitals, Sy No 52/2 & 53/3, Deverabeesanahalli (opp Intel, Outer Ring Road), Varathur Hobili, Marathahalli, Bangalore 560103, Karnataka State

Member of the NASI: No

(YON 2017, Medical & Forensic Sciences)

Dr. Harinarayan first documented 25OH-Vitamin D(25OHD) deficiency as the predominant cause for radiological bone changes in Primary Hyperparathyroidism in India. In the same work, he demonstrated Vitamin D deficiency, in apparently healthy individuals for the first time in the country. This striking observation contradicted the then existing impression of normal Vitamin D status in India – a tropical country. Now this observation has now been confirmed countrywide and Vitamin D deficiency is an important health problem in India. He conducted the first population survey in the country in Andhra Pradesh and documented low vitamin D status and low dietary calcium intake in south Indian population. He demonstrated by in-vitro “Ampoule Model” studies that by exposing 7-Dehydrocholesterol to sunlight on hourly basis the whole day and in various seasons all-round the year, previtamin D synthesis takes place. Hence we as Indians can synthesize enough vitamin D from the skin on exposure to sunlight between 11 am to 2 pm, by exposing 10 to 15% of body surface area for 15 to 30 minutes. He showed the improvement in pancreatic β-cell function with correction of 25OHD deficiency in vitamin D-deficient non diabetic subjects, fall in serum 25OHD levels in patients with anti-epileptic therapy irrespective of the type of drug used, even at therapeutic concentrations, impact of low vitamin D levels in thyroid bone disease, Vitamin D Receptor gene polymorphisms and hypovitaminosis D might predispose to multidrug resistant tuberculosis(MDR-TB) and may increase time to MDR-TB sputum smear negativity.

Proposer: Prof. Ravinder Goswami, Seconder: Prof. Sanjeev Sinha

Ten Best Publications:


KAUR, INDU PAL (b 1965), Professor of Pharmaceutics, University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

It is a great pleasure to refer Professor Indu Pal Kaur, who has an expertise in designing nanostructured carrier systems for efficient drug delivery. She has more than 120 high-impact, well-cited publications 19 filed including two (US and Indian) granted patent applications, two books, and two edited journal volumes; delivered several invited talks and more than 150 presentations have been made by her research group, with 26 being adjudged as best presentations. Primary focus of Professor Kaur is to develop cost-effective, simple, versatile, scalable and industry-amenable nanostructured systems. She wants to bring industry and patient friendly, high performance products to the market. She has transferred three of the technologies developed by her to the Industry. Her work in the area of ocular delivery is taken as a benchmark within and outside India. She has improved bioprofile of first line anti-tuberculars in terms of stability, safety and pharmacokinetics using SLNs. She has assigned pharmaceutical couture to natural molecules, extracts and probiotics to elevate their status from protective prophylactics to therapeutic curatives. She has produced two Post-doctorates, 16 PhDs and 55 postgraduates and is presently guiding 8 PhD scholars and 2 Masters (M.Pharm) students. It will be an important step forward in the credentials of Prof. Indu Pal Kaur if she is honoured with the NASI Fellowship.

Proposer: Prof. Hirendra N. Ghosh, Seconder: Prof. Jatinder V. Yakhmi

Ten Best Publications:
KUMAR, RAKESH (b 1965), Professor & Head, Diagnostic Nuclear Medicine Division, Department of Nuclear Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Dr. Rakesh Kumar, Professor & Head of the Diagnostic Nuclear Medicine Division, Nuclear Medicine at AIIMS, New Delhi. He has been actively involved in research and teaching for the last 24 years at this institute. He has 466 publications in the ‘PUBMED’ indexed journals with more than 7800 citations. He has 45 H-Index publications. He has delivered 142 CME lectures at conferences. He has been guide/co-guide to 160 post graduate MD/MS/DM/MCH/PhD students and has published 35 book chapters. He was ‘Guest Editor’ of 4 issues of prestigious “PET Clinics” published by Elsevier. He has been “Editor” of Indian Journal of Nuclear Medicine since 2008. Dr Kumar has received 15 international and 5 national awards. He has also been honored with the Fellowship of National Academy of Medical Sciences (FAMS). Prof Kumar has been awarded with Hari Om Ashram Alembic Research Award-2015 by MCI presented by honourable President of India. His original contribution is developing the PET/CT guided biopsy using robotic arm. This is first in the world and has received “First Prize” at Salt Lake City, USA. His group was first to show various clinicopathologic factors associated with false negative PET results in breast cancer(Breast Cancer Res Treat. 2006;98:267-74). Using PET/CT his team has designed a new PET/CT technique for evaluation of inflammatory bowel diseases and urinary bladder cancer (Eur J Nucl Med Mol Imaging. 2007;34:2106-14, 2010;37:714-21 and 2013;40:386-93). He has also provided new definition for the detection of ectopic gastric mucosa which is now accepted worldwide(BrJRadiol2005;78:714-20).

Proposer: Dr. Pramod Kumar Garg, Seconder: Dr. Ravinder Goswami

Ten Best Publications:
MAHESHWARI, MONIKA (b 1975), Professor, Jawahar Lal Nehru Medical College, Ajmer

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Dr. Monika Maheshwari, Professor and Unit Head in J.L.N. Medical College Ajmer, has done DM (Cardiology) and Ph.D. research on ‘Echocardiographic Assessment of Right Ventricular Functions in patients with Isolated Left Ventricular Infarction’. She was the first one to demonstrate RV dysfunction in patients of Isolated LV Anterior MI, after categoric exclusion of any associated RVMI by doing Right coronary Angiography. She is a dedicated scientist in the field of Cardiology, an outstanding teacher and an acclaimed author. She has more than 200 publications in various journals and 8 chapters in medical books. Her pioneering research work has attracted considerable attention and has been awarded Dr. D.P. Basu Award of National API, Dr. D.S. Munagekar Award of National IMA, Prof. M. C. Gupta Oration of Indian Academy of Clinical Medicine, NIMS Best Research paper award of Indian Society of Geriatrics, Dr. V.G. Nadgouda Lecture Award by National RSSDI, IMA AMS Dr Satya Pal Agarwal Memorial Award by Indian Medical Association, Gangadhar Verma Memorial Award and Jaipur Apicon Award by Rajasthan API. Her name is enlisted in Marquis Who’s Who in the World (29th edition) and in Asia / Pacific Who’s Who in the World (Vol.X). She is a Fellow of Indian College Of Physicians (FICP), Indian Society of Electrocardiology (FISE), Indian Association of Clinical Medicine (FIACM), International Medical Science Academy (FIAMS) and American College of Cardiology (FACC).

Proposer: Prof. Shyam Sundar, Seconder: Prof. Shally Awasthi

Ten Best Publications:
1. M Maheshwari, SR Mittal. 2004. Acute myocardial infarction complicating Snake bite. JAPI; 52: 63-64 (if=0.28, ci=26)
3. M Maheshwari, R K Gokhroo, S K Kaushik. 2012. Isolated Non-compacted Right Ventricular myocardium. JAPI; 60: 56-57 (if=0.71, ci=10)
4. SR Mittal, MMaheshwari. 2005. Electrocardiographic changes in Submassive Pulmonary Embolism. Indian Heart Journal; 57: 80-81 (if=0.34, ci=5)
5. M Maheshwari, S Maheshwari . 2015. Clinico-Radiological Profile and Outcome of Novel H1N1-Infected Patients During 2009 to 2014 Pandemic at Tertiary Referral Hospital in Rajasthan. JAPI; 63: 42-5 (if=0.37, ci=6)
6. SR Mittal, M Maheshwari . 2008. Absent left circumflex artery and unusual dominant right coronary artery JAPI; 56, 711 (if=0.56, ci=6)
7. M Maheshwari, SK Kaushik . 2013. Echocardiographic assessment of left atrial volume index in elderly patients with anterior wall myocardial infarction. JAPI; 61: 310-311 (if=0.76, ci=4)
9. SR Mittal, M Maheshwari .2006. Amiodarone-induced Exudative Pleural Effusion-A Case Report and Review of Literature. Indian Heart Journal ; 58 : 352 (if=0.46, ci=4)
10. M Maheshwari, SR Mittal.2013. Right ventricle myocardial performance index versus Simpson’s right ventricle ejection fraction in patients with isolated left ventricle anterior myocardial infarction. Heart Views; 14 : 68 (if=0.50, ci=4)
MISHRA, AKHILESH CHANDRA  (b 1950), Director, Interactive Research School for Health Affairs (IRSHA), Bharti Vidya Peeth University Pune 411043

Member of the NASI: No  
(YON 2017, Medical & Forensic Sciences)

Crimean Congo Hemorrhagic Fever: First detection in India, isolation, characterization, molecular clock analysis (19,28,39) Swine Flu (Pandemic Influenza (H1N1): Providing identification to human cases on country level, challenging Investigations of outbreaks, National multi-site surveillance, sero-epidemiology, Genetic characterization, drug resistance surveillance, disease severity studies, meta analysis of global serological surveys, disease burden studies, immunogenicity of vaccines in field, participation in global negotiations for virus and benefit sharing, and vaccine strain selection by Dr Mishra and group created a new culture of response to national health emergencies.(10, 11, 14, 16, 35, 36, 59, 61, 63, 65, 66) 

Chikungunya: Identification of African genotype, outbreak investigations, Systemic involvements and fatalities, Genetic divergence, diagnostic developments.(24, 48, 72, 77, 81, 85, 90, 111) Avian Influenza (H5N1): Characterization of Indian poultry isolates revealed entries of 3 independent and separate fatal viruses in India. A reverse genetics modified virus was prepared and transferred to Industry for vaccine preparation. Actively participated in pandemic preparedness plans of the country. [69,76,79,57] Chandipura encephalitis: Comprehensive studies resulted in discovery of new, highly fatal pediatric disease entity in central India. Further studies included investigations of repeated outbreaks, characterization of viruses, standardization of diagnostics, development of vaccine candidates, establishment of network of diagnostic laboratories. (105, 95, 84, 96, 78, 52) Nipah virus: Investigations in Siliguri and other places in West Bengal revealed that Nipah virus, a Biosafety 4 and dangerous select agent was responsible for several fatal outbreaks. The virus was also detected from bats (89, 42, 26).  

{Refer Annexure 1 for references}

Proposer: Prof. U.C. Chaturvedi, Seconder: Dr. G.C. Mishra

Ten Best Publications:


MISHRA, AMIT KUMAR (b 1981), Assistant Professor, Indian Institute of Technology, Jodhpur

Member of the NASI: Yes (YON 2017, Medical & Forensic Sciences)

The major focus of Amit’s research has been the role of E3 ubiquitin ligases and chaperones in neurodegenerative diseases, neurodevelopmental disorders, and ageing. He has started addressing difficult conceptual problems in the medical field associated with neuroscience and biochemistry of the brain. Is there any specific recognition mechanism possible which figures out difference among normal proteins or damaged proteins? What molecular mechanisms regulate its exquisite functionality and determine overall specificity? His research work sincerely contributed in the field of ‘Protein Quality Control Mechanisms’ and understanding the molecular pathomechanisms of neurodegenerative disorders. Amit’s research on the efficiency of the cellular quality control system suggests that there might be an early quality control system in cells, which is governed by E3 ubiquitin ligases and generate first line of defense in cells against by abnormal protein accumulation. He also finds various crucial proteins as substrates of few selective quality control E3 ubiquitin ligases. His work has improved our existing knowledge about crucial mechanisms, which can provide new opportunities to modulate proteins involved in cellular quality control mechanism in neurodegenerative diseases and ageing. Amit has published very well in his chosen field of research and has consistently produced high-quality work in leading journal that publishes Medical Biochemistry basic research. In near future results of Amit, studies may offer the more suitable substitute proteolytic machinery therapeutic strategies to balance the proteostasis for the defective events specifically linked with late-onset neurodegenerative diseases and ageing.

Proposer: Prof. Kanury Venkata Subba Rao, Seconder: Prof. Nihar Ranjan Jana

Ten Best Publications:
3. D Chhangani, F Endo, A Amanullah, A Upadhyay, S Watanabe, R Mishra, K Yamanaka* and Amit Mishra* (2016) Mahogunin ring finger 1 confers cytoprotection against mutant SOD1 aggresomes and defective in an ALS mouse model. 86:16-28 (Neurobiology of Disease) *(if=5.02 *Corresponding Author, ci=H-Index 15 and I-Index 18)*
7. Amit Mishra*, M Maheshwari; D Chhangani, N F Tonou, F Endo, A P Joshi; N R Jana and K Yamanaka* (2013) E6-AP association promotes SOD1 aggresomes degradation and suppresses toxicity. Apr;34 (4) (Neurobiology of Aging) *(if=3.11 *Corresponding Author, ci=H-Index 15 and I-Index 18)*
NATH, GOPAL (b 1961), Professor of Microbiology, IMS, BHU, Varanasi

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

I have known Prof. Gopal Nath & followed his work for 26 years. He with his group have established for the first time the role of Salmonella Typhi in causation of Cancer Gall Bladder based on his in vitro and in vivo experiments (Scanu et al, 2015; Kumar G et al, 2012; Nath G et al, 1008; Prakash P et al, 2005; Shukla VK et al, 2000; Nath Et al, 1997). His findings emphasize the eradication of Salmonella Typhi to reduce the occurrence of CaGB. Again his bacteriophage therapy work is commendable that is applicable to deal with chronic and acute infections caused by multidrug resistant bacteria (Kishore et al, 2015). His work on non putrefying capability of river Ganga is well appreciated in the whole country. His research publications are in journal of high IF and are extensively cited (Pandey SN et al, 1999). He has consistently managed to have high end projects funded by DBT, ICMR, DST, CS&T, UP, UGC. He has been awarded Prof UC Chaturvedi oration-2017. He is also on the editorial board of World J of Gastroenterology. He has got recognition of his research work in USA, UK, Nepal and Saudi Arabia. He has consistently worked on local issues-typhoid, Ca GB, Helicobacter, MDR organisms and Bacteriophage Therapy using sophisticated technology. He stands tall amongst academic fraternity and well deserves the Fellowship of NASI.

Proposer: Prof. S.C. Lakhotia, Seconder: Prof. Rajiv Raman

Ten Best Publications:
4. In-vitro scolicidal activity of Mallotus philippinensis (Lam.) Muell Arg. fruit glandular hair extract against hydatid cyst Echinococcus granulosus M Gangwar, VC Verma, TD Singh, SK Singh, RK Goel, G Nath. Asian Pacific journal of tropical medicine 6 (if=0.841, ci=9)
5. Use of urine with nested PCR targeting the flagellin gene (fliC) for diagnosis of typhoid fever. G Kumar, CB Pratap, OP Mishra, K Kumar, G Nath. Journal of Clinical Microbiology 50 (6), 1964- (if=2.44, ci=12)
PAUL, GOUTAM (b 1964), Professor & Ex-Head, Department of Physiology, & Ex-Dean, Faculty of Science, University of Kalyani, Kalyani, West Bengal-741235

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Professor Goutam Paul is an outstanding teacher, an acclaimed author and a superb scientist in the field of Physiology. His devotion to the Physiology has inspired students enormously over the past three decades. Moreover, Prof. Paul has contributed significantly in promotion and application of Science for the social welfare, and popularization of Science since 1992. The contributions of Prof. Paul are given precisely –
(a) Taught Physiology for 30 years and served as Dean of Science (2013-2016).
(b) Obtained D.Sc. in Physiology for his pioneering work on arsenic intoxication in intestine.
(c) Developed the Physiology Department at Kalyani University as First Teacher and Head since 2006 and PG Physiology Department, Burdwan University from 1992-2005.
(d) Published 09 text-books, 117 research articles in journals and registered 14 GenBank submissions at NCBI.
(e) Completed several research projects funded by DST, UGC as PI.
(f) Guided 13 PhD students including one Fulbright- Nehru Fellow; and thesis and review work of 102 PG students.
(g) Popularized science teaching-learning through organizing seminars, science fairs, writing articles in Newspapers; and participating in live programmes of National TV channels.
(h) Upgraded and developed 14 Science Departments in University and 98 affiliated colleges as Dean of Science.
(i) Participated in Science Academies’ workshop to promote students for pursuing research.
(j) Devised CBCS UG and PG syllabus in Physiology for all universities in West Bengal as a sole Expert.
(k) Obtained Raj Kristo Dutt Memorial Award 2017-18 from ISCA in 105th ISC held in March 2018 at MU, Imphal.

Proposer: Prof. Sankar Kumar Ghosh, Seconder: Prof. Syamal Roy

Ten Best Publications:
RAJAMMA, USHA (b 1962), Senior Scientist, Inter University Centre for Biomedical Research & Super Speciality Hospital (IUCBR&SSH), Thalappady, Kottayam, Kerala

Member of the NASI: No

(YON 2017, Medical & Forensic Sciences)

Usha Rajamma has made decisive contributions by way of genetics, behaviors and neurotransmitter metabolism in understanding the basis of developmental disabilities. She pioneered autism spectrum disorders (ASD) research in India for the past two decades. ASD a childhood developmental disorder, is ever increasing in incidence in India and globally. She has examined neurogenetics of patients with ASD, and defined these in terms of phenotypes and neurotransmission, comparing with age- and sex-matched controls. Relevance of Usha’s work is highlighted since direct association of serotonergic genes was established with ASD syndromes and cell and molecular basis of neuropathology in the eastern Indian cohort. Her group has demonstrated male-specific effect of serotonergic system genes on the severity of ASD behaviors, through its modulation of serotonin transmission. Parent-of-origin effect in the association of neurodevelopmental genes, Reelin and Engrailed-2 proved to have long-lasting relevance to ASD biology. These discoveries revealed to the experts and the public alike the genetic and epigenetic underpinnings of developmental disabilities, particularly to certain strata of the society in India. To prove this beyond, she moved to Southern parts of India, and established an Autism laboratory in a new institute with hospital settings, that survey the population and identify patients and with developmental disabilities for genetic, epigenetic and nutrient based alterations in the genome, transcriptome and epigenome in relation to ASD incidence and severity. In short her modest contribution in this disability research sector is enormously significant that she is regarded as one of the best in India.

Proposer: Prof. Nahid Ali, Seconder: Prof. Pijush Kanti Das

Ten Best Publications:


Prof. Balaraman, FAMS is one of the senior and eminent pharmacologists having over 40 years of experience in teaching and research. He has made significant contributions in the field of Cardiovascular Research. He did pioneering work on the mechanism of cadmium-induced hypertension. He subsequently utilized this model for new drug discovery of synthetic drugs with beta blocking activity to be for the treatment of hypertension. He then worked on herbal drugs for their significance of dyslipidemia in diabetes and hypertension, which was helpful in the evaluation of anti-hyperlipidemic herbal drugs in such metabolic disorders. During this journey of research he established the role of 5-HT on hypertension, effect of pioglitazone, LNAME and curcumin on endothelial function in diabetic rats. This work was recognized such that Prof. T’a’na Ravingerov’a, Institute for Heart Research, Centre of Excellence for Cardiovascular Research, Slovak Academy of Sciences, Slovakia collaborated with Dr. Balaraman for the Effect of Hemidesmus indicus and Hibiscus Rosasinensison in Ischemia Reperfusion Injury in Isolated Rat Hearts. Recently his research collaboration with Zydis Research Centre included the role of adipocytokines in romanbant mediated insulin sensitivity in ob/ob mice and Retinol Binding Globulin in cardiovascular complications. One of his research papers entitled “Antidiabetic & anti-hyperlipidemic effect of neem seed kernel powder on alloxan induced diabetic rabbits” in Indian Journal of Pharmacology got the maximum citation of 300. He guided 20 students for PhD. He has published more than 125 research papers in International and National journals of repute with 2800 citations and ‘h’ index 27.

Proposer: Prof. Ramesh K. Goyal, Seconder: Prof. L. S. Chamyal

Ten Best Publications:
1. Manoranjan Sharma1, Jogeswar Mohapatra1,*, Umar Malik1, Jignesh Nagar1, Abhijit Chatterjee1, R.Balaraman2 and Mukul R. Jain1 (2017), Effect of pioglitazone on metabolic features in endotoxemia model in obese diabetic db/db mice, Journal of Diabetes (if=3.1.)
RANA, SURINDER SINGH  (b 1975), Professor, Postgraduate Institute of Medical Education and Research, Chandigarh

Member of the NASI: Yes (YON 2017, Medical & Forensic Sciences)

Dr Surinder Singh Rana is Professor of Gastroenterology at Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh. His areas of research are pancreatic disorders and therapeutic endoscopy and endoscopic ultrasound (EUS). He has worked on various innovative endoscopic and endoscopic ultrasound methods for treating various pancreatic diseases with minimally invasive methods. To his credit, there are several first time clinical and imaging features of various gastrointestinal disorders. He has published 335 papers of high scientific standard in various journals. He has been awarded various awards and orations including Young Investigator Award by Indian Society of Gastroenterology (ISG), Young Clinician Award by World Gastroenterology Organization, Don Wilson Award (Crystal award) of the American Society of Gastrointestinal Endoscopy, Postgraduate grants by European Society of Gastrointestinal Endoscopy (ESGE), "Shakuntala Amir Chand Award 2006" by Indian Council of Medical Research (ICMR) for significant contribution in biomedical research, "ISG Alkem Omprakash Memorial Award" by the Indian Society of Gastroenterology for significant contribution in research, Young Scientist Medal by Indian National Science Academy, NASI- Scopus Elsevier Young Scientist Award, ISG Zyduz Alidac Oration 2015 by Indian Society of Gastroenterology, and ISG-J Mitra Memorial Endoscopy Award (2012) for outstanding contribution in the field of gastrointestinal endoscopy. He has been awarded the fellowship of American Society of Gastrointestinal Endoscopy (ASGE), Society of Gastrointestinal Endoscopy of India (FSGEI) and Association of Interventional GI Endoscopy of India (FAIGE).

Proposer: Prof. B.C. Das, Seconder: Prof. Arunaloke Chakrabarti

Ten Best Publications:
SAGAR, RAJESH (b 1964), Professor, Department of Psychiatry, All India Institute of Medical Sciences (AIIMS), New Delhi.

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Dr Rajesh Sagar, as clinician developed the services for Child and Adolescent Psychiatry and started the separate inpatient services in his institution. He has significant experience as a policy expert and has expertise in conducting community research related to mental health at the national and international level. In the capacity as Secretary, Central Mental Health Authority and honorary advisor on mental health for DGHS, MoHFW, Govt. of India, he has been involved in the NMHP and has also worked to strengthen Psychiatry in undergraduate medical education. He involved with development of national mental health policy, the new mental health care bill, insurance cover for mentally ill persons, training program for primary care doctors etc. He is excellent clinician, academician and researcher par excellence. He has successfully accomplished 98 funded research projects as investigator on varied aspects of the mental health. His work has been published more than 300 articles in peer-reviewed national and international journals/books/chapters. He has also been a guide/co-guide of 96 MD/MS/DM/MSc thesis work in addition to 30 PhD students. He has made important contribution at int. level such as coordinator and PI of pioneering work in India on World Mental Health Survey, supported by the WHO (HQ) and Harvard Medical School, USA and may more international projects. He also conducted the Audit of Mental Health services in Maldives, awarded International Exchange Program by Royal Society of Edinburgh for the Robert Gordon University, Aberdeen UK. He also has been an Honorary Professor by department of Psychiatry, University of Melbourne, Australia.

Proposer: Prof. N.R. Jagannathan, Seconder: Prof. Ravinder Goswami

Ten Best Publications:

10. Alonso J., Petukhova M., Vilagut G.... Sagar R.... et al. (2011). Days out of role due to common physical and mental conditions: results from the WHO World Mental Health surveys. Molecular Psychiatry, 16(12), 1234–1246 (if=13.204, ci=180)
SAXENA, SANDEEP (b 1965), Professor and Chief of Retina Service, Department of Ophthalmology, King George’s Medical University, Lucknow, India

Member of the NASI: No  
(YON 2017, Medical & Forensic Sciences)

Prof. Sandeep Saxena has contributed scientifically over past twenty five years. He was awarded Post-Doctoral Fellowships at Anheuser-Busch Eye Institute and Barnes Retina Institute, St. Louis (1995-96) and New York-Presbyterian Hospital of Columbia and Cornell, New York, (2000-01; Ivy-league institution) USA. He was awarded prestigious Visiting Fellowships at Harvard University, USA (2016), Oxford University, UK (2015), DAAD Fellowship-Bonn University, Germany (2009) and several international Visiting Professorships. His pioneering research, in Diabetic Retinopathy and Eales’ disease, provided unique insight into pathogenesis, unravelled new approaches for drug therapies and defined classification systems for disease monitoring and planning management. In diabetic retinopathy, he discovered external limiting membrane as part of retinal barrier and provided novel insight into photoreceptor ellipsoid zone disruption, using spectral-domain optical coherence tomography (SDOCT). He defined the role of bioimaging (International J Retina Vitreous-2015, Biomarker-2017) and biochemical biomarkers: VEGF, ICAM-1, NεCML and antimonyolperoxidase antibody (Molecular Vision-2013; Diabetes Complications-2016; Retina-2017) in retinal dysfunction and disease progression. He published three SDOCT-based classification systems (Mol Vis-2013, Clinical Experimental Ophthalmology 2015, Retina-2017). In Eale’s disease, he discovered autoimmunity and cytokine dysfunction in pathogenesis. He published a novel grading system incorporating disease severity and management strategies, introduced novel low-cost medical therapy and paved way for newer immunotherapy approaches (Pathobiology 1999, 2011; Ocular Inflammation-Immunology-2009, European Ophthalmology 2004, 2005). He provided innovative insight into 3-dimensional SDOCT-based retinal research (BMJ-CR 2012-2016). He has over 120 published articles in indexed journals, 15 textbooks and 35 book chapters. He designed an innovative instrument ‘Saxena Retinal Grid-520 & 428’ (Ocular Instruments-USA).

Proposer: Prof. Asha Mathur, Seconder: Prof. Prahlad K. Seth

Ten Best Publications:
SENGUPTA, SHARMILA (b 1959), Professor/Director, National Institute of Biomedical Genomics, Kalyani, West Bengal

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Her research contributions are primarily in (i) the molecular epidemiology of cervical cancer (CaCx) in relation to human papilloma viruses (HPV) and (ii) host-pathogen interactions in HPV16 related cervical cancer. She has provided useful epidemiological data and findings of high public-health importance, highlighting the utmost need for prevention of CaCx in India through HPV based screening and prophylactic vaccinations at the population level. Her studies have unfolded the biological relevance of episomal HPV16 genomes in a large number of CaCx cases as opposed to the traditional dogma of HPV integration in CaCx cases as a key mediator of cervical carcinogenesis. Her studies have further provided deep mechanistic insights on CaCx pathogenesis, involving genetic and epigenetic alterations of the viral genomes within the gene regulatory regions. Employing molecular and genomic tools, she deciphered that cervical carcinogenesis could be mediated by HPV16 E7, employing multiple epigenetic mechanisms. E7 could physically interact with IncRNA HOTAIR, expressed at high levels in a small subset of such cancers, and abrogate its function in PRC2-LSD1 complex recruitment, causing gain and loss of chromatin activating and suppressing histone marks, respectively, at the HOX cluster gene promoters with enhanced expression of such metastatic pathway genes. She further elucidated the mechanism of HOTAIR downregulation in majority of cervical cancers lacking metastatic signatures, through abrogation of HOTAIR secondary structure and gain of miR-22 binding site within HOTAIR encoding gene due to a genetic variation, concomitant with E7 dependent miR-22 upregulation. Such seminal contributions are of enormous prophylactic and translational relevance.

Proposer: Prof. Partha P. Majumder, Seconder: Dr. Susanta Roychoudhury

Ten Best Publications:
SHARMA, JAI BHAGWAN (b 1960) Professor, Dept of Obstetrics & Gynaecology, All India Institute of Medical Sciences, New Delhi-110029

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

Prof. J. B. Sharma has made significant contributions in the field of Obstetrics and Gynaecology. He has completed two research projects entitled “CORONIS International study of caesarean section surgical techniques: a randomised factorial trial” from 2004-2007 and “CORONIS International study of caesarean section surgical techniques: the follow-up study” from 2007-2014 with NPEU University of Oxford with two publications in The Lancet. He has about 300 publications with 150 being in Pubmed indexed journals including 20 on various aspects of female genital tuberculosis (FGTB), including a landmark RCT published in European Journal of Obstetrics and Gynaecology which has proven the efficacy of 6 months antituberculosis therapy female genital tuberculosis. He has developed new laparoscopic sign in FGTB like Sharma’s Blue Python Sign, Sharma’s Hanging Gallbladder Sign, Sharma’s Ascending Colonic Adhesion, Sharma’s Kissing Fallopian tube sign and Sharma’s Dried Tree Branch Fallopian Tubes Sign.

He has 30 years (20 years as faculty) experience in the obstetrics and gynaecology including 4 years in various UK hospitals. He is a popular under graduate and postgraduate teacher and examiner for MRCOG, MD, DNB, DGO and MBBS examinations. He has written and edited 5 books is editor of 2 journals and is on the editorial board of 4 other journals & reviewers for many International and national journals. He has organized many conferences and CMEs and has delivered lectures in various international and national conferences. Dr J B Sharma was awarded Dr B C Roy Award for Research by Hon’ble President of India for the year 2015.

Proposer: Prof. S.K. Sharma, Seconder: Prof. Sanjeev Sinha

Ten Best Publications:


SRIVASTAVA, DEEP NARAYAN (b 1958), Professor, Department of Radiodiagnosis, All India Institute of Medical Sciences (AIIMS), New Delhi - 110029.

Member of the NASI: No (YON 2017, Medical & Forensic Sciences)

He has established some advanced techniques in Interventional Radiology (IR) & Magnetic resonance imaging (MRI). He has established various IR techniques in India, which are minimally invasive life saving procedures, now viable alternatives to traditional invasive therapies and can be performed in the outpatient settings and also as a life saving or palliative in cancer care or as a standard treatment method. In IR he started angiographic radioembolization in liver cancer for the first time in India under a multicentre trial funded by International Atomic Energy Agency (IAEA), established round the clock facility of life saving minimally invasive IR procedures at AIIMS for the management of tuberculosis and lung cancer patients, vertebroplasty, to treat osteoporosis common in elderly population making them walking independently, Uterine artery embolization a life saving procedure in post delivery. For training of these IR procedures he developed a low cost indigenous phantom, made from locally available materials for training. He has also developed few indigenous (Homemade) techniques /materials which are useful for life saving procedures with no cost to patient. In MRI he started doing MR arthrography and established cartilage and bone marrow imaging, MR guided biopsy techniques etc. He was member of expert committee of standard treatment guidelines (STGs-2010), Ministry of Health & Family Welfare, New Delhi. He has 144 published papers including 23 chapters in different textbooks and edited one textbook. He is current secretary of National academy of Medical Sciences (India).

**Proposer: Prof. N.R. Jagannathan, Seconder: Prof. Ravinder Goswami**

**Ten Best Publications:**

Dr. Monisha Banerjee developed DNA diagnostic methods in Medical Genetics, SGPGIMS, Lucknow for genetic disorders like hearing loss, achondroplasia, myopathies etc. and established a manual sequencing technique for mutation detection, carrier analysis and prenatal diagnosis of Duchenne/Becker muscular dystrophy, spinal muscular atrophy and Hemophilia A to provide dependable genetic counseling to affected families (47-62). Further, she identified genetic variants of different pathways in type 2 diabetes(T2DM) (13-17,19,21-27,29-33,35-38,41-43,45,46), gestational diabetes mellitus (GDM), pulmonary diseases (12) and cervical cancer(CaCx) (7,9,18,20) and established risk genotypes/haplotypes associated with T2DM and CaCx in North Indian population. This led to identification of several risk alleles associated with individual susceptibility to T2DM and CaCx which will greatly help in designing pharmacogenetics-guided preventive and therapeutic measures (1,3,4,14,15,18,20,25,37). She found that in CaCx women, association of GSTM1 null genotype with GSTP1 AG+GG polymorphism greatly reduced the hazard ratio, thus better overall survival after chemoradiation therapy. The inter-individual difference in differential activity of GST enzymes has impact on treatment outcome in CaCx (9). Dr. Monisha made significant contribution in prenatal diagnosis of genetic disorders. She has successfully established a kit based Nucleospin method for isolation of cell free fetal DNA (cffDNA) from maternal plasma which can correlate with various pregnancy related complications such as preeclampsia and gestational diabetes (28,34). Dr. Monisha Banerjee correlated genetic and epigenetic alterations with gene expression in complex diseases as mentioned above. She made significant contribution towards search for synthetic compounds (2) and phytochemicals (11) against cancer and osteoporosis.

Propose: Dr. P. Kalpana P. Murthy, Seconder: Dr. Shailja Bhattacharya

Ten Best Publications:
DAS, KUSAL KANTI (b 1962), Professor of Physiology, Shri B.M.Patil Medical College, Hospital & Research Centre, BLDE (Deemed to be University), Vijayapur-586103

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

Kusal K Das is personally known to me as a researcher in the similar area of my research interest. Currently he is the Professor of Physiology at Shri B. M. Patil Medical College, BLDE University, Vijayapura, Karnataka and also a Visiting Professor (2017) at Tulane University, New Orleans, USA. His area of research is on experimental hypoxia and cell signaling mechanism during heavy metal induced stress and alteration of vascular integrity in both animal and human models. His research on divalent heavy metals like lead (Pb) or nickel (Ni) established the link between heavy metals and oxygen sensing mechanisms through hypoxia-inducible factor-1a (HIF-1a) that regulate sympathetic over drives and ROS generation (Das KK et al 2017). Currently Prof.Das is working on the H1 α dependent responses to hypoxia along with calcium channel blockers and vitamin c supplementation in vascular responses to ischemia that are associated with aging, diabetes and other cardiovascular disorders (Das KK et al 2015). His research extends from experimental physiology to clinical medicine. Recently he has standardized rodent stroke model in his laboratory which will be unique for understanding and treatment of stroke patients. He is among the first in the world to establish the link between arsenic toxicities and gold mining activities which made a tremendous impact on Government policy on environmental issues. Prof.Das has also invented a new method to determine blood vitamin E. Government of Karnataka conferred him “Dr.Raja Ramanna State Scientist Award 2013” for his immense scientific contributions to the society.

Proposer: Prof.Srinivas K.Saidapur, Seconder: Prof.N.M.Bujurke

Ten Best Publications:
2. Das KK, Razzaghi-Asl N; Tikare SN. Hypoglycemic activity of...J Enzyme Inhibition Med Chem; 2016; 31(1):99-105 (if=4.293, ci=1385)
DUTTA, RANJNA C (FOR CHHABRA)  (b 1966), Innovator, DST, C/o Excel Matrix Biological Devices Pvt. Ltd., Hyderabad

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

A bio-medical researcher Ranjna started with the synthesis and evaluation of immunomodulating peptides for targeting liposomes to macrophages, under the supervision of Padamshri Dr. NityaNand at CDRI (1987-93), Lucknow and ended up joining hands with Dr. A.K. Dutta, as founder Director of ExCel-Matrix Biological Devices P Ltd, India’s first and perhaps the only innovation based company in Tissue Engineering and Regenerative Medicine in 2005-06. Their efforts in the field have led to ‘DST-Lockheed Martin Innovation Gold medal’ in 2009 and ‘Leaders of Innovation fellowship’ from ‘Royal Academy of Engineers, UK’ in 2015. Ranjna was associated with NII and ICGEB New Delhi (1994-99), IICT (1999-02) and NIN (2009-12), Hyderabad and IISc, Bangalore (2016-2017) for different projects, collaborative as well as independent. She also worked in the BMBCB department of Northwestern University, Illinois, USA as visiting post-doctoral fellow (2002-03). She received ‘Prolog to Discovery’ award at IICT for her project and also published in International Journals (cumulative impact >65, citations >445). Ranjna is an invited member of ‘American Nano-society’, international reviewer’s panel of many reputed journals and is also the managing editor of special issue on ‘Cell Dynamics in 3D culture’ in the ‘Frontiers in Biosciences’. She is currently engaged in the design and synthesis of ECM-mimicking macro-conjugates for creating instructive 3D-scaffolds that in addition to TE and RM can find applications in therapeutic delivery. In view of her significant contribution in the field of Medical Biotechnology, I feel pleasure in recommending Dr. Ranjna C. Dutta for the fellowship of NASI.

Proposer: Prof. Bikramjit Basu, Seconder: Dr. G. Bhanuprakash Reddy

Ten Best Publications:
GANGADHAR, BANGALORE NANJUNDAIAH (b 1955), Director, National Institute of Mental Health And Neuro Sciences, Bangalore

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

Prof Gangadhar has done pioneering research in the areas of electroconvulsive therapy (ECT), yoga therapy in psychiatric disorders and neurobiology of schizophrenia. Seminal studies by Prof Gangadhar helped standardize ECT for psychiatric disorders in terms of device requirements, stimulus parameters and laterality, physiological monitoring, anesthetic modification and monitoring the cognitive status during ECT. Findings from these studies have facilitated the therapeutic use of ECT in depression, schizophrenia, bipolar affective disorder among others (Gangadhar et al 1982; Radhakrishnan & Gangadhar, 1998). Prof Gangadhar has done rigorous research on yoga therapy in psychiatric disorders especially schizophrenia and depression (Duraiswamy et al 2007; Vedamurthachar et al 2006), which led to establishment of yoga as a specialized clinical service at NIMHANS and recognition from the National Institute of Health and Care Excellence (NICE, UK) as “high quality” evidence for use of yoga in schizophrenia (https://www.nice.org.uk/guidance/qs80). These research articles are the critical evidence-base on which the recent NICE guidelines (2014) included yoga as a complementary treatment in schizophrenia for the first time. He also initiated a unique cohort study of persons with schizophrenia living in rural community in 2005. Prof Gangadhar was instrumental in developing a special clinical service dedicated for schizophrenia patients at NIMHANS since 2000. In conclusion, Prof Gangadhar, an outstanding psychiatrist, has carried out path-breaking research, which has had a direct translational impact in the treatment of psychiatric disorders by non-pharmacological methods, such as ECT and yoga that is of immense importance for our country.

Proposer: Prof. Vijayalakshmi Ravindranath, Seconder: Prof. V. Nagaraja

Ten Best Publications:


4. Janakiramaiah N, Gangadhar BN, Naga Venkatesha Murthy PJ, Harish MG, Subbakrahnna DK and Vedamurthachar A. 2000. Antidepressant efficacy of Sudarshan Kriya Yoga (SKY) in melancholia: a randomized comparison with electroconvulsive therapy (ECT) and im (if=3.845, ci=403)


GARG, PANKAJ  (b 1972), Senior Surgeon Colorectal & Laparoscopic, Fortis Super Hospital, Mohali

Member of the NASI: No  
(YON 2016, Medical & Forensic Sciences)

Dr Garg a renowned Surgeon of international fame. He is one of the rare clinicians in the country who has invented 4 new operations (PERFACT, Tube in tract, LOCULA, FATS) to treat complex dreaded illnesses. PERFACT procedure is quite effective to treat highly complex fistula-in-ano, a disease for which there is no good treatment available. (Published in highest ranking Colorectal journal in world: Impact factor -3.75). Presentations (>60) in top US & European conferences. Consecutive invitations for last 8 years from Top American Surgical Societies to give lectures. Surgeons from across the globe are coming to him to learn the procedures he has invented. He is also teaching clinical research to medical students from all over the world. Dr Garg has two discoveries to his credit. He discovered that water-jet stream used in toilet commodes could cause anterior fissure-in-ano. This discovery would help prevent this painful disease in large number of people. He has also innovated three New treatment concepts (TON, LOABAC & ECLIPs). With Dr Garg’s new treatments, TONE & LOABAC (Published in highest ranking Colorectal journal in world), a large proportion of these operations can be averted in lakhs of people and save enormous resources. He is bestowed with the highest award in the field of Science & Technology in states of Haryana, Punjab & Chandigarh and top surgical societies of world (SAGES-USA, ASCRS-USA, ASI-India). Hundreds of patients from 30 countries came to Panchkula (Chandigarh) to get treated by him [not for cheaper treatment (medical tourism), but for his technical expertise].

Proposer: Dr. Javed N. Agrewala, Seconder: Dr. I.B.S. Passi

Ten Best Publications:
GHATAK, ASHIM (b. 1957) Chief Scientist & Head & Professor, AcSIR, Division of Clinical & Experimental Medicine, Central Drug Research Institute, Lucknow

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

Dr. Ashim Ghatak is among the few clinical scientists of the country who have made significant contribution to basic sciences. His elucidation of pathophysiology of heart diseases— a definitive role of increased oxidative stress in ischemic heart patients, which attenuates with Vitamin E 400 mg daily orally in addition to standard treatment in the first few days in acute myocardial infraction and an important role of oxidative stress and serotonin in heart failure, where standard treatment along with vitamin E 400 mg daily orally for 4 weeks significantly improves the congestive heart failure. He has also elucidated the Nitric Oxide pathways in Essential Hypertension and shown a reversible suppression of Nitric Oxide with standard treatment along with vitamin E orally. He has also recently identified newer Biomarkers for lifestyle diseases especially in metabolic syndrome and various cancers. Dr. Ghatak has been planning, conducting and coordinating phase-I to IV clinical trials of CDRI drugs— Centchroman, Gugulipid, injection αβ arteether & CDRI 80/53 and these have been successfully marketed. He has conducted and coordinated clinical trials of other CDRI candidate drugs. His publications which have been cited widely - Google Scholar-330 citations & h-index-7; and Web of Science -122 citations & h-index-3 and has been awarded and recognized by his peers. He has successfully filed many national and international patents. He has been responsible for the implementation of Good Clinical Practices and important Ethical issues in CDRI.

Proposer: Prof. B.N. Dhawan, Seconder: Dr. V.P. Kamboj

Ten Best Publications:
1. Ghatak, A; Brar, MJS; Agarwal, A; Goel, N; Rastogi, AK; Vaish, AK; Sircar, AR; Chandra, M; 1996; Oxy free radical system in heart failure and therapeutic role of oral vitamin E; International Journal of Cardiology; 57 (2); 119 -127. (if=4.036 WoS ci =63 GS ci=109)
2. Chandra, M; Chandra, N; Agrawal, R; Kumar, A; Ghatak, A; Pandey, Vc; 1994; The Free-Radical System In Ischemic-Heart-Disease; International Journal Of Cardiology; 43 (2) 121-125. (if=4.036 WoS ci =43 GS ci=65)
4. A Ghatak, OP Asthana; 1995; Recent trends in hyperlipoproteinemias and its pharmacotherapy, Indian Journal Of Pharmacology 27 (1) 14. (if=0.691 GS ci=43)
5. PA Sadiq, A Puri, M Dikshit, A Ghatak, SK Dwivedi, VS Narain, RK Saran; 2005; Profile And Prevalence Of Aspirin Resistance In Indian Patients With Coronary Artery Disease, ... Indian Heart Journal; 57 , 658-661. (GS ci=32)
7. OP Asthana, JS Srivastava, A Ghatak, SPS Gaur, BN Dhawan; 1996; Safety and tolerability of bacosides A and B in healthy human volunteers; Indian Journal Of Pharmacology, 28 (10) 37. (if=0.691 GS ci=8)
8. VV Bhosale, SC Inamdar, VB Karande, SR Burute, MB Murthy, A Ghatak; 2014; Beneficial effects of Nebivolol in comparison with Atenolol on safety and tolerability in essential hypertension; Journal Of Clinical And Diagnostic Research ; 8 (6) ;HC01 -HCO4. (GS ci=4)
9. G Monte, RP Moerschell, A Ghatak, E Melissari; 1993; C4b-Binding Protein -An Update; Thrombosis And Haemostasis; 69(1)86. (if=4.984 GS ci=3)
10. AK Vaish, S Kumar, M Chandra, A Ghatak, AK Balapure, AR Sircar; 2001; Effect of ALPHA-Tocopherol on oxidative stress and antioxidant enzymes in essential hypertension., Journal Of Internal Medicine Of India; 4 55-57 (GS ci=2)
KATARE, OM PRAKASH (b 1959), Professor (Pharmaceutics), University Institute of Pharmaceutical Sciences, Director, Research Promotion Cell (RPC), Panjab University, Chandhigarh.

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

A drug delivery expert par excellence, Professor Katare is recognized globally as an accomplished scientist in the sphere of Liposome Technology, with more than 120 International and National research publications, several book chapters and patents (5 granted out of 18 filed). He guided successfully as many as 10 Ph.D. thesis and completed several ambitious research projects. But, the hallmark of Prof. Katare’s work relates to Academia-Industry collaborative ventures which, to be rated very high, culminated into the tech transfers and commercialization of the cutting-edge technologies. The three novel liposome and nanotechnology based pharmaceutical products (Psorisome™, Lipotar S™, Lipotar SS™) for the treatment of ‘difficult-to-treat’ skin ailment, Psoriasis, are in the market. For this contribution, Prof. Katare has received high-end awards and accolades including DBT National Technology Award by the then President of India, (Late) Dr A P J Abdul Kalam (2007), IABMS Best Patent Award (2012), OPPSI Scientist Award (2011), and Illustrious Alumnus Award (2016) by Dr H S Gaur Vishwavidyalaya etc. Currently, after holding several prestigious University positions, he is serving as Director, Research, Panjab University and engaged himself intensively and extensively in formulating research plans and policies. In a nutshell, the collaborative efforts of Prof. Katare in the field of translational research comprising both basic and applied sciences has contributed substantially in creating the culture and climate for the current and younger generation.

Proposer: Dr. P.K. Chakraborti, Seconder: Prof. Arun Kumar Grover

Ten Best Publications:


KULKARNI, MAHESH J. RAO (b 1971), Senior Scientist, CSIR-National Chemical Laboratory, Pune

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

Dr. Mahesh Kulkarni has carried out excellent work in the area of alternative diagnostic markers for prediction of diabetes and its complication. Glycated albumin is emerging as an alternative biomarker for better diagnostics of diabetes and its complications (Expert Rev Proteom. 2017). In this regard, Dr. Kulkarni’s group has developed diagnostic fragment ion library for mass spectrometry based quantification of glycated peptides of albumin, and identified glycation sensitive lysine residues that could be useful to assess the degree of glycation in diabetes (Mol Cell Proteom. 2015). Glycated albumin also elicits immune response and form complex with immunoglobulins called circulating immune complexes (CICs). Label-free-based mass spectrometric analysis of CICs in clinical plasma of diabetic subjects revealed elevated levels of serum albumin in the CICs, which were also observed to be AGE modified. Quantification of CICs could serve as a reliable biomarker for prediction of diabetic complications such as nephropathy (Mol Cell Proteomics. 2016 Jun;15(6):2011-20). In addition, Dr. Kulkarni has also unequivocally demonstrated that albumin protects low abundant plasma proteins from adverse effects of glycation and lower levels of albumin are associated with increased glycation of plasma proteins and HbA1c (J Proteome Res. 2012). Thus lower levels of albumin in diabetes could be potential risk factor for glycation induced complications. Dr. Kulkarni’s work has demonstrated that HbA1c, the currently used diagnostic marker, gets transformed to advanced glycated form called N-1-(carboxymethyl) valine β-Hb, which shows better correlation with the clinical parameters of diabetic nephropathy, such as microalbuminuria (Clinical Proteome, 2016).

Proposer: Prof. Sourav Pal, Seconder: Prof. Udayakumar M

Ten Best Publications:


KUMAR, RAJEEV (b 1972), Professor of Urology and Associate Dean (Academics), All India Institute of Medical Sciences, New Delhi

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

The nominee’s primary contribution has been a combination of clinical and basic research in the evaluation and management of male infertility. Infertile men are often subjected to investigations and treatments, including surgery, with little scientific justification. The nominee has questioned the role of such investigations, such as screening for tuberculosis, in infertile men (1-5). He has evaluated the role of empirical drug therapies (6-11) and suggested simplified algorithms and investigative protocols to minimize procedures (12-17). He has developed two new microsurgical techniques to simplify complex procedures (18-23). With a collaborative team for basic research, including an earlier ICMR task force project, they have evaluated genetic abnormalities including Y chromosome microdeletions, mitochondrial DNA mutations, and the role of oxidative stress in male infertility (24-54). They have identified novel mutations in the genome of infertile men and developed a multiplex PCR technique to minimize diagnostic evaluation. His second area of research is multiparametric magnetic resonance techniques in early prostate cancer diagnosis. Data gathered from in-vitro and in-vivo imaging MR studies (55-57) was used to determine cut-off values between normal, benign and malignant tissues (58). These values were validated on a cohort of men with suspected prostate cancer who underwent MR studies followed by prostate biopsy (59-60). Additional MR techniques were evaluated for targeting such biopsies (61-64) followed by the establishment of pre-biopsy MR protocols for detecting prostate cancer with high specificity which could increase diagnostic yield while avoiding unnecessary biopsies (65-70).

Proposer: Prof. Rakesh Kapoor, Seconder: Prof. Veereshwar Bhatnagar

Ten Best Publications:
1. Javali TD, Dwivedi DK, Kumar R, Jagannathan NR, Thulkar S, Dinda AK (2014) Magnetic resonance spectroscopy imaging-directed transrectal ultrasound biopsy increases prostate cancer detection in men with prostate-specific antigen between 4-10 ng/mL an (if=2.409, ci=10)
Dr. N. Venkatesh Prajna combines busy clinical practice and laboratory research effectively. He conducted a randomized control study called as the Madurai Intraocular Lens Study involving 3400 patients that established the superiority of the technique of intraocular lens implantation (IOL) compared to simple capsular cataract extraction. This study published in American Journal of Ophthalmology, as a part of series, paved the way for large scale IOL implantations in developing countries. His contributions to the study of mycotic and bacterial keratitis is extensive. He was the Principal Investigator in Mycotic Ulcer treatment trial (MUTT), which established the fact that different fungi respond to different antifungals and the results of this study altered the preferred practice pattern in the treatment of fungal keratitis even in developed countries. His basic research interest is in the areas of tear and corneal proteomics, immunology of corneal infections and in vivo confocal microscopy of limbal stem cells. His involvement and critical input led to framing new probing questions to explore additional problems. He complements the basic researchers and expands their approach to complex clinical problems. He has publications in several international journals such as American Journal of Ophthalmology, British Journal of Ophthalmology, JAMA and Nature Genetics. He is also a peer reviewer of several prestigious journals such as American Journal of Ophthalmology. Apart from all these he is an excellent teacher and mentor of young clinicians and researchers alike.

Proposer: Prof. K. Dharmalingam, Seconder: Prof. G. Marimuthu

Ten Best Publications:


PAUL, JAISHREE  (b 1952), Scientist 'C' (Professor); School of Life Sciences, Jawaharlal Nehru University, New Delhi

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

Her research is focused on two areas: (A). Interplay between the genetic and microbial factors in the pathogenesis of Inflammatory Bowel disease (Ulcerative colitis) in North Indian population. Association of SNPs in susceptible genes like Nucleotide Oligomerization Domain and Toll Like Receptors were evaluated in UC patients of Northern India for the first time. Functional analysis of these SNPs showed their impact on the altered immune response assessed by Real Time analysis of clinical samples. Regulation of miRNA in the pathogenesis of UC revealed site specific expression of miRNA during UC, modulating the expression of target genes. Enumeration of gut bacteria in UC patients targeting specific region of rDNA, revealed significant fluctuations in the concentration of predominant and subdominant species with concomitant change in concentration of their metabolites like SCFA.

(B). Enteric Parasites Highthroughput molecular screening technique has been established for the detection and screening of enteric parasites like Entamoeba, Cryptosporidium and Giardia in clinical samples from different geographical locations. Clinical isolates exhibiting varying response to antiamoebic drugs are observed. Fluctuations in the gut flora in amoebic patients were enumerated. To correlate with the virulence of the parasite, characterization of clinical isolates was carried out using few loci of LINE and SINE repeat elements present abundantly in the genome of Entamoeba. Several loci with extensive polymorphism of SINE occupancy among different strains of E. histolytica proved the principle that the genomic distribution of SINEs is a valid method for typing of E. histolytica strains.

Proposer: Prof. Kasturi Datta, Seconder: Prof. Sudha Bhattacharya

Ten Best Publications:
2. Kumari R, V Ahuja, Jaishree Paul (2013) Fluctuations in butyrate-producing bacteria in ulcerative colitis patients of North India. World J Gastroenterol 19 (22), 3404-3414 (if=2.547, ci=19)
SADAKHSRAM, JAYACHANDRAN  (b 9664), Professor and Head, Department of Oral Medicine and Radiology, Tamilnadu Govt Dental College and Hospital,Chennai- 600003

Member of the NASI: No  (YON 2016, Medical & Forensic Sciences)

Prof. Dr. S. Jayachandran is Head of the department of Oral Medicine and Radiology, Tamilnadu Government Dental College and is a PG & PhD Guide of Tamilnadu Dr. MGR Medical University. He has contributed in the application of Tissue Autofluorescence, diffuse reflectance, Raman spectroscopy, Salivary interleukin-6 level and various biological fluids for an early non-invasive detection of oral precancer and cancer. He has also evaluated Photodynamic therapy and Low intensity Laser therapy and CO2 laser therapy for treating oral precancer. He has evaluated Colour Doppler USG in the evaluation of metastatic lymphnode in cases of Oral Cancer. He has conducted epidemiological studies on Oral Cancer. He has tried newer treatment modalities for Oral Lesions. Dr S Jayachandran has done research on Oral lesions in AIDS patients and has provided treatment guidelines for same. He has evaluated application of CBCT in evaluation of impacted molars, in evaluation of Cysts and Tumors of Maxilla and Mandible, in evaluation of TMJ in cases of Rheumatoid Arthritis as well as in evaluation of Oral cancer invading the mandible. He has special interest in Forensic odontology. He has done research on age estimation using raman spectroscopy of various teeth. He delivered lecture at India International Science Festival–2017 in GIAN course on Medical Imaging Techniques in MHRD Sponsored course at Anna University in Oct 2017. He has national and international publications to his name. He has Authored Book Titled- Oral Cancer and Prevention, funded by Tamilnadu State Science council.

Proposer: Dr. V. Mohan, Seconder: Prof. M.A.Maria-Josepph

Ten Best Publications:
Prof. Kannan, Soundarapandian is currently Professor and Head of Department of Zoology & Coordinator of School of Life Sciences, Periyar University, Salem, Tamil Nadu, India. His research centers on developing safe and innovative nanocarriers for smart drug/gene delivery agents for CANCER. Kannan’s contributions have been highly commendable in development of enhanced smart delivery of gene/drugs of interest to target cancers. Further, he developed cargo-loaded mesoporous silica nanoparticles (MSNs) with convenient surface modification that can facilitate the development of the innovative nano-drug system which targets cytoplasm and nucleus of tumor cells. His collaborative research brought out a hydroxyl apatite with the incorporation of Carbon Nano Fibres into the PCL composite which significantly improves the adhesion strength and elastic modulus of the scaffolds for tissue engineering and understanding the 3D cell biology. Kannan initiated research on biopolymeric hydrogels to develop organ on Chip. Prof. Kannan is also a Visiting Professor at Harvard Medical School & Northeastern University, Boston, USA. During his career he bestowed with numerous highly accredited awards from Indian Government, UGC-RAMAN Fellowship (USA) in 2016-2017, DST Young Scientist Award in 2003 from Department of Science and Technology, Ministry of Science and Technology, India. DBT overseas Associateship (UK) in 2005-2006, and DBT postdoc fellowship (IISc., Bangalore) in 1997-1999. Based on his credentials, he is qualified to be a Fellow of National Academy of Sciences, India.

Proposer: Prof. M. Radhakrishna Pillai, Seconder: Prof. G. Marimuthu

Ten Best Publications:
TANDON, SALIL (b 1965), Consultant Urologist, N.E. Railway Hospital, Lucknow, U.P.

Member of the NASI: No (YON 2016, Medical & Forensic Sciences)

THE STRONG EDUCATIONAL BACKGROUND: Dr. Salil Tandon underwent his medical education from the K.G.M.U, Lucknow and was bestowed with Gold Medals & Certificates of honours. He continued his career in England & was awarded Certificate of Urology (Royal College) GMC of England has granted him full registration. He worked as Visiting Fellow in America, U.K. and S.E. Asia. THE UNIQUE LEVEL OF COMMITMENT TO THE STATE: He resigned his job in U.K. and returned to Lucknow to serve his people in 2001. He is attached to N.E. Railway Hospital, & HAL, Lucknow. MANY FIRSTS TO HIS CREDIT: He is the first Urologist in the recent past, from U.P. to be awarded FRCSI (2015), FACS (Urology 2012) and simultaneously MAMS & FICS (Urology, 2010). First Urologist from U.P. who received training in male infertility from Cleveland Clinic, USA and Edinburgh, U.K. and has been able to develop reproductive medicine as a new sub speciality. His academic achievements have been honoured with several awards including U.P. Government “Vigyan Ratan Award”. He has also worked in the field of Homeopathic medicine (project sponsored by AYUSH,), and has helped in developing cost effective treatment for prostate and stone disease. CURRENT AREA OF RESEARCH: 1] Effect of life style factors on Reproductive Health, 2] Bariatric Surgery and Male infertility, 3] Incidence of Genetic cause (Karyotype and Y Chromosome Micro deletion) for Male Infertility, 4] Incidence of CBAVD in Indian sub population.

Proposer: Prof. Shally Awasthi, Second: Prof. P. Pushpangadan

Ten Best Publications:
1. R Donat, S Tandon, KM Grigor, JW Fowler. Neoadjuvant Androgen Blockade (NAB) in T1 and T2 prostate carcinoma. Histology and PSA failure. After Radical Prostatectomy. Accepted in supplement to Prostate cancer and Prostate disease, 2000; 5
BHATTACHARYYA, MAITREE (b 1960), Professor, Department of Biochemistry, Calcutta University and Director, Jagadis Bose National Science Talent Search, Kolkata

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Prof. Maitree Bhattacharyya graduated from Presidency College with Honours in Physics and obtained M.Sc from Calcutta University. Started research career in Department of Biophysics and Molecular Biology, CU with PhD in 1991. Now she is Professor, Department of Biochemistry in University of Calcutta. Ten students have already been awarded PhD degree under her supervision and she is leading a group of ten research scholars which comprises of PhD and post doctoral students. Her major research interest is in the field of biomedical research. She worked on the oxidative and nitrosative stresses in thalassemia, arsenic toxicity, diabetes mellitus and in protein drug biomolecular interaction. Her major contribution lies in identifying the risk factors and biomarkers in the disease dynamics of diabetes and associated cardiovascular disease and dyslipidemia. She has also developed a kit for detection of Platelet shed Microparticles (MP) under Flow Cytometry Platform, for which the patent has been filed. This work has got immense significance as a diagnostic tool for prediction of cardiovascular disease in diabetes. She is also working to explore the microbial diversity in the coastal and estuarine area of Sunderban, Chilka and Gujarat. Apart from academic research and teaching she is passionate to develop scientific and technological sphere of India especially the human resource to the level of highest possible International Standard. To fulfill this ambition she has recently joined (on lien) as Director of Jagadis Bose National Talent Search, where young talents are nurtured and motivated to achieve the best quality human resource.

Proposer: Prof. Gobardhan Das, Seconder: Prof. Amitabha Mukhopadhyay

Ten Best Publications:
6. Arindam Saha, Sangeeta Adak, Subhankar Chowdhury, Maitree Bhattacharyya (2005), Enhanced Oxygen releasing capacity and Oxidative stress in Diabetes Mellitus and Diabetes Mellitus Associated Cardiovascular Disease: A comparative study, Clinica Chimica Acta,( Elsevier) 361,141-149 (if=2.748, ci=26)
8. Dibyendu Chakraborty & Maitree Bhattacharyya (2000), Deferiprone (LI) induced conformation change of Hemoglobin: A fluorescence and CD spectroscopic study, Molecular and Cellular Biochemistry, 204. 17-20. (if=2.388, ci=18)
CHAKRABARTI, SUBHABRATA (b 1972), Associate Director (Research), L.V. Prasad Eye Institute, Hyderabad

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Dr. Subhabrata Chakrabarti is one of the leading Human Geneticist of the country with immense contributions in the areas of understanding the molecular mechanisms of complex eye diseases. His major work on functional genomics of primary congenital glaucoma (PCG) that affects children in the developing world, has convincingly demonstrated the role of CYP1B1 (a major candidate gene) and other novel genes in the disease pathogenesis. He also provided evolutionary insights on the geographical structuring and migrations of these disease-associated mutations worldwide. This led to the initiation of bilateral grants with Brazil, Tunisia, Portugal, and Australia to understand the nature-nurture dialectics in PCG. The dissection of the genetic and physical interactions of genes and genotype-phenotype correlations in PCG have provided clues for undertaking predictive testing. Further, his work on genomics of age-related and rare eye diseases in the populations have an overarching component of translation from bench to bedside. He has published widely in reputed journals and has been well funded with national and international grants. Dr. Chakrabarti’s work has also provided him international recognition in the form of several honors and awards; notable among them being the ‘Research Recognition Award’ of the World Glaucoma Association (WGA) and as Affiliate of all the 3 Science Academies of India (INSA, NASI and IASc) and also The World Academy of Sciences (TWAS). He is an internationally acclaimed scientist and serves on various editorial boards, international funding agencies and scientific bodies on eye research.

Proposer: Prof. Partha P Majumder, Seconder: Prof. D. Balasubramanian

Ten Best Publications:
CHANDAK, GIRIRAJ RATAN (b 1963), Sr. Principal Scientist and Group Leader, CSIR-Centre for Cellular and Molecular Biology, Hyderabad

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

The outstanding contribution of Dr G R Chandak demonstrating the genetic and mutational heterogeneity and gene-nutrient interaction in prevalent complex diseases, such as chronic pancreatitis, diabetes mellitus, neural tube defects, etc. in Indians can be seen from his regular contribution in journals of Nature group including Nature and Nature Genetics. He has identified two novel genes, SPINK1 and CTSB that predict susceptibility to chronic pancreatitis in Indians, which established genetic basis of tropical calcific pancreatitis and inclusion in the Online Mendelian Inheritance in Man (MIM#608819) and are being used for genetic testing of chronic pancreatitis. He has been the first to show that genetic susceptibility to type 2 diabetes in Indians is different than Europeans, especially for traits like central obesity and insulin resistance. He has established the causal role of maternal B12 deficiency and one-carbon metabolism in predicting low birth weight and adiposity in their children. Using animal models of B12 deficiency, he has demonstrated altered PPAR signalling pathway in explaining fetal programming of obesity, insulin resistance and altered lipid metabolism. His studies provide a possible link of differential epigenetic regulation of candidate type 2 diabetes genes with B12 deficiency that is widely prevalent in the Indians. In contrast to the globally established role of folate deficiency, his studies have conclusively established a major role for maternal B12 deficiency in the risk of neural tube defects. He has also created awareness about preventing monogenic genetic disorders by prenatal diagnosis and genetic counselling using cost-effective protocols.

Proposer: Dr. Ch. Mohan Rao, Seconder: Dr. R. Sankaranarayanan

Ten Best Publications:


CHATTOPADHYAY, DEBPRASAD (b 1959), Scientist G & Director, ICMR-National Institute of Traditional Medicine, Belagavi

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Dr. Chattopadhyay has exceedingly contributed in the field of Ethnomedicine, towards drug discovery against emerging, re-emerging and difficult to treat diseases. Finding new therapies from an untapped natural resource is the need of the hour. His group has validated herbs, herbal preparations/formulas used in traditional practices of diverse Indian tribes including Onge, Nicobarese, Shompen, Birhore, Kattabhai, Santal etc, and identified molecules with pharmacological potentials such as anti-inflammatory, antibacterial, antiviral, contraceptive drugs. His group has also revealed the mechanism of action of these agents. The most notable one is the isolation and identification of an anti-HSV alkaloid. The mechanistic study showed that it inhibits the immediate early transcription of HSV in-vitro and in-vivo. The same approach helped to find new principles for typhoid and tuberculosis. His ground breaking work with an existing drug demonstrate alters the membrane permeability of drug-resistant bacteria, a hope to the management of microbial drug-resistant problem. In addition Dr Chattopadhyay significantly contributed in contraception research, another challenging area most relevant to India. Contraception without side effect is highly desirable. His group has identified a phenolic having potent sperm motility inhibiting activity from a preparation used by Onge. Altogether his ethnomedicinal approach is unique and highly successful in settling the principles of the management of HSV, typhoid, contraception and wound healing. India has vast resources of ethnomedicinal plants, and Dr Chattopadhyay has disseminated to common people. Therefore, the awareness to use herbal formulation from the age-old practices is led and fostered by him.

Proposer: Dr. Bhaskar Saha, Seconder: Prof. Subrata Majumder

Ten Best Publications:
Dr Roshan Colah is a researcher of international standing and repute. Over last 35 or more years she has been a beacon of research on haemoglobinopathies and red cell enzymopathies in this country. In more than 250 of her research paper one can see her evolution from a student researcher to an erudite scientist. She established a comprehensive prenatal diagnosis centre in NIIH where she worked. Her research on hydroxyurea in thalassaemia, hydroxy urea as an iron chelator etc got critical national acclaim. Her work on molecular pathology and epistatic interaction of haemoglobinopathy in modulating its clinical presentation constitute a substantial bulk of her research work. At present very few laboratory in India investigates red cell enzymopathy comprehensively and the only one such comprehensive laboratory was established by her at NIIH, Mumbai. Dr Colah is a member in many national and international committees. She has written several chapters in quite a few books and edited herself 3 books for every day use by haemoglobinopathy research. In fact to day in India nobody stands as tall as her in haemoglobinopathy research. She deserved this fellowship long time back I strongly endorse her fellowship in the academy without any further delay.

Proposer: Prof. Kanjaksha Ghosh, Seconder: Dr. Smita D. Mahale

Ten Best Publications:
DAS, SATYA NARAYAN (b 1952), Professor, Department of Biotechnology, AIIMS, New Delhi

Member of the NASI: No

(YON 2015, Medical & Forensic Sciences)

Dr. Das has made significant contribution in cancer research specially in understanding the genetic susceptibility to breast (Valarmathi et al, 2003, 2004) and oral cancer (Jha et al, 2013; Karimi et al, 2013; Bharti et al, 2013; Gaur et al, 2011a, 2011b; Mittal et al, 2010; Gupta et al, 2008). In case with familial breast cancer his group detected about 20 novel mutations in BRCA1 and BRCA 2 gene while in oral cancer novel polymorphisms were reported in hMLH1 gene, TNF-alpha and TNF receptor genes, COX-2, TGF-beta, IL-4 and IL-6 genes and CTLA-4 gene that may be useful to screen population at a higher risk. Dr. Das was first to report abnormal expression of PI3K isoforms (Garg et al, 2013) and COX-2 (Kapoor et al, 2010) in oral cancer patients and showed that peptide inhibitors of COX-2 significantly inhibited tumour cell growth and proliferation. These findings may lead to development of peptide/biological inhibitors of PI3K and COX-2 for chemopreventive and chemotherapeutic strategy for oral cancer. Recently his group showed impaired population and functions of invariant Natural Killer T (iNKT) cell subsets in oral cancer patients (Singh et al, 2013, 2015). They further showed that selective activation of iNKT cells by its ligand along with tumour antigen via dendritic cells significantly reduced tumour cell viability and enhanced apoptosis. These observations will provide an efficient process of NKT cell-based vaccination of oral cancer patients in order to prevent development and recurrence of the tumours.

Proposer : Prof. Y. D. Sharma, Seconder : Prof. J. S. Tyagi

Ten Best Publications:
HALDER, ASHUTOSH (b 1961), Professor and Head, Reproductive Biology, AIIMS, New Delhi

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Dr. Halder is well known authority in Reproductive Sciences with subspecialization in Reproductive Genetics/Endocrinology/Biology. He has made significant contribution in infertility, reproductive wastage, malformations, disorder of sex development, prenatal/preimplantation diagnosis, etc. He has developed Molecular Cytogenetic Specialty in India. He conducts national workshop annually to generate human resources in Molecular Cytogenetics besides symposium & conferences in Reproductive disorders. Dr. Halder is involved in teaching, training, research and patient care related work. He has published about 77 full length research papers, 2 full length research papers submitted (in Molecular Cytogenetics & Ind J Exp Biology; under revision), edited three books/ monograph/ laboratory manual and several book chapters (including 2 since last submission). Many of his publications are well cited; total citations are 802 (citations as of 28/02/2018 in google scholar was 742 & research gate 675). He has also undertaken several significant research projects of national agencies. His research works are on PCOS, POF, familial primary amenorrhoea, hyperprolactinemia, primary testicular failure, biological basis of skewed sex ratio and malformation. He is expert member of various National Institutes/Government Organizations, reviewer and editorial board member for various national & international medical journals. He is guiding/guided 7 PhD student as chief guide and over 25 as co-guide/doctoral committee member besides guiding 6 DM student in past. He is the recipient of ICMR international fellowship, commonwealth scholar, pathology honor, silver medal in 3 national conferences and FAMS. He is now heading Reproductive Biology and working for several new courses.

Proposer: Prof. V.K. Paul, Seconder: Prof. R. Goswami

Ten Best Publications:

HUSAIN, NUZHAT (b 1961), Director, Dean Dr.RMLIMS, Officer In-charge State Referral Centre for Lab Investigations, Professor and Head of Pathology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Vibhuti Khand, Gomti Nagar, Lucknow

Member of the NASI : No (YON 2015, Medical & Forensic Sciences)

It is my pleasure to recommend NASI Fellowship for Prof. Nuzhat Husain who has outstanding academic and scientific profile. With her persistent hard work and devotion she has many Scholarships, medals and laurels to her credit. She has established Pathology department at RMLIMS with high-end equipments, has been a popular educator and enlightening guide of 30 PhD and more than 70 MD students. She has an excellent scientific profile depicted by 156 publications in National and International Journals. She has international research training on Molecular Neuro-Oncology and Gene Therapy, at Massachusetts General Hospital, Harvard University, Boston , USA. Her major research area has been Neuro pathology and Neuro-Oncology which has now further broadened to oncology. She is presently working on regulatory gene mutations, stem cells expression and liquid biopsies in various cancers. As director of RMLIMS she has an experience of government entrepreneurship, her major focus is providing high end medical care and education at an affordable cost, with the public health care system. She has innovatively established State Referral Centre for Lab Investigations, Telepathology and Telemedicine facilities at RMLIMS. Under Professor N. Husain’s leadership major expansion programs at the institute including MCI recognition and post graduate programs have been implemented. In view of her comprehensive leadership in science, academia and administration I strongly recommend her fellowship at NASI.

Proposer : Prof. Chitra Sarkar , Seconder : Prof R.K. Gupta

Ten Best Publications :


KAKKAR, POONAM (b 1959), Chief Scientist & Area Coordinator (Regulatory Toxicology); Professor (AcSIR); Dy. TFM (In-charge) Toxicity Testing: GLP Test Facility; CSIR-Indian Institute of Toxicology Research, Lucknow

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Prof. Kakkar’s pioneering research showed mitochondrial damage by ROS/oxidative stress as key phenomena in toxicity of drugs/chemicals and diabetes (Free Radic. Biol. Med, 1991). The highly sensitive method developed by her for estimation of superoxide dismutase (Ind. J. Biochem. Biophys., 1984); is the highest cited paper (2900 citations) of CSIR. She demonstrated for the first time hepatoprotection by probiotics in acetaminophen induced apoptosis (Food Chem Toxicol,2011). Her novel approaches provided evidence for intervention by phytochemicals/herbal extracts in redox mediated cellular signalling. She showed natural terpenes protected against redox imbalance and calcium dependent mitochondrial dysfunction in nimesulide hepatotoxicity (PLoS One,2012). Regulation of carbohydrate metabolism by Berberis aristata extract in diabetic rats (J. Ethnopharmacol, 2009) observed in vivo led to formulation of nanotized berberine which gave protection at low doses. More recently she reported berberine induced FoxO proteins’ nuclear retention. Bim/PUMA induction, mitochondrial dysfunction and apoptosis in HepG2 cells (FRBM,2014;TAAP,2016). She also reported essential role of PHLPP2 in suppression of redox sensitive transcription factor Nrf2 via modulation of Akt/GSK3β/Fyn kinase axis during oxidative hepatotoxicity (Cell Death & Disease,2014) and its modulation by Morin (Redox Biol., 2015). She was a key member for development of pharmacopoeial standards of Ayurvedic drugs (API, 2006). Her observation of decline in antioxidant capacity of herbal teas during storage (Food Res. Int,2006) reiterated need for expiry date on herbal products. Her findings on safety of herbo-mineral Ayurvedic drugs and heavy metals in medicinal plants were cited by Government of India to rebut a US report.

Proposer: Prof. P. K. Seth, Seconder: Prof. C. S. Nautiyal

Ten Best Publications:
KAR, SHANTANU KUMAR (b 1952), Director (Research) Medical & Life Sciences, IMS & SUM Hospital, SOA University, Bhubaneswar

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Dr. SK Kar, MD (Medicine), having brilliant academic record with 38 years of research carrier in ICMR, acclaimed several national and other awards for his research contributions in areas of tropical diseases, clinical, therapeutics and vaccine tools towards control and elimination of diseases of poverty like Filariasis and cholera. He is first to demonstrate the usefulness of Ivermectin as a scabicidal agent besides acting as antifilarial drug being used now and tissue tonometry to accurately measure lymphoedema status in filarial lymphoedema. He has conducted for the first time globally, the phase IV vaccine trial in public health setting with oral cholera vaccine (Sanchrol) in prevention of cholera. His clinical drug trials on antifilarials has shown effective drug regimens for control and elimination of Filariasis. His research influenced national and global policies in elimination of Filariasis and cholera. He was a recipient of ICMR National Talent Search Fellowship, and awarded as a Fellow of National Academy of Medical Sciences and Fellow of Indian College of Physicians. He received MOT Iyenger National ICMR award, Rajiv Gandhi Sadbhawana award for excellence in medical science and Kalinga Gastro Enterology Foundation Samman for contribution towards HBV prevention. He has over 170 research publications in reputed International and National Journals beside eleven chapters in books and monographs during his research career including 20 years as Directorship in two ICMR institutes, RMRC Bhubaneswar and RMRI Patna.

Proposer: Dr. Sujit Kumar Bhattachary, Seconder: Dr. T. Ramamurthy

Ten Best Publications:
KUMAR, ARUN (b 1960), Professor, Indian Institute of Science, Bangalore

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Arun Kumar has made outstanding contributions in the area of human genetics and cancer biology. He has discovered the causative genes, STIL, TRIM36 and LTBP2, for primary microcephaly (small brain), anencephaly (no brain) and microspherophakia (small spherical lens), respectively (Am J Human Genet, 2009, 84:286-290; Human Mol Genet, 2017, 26:1104-1114; Human Genet, 2010, 128:365-371). He has investigated the nuclear function of a well-known tumor suppressor TSC2, which functions as a negative regulator of mTORC1 in complex with TSC1 in the insulin signaling pathway. He has shown that TSC2 also functions as a transcription factor and regulates the expression of epiregulin, a ligand for EGFR (Nucleic Acids Res, 2014, 42:6243-6255). He has further shown that the well-known tumor suppressor gene WT1 functions as an oncogene in oral cancer and transcriptionally represses the tumor suppressor CDC73 (J Biol Chem, 2014, 289:968-976). CDC73 as part of the Pafl complex remains associated with RNA polymerase II and regulates global gene expression. His work has shown that the dramatic upregulation of oncogenic miR-155 is an exclusive mechanism for downregulation of CDC73, and the restoration of CDC73 levels by antagonim-155 may have an important role in therapeutic intervention of cancers (J Biol Chem, 2013, 288:608-618). Further, he has also shown that the ESRR gene is upregulated in oral cancer and is regulated by miR-125a, and decreasing the level of ESRR by synthetic miR-125a mimics may have an important role in therapeutic intervention of oral and other cancers (J Biol Chem, 2014, 289:32276-32290).

Proposer: Prof. Bhudev C. Das, Seconder: Prof. Subrata Sinha

Ten Best Publications:
MISRA, RAMNATH (b 1954) Dean, Professor and Head Department of Clinical Immunology, S.G.P.G.I.M.S, Lucknow

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

He has contributed to advance the knowledge of pathogenesis of Reactive arthritis, Systemic lupus erythematosus, Takayasu arteritis and Juvenile Idiopathic Arthritis. In salmonella induced Reactive arthritis he has shown the antigenic targets of synovial fluid T cells to be outer membrane protein (OMP) A of salmonella typhimurium. Recombinant OMP A stimulates synovial fluid mononuclear cells to produce IL-17, a proinflammatory cytokines which he described in SF of patients with ReA/uSpA earlier for the first time. 

He has described the long term outcome of patients with lupus nephritis and recently showed a distinctive metabolomic signature in lupus nephritis that could be utilized as a biomarker. In Takayau arteritis, he led a group Indian Rheumatology Association Vasculitis group (IRAVAS ) which validated a clinical instrument to measure disease activity in Takayasu arteritis (ITAS2010). In TA, he along with collaborative scientist described a characteristic metabolomic signature by using NMR spectroscopy. Other notable contributions being observations of subclinical atherosclerosis in your Rheumatoid arthritis patients in our country and a different profile of children and adolescents with Juvenile idiopathic arthritis seen in India. He has therefore , made substantial contributions in the field of clinical immunology and rheumatology. He is a pioneer in establishing this branch of Medicine in our country.

Proposer : Prof Rakesh Kapoor, Second : Prof. U. K. Misra

Ten Best Publications :


7. Aggarwal A, Misra R. Juvenile chronic arthritis in India: is it different from that seen in Western countries? Rheumolnt Int. 1994;14:53-6. 3 (If= 1.702 ci=43)


433
PATURU, KONDAIAH (b 1954), Professor, Dept. of MRDG, Indian Institute of Science, Bangalore

Member of the NASI: No  (YON 2015, Medical & Forensic Sciences)

Prof. Kondaiah is an established and highly accomplished Cancer Biologist. He made seminal contributions towards the understanding of signaling pathways involved with fibrosis, breast cancer and glioma. His laboratory extensively used microarrays as a tool to understand the pathways involved in TGF-beta signaling, breast cancer prognosis, etio-pathogenesis of oral submucous fibrosis and role of IGFBPs in progression of breast cancer and glioma. His group demonstrated differential regulation of genes by TGF-beta in normal and tumor cells demonstrated the differential activation of non canonical and MAPK signaling in tumor and non tumor cells by TGF-beta. This work resulted in the identification of S100A2 as an intermediate in TGF-beta actions. Using a variety of in vitro and in vivo experiments the role of S100A2 has been demonstrated in the progression of cancers. Activation of TGF-beta1 by laser and a mechanism for faster healing of soft tissues was also an interesting demonstration by his group. With respect to glioma, a role for IGFBP 2,3 and 4 isoforms in glioma progression has been proposed and demonstrated the importance of IGFBP2 actions in the regulation of bet-catenin. This work identified IGFBP2 as an important therapeutic target for glioblastoma. Importantly, his group elucidated the mechanism of areca nut induction of TGF-beta pathway that has enormous implications in the etiology of Oral Submucous Fibrosis. Significantly, his group along with chemists identified a small molecule which acts on mutant form of p53 resulting in wild type conformation and activates the p53 dependent apoptosis.

Proposer: A. Jagannadha Rao, Seconder: Rajan R. Dighe

Ten Best Publications:

- Developed hydrogels and evaluated the bioefficacy of alpha glucans, serralysin as anti-inflammatory, fibrinolytic, anti-microbial and wound-healing agents.
- Unraveled the involvement of two ammonium transport systems and their regulatory role in inhibition/stimulation of ammonium/glutamate transport.
- Decoupled of biomass growth and its bioproduct production by modulating cellular metabolism to develop a recycle and reusable biocatalyst and to improve bioethanol process.
- Functionalization of biopolymer, ferric/nickel impregnated silica nanoparticles and understanding its robustness as well as evaluation of its role as immobilizing matrix in enantioselective lactic acid production - used in biopolymer production.
- Evaluating the Taguchi methodology as a statistical tool for biotechnological applications for first time.
- Unraveling the role of barbital in modulation of metabolism linked to improved production (120%) of rifamycin in Nocardia strain and understanding the alkaline. protease production kinetics and developing the a mathematical model.
- Developed rapid bioprocesses for silver nanoparticles, xylooligosaccharides, fructooligosaccharides, polygalacturonase, prodigiosin wine, L-asparaginase, L-glutaminase, proteases, serralysin, L-lactic acid, rifamycin, actinomycin, epothelon, tyrosinase, xylanase, xylitol and defloridation using untapped agroindustrial materials.
- Understanding of, glucose to xylose ratio, high biomass and sweet sorghum juice for effective biohydrogen as well as bioethanol production from lignocellulosic biomass.
- Heterologous expression of CYP I 02A5 variant and its production as well as predicting drug metabolism of human P450 probe substrates and in silico molecular docking of prodigiosin and cycloprodigiosin as COX-2 inhibitors.
- Evaluating the functionalized polyamide membrane for treating the bulk drug industrial effluent.
- Demonstrated the technologies (xylitol from biomass, xanthan gum, ethanol, and xylose) to industries.

Proposer: Prof. Appa Rao Podile, Seconder: Prof. P.B. Kavi Kishor

Ten Best Publications:
SHARMA, AMAN (b 1974), Professor, Clinical Immunology and Rheumatology Services, Internal Medicine, PGIMER, Chandigarh

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Prof Sharma has made important, and outstanding contribution to knowledge and progress of Clinical Immunology and Rheumatology in India. His areas of research are Systemic Vasculitis, Relapsing Polychondritis, Psoriatic arthritis and Extra-pulmonary tuberculosis. He has 249 peer reviewed publications and has also written 42 book chapters. He has also edited a very popular ‘Textbook of Systemic Vasculitis’. Based upon his research he was conferred with prestigious IRA Oration and Zydus oration by Indian Rheumatology association, and Rabindranath Tagore Oration, R Subramanium endowment oration and Shurvir trust visiting professorship by Association of Physicians of India. He was the invited expert for 2017 ACR EULAR Criteria for GPA(Wegener’s),MPA and EGPA, Relapsing polychondritis disease activity index(RPDAI) and relapsing polychondritis damage index. He has also been conferred fellowships of the royal college of physicians(London) and American College of Rheumatology. Considering his research potential and contributions to research, he has held the office of Associate Editor of International Journal of Rheumatic diseases and Indian Journal of Rheumatology. He has also been awarded at the last four consecutive Annual Research Days of PGIMER, Chandigarh, for ‘presenting high quality published Research work’. He is a very sought after physicians, getting patient referrals from all over India and even abroad . In recognition of his standing in the field, PGIMER, Chandigarh is the only center from India which has been recommended for vasculitis treatment and research by Vasculitis foundation, USA (http://www.vasculitisfoundation.org/education/research-institutions/). Prof Sharma is also a very popular teacher.

Proposer: Prof. Arunaloke Chakrabarti, Seconder: Prof. Javed N. Agrewala

Ten Best Publications:
SINGH, SUNIT KUMAR (b 1971), Professor, Molecular Biology Unit, Institute of Medical Sciences, Banaras Hindu University (BHU), Varanasi-221005

Member of the NASI: No (YON 2015, Medical & Forensic Sciences)

Prof. Sunit K. Singh completed Ph.D. in the area of Infection Biology from the University of Wuerzburg, Wuerzburg, Germany and postdoctoral training from Yale University School of Medicine, USA and the University of California, Davis, USA. Prof. Singh served as the Scientist at CCMB, Hyderabad. Currently, Prof. Singh is working as Professor at the Molecular Biology Unit, Institute of Medical Sciences, BHU, Varanasi. My interest in Prof. Singh reflects his ability to work across different types of viruses, including retroviruses (HIV-1), alphaviruses, and flaviviruses. Prof. Singh published excellent papers in internationally reputed peer-reviewed journals in the area of molecular virology. Prof. Singh published excellent research papers in the peer-reviewed journals such as “Lancet Infectious Diseases”, “The Journal of Neuroscience”, BMC Neuroscience”, Annals of Rheumatic Diseases “Journal of Neuroinflammation” and many others. He received FEBS Top Cited Paper Award” by “The FEBS Journal”. Prof. Singh edited many important books titled: Neuroviral infections, “Viral Hemorrhagic Fevers” and “Human Respiratory Viral Infections” published by Taylor & Francis publication, USA and a book titled “Viral Infections and Global Change” by Willey Blackwell, USA. Prof. Singh excelled in an area, which is very much related to the health and well-being of this country. Therefore, I strongly nominate Prof. Sunit K. Singh for the fellowship of National Academy of Sciences of India. Note: The request to update my application may be sent to my seconder Dr. Anirban Basu (anirban@nbrc.ac.in) due to the sad demise of Dr. Lalji Singh on Dec 10, 2017.

Proposer: Late Dr. Lalji Singh, Seconder: Prof. Anirban Basu

Ten Best Publications:

Recently, concern has been expressed about the influence of sperm DNA integrity on the abnormal reproductive outcome. Although infertile men may father children with assisted conception, fertilization with DNA-damaged spermatozoa may increase the risk of genetic abnormalities in offspring (Adiga et al., 2010). For the first time, a study from nominee’s laboratory has revealed that advanced age and poor quality ejaculates carry spermatozoa with increased DNA fragmentation (Varshini, et al., 2011). However, the DNA fragmentation in the spermatozoa can be effectively eliminated by split ejaculate approach (Kumar et al., 2011) or by supplementing the antioxidants such as vitamin E (Kalthur, et al., 2011). The results of these studies established that the genetic and epigenetic integrity of sperm DNA can be affected by various endogenous and exogenous factors (Adiga et al., 2011). The embryos derived from the DNA damaged sperm show unique damage response pathways (Adiga et al., 2007). However, recent developments in the area of metabolomics are expected to help IVF professionals in selecting healthy embryos (Pudakalakatti, et al., 2013) which have the potential to implant and benefit infertility patients. Considering the fact that in India, male factor infertility remains a significant problem contributing 50% of cases attending infertility clinics and its assessment still relies on the traditional semen analysis, which does not address integrity of the male genome the contributions of Prof.Adiga to assess the level of sperm DNA integrity on the embryonic response and risk associated with fertilizing the oocytes with DNA damaged sperm are of great significance.

Ten Best Publications:


BASHYAM, MURALI DHARAN (b 1969), Staff Scientist VI, Centre for DNA Fingerprinting and Diagnostics, Hyderabad

Member of the NASI: Yes (YON 2014, Medical & Forensic Sciences)

Though scientific research in India has resulted in several seminal advancements in the field of basic biology, achievements in medical research have been fewer. In this respect, the nominee’s pioneering contributions in the field of translational cancer research deserve to be recognized. His efforts on sporadic colorectal cancer (CRC) identified non-canonical tumorigenesis pathways in early-onset rectal cancer, the predominant but least understood CRC subtype in India. In parallel, his work on familial CRC revealed mismatch repair (MMR) expression proficient Lynch Syndrome-associated colorectal tumors despite presence of MMR gene lesions. His discoveries therefore challenge the well-established CRC dogmas and highlight the caution to be exercised while replicating patient treatment and management regimes developed in the West. The nominee’s seminal work on squamous carcinoma of the esophagus and oral tongue has identified unique gain of oncogenic function activities of TP53 missense mutations, unraveling therefore novel therapeutic options. His efforts utilizing genome-wide DNA and RNA profiling followed by methylation, tissue microarray and functional analysis identified novel pancreatic cancer suppressor genes providing efficient options for targeted therapy. The nominee has made significant contributions in the field of medical genetics as well. He performed the first ever molecular characterization of several genetic disorders from the Indian population including but not limited to Phenylketonuria, Farber disease, Hypohidrotic/Ectodermal Dysplasia and Maple Syrup Urine Disease that not only revealed a unique mutation profile distinct from other populations but also resulted in a paradigm shift to study the disease causing mutant transcript rather than the mutant protein.

Proposer: Dr. J. Gowrishankar, Seconder: Dr. Ranjan Sen

Ten Best Publications:

BASU, SANDIP (b 1971). Head, Nuclear Medicine Academic Programme, Consultant Nuclear Medicine Physician and Scientific Officer-F Radiation Medicine Centre, Bhabha Atomic Research Centre, Tata Memorial Center Annex, Jerrai wadia Road, Parel, Mumbai-400012, India. Dean-Academic (Health Sciences), BARC, Homi Bhabha National Institute

Member of the NASI: No

(YON 2014, Medical & Forensic Sciences)

Dr. Sandip Basu made distinguished contributions to the field of Nuclear Medicine by integrating functional radionuclide imaging and therapy for individualized patient management. His focus is on patient services, medical education and clinical research. Dr. Basu assumed responsibility of successful functioning of the India’s first PET machine and devised several outstanding ways to advance routine and novel applications of unsealed radionuclide sources for the benefit of patients, at the Radiation Medicine Centre. He has been instrumental in initiation of several therapeutic services such as Peptide Receptor Radionuclide therapy with 177Lu-DOTATATE for Neuroendocrine tumors and therapy for metastatic thyroid carcinoma or diagnostic services such as rhTSH primed I131 scan and FDG based detection of infection and inflammation. His vast clinical experience has been translated into enrichment of literature in oncology and molecular imaging that has enhanced the understanding of molecular basis of human pathophysiology. He has published 263 papers on comprehensive patient data (original communications), rare cases (Clinical Case Reports or Technical Notes), innovative hypotheses (Editorials or Letters) and impressive reviews in high impact peer reviewed indexed international journals and text book chapters. He has been involved in teaching, training and assessment of PG students in Nuclear Medicine. He has delivered about 66 invited lectures in national/international conferences in addition to 104 scientific abstracts in peer reviewed meetings. He has been a recipient of several awards, prominent among them being prestigious Shanti Swarup Bhatnagar Prize in Medical Sciences (2012) and DAE Scientific and Technical Excellence Award (2007).

Proposer: Dr. Kanjaksha Ghosh, Secondor: Dr. Shree Kumar Apte

Ten Best Publications:
CHAKRABORTY, SOUMEN (b 1969), Institute of Life Sciences, Nalco Square, Bhubaneswar-751023, Odisha

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Dr. Chakraborty and his group, in active collaboration with the clinicians, work on the disease progression of chronic myeloid leukemia (CML) and the role of the oncogene, EVI1 in CML. His group reported that a combination therapy of Imatinib and JAK inhibitor could kill CML progenitor cells more efficiently than Imatinib alone. He has shown that EVI1 is periodically acetylated and deacetylated and this activity of EVI1 can divergently regulate various pathways by influencing Bcl-xL, SIRT1, and ΔNp63 which was reported by the lab for the first time as direct targets of EVI1. A set of EVI1 positive CML samples showed higher expression of Bcl-xL and SIRT1 with respect to EVI1 negative CML samples. It was observed that acetylated/deacetylated form of EVI1 not only protects the cancer cells from apoptosis but also may help in the accumulation of mutations that promotes disease progression. Drastic changes in the localization pattern of sumoylated EVI1 was observed when EVI1 positive cells were treated with arsenic trioxide. This finding may someday pave a way to understand the significance of arsenic trioxide (Trisenox) that was used in a clinical trial to treat patients with myelodysplastic syndrome showing high expression of EVI1. Thus acetylation-sumoylation data obtained so far has initiated a new paradigm of targeting modification dependent mechanisms working alone or in combination, on EVI1 that abnormally deregulates several biochemical pathways in advanced CML. His group recently showed that EVI1 potentiates the development of metastasis independent of epithelial-mesenchymal transition in colon cancer cells.

Proposer: Dr. Samit Chattopadhyay, Seconder: Dr. Sharmila A. Bapat

Ten Best Publications:

CHATTOPADHYAY, KOUSHIK (b 1980) Researcher, Department of Epidemiology, University of Pittsburgh, Pennsylvania, USA

Member of the NASI: No

(YON 2014, Medical & Forensic Sciences)

Dr. Koushik Chattopadhyay graduated with a Ph.D. in human genetics from University of Cape Town in South Africa. He worked on cancer molecular genetics during his Ph.D. He worked on neurogenetics and pharmacogenetics for his first and second postdoctoral fellowships subsequently in South Africa. Following this he took up a faculty position at the Genetics department at University of KwaZulu-Natal in South Africa. After briefly serving as a lecturer he moved to the USA. Currently he is working on genetic epidemiology of cancer at University of Pittsburgh in the USA. He has 8 peer-reviewed first-author publications in international journals, 1 peer-reviewed conference publication and 2 e-books published. Currently 6 more first-author manuscripts are under-review. His publications have generated 63 citations till date. He is on the editorial board of 8 international journals and has also reviewed several articles for different international journals. He has presented his work in 8 international conferences as oral and poster presentations including, American Society of Human, Genetics Conference in 2012. He has won several fellowships and awards including Poliomyelitis Research Foundation (PRF) Ph.D., fellowship. He has attended international workshops to improve his skills that include Advanced Molecular Methods for Diagnosing of Human Genetic Diseases conducted by International Centre for Genetic Engineering and Biotechnology (ICGEB) in Iran and a genotyping training using TaqMan's Assay at Uppsala University in Sweden. From his career graph it is evident that he is a promising scientist and had significant contribution in the field of human genetics and cancer biology.

Proposer: Dr. Gopal C. Kundu, Secondner: Dr. Vijay Kumar

Ten Best Publications:
2. Chatterjee K, 2010, Host genetic factors in susceptibility to HIV-1 infection and progression to AIDS. Journal of Genetics, Apr 89(1):109-16. (If=0.876, ci=11)
CHAUDHURI, SWAPNA (b 1954), Former Professor, Dept of Lab Medicine, Calcutta School of Tropical Medicine, Kolkata

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Prof Chaudhuri’s lab first deciphered the disease relevance of the anti-neoplastic biomolecule T11TS in glioma rat model. T11TS immunotherapy in glioma reverses intense immunosuppression and causes profound immunopotentiation both at the peripheral and intracranial levels by ligating with CD2 receptors on immunocytes. We pioneered to show complete downregulation of T-cell signaling in glioma and demonstrated that T11TS reverses different lymphocyte signals positively to stimulate them against glioma. Strengthened by inflammatory cytokines, potentiated lymphocytes along with other phagocytic cells strike against glioma to eradicate them by intrinsic and extrinsic apoptosis. T11TS intervention was also studied molecularly at hematopoietic stem cell (HSC) level. We first established that glioma-induced apoptosis of HSC was prevented by T11TS and progenitor cells were rejuvenated. T11TS causes glioma cell cycle arrest at G1 phase by inhibiting different molecular pathways but spares normal cells. The underlying molecular mechanisms of anti-angiogenic potential of T11TS in malignant glioma were unravelled in isolated glioma endothelial cells (EC). T11TS inhibited matrix degradation and loosened cell grip preventing endothelial cell propagation and metastasis. T11TS disrupts initiation and maturation of glioma angiogenesis by significantly downregulating various signalling pathways, essential for angiogenic induction and proliferation. T11TS modulates pro- and anti-inflammatory cytokines resulting in abrogation of glioma inflammation and angiogenesis. T11TS triggers apoptosis in ECs via activation of intrinsic pathway as well extrinsic pathway. Toxicity studies revealed that T11TS is totally non toxic. Our findings suggest that the multiphasic actions of T11TS for glioma destruction and normal cell protection can be introduced translationally as an effective anti-neoplastic agent.

Proposer: Dr. Syamal Roy, Seconder: Dr. Sekhar Chakrabarti

Ten Best Publications:
CHOU DHURY, NAB AJ YOTI (b 1959), Additional Director & Head; Fortis Memorial Research Institute, Gurgaon

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Dr. Nabajyoti Choudhury is one of the prominent transfusion medicine specialists in India. After completing his post-graduation from PGIMER, Chandigarh, he was a founder faculty to start MD in Transfusion Medicine in 1990 at SGPGIMS, Lucknow for the first time in the country. He started DNB in Transfusion Medicine for the first time in India. He started four state of the blood banks in the country and taking to the highest level, i.e. SGPGI, Lucknow; Prathama Blood Centre, Ahmedabad; Tata Medical Centre, Kolkata and Blood Bank in Fortis hospital, Gurgaon.

He has 73 publications out of which, 58 are in indexed journals. He has also published 11 chapters in various text books and monographs. He was the founder Editor of Asian Journal of Transfusion Science which was the first journal in transfusion medicine to receive PubMed accreditation in shortest possible time i.e. three years.

He was also the founder Chairperson of the Technical Committee of NABH who was instrumental in writing NABH Standard, initiating and implementing NABH (Blood Bank) accreditation program across India. He has got Fortis (Gurgaon) blood bank accredited by NABH within record possible time i.e. six months after becoming operational.

He is the Secretary General of Asian Association of Transfusion Medicine (AATM) which is transnational organization. He is a member of Expert Advisory Body of WHO-Geneva for South Asia. On behalf of United Nations, he has worked in multiple countries like Indonesia, Maldives, Timor-Leste, Netherlands etc. He is instrumental in developing linkage in developing blood transfusion services in South Asian countries through AATM.

It is strongly recommended that he should be considered as Fellow of NASI.

Proposer: Dr. Rakesh Kumar Gupta, Seconder: Dr. Rakesh Aggarwal

Ten Best Publications:
7. CHOU DHURY N. Transfusion Medicine in year 2025: Facts or fantasy? 2007. Asian J Transfusion Science. 2 (1); 1-2. (if=Low (indexed))
8. CHOU DHURY N. Can there be blood units of high and low quality? 2009. Asian J Transfusion Science. 3 (1); 1-2 (if=Low (indexed))
10. CHOU DHURY N, Tulsi Sunita, Desai Priti, Shah Ripal, Mathur Ankit, Harimurthy V. 2011. Serial follow-up of repeat voluntary blood donors reactive for anti HCV ELISA. Asian J Transfusion Science. 5(1); 26-31 (if=Low (indexed))
In last 25 years, Dr RK Garg has published more than 370 publications. His areas of interest include CNS infections like CNS tuberculosis, neurocysticercosis, SSPE and leprosy. Neurocysticercosis is the most common parasitic disease of the CNS. Solitary cysticercus granuloma is a common cause of focal seizures. Controversy exists regarding the efficacy of various modalities of treatment. In follow-up studies he confirmed that the most important feature of these solitary enhancing lesions is spontaneous disappearance, within weeks or months. Some lesions "heal" by becoming calcified. These patients require only antiepileptic drugs, and this medication may be withdrawn safely after the lesion has resolved. In two open-label studies and in one placebo controlled study he suggested the effectiveness of oral corticosteroids for controlling seizures and disabling headache in patients with solitary cysticercus granuloma. In one study, he observed that oral corticosteroids were helpful in early resolution of the lesion. He observed that infective pathologies were the most common etiology for multiple enhancing lesions of the brain. Tuberculosis was the commonest infective pathology, followed by neurocysticercosis. He highlighted the fact that, in India, often it is difficult to differentiate between tuberculosis and a cysticercal granuloma. He suggested diagnostic criteria for this differentiation. Another important area he is presently working is tuberculous meningitis. He is trying to know the pathogenesis, predictors and prognostic impact of several major complications, like vision loss, stroke, tuberculomas and arachnoiditis, of tuberculous meningitis.

Proposer: Prof. Rashmi Kumar, Seconder: Prof. Rakesh Kumar Gupta

Ten Best Publications:
JULKA, PRAMOD KUMAR (b 1950), Dean (Academics) and Professor, All India Institute of Medical Sciences, New Delhi

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

With over three decades of research in cancer and major breakthroughs in the treatment procedures and protocols, Dr. P.K. Julka indisputably stands as a pioneer oncologist in India. He has performed India’s first Peripheral blood stem cell transplant following high dose chemotherapy in Metastatic Breast Cancer with the aim to improve the overall survival that has made a significant scientific contribution to the clinical practice of oncology in India (Limca Book of Records). He has developed several investigator initiated research protocols in order to find newer indications for the existing drugs as well as newer therapies for the treatment of various cancers. His seminal contributions include: establishing the role of gemcitabine and carboplatin chemotherapy in the treatment of gallbladder cancer where no other standard therapy existed; prediction of response with sequential gemcitabine based combinations in patients with operable breast cancer using molecular profiling with Agilent human microarrays covering over 17,000 genes; establishing the role of tamoxifen for 10 years instead of 5 years in women with ER positive breast cancer; establishing the role of adjuvant Trastuzumab in HER2-2 positive breast cancer; postoperative treatment of glioblastoma multiforme with radiation therapy plus concomitant and adjuvant temozolomide etc. His work has benefited eminent researchers across the globe and has been instrumental in changing the clinical practice worldwide. He is also the author of the first book from India on ‘Developing A World Class Clinical Trial Site’ that provides a step by step guide to the clinicians for becoming a successful clinical researcher

Proposer: Prof. N. R. Jagannathan, Seconder: Prof. T. P. Singh

Ten Best Publications:
KAUR, GURCHARAN (b 1958), Professor, Dept of Biotechnology, Guru Nanak dev University, Amritsar

Member of the NASI: No  (YON 2014, Medical & Forensic Sciences)

Gurcharan Kaur's contributions on Healthy Brain & Aging are in-depth and far-reaching, with direct relevance to human daily living. She has achieved that by scientifically validating certain Indian traditional practices such as Intermittent Fasting and/or Dietary Restriction (DR). She has used natural products in her studies. Gurcharan presented the first ever pre-clinical evidence for the use of Withania somnifera and Tinospora cordifolia extracts as potential differentiation-based therapy for brain cancers. Her investigations on therapeutic avenues for obesity identified natural products with promises for curtailing the disease-associated neuroinflammation. Gurcharan's experimental studies have scientifically validated benefits of late onset short term DR regimen as equivalent to lifelong calorie restriction/DR that is in practice for millennia as a powerful tool for healthy aging in Indians. Experimentally, such practices prevented loss of cognitive functions and improved motor co-ordination by modulating neuron-glial plasticity. Her continued contribution in the field provided novel insights into structural-functional basis of neuron-glia interactions in modulating adult brain plasticity under day-to-day stress. Remarkably, her investigations re-positioned the use of 5-nonyloxytryptamine and venorelbine as potential drugs for treatment of spinal cord injuries. Prof. Kaur has played a key role in establishing Central Instrumentation Facility in GNDU under UGC-UPE and CPEPA programs. She efficiently linked resources of Departments of Chemistry and Biotechnology and established active collaborations to achieve mileage in terms of excellent output for both the Departments and the University.

Proposer: Dr. K.P. Mohanakumar, Seconder: Dr., P.K. Seth

Ten Best Publications:


KHULLAR, MADHU  (b 1953), Professor, Department of Experimental Medicine & Biotechnology, Post
Graduate Institute of Medical Education & Research, Chandigarh

Member of the NASI: No  (YON 2014, Medical & Forensic Sciences)

I have known Prof Madhu Khullar, first as a young faculty member later blossoming into a mature, internationally known research worker, an excellent teacher and an efficient group leader. She has made significant contributions in the field of cardiovascular diseases (genetics and pharmacogenomics of coronary heart disease, genetics of Idiopathic cardiomyopathy, genetics of Diabetic nephropathy, epigenetics of diabetic cardiomyopathy and dilated cardiomyopathy, Hypertension and environmental basis of head and neck cancer. Her current research projects include next generation sequencing as diagnostic tool for idiopathic cardiomyopathies. She has published nearly 160 papers in high impact factor journals including co-authoring in Nature Genetics. She has authored 2 books, monographs and contributed chapters in books which have been appreciated nationally and internationally. High quality research has been possible because of well-deserved funding from different National (ICMR, DBT, DST, CSIR) and International (NIH) agencies. Dr. Khullar is viewed as a leader in her subject area and is sought after speaker at National and International meetings on heart research. She has great organizational ability and is credited with organizing several International and National meetings on Cardiovascular Research at PGI, Chandigarh. She is also heading Cardiomyopathy Research Group at PGI. On a personal note, I find in her a sincere and hardworking researcher with leadership qualities and a good team worker with necessary intellectual potential of handling scientific matters.

Proposer: Prof. C.C. Kartha,  Seconder: Prof. Y.K. Gupta

Ten Best Publications:
KUMAR, ASHOK (b 1960), Professor & Head, Department of Pediatrics, Institute of Medical Sciences, Banaras Hindu University, Varanasi

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Prof Ashok Kumar has made significant contributions towards understanding maternal-fetal iron homeostasis in maternal iron deficiency anemia. Until recently it was believed that fetus behaves as a complete parasite as far as its iron needs are concerned, and is capable of extracting iron from maternal circulation efficiently regardless of maternal iron levels. His work has shown that extraction of iron by fetus is a function of iron levels available in maternal circulation and fetal iron status and fetal growth are adversely affected in severe maternal iron deficiency anemia. Further, they have also shown that anemic women have insufficient iron present in their breast milk. Thus the offspring of an anemic mother is exposed to inadequate iron not only in-utero but also after birth. In addition to hemoglobin synthesis, iron is required for myelination of developing brain. Iron deficiency during this critical period of life may have long-term adverse effects on cognitive development. Another area where he has made significant contribution is his work on oxidative injury in perinatal asphyxia and anti-oxidant role of bilirubin in neonates. Recently his work on the genetics of neonatal jaundice has improved our understanding of this complex disorder. His work has shown that many cases of idiopathic hyperbilirubinemia in neonates are in fact due to the presence of polymorphisms of UGT1A1 and Heme oxygenase-1 genes.

Proposer: Prof. Shyam Sundar, Seconder: Prof. Arvind Mohan Kayastha

Ten Best Publications:

8. Sukla KK, Tiwari PK, Kumar A, Raman R. Low birth weight (LBW) and neonatal hyperbilirubinemia (NNH) in an Indian cohort: Association of homocysteine, its metabolic pathway genes and micronutrients as risk factors. PLoS ONE 2013; 8:e 71587. (if=3.370, ci=7)
MEHROTRA, RAVI (b 1956), Director ICMR- National Institute of Cancer Prevention & Research, Department of Health Research (Govt. of India), Noida

Member of the NASI: Yes (YON 2014, Medical & Forensic Sciences)

Prof. Mehrotra has been systematically exploring appropriate strategies for screening of common cancers in India. In 2013, as Director of the National Institute of Cancer Prevention and Research, he co-organized with the US-National Cancer Institute a national workshop on cancer screening strategies. He was the senior author on the publication that resulted from the symposium on research, policy, and advocacy priorities for cancer prevention in India. These recommendations have been taken up by the Government in formulating an operational and technical manual for cancer screening. His contributions have amalgamated a very strong basic, clinical and applied research approach involving medical and community practice to early detection, primary and secondary prevention of cancer. He worked in the areas of oral malignancies over the last two decades and reported on its epidemiology, early diagnosis and management, as well as, the novel aspects of molecular biology of the disease. His contribution to cancer diagnosis utilizing affordable technology has been widely recognized and was recently covered in BMJ Innovations. In an effort to improve public awareness about cancer and cancer prevention and to mitigate cancer stigma, myths and fears, his guidance, NICPR recently launched a comprehensive India-centric web portal called “India Battles Cancer” (http://cancerindia.org.in/cp/) and now WHO-FCTC Global information for smokeless tobacco has started functioning at the centre.

Proposer: Prof. Chitra Sarkar, Seconder: Dr. V.M. Katoch

Ten Best Publications:
MUKHOPADHYAY, SATINATH (b 1958), Professor, Department of Endocrinology & Metabolism, Institute of Postgraduate Medical Education & Research, Kolkata

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Professor Satinath Mukhopadhyay, MD, DM (Endocrinology), FRCP (London), has more than 20 years experience in patient care, teaching and translational research in the field of endocrinology. He has mentored several DM trainees, research fellows and post docs. He has around 200 original publications in high impact journals like Lancet, Nature Medicine, Diabetes, Biochemical Journal, Metabolism, etc. Prof. Mukhopadhyay has 10 book chapters to his credit including two recent ones as communicating authors (published by CRC Press/ Taylor & Francis group, 2018). He has made significant research contributions in the area of insulin resistance. He is a Principal Investigator (PI) for global clinical trials. Prof. Mukhopadhyay is a member of American Endocrine Society and European Association for the study of Diabetes. He is a Visiting Professor (Endocrinology), University of Manchester, UK and is an online tutor (Endocrinology) for the University of South Wales, Cardiff, UK. Dr. Mukhopadhyay chairs the human ethics committee at IICB, Kolkata. He is actively involved in the patient awareness programs organized by NASI (Calcutta chapter). Strong scientific credentials and significant research contributions in the field of metabolic disease are the grounds that prompt me to nominate Professor Satinath Mukhopadhyay for the Fellowship of the NASI. He is a rare clinician who has stepped beyond the confines of patient care to find solutions to human disease. As a clinician par excellence, he is highly respected and rated amongst his peers. I cannot think of a person better than him for this prestigious fellowship.

Proposer: Prof. Hemanta K. Majumder, Seconder: Prof. Pijush Kanti Das

Ten Best Publications:
2. D Dutta, SA Mondal, S Choudhuri, I Maisnam, S Chowdhury, S Mukhopadhyay*, A Reza, B Bhattacharya. (2014 March) Vitamin-D supplementation in prediabetes reduced progression to type 2 diabetes and was associated with decreased insulin resistance and sy (if=3.639, ci=59)

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PADHY, RABINDRA NATH (b 1954), Professor and Head, Central Research Laboratory, IMS & Sum Hospital, Bhubaneswar-03, Odisha, India

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Prof. Padhy has been working on development of antimicrobial drugs against drug-resistant pathogens, Gram-positive, Gram-negative bacteria, Mycobacterium tuberculosis and Mycobacterium leprae; and evaluation of cytotoxicity of drugs and phytochemical using isolated human lymphocytes and neural, carcinoma and hepatic cell lines. Using advance tools of bioinformatics for locating effective conjugated drugs (a pure phytochemical conjugated with an obsolete drug or antibiotic with an approach from medicinal chemistry) against human pathogens isolated from clinical samples of patients admitted to hospital. To control drug resistant bacteria though crude extracts of medicinal plants and cyanobacteria were attempted. Indeed, bioinformatics tools minimize time and resources for the development of suitable drugs before synthesis and isolation of pure phytochemicals. For example, phytochemicals are conjugated with obeslated mainstream sulfa drug, sulfamethoxazole for effectivity in controlling pathogenic drug-resistant bacteria. Similarly, the well known antimalarial drug, chloroquine conjugated with adhatodine from the plant Adhatoda vasica could be taken up by pharmacology for further development as a new drug against drug-resistant Plasmodium. Moreover, pure phytochemicals active against bacteria such as, epigallocatechin 3-gallate and eriodictyol were identified for further development of phytochemical-based mainstream medicine. In parallel, for in vitro evaluation of cytotoxicity and genotoxicity of developed drugs and phyto-extracts, along with non-target effects of pesticides causing harmful effects on health, using human umbilical blood (waste blood is collected from newly born babies in hospital).

Proposer: Prof. P. Das, Seconder: Prof. G.R. Rout

Ten Best Publications:
4. Rath S, Das SR, Padhy RN (2016) Surveillance of bacteria Pseudomonas aeruginosa and MRSA associated with chronic suppurative otitis media. Brazilian J. Otorhinolaryngology (if=0.73, ci=Scopus, PubMed. (Elsevier).)
6. Patnaik R, Padhy RN (2016) Evaluation of geno-toxicity of methyl parathion and chlorpyrifos to human liver carcinoma cell line (HepG2) Env. Sci. and Pollut Res. 23(9):8492-8499. (if=2.76, ci=Scopus, PubMed & Science Citation Index (Springer).)
10. Dubey D and Padhy RN (2013) Antibacterial activity of Lantana camara L. against multidrug resistant pathogens from ICU patients of a teaching hospital. J. Her. Med. 3(2):65-75. (if=1,20, ci=Scopus, PubMed & Science Citation Index (Elsevier).)
RAY, ARUNABHA (b 1952), Director-Professor and Head, Department of Pharmacology, Vallabhbhai Patel Chest Institute, & Dean, Faculty of Medical Sciences, University of Delhi, New Delhi.

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Prof. Arunabha Ray has made significant contributions in the area of 'stress research' and 'stress pharmacology'. Using a novel and innovative approach, he integrated concepts of neuropharmacology and immunopharmacology to explain biological responses to emotional and environmental stressors and their impact on pathophysiological states. His pioneering research on the brain-gut and neuro-immune axis interactions has opened up new dimensions for understanding stress mechanisms, for which he received international recognition. Most significantly, on the basis of his studies, he proposed the role of Nitric Oxide (NO), a unique gasotransmitter, as a physiological regulator of stress and a pharmacological target for stress pathophysiology. He also showed that age and gender related differences in stress susceptibility and adaptation were under the regulatory influence of NO and suggested possible interactions of NO with cellular/molecular stress markers. His research concepts extended to the study of medicinal plants in stress related inflammatory and immunological disorders and integration of modern and traditional medicinal concepts. The translational impact of his research has been acknowledged and has led to significant publications in leading journals and invited book chapters. He is thus internationally recognized as one of the leading exponents in the field of stress research. He has received both national and international recognition/awards for his contributions and advancement of knowledge in this field. As further evidence for his scientific acumen and excellence, he actively collaborated with other leading researchers of international universities/laboratories, regularly organized scientific meetings attracting global experts and delivered guest lectures/chaired sessions in reputed international universities/conferences.

Proposer: Prof. S.D. Seth, Seconder: Prof. Rup Lal

Ten Best Publications:
SHUKLA, SANGEETA (b 1961) Vice Chancellor, Jiwaji University, Gwalior

Member of the NASI: Yes  (YON 2014, Medical & Forensic Sciences)

Professor Shukla, Vice Chancellor Jiwaji University, Gwalior, an inspiring teacher, has wide experience of research in the field of Reproductive Biology, Biochemical Pharmacology and Environmental Toxicology. In the area of health sciences, the nominee has made notable contributions in the area of toxicology and pharmacology relating to hepatic disorders, therapeutics for occupational health hazards. She introduced the concept of mechanistic toxicology for assessing risk associated with toxic substances and the need to identify the target molecules to serve as markers for detoxification of chemicals. Her studies led to the understanding of the mechanisms of detoxification by therapeutic evaluation of chelators along with co-therapy with trace elements (Se, Zn, Fe, Ca and Mg) with special reference to Beryllium, Lead, Mercury, Vanadium and Aluminum. Her work in the area of toxicology has won her international accolades and she was awarded with the UNESCO satellite centre of trace elements study (France) which is the only centre in India. She has effectively mapped silicosis in occupationally exposed workers of the region, identifying Jaggery as an therapeutically and cost effective drug for chronically exposed patients. She has pursued hypothesis based research and has effectively utilized the modern tools to isolate and identify of potential active substances from natural resources for the treatment of liver diseases and cancer. She generated a database for 10 Unani drugs for hepatoprotection for AYUSH. She addressed the mechanism of action of natural products on DNA repair, signalling pathways and Cell cycle regulation related to hepatic disorders. Development of a liver drug has resulted in the filing of a patent. Her work is widely cited and about 30 students have received Ph.D under her supervision. She has contributed to science education and human resource development.

Proposer: Prof. Vani Brahmachari, Seconder: Dr. Kiran Katoch

Ten Best Publications:
5. Food and Chemical Toxicology 46: 2703-12. 2008 (if=2.999, ci=50)
7. Experimental and Toxicologic Pathology 63, 671-676 2011 (if=2.781, ci=42)
10. Arch Toxicology 76(8) 442-448. 2002 (if=4.67, ci=19)
Dr. Singh used ‘omics’ in combination with classical tools to identify the signature fingerprints of pesticides-induced Parkinsonism to elucidate its molecular mechanism. He established the role of mitochondrial dysfunction, microglial activation and energy metabolism in pesticides-induced Parkinsonism. He reported the expression of glutathione-S-transferase A4-4 and cytochrome P-4502d22 genes in mouse brain and established their roles in PD (Patel et al., 2006; Singh et al., 2009; Srivastava et al., 2012). Moreover, neuroprotective mechanisms of nicotine, caffeine, melatonin, resveratrol and silymarin against pesticides-induced PD were also deciphered by him (Singh et al., 2008 and 2009; Singhal et al., 2011; Srivastava et al., 2012; Tiwari et al., 2013). He identified some proteins from blood and cerebrospinal fluid of PD patients that possess tremendous potential to be used as biomarker(s) (Sinha et al., 2007 and 2009). He reported that prolonged exposure to cypermethrin, one of the most widely used pesticides, induces Parkinsonism and deciphered its underlying mechanism (Singh et al., 2011 and 2012; Tiwari et al., 2012; Agrawal et al., 2015). Cypermethrin model offers many advantages over the classical models. It is environmentally relevant and reproduces PD features after prolonged exposure similar to sporadic PD. Cypermethrin induces striatal dopamine depletion and behavioral deficits, as a result of slow and progressive neurodegeneration that further mimics sporadic PD (Singh et al., 2011 and 2012; Tiwari et al., 2012).

Proposer: Prof. Lalji Singh, Seconder: Dr. Mukul Das

Ten Best Publications:


Dr. Surender Singh has been faculty of pharmacology for the last twenty five years of which eleven year in All India Institute of Medical Sciences, New Delhi. He has to his credit four books, scientific series and he has over 100 scientific papers in indexed journals with cumulative impact factor of 125.64 and total citation of 2880 with h-index 29. He has made significant contributions in the field of pharmacotherapy of inflammatory disorders using cytokine profiling and respective characterization for establishing the disease modifying agent in the treatment of rheumatoid arthritis. He is recipient of Gold Medal, M.Pharm. (Pharmacology) DIPSAR (University of Delhi), 1989, JSPS-Asia Africa Science Platform Programme, Japan Best Paper Award, 2011, All India Institute of Medical Sciences (AIIMS) Excellence Research Award, 2016, Dr. B. Mukherjee Prize for Best paper in Indian Journal of Pharmacology, 2016 and prestigious National ICMR award for biomedical research for his research contribution in the field of "Pharmacotherapy of inflammatory disorders". He is a certified OECD-GLP Inspector of NGCMA, Department of Science & Technology, Govt. of India. He has guided 45 PhD/MD/MSc students. He is a member of several academic and scientific advisory committees. He is a Fellow of National Academy of Medical Sciences (FAMS), India, Fellow of Royal Society of Chemistry (FRSC), United Kingdom, Fellow of International Medical Science Academy, India (FIMSA) and Fellow of Institution of Chemists (FIC), India. In view of his contribution in discipline of pharmacology, I strongly recommended for the Fellowship of The National Academy of Sciences, India.

Proposer: Prof. Y.K. Gupta, Seconder: Prof. N.R. Jagannathan

Ten Best Publications:

TRIPATHI, ARVIND (b 1958), Professor & Head, Prosthodontics, Dean, Postgraduate Studies & Research, Saraswati Dental College & Hospital, Lucknow

Member of the NASI: No (YON 2014, Medical & Forensic Sciences)

Dr. Arvind Tripathi, embarked on a career in teaching Prosthodontics in December 1985 with an appointment at the Faculty of Dental Sciences King George’s Medical College, Lucknow. He was a WHO fellow in Maxillofacial Prosthetics at USA and Canada in 1998, He has also been an American Cancer Society fellow in Maxillofacial Prosthetics in 2001-02.

He started a training program in Maxillofacial prosthetics and offered adjunct services to patients of Surgical Oncology, Plastic surgery Pulmonary medicine and ENT. for post surgical rehabilitation.

Dr. Tripathi joined Saraswati Dental College & Hospital, Lucknow in December 2008 as Dean PG studies and Research and was able to instill the spirit of Dental research in the Institution. He developed a diversified Postgraduate curriculum in his Department of Prosthodontics, introducing three new additional sub-specialities—Maxillofacial prosthetics, Cleftlip & palate prosthetics, Dental Sleep Medicine and Geriatric oral health. This is the first such successful effort in India, and students trained by Dr. Tripathi are proficient in treating a wider variety of Prosthodontic patients.

At the same time this effort has elevated the value of Prosthodontics as an adjunct to Surgical oncology, Plastic Surgery, Pulmonary Medicine and Otorhinolaryngology. Dr.Tripathi is also currently pursuing a PhD. programme in Dental Sleep Medicine.

In appreciation of his unique effort to diversify Postgraduate academic instruction, which is the first of its kind in India and providing free treatment to such patients, I propose his nomination for the Fellowship of NASI.

Proposer: Dr. Nitya Anand, Seconder: Prof. Soniya Nityanand

Ten Best Publications:

3. Parlani Swapnil, Tripathi Arvind, Singh, Saumyendra V.: Increasing the prosthodontic awareness of an aging Indian rural population. Indian J. of Dental Research, Vol-22(3), Nov 2011 (Citation 1) (if=unknown, ci=1)
7. Goel Ashima, Tripathi Arvind, Pooran Chand, Singh Saumyendra Vikram,Pant M.0 and Nagar Amit : A study on the use of positioning stents in lingual carcinoma patients subjected to radiotherapy Accepted for publication Int. Journ. Prosth.Vo1123;450-4525ep2010 (Citations 1) 11. (if=1.625, ci=1)
VUTHALURU, SEENU (b 1962), Professor, Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi

Member of the NASI: No  (YON 2014, Medical & Forensic Sciences)

Dr Vuthaluru Seenu has been working in the Department of Surgical Disciplines, All India Institute of Medical Sciences since 1990. As a faculty member, he has guided many medical graduates to conduct research & publish in peer reviewed journals. AIIMS attracts externs from different Asian and westerner countries & he, as part of AIIMS endeavour has given them exposure to common tropical surgical diseases. He has established kidney transplant program for treatment and research at IGIMS, Patna, and performed the first kidney transplantation in Bihar. His research focus is on applying newer advances of treatment to patients in local settings. In collaboration with IIT Delhi, he patented a laparoscopic instrument for complex surgeries. His area of interest in research is breast cancer. He is the first Indian investigator to perform & publish data on sentinel node biopsy in breast and other cancers in the country. Our group is recognised for our work pertaining to locally advanced breast cancer and evaluation of sentinel node using Magnetic Resonance Spectroscopy which has been published in peer reviewed journals. He is a member of many national & international scientific academies & fellow of American College of Surgeons, international union against cancer, International College of Surgeons & WHO. He also served in the executive councils of many academic bodies. He is a recipient of many national and international awards for his work in the field of breast cancer & has delivered prestigious orations.

Proposer: Prof. N.R. Jagannathan, Seconder: Dr. T.P. Singh

Ten Best Publications:

2. S Vuthaluru, Pushkar N, G Lokadarshi et al. 2013 Sentinel lymph node biopsy in malignant eyelid tumor: Hybrid SPECT/CT and dual dye technique. 156 (1) 43-49 (if=4.29, ci=7)
8. Male breast cancer: a retrospective study from a regional cancer center in northern India NK Shukla, V Seenu, AK Goel, V Raina, GK Rath, R Singh, AK Kriplani, ... Journal of surgical oncology 61 (2), 143-148 (if=2.64, ci=7)
9. K Ramalingam, S Vuthaluru, A Srivastava, AK Dinda, A Dhar Ultra structural changes occurring in duct ectasia and periductal mastitis and their significance in etiopathogenesis PloS one 12 (3), e0173216 (if=2.8)
10. V. Seenu, A Hafiz.2005. Routine antibiotic prophylaxis is not necessary for no scalpel vasectomy Int Urol Nephrol 37; 763-765 (if=1.33, ci=9)