

**Report of the Board of General Assembly – International Union of Physiological Sciences**  
**on**  
**Indian Council of Medical Research (ICMR) Workshop Series on**  
**Physiology Education Techniques 2018: IUPS Initiative**

The IUPS, a family of physiologists across the globe, has once more embarked on a challenging path to bring ‘*Physiology to the Centre Stage*’ through programmes such as the recently concluded workshop series on **Physiology Education Techniques 2018: IUPS Initiative** towards sensitizing young faculty members of India on three tools to best impart to their students the complexities and appreciation of physiological sciences in basic and applied fields.

The Workshop series was convened under the chairmanship of D. Ghosh, Professor Physiology at the All India Institute of Medical Sciences, New Delhi. D. Ghosh had initiated the planning of the workshops in late 2017 with the establishment of a Core Committee, the members of which were drawn from academic institutions in and around Delhi. The Advisory Committee members included J. Chan, President, IUPS; R. Carroll, Chair, IUPS Education Committee; J. Sengupta Chair and Susan Barman, Vice Chair, BGA; L. Peltonen, member, BGA and IUPS Education Committee; K. Das, Member, IUPS Education Committee among others. The Workshops were held at three apex centers of learning in India, the first at the All India Institute of Medical Sciences-Jodhpur, Rajasthan (3rd – 5th November), the second at the North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS) in Shillong, Meghalaya (10th – 12th November) and the final workshop at the Government Medical College, Kozhikode, Kerala (15th – 17th 2018). The Workshops were aimed to deliver novel tools in teaching the complexities of physiology to teachers of India.

D. Ghosh considered that the prime mover of the Physiology Education Workshops sponsored by the Indian Council of Medical Research (ICMR) was the Report, *Physiology – Current Trends and Future Challenges* presented by the BGA at the 38<sup>th</sup> IUPS Congress held in Rio de Janeiro. A group of physiologists in India took cognizance specifically of three out of seven recommendations of this Report:

*“Networks and working groups should be created, domestically and internationally, by IUPS and member societies to facilitate the exchange of knowledge and best practice in teaching and research” (Recommendation 2).*

*“Societies should continue the efforts of the IUPS Outreach Programme to increase support among physiologists for IUPS initiatives and furthering of the World Health Organization’s Health for All agenda” (Recommendation 3).*

*“Societies should develop resources to improve the teaching and learning of physiology, and to ensure graduates have a full appreciation of the complexities at all scales of physiological understanding” (Recommendation 5).*

D. Ghosh suggested that the spirit behind these recommendations bore the spirit of physiology *sans border* to release the large capacity of liberalism inherently present in the practice of

teaching-learning of physiological sciences because of its multi-dimensionality and scalability. This led him and his core group of physiologists in India to become the flag bearer of this IUPS initiative in India to which the IUPS and the ICMR provided all support.

The workshop series carried a common theme: To hold serious discourse on the theory and practice of infusing the interactive, evolutive and adaptive conditions in the teaching-learning of physiology at the three apex centers with the help of IUPS education experts and Indian experts. The workshop was conceived with a vision to improve the quality of physiology teaching by training the teachers of basic sciences, medicine, veterinary and dentistry through creating networks and working groups at national and international levels to facilitate the exchange of knowledge about best practices in physiology teaching. Considering that the primary role of a physiology teacher is to brainstorm, discuss, coach and facilitate student learning, attitude and aptitude, the aim of this workshop was to create awareness and 'hands on' experience about the true potentiality of Case Based Learning (CBL), Problem Based Learning (PBL) and Flipped Class Room (FCR) models amongst teachers as innovative tools for physiology education.

The three Workshops were attended by 72 delegates selected from different parts of India on the basis of their stated interest in learning new tools of physiology teaching. Each registered delegate arrived to their respective centers receiving relevant preparatory material. The programme at each of the three centers consisted of a daily plenary lecture covering CBL, PBL and FCR followed by small group 'hands on' training led by Resource Faculty of national and international experts, S. Barman and D. Chandran (AIIMS-New Delhi) for CBL, L. Peltonen and R. Sharma (Vardhaman Mahavir Medical College-Safdurjung Hospital, New Delhi) for PBL and S. Ghosh (International Medical University, Kuala Lumpur, Malaysia) and M. Bhattacharjee (Vardhaman Mahavir Medical College-Safdurjung Hospital, New Delhi) for FCR. The delegates were initiated into the small group interactions after completing a short Pre-Session Questionnaire based on the Workshop preparatory material and at the end of each session they provided feedbacks based on a Post-Session Questionnaire and a Session Assessment Questionnaire, and finally a General Feedback at the end of the Workshop.

Attached is the Brochure highlighting the congratulatory messages, abstracts of lectures and introduction to the Resource Faculty, members of the Core Organizing Committee and the Local Organizing Committee.

The Workshops were also attended by senior teachers from across India as Observers. The Observers present at AIIMS-Jodhpur were R. Sinha, Chair, Physiology at AIIMS-Raipur and K. P. Kalyanikutty, Chair, Physiology at GMC-Kozhikode; at NIGRIHMS-Shillong, M. Mandal, Chair, Physiology at the Banares Hindu University, Varanasi and J. Bhattacharya, Professor, Physiology at the KPC Medical College and Hospital, Kolkata, and at GMC-Kozhikode, S.C. Mahapatra, Chair, Physiology at the AIIMS- Bhubaneswar and P. Chandran, Associate Professor, Community Medicine, GMC-Kozhikode. The observers attended and interacted in all sessions and provided their written reports to the Convenor and to his team of Resource Faculty. The senior observers considered each Workshop had been carefully conceived and well planned with a team of national and international experts with the logistic and organizational support of

the local organizing committees delivered in an exemplary manner the course contents for CBL, PBL and FCR with due diligence and care to all participating delegates.

The Keynote lecture at the first Workshop held at the AIIMS-Jodhpur was delivered by J. Chan, President, IUPS in which she commented, “As one who has benefited from many talented teachers during my formative years as a physiologist, I cannot agree more with the idea that the best way to teach is to facilitate learning using innovative skills. Towards this end, I wish to offer my sincere thanks to all the invited scientific lecturers, the instructors, and the proctors for donating their time to inspire; and the students for their willingness to learn. I truly believe that the end result of this joint effort is unceasing thriving of physiology.”

The Invited Valedictory Lecture at the AIIMS-Jodhpur Workshop was delivered by S.H.H. Chan, Director, Institute for Translational Research in Biomedicine, Chang Gung Memorial Hospital, Kaohsiung, Taiwan who addressed the delegates and the gathering on “*How to Groom a Thriving Academic Through Education: Perspectives of a Senior Physiologist.*” His address covered four excellent cues: (1) the fitting attitude of an academic; (2) setting and accomplishing career goals; (3) how to meet the challenges of teaching, research and service; (4) the pros and cons of collaboration that was highly appreciated. T. Macknight, Co-founder, Director of Education, ADInstruments, Australia, discussed at the Workshop held at AIIMS-Jodhpur on how to turn students into active learners and lecturers into learning facilitators through his Invited Dinner Lecture “*What determines the physiology that students learn?*”

R. Carroll delivered the Keynote Lecture at the GMC-Kozhikode Workshop on “Placing the Student at the Center of Education.” He stressed upon “... *significant shift in the educational paradigm now emphasizes the student as the focus, with documentation of competencies (knowledge, skills and attitudes) marking progress of the learner through the educational system. This shift in emphasis requires staff to reconsider their approach to education. Rather than serving as the source of knowledge, facilitators now guide students as they develop their own skills in identifying and learning appropriate information.*”

In her Invited Lecture, J. Sengupta, Chair, BGA deliberated that “...The vision of the ICMR Workshop Series on Physiology Education Techniques lies in outreaching to each faculty participant the *joie de vivre* of imbibing novel teaching tools towards understanding physiology in an integrative manner. Time has come she stressed to re-design our teaching-learning tools to focus and embrace our understanding of physiology in health and disease through the viewport of Integrative Physiology.”

The Invited Lecture on “Ethical Teaching: A Needed Emphasis for Physiology Educators” in the Valedictory Session at the GMC-Kozhikode Workshop, K. Das deliberated upon the need to include ethical attitude as a part of the medical teaching to “incorporate attitude, understanding, behavior and professionalism which make a medical teacher ‘a role model for his/her student’.”

In his Valedictory Address, R. Carroll on the last day of the Workshop series in GMC Kozhikode concluded that this novel IUPS Education Model has led to the development of Competencies, Knowledge, Skills and Attitude in the Unique Series of Workshops. He opined that the delegates of these workshop series would be the Agents in schools and regions through Dissemination and

they may form Learning Community to allow Physiology to lead in the upcoming curricular reform slated for initiation in 2019 by the Medical Council of India (MCI).