

Clare E. Elwell
Terence S. Leung
David K. Harrison *Editors*

Oxygen Transport to Tissue XXXVII

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Editors

Oxygen Transport to Tissue XXXVII

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Preface

The 42nd Annual Meeting of International Society on Oxygen Transport to Tissue was held at University College London (UCL) in the UK between 28th June and 3rd July 2014. This volume contains the papers submitted, reviewed and accepted from presentations at that meeting.

Clare Elwell, the President of ISOTT 2014, and her organising committee were particularly keen to represent a broad range of oxygen-related scientific topics at the meeting and to include contributions from researchers new to ISOTT. This resulted in a total of 146 submitted abstracts and attendance of 192 participants including 40 students.

UCL has a long tradition of multidisciplinary research in basic and clinical sciences and this was reflected in the contributions from local keynote speakers Nick Lane and Monty Mythen who between them took us from the origin of life to the heights of Everest. Keynote talks were also provided by Sir Moncada Salvador (University of Manchester, UK), Carsten Lundby (University of Zurich, Switzerland), Elizabeth Hillman (Columbia University, USA) and Can Ince (Erasmus University of Rotterdam, Holland). Submitted contributions were given as oral and poster presentations in sessions on cellular hypoxia, blood substitutes and oxygen therapeutics, oxygen transport in neonatal and adult critical care medicine, cancer metabolism, altitude, muscle oxygenation, multimodal imaging techniques, brain oxygenation, optical techniques for oxygen measurement and mathematical modelling of oxygen transport. The 2014 Kovach Lecture was delivered by Edwin Nemoto. Lunchtime sessions were presented on new advances in optical neuroimaging and the future of blood substitutes. We were also pleased to welcome Harriet Tuckey, who spoke to us about the scientific contribution of her father Griffin Pugh, to the 1953 Everest expedition.

The conference was supported by generous sponsorship from Hitachi High Tech, Hamamatsu Photonics, NanoBlood LLC, Seahorse Bioscience, Baker Ruskin, Gowerlabs, Moor Instruments, Swinco AG/Secret Training and Oxford Optonics.

The Annual General Meeting agreed to establish the “John Severinghaus Lecture” in honour and recognition of the significant contributions that John

Severinghaus has and continues to make to ISOTT and the field of oxygen transport. Some ISOTT members were lucky to share a memorable dinner with John and his colleagues at the Royal Society of Medicine during which extensive and stimulating discussions were held about those who discovered oxygen and many other topics.

This exciting scientific programme was matched by social events reflecting the vibrant central London location. ISOTT2014 took place on the UCL Bloomsbury campus in the heart of London providing excellent local venues for social events allowing scientific interaction in an informal atmosphere. The Welcome Reception was hosted in the UCL Cloisters complete with string quartet. On Sunday evening, we honoured UCL's spiritual father with a Great British Pub evening in the Jeremy Bentham pub. On Monday evening, we viewed a wide and varied range of zoological specimens at the local Grant Museum before enjoying a barbeque in the main UCL quad. The highlight social event was the Thames River Cruise Banquet which provided spectacular views of the city as well as music and dancing.

The meeting concluded with the Awards Ceremony during which the Melvin H. Knisely award was presented to David Highton, the Dietrich Lübbers award to Felix Scholkmann and the Britton Chance award to Anne Riemann. Bruley travel awards were presented to Nassim Nasser, Stefan Kleiser, Shinsuke Nirengi, Marie-Aline Neveu, Geraldine Depreter, Ben Jones and Takuya Osawa.

London, UK

Clare Elwell

Acknowledgements

As President of the 2014 Conference of the International Society on Oxygen Transport to Tissue, held from 28th June to 3rd July at University College London, UK, I would like to gratefully acknowledge the support of our sponsors:



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ISOTT Award Winners

The Melvin H. Knisely Award

The Melvin H. Knisely Award was established in 1983 to honor Dr. Knisely's accomplishments in the field of the transport of oxygen and other metabolites and anabolites in the human body. Over the years, he has inspired many young investigators and this award is to honor his enthusiasm for assisting and encouraging young scientists and engineers in various disciplines. The award is to acknowledge outstanding young investigators. This award was first presented during the banquet of the 1983 annual conference of ISOTT in Ruston, Louisiana. The award includes a Melvin H. Knisely plaque and a cash prize.

Melvin H. Knisely Award Recipients

1983	Antal G. Hudetz (Hungary)
1984	Andras Eke (Hungary)
1985	Nathan A. Bush (USA)
1986	Karlfried Groebe (Germany)
1987	Isumi Shibuya (Japan)
1988	Kyung A. Kang (Korea/USA)
1989	Sanja Batra (Canada)
1990	Stephen J. Cringle (Australia)
1991	Paul Okunieff (USA)
1992	Hans Degens (The Netherlands)
1993	David A. Benaron (USA)
1994	Koen van Rossem (Belgium)
1995	Clare E. Elwell (UK)
1996	Sergei A. Vinogradov (USA)
1997	Chris Cooper (UK)
1998	Martin Wolf (Switzerland)
1999	Huiping Wu (USA)