



REPORT

VIRTUAL BIENNIAL SAAP VII & PSI CONFERENCE – 2021

March 17 & 23-25, 2021

Theme

“Physiological Sciences for betterment of Health”

Organized By

DEPARTMENT OF PHYSIOLOGY

**HAMDARD INSTITUTE OF MEDICAL SCIENCES & RESEARCH AND
ASSOCIATED HAH CENTENARY HOSPITAL
HAMDARD NAGAR, NEW DELHI – 110062**



REPORT

The '*Virtual Biennial South Asian Association of Physiologists (SAAP) VII and PSI Conference – 2021*' was jointly organised by the South Asian Association of Physiologists (SAAP) and the Physiological Society of India (PSI) in one of the reputed Medical Institutes of India, Hamdard Institute of Medical Sciences & Research (HIMSR), New Delhi, during 23rd-25th March, 2021. The focal theme of three two-day Conference was '*Physiological Sciences for betterment of Health*'. The Conference was organised under the great patronage of Dr. G.N. Qazi, CEO, HIMSR and was chaired by Prof. (Dr.) Mridu Dudeja, Dean, HIMSR. The whole event was managed meticulously by Prof. (Dr.) Md Iqbal Alam, Head, Dept. of Physiology, HIMSR as the organising secretary.

The Conference was inaugurated on 24th March, 2021 in the morning at Conference Hall of HIMSR and was presided over by Dr. G N Qazi with the recitation of the Holy Quran by Imam of Rabia mosque followed by 'Lamp Lighting Ceremony' by the virtual participants and the office bearers of SAAP. Just after the inauguration, Prof. Iqbal Alam, Organising Secretary welcomed the delegates of the virtual gathering. It was followed by a short speech to tribute 'Late Prof. Arif Siddiqui – the founder of SAAP' by Prof. Kusal K. Das, Vice-President of PSI as well as Advisor of SAAP. Prof. (Dr.) Mridu Dudeja, Dean, HIMSR then addressed the audience. The Conference was then formally inaugurated by the President of SAAP, Prof. Md. Aslam, President of PSI, Prof. Amar K Chandra, while Prof. Julie Chan, President, International Union of Physiological Sciences (IUPS) -the Chief Guest of the event, Prof. Robert G. Carroll, Chair, Education Committee, IUPS, Prof. Chau Hun Leem, President, Federation of the Asian and Oceania Physiological Societies (FAOPS), Prof. M S Biradar, Vice Chancellor of BLDE (Deemed to be University), India, Guests of Honour were virtually present.

In this two-day deliberation, there were nine (9) Plenary Sessions each with 3-6 speakers and parallel 5 E-poster sessions. Each session was chaired by eminent academician(s). Each speaker was allowed 20 minutes to deliver their speech and about 5 minutes allotted for discussion. The Conference was attended by three hundred twenty (320) delegates from South Asian countries that includes Pakistan,

India, Sri Lanka, Bangladesh and Nepal and also from USA, UK, South Korea, Armenia, Sweden, Taiwan and Saudi Arabia.

First Day of the Conference (24/03/2021):

The session started just after the formal inaugural programme with the keynote address of Prof. Julie Chan, President IUPS, she elaborated in detail the broad spectrum of actions of nitric oxide (NO) on the cardiovascular regulation. Describing the intricate mechanisms balancing the “Pro-life” and ‘Pro-death” phases in the RVLM and the role of NO in this phenomena. It was followed by another interesting session of Prof. Robert G. Carroll who spoke about the shift to competency-based education in the medical curriculum. He stated about the need to move beyond knowledge based competencies and to other domains and the importance of early clinical exposure.

This enjoyable intellectual extravaganza was then brought forward by Prof. Dewan Majid (USA) who spoke at length about the role of cytokines with high salt intake. The role of high salt intake in development of clinical hypertension and the probable importance of Tumour Necrosis Factor (TNF-alpha) in developing pathogenesis was discussed.

Prof. KK Deepak (AIIMS, New Delhi) spoke on WHO's global action plan for physical activity 2018- 2030. He emphasised the importance of regular physical activity and lifestyle improvement both at individual and community level.

The afternoon sessions of the first day, was started with the keynote address of Prof. Sinerik Ayrapetan, UNESCO Chair in Life Sciences, who spoke on the metabolic regulation of semipermeable properties of cell membranes. He elaborated the role of cell hydration in the realization of biological effects on Na/K-ATPase alpha isoforms on it. This was followed by lectures of Prof. Maulee Arambewela and Dr. Chandimani Undugodage both from Sri Lanka on different aspects of obesity. Then Dr. Rita Khadka of Nepal and Prof. Shelina Begum from Bangladesh shared their work on cardio-autonomic dysfunctions in thyroid disorders and metabolic syndrome respectively. The exhilarating barrage of information of the first day was taken forward with the deliberation of Prof. Amal Kanti Bera, IIT Madras, India who spoke on the role of calcium receptor Pannexin-P2X7 in cell survival and death. His

team demonstrated extracellular calcium-dependent coupling between P2X7 receptor and pannexin hemichannel in the neuronal system and its involvement in ischemic neuronal death. The last plenary lecture of the day was of Dr. Amit Bandhyopadhyay, Kolkata, India who spoke on the predictions of cardiorespiratory fitness in Indian population. The last but most important keynote lecture was delivered by Prof. Chandan Sen, J. Stanley Battersby Chair and Professor of Surgery, Director of the Indiana Center for Regenerative Medicine and Engineering, USA who mesmerised the audience with the cutting edge work on tissue nano transfection for in-vivo tissue programming. Prof. Sen and his team have developed a nanochip device that uses tissue nano transfection (TNT) to reprogram one type of tissue into another using nothing more than a simple touch and a harmless electric spark. With TNT, researchers have converted skin tissue in mice into functional blood vessels that fostered the healing of a badly injured leg.

Annual General Meeting of SAAP:

The last event of the first day was the Annual General Meeting of SAAP wherein Prof. Kusal Kanti Das, Vice President of PSI was nominated as the President of SAAP and Prof. Mangala Guntathilaka as Secretary General of SAAP unanimously for (2021- 2023).

Second Day of the Conference (25/03/2021):

The second day began with the topic in COVID-19, as the most devastating coronavirus disease has taken over our social lives globally. In this topic the first lecture was by Prof. Jassimuddin Ahamed (USA) who spoke about the role of COVID-19 in cardiovascular diseases. He demonstrated the thrombotic events in Covid-19 and the probable changes occurring at cellular level causing a state of prothrombosis; in the next lecture, Prof. Sunil Dhungel of Nepal, spoke on the relation between chemo-sensation and COVID-19 and how the virus causes a dysfunction in taste and olfaction.

Prof R. V. Kulkarni of BLDE University then spoke on the importance of Chronotherapeutics and how the drug delivery systems can be synchronized with time. Prof Deepthi De Silva of Sri Lanka discussed on the role of connexins in inner ear function in development of wiring, tonality etc. The session was continued further

with the lecture of Prof. Gausal Azam Khanof Fiji who spoke about the role of stress in sterile inflammation and insulin resistance as well as role of hypoxia in it.

Other Interesting lectures in the morning session of the day were by Prof. G. K. Pal of JIPMER, India who spoke on the brain-gut axis and described the neural, neuro-endocrine and the immune pathways by which the gut microbiota affect the central capacities of an individual. Prof. Samina Malik of Lahore, Pakistan, indicated about the PTEN variant in breast cancer while Prof. Suvro Chatterjee of Chennai, India described his work based on microfluidics in vascular diseases.

The afternoon sessions of the second day, started with the lectures on nitric oxide (NO) and free radicals and the speakers were from Nitric Oxide Society (India). Prof A. Ray, Prof. M. I. Alam and Prof. Kavita Gulati spoke at length about gender based differences, its role in pre eclampsia and neuromodulation respectively.

The last sessions of the day, comprised of keynote address delivered by Prof. Chae Hum Leem, South Korea and two plenary lectures of Dr. Adel Helmi, University of Cambridge, UK and Dr Eric Thelin, Karolinska Institutet, Sweden who spoke on brain injury and neuro-inflammation. Dr. Helmi stressed that inflammation not only causes secondary injury following traumatic brain injury (TBI), but also in the starting of reparative processes. Their team carried out a randomised control trial of an Interleukin-1 Receptor antagonist, a putative neuroprotective agent, in patients with severe TBI and used cerebral microdialysis to demonstrate penetration of the systemically administered drug into the brain extracellular space. By measuring downstream cerebral cytokines and chemokine in the same patients they were able to track the pattern of response to the administered cytokine inhibitor. An understanding of the underlying biological effects of promising pharmacological agents illuminate the pathological processes at play after TBI as well as informing larger phase III trials. Dr. Thelin spoke on the predictive power of serum cerebrospinal fluid NF-L levels towards outcome, and their potential correlation to diffuse axonal injury (DAI).

The deliberation as mentioned consisted of Plenary and Keynote lectures by globally recognised Eminent Researchers in presence of over 300 participants spanning over two-day were chaired by Eminent Scientists and Academicians like

Prof. Aslam (Pakistan), Prof. Rokeya Begum (Bangladesh), Prof Sunil Kohli (India), Dr. Suman Jain (India) Prof Amar K Chandra (India), Prof. VP Varsheney, Prof Ruhul Amin (Bangladesh), Prof. Arunabha Ray (India), Prof Mahwish Arooz (Pakistan), Prof. Zahid Ashraf (India) and Prof. Rita Khadka (Nepal) amongst others.

E-poster presentation Sessions:

In the E-poster presentations sessions, the young researchers and students got the opportunity to present their work. This session was organised on a parallel online zoom link. It was spread over both the days of Conference that is 24-25th March, 2021. It was conducted during all the five sessions of both the days. A total of 62 e-posters were only presented out of 130 e-posters due to time constrained. The sessions were chaired by eminent judges from the SAAP member countries. The sessions were very much enriching for all. The presenters of outstanding papers were awarded in each of the categories as. M.Sc.students, PhD students, MD students (Physiology) and Faculties.

Preconference Workshops : CME on 'Medical Education

Besides the main event, the pre-conference CME on 'medical education' and workshop on 'Recent advances in physiological techniques' were also organised successfully on 17th March, 2021 respectively. Eminent personalities from the field, namely Dr. M. Aslam, President SAAP, Dr. K. K. Deepak, AIIMS, New Delhi, Dr. G. K. Pal, JIIPMER, Puducherry and Dr. Rokeya Begum, President, BPS, Bangladesh, chaired the first session.

After the inauguration and welcome address, the perspective of the workshop was laid out by Dr. Robert G Carroll, Greenville, with his brief and enlightening speech on 'Aligning assessment with CBME objectives'. This was followed by an interesting session on 'Student Assessment: fail or pass for teachers in the system of Assessment' by Dr. Amarnath Karunanayake, Sri Lanka, where novel ideas on strengthening medical pedagogy were presented. Thereafter, Prof. Md. Ruhul Amin, Bangladesh, shared his experience from the South East Asian region on 'Conducting assessment for undergraduates,

The second session was chaired by another set of luminaries that included Dr. Savithri Wimalasekara, Secretary General, SAAP, Dr. Iqbal Alam, HIMSR, Dr. Farah

Khalique, UCMS, New Delhi and Dr. Prasun Priya Nayak, AIIMS, Jodhpur. This session commenced with an illuminating talk on 'Assessment of knowledge by constructing quality MCQs' by Prof. Samina Malik and Prof. Mahwish Arooj, University of Lahore, Pakistan, who gave impactful insights into designing multiple choice questions. The next lecture was of Prof. Bishnuhari Paudel, Nepal who shared his enriching thoughts on 'Assessment using long and short answer questions- advantages and disadvantages'. At the end of the second session of the workshop, Prof. Musharraf Husain, New Delhi elaborated on 'OSCE/OSPE in resource poor setting'.

The third and final session of the CME was chaired by Dr. Himani Ahluwalia, VMMC, New Delhi, Dr. Ramanjan Sinha, AIIMS Raipur and Dr. Bharti Bhandari, GIMS, Greater Noida, wherein Dr. Sabina Khan, New Delhi dwelled at length on the very topical subject on 'Online assessment- relevance in current scenario'. This was followed by an interesting talk on 'Blueprinting in assessment' by Dr. Aqsa Sheikh, New Delhi. The last workshop was 'Assessment of clinical skills', whose various aspects were elaborated in a lucid fashion by Dr. Lata Mullur, Dept. of Physiology, BLDE University, Vijayapura. The engaging and intellectually stimulating workshops were thereafter brought to aend by the valediction ceremony.

Workshops on the Day of Conference

Workshop on recent advances in Physiological Techniques was also conducted during Virtual Biennial SAAP VII & PSI Conference on 23rd March 2021.

The first session of this workshop was on ' Cardiovascular Autonomic Function Tests'. This session started with the lecture of Prof. Ashok Jaryal, AIIMS, New Delhi, India, who in a very well elaborated way explained the different autonomic function tests and also discussed its relevance in basic research and clinical practice.

In the following session, Dr. Bhawna Mattoo, HIMSR, India has delivered a very informative talk on the importance of animal experiments in physiology. This workshop was chaired by eminent researchers from the SAARC nations Prof Md. Aslam, Prof. A. K. Chandra, Prof. K. K. Das, Prof. Arunabha Ray, Prof. MangalaGunatillake and Prof. Ruhul Amin.

The most appealing points of this workshop session were the live demonstrations of cardiovascular autonomic functions tests and live demonstrations on animal experiments showing invasive blood pressure monitoring, non-invasive blood pressure monitoring, blood flow measurement and cardiac output measurement.

The conference highlighted the prospective of physiology. In the future; there is an expectation that physiological sciences will be translated into research that relates better to ordinary people and their everyday lives. Expanding upon the current data pool and need of new technologies that will lead to much greater use of virtual and 'document-oriented' data stores, as well as reconsideration of the way data is presented.

Notably, the success of the *'Virtual Biennial SAAP VII and PSI Conference 2021'* is attributed to the active engagement of the esteemed members of local organizing committee, the co-chairs, international committee members, speakers, delegates, and representatives of academia who attended the event.