

17th International Photodynamic Association World Congress 2019

by [Andrés García-Sampedro]

Edited by [Pilar Acedo]

The 17th biennial International Photodynamic Association (IPA) World Congress was held in Boston, USA (June 28 – July 4, 2019). During these days, more than 450 basic and clinical researchers from all over the globe met to discuss the biggest advances in photodynamic therapy (PDT) and photodiagnosis (PD), as well as to review the current status of the field and the future challenges. A total of 448 abstracts were submitted, 27 plenary talks, workshops and lectures were organized, with 185 oral presentations (29 sessions) and 192 poster presentations (2 poster sessions).

The congress was designed to cover the wide spectrum of applications that PDT can offer, ranging from cancer therapy, antimicrobial PDT, food safety, drug delivery and image-guided surgery, among others. An impressive number of talks (more than 200!) were delivered having a total of 29 different sessions, running in parallel in six all-equipped rooms. In addition to the talks, two poster sessions were also organized, and 220 posters were exhibited promoting scientific discussion.

The first day of the congress started with a PDT School, which provided a broad overview of key concepts and topics such as photosensitizers, photochemistry, photophysics and dosimetry, antimicrobial PDT, biological aspects of PDT and its clinical translation. After that, the Welcome Reception took place and attendees were able to socialize and greet some familiar faces of friends and international collaborators.

A Clinical Workshop on Neurosurgery opened the second day, chaired by Prof Brian W. Pogue (Dartmouth,

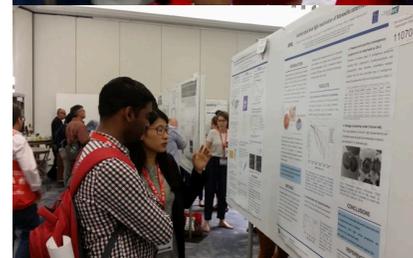
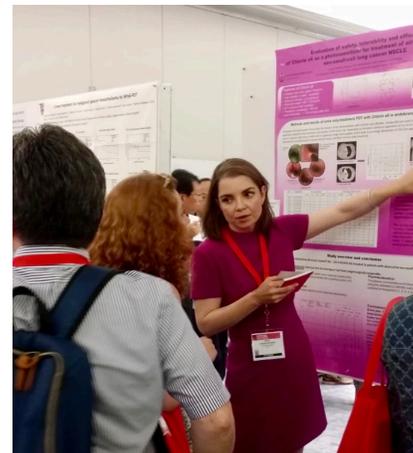
USA) and Prof Constantinos G. Hadjipanayis (Mount Sinai, USA).



Left to right: Colin Hopper (UCL, UK), Stephen G. Bown (UCL, UK), Tayyaba Hasan (Harvard, USA), Pilar Acedo (UCL, UK) and Andrés García (UCL, UK) at the Welcome Reception.

During this session, the importance of the use of 5-ALA in fluorescence-guided surgery of the brain was highlighted. This workshop was followed by the first oral sessions (1-3) comprising engaging talks focused on PDT in food safety and solid surface sterilizations, PDT in molecular and personalized medicine and nanotechnology for photodiagnosis. A fascinating Tom Dougherty Remembrance session made the start of the third day with a group of worldwide leaders in PDT looking back at the revolutionary impact that Prof Dougherty had in today's clinical PDT, especially for cancer therapy. After that, sessions 4 to 9 run in parallel covering PDT aspects such as photosensitizing systems, nanotechnology for PDT, PDT in urology, gynecology and the brain, capabilities of 5-ALA and intracellular mechanisms of PDT in cancer.

On Monday morning, Prof Rakesh Jain (Massachusetts General Hospital, USA) delighted the attendees with a plenary lecture on targeting the tumor microenvironment for cancer treatment. Dr Catherine Sabatos-Peyton (Novartis, USA) gave a fantastic second plenary lecture on



Researchers presenting their work at the poster session.

next-generation immune checkpoints towards deciphering the tumor microenvironment. Following that, sessions 10 to 17 included talks about PDT and immunotherapy, photochemical internalization (PCI) and photoactivated chemotherapy, among others. Lastly, the Global Funding Workshop brought together both basic and clinical researchers, at different stages of their careers, to give their best word of advice on how to get grant proposals funded. Prof Tayyaba Hasan (Harvard Medical School, USA) delighted all the participants of the workshop with her "Mentor's Word of Advice" talk.

Tuesday commenced with Prof Jack W. Szostak's (Harvard, USA) plenary lecture on photochemistry and the origin of life. It was followed by an engaging lecture by Dr Nicolas G. Loebel (Ondine, USA) on antimicrobial PDT. Then, three oral sessions (18-20) included remarkable

talks on PDT in head and neck cancer, photoactivation in drug delivery and mechanistic issues of antimicrobial PDT. The day concluded with a fantastic Gala Dinner and the subsequent Award Ceremony.

The challenges in clinical translation of macromolecular targeting of cancer using PDT were covered by Prof Daryl Drummond (Merrimack, USA) during the plenary lecture on Wednesday. After that, speakers with very different backgrounds addressed topics such as macromolecular targeted PDT, dosimetry and interstitial PDT, PDT in global health, low-cost systems for PDT light delivery, novel light sources and clinical models used in PDT research.

The closing session of the congress involved leaders in the field from North America, South America, Europe and Asia participating in a panel discussion on Challenges in translating PDT technologies and a way forward - a marvelous and key finishing touch for the 17th IPA World Congress.



Left to right: Stephen G. Bown (UCL, UK), Cristina Kurachi (University of São Paulo, Brazil), Lothar Lilge (University of Toronto, Canada), Serge Mordon (Inserm, France), Harubumi Kato (Tokyo Medical University, Japan) and Colin Hopper (UCL, UK) during the panel discussion 'Roadmap to Impact'.

It was a fantastic week full of outstanding quality sessions and an unbeatable opportunity to bring together top scientists and clinicians from every continent. Many new collaborations were built, and ideas shared. We are sure this congress helped to stimulate the cooperation between the PDT community. Thank you to the IPA 2019 Organizing Committee and to Prof Tayyaba Hasan!!