

Meet The Guest Editor



Dr. Trevor G Cooper

Major research interests: epididymal function, sperm maturation, post-testicular contraception

With a BSc in Physiology & Biochemistry (Reading University, UK 1970), Trevor Cooper worked for a PhD (1970–73) with the newly-arrived professor, Geoffrey Waites, on steroid transport in the testis. Dr Cooper was introduced to the epididymis by Marie-Claire Orgebin-Crist (Vanderbilt University, Nashville), working as a post-doc there (1974–1975), and in Boston (1976) as Ford Foundation Fellow with David Hamilton (Harvard Medical

School). He returned to Reading (1977–80), working with his future wife, who was doing a PhD with Geoff on luminal perfusion of the epididymis *in vivo*. For the next 30 years Drs Cooper & Yeung worked together in the UK, Germany and China.

Dr Cooper was a Wellcome Trust Fellow (1980–84) with David Woolley (Bristol Medical School), taking a 10-month sabbatical in 1983 as a WHO-sponsored U.N. Consultant at the National Research Institute for Family Planning, Beijing, China, promoting research and developing luminal perfusion *in vitro*. From 1985 he worked with Professor Nieschlag at the University of Münster, Germany: from 1985–1987 as a Max Planck Research Fellow at the Max Planck Society Clinical Research Unit for Reproductive Medicine; from 1988–1993 as a scientist at the Institute of Reproductive Medicine of the University; from 1994–2009 as a Senior Scientist and Head of the Andrology Laboratory at the Centre of Reproductive Medicine and Andrology.

During the latter period Dr Cooper studied various aspects of the epididymis and spermatozoa relating to male contraception in animals and men. Human epididymides provided epithelial cells, fluids and spermatozoa, which were studied in monolayer culture and by CASA and flow cytometry. Human semen was examined for osmolality during liquefaction and epididymal markers; methods for counting low numbers of spermatozoa and leukocytes were developed, and an External Quality Control system for semen analysis in Germany established. Observations on the nature of the infertility of *c-ros* knockout male mice (the failure of swollen, angulated spermatozoa to enter the oviduct) and their lack of an initial epididymal segment (with its osmolyte transporters) led to the suggestion that one aspect of sperm maturation is the gradual provision of osmolytes by the epididymis to spermatozoa during their maturation, enabling the mature cells to survive the osmotic challenges of ejaculation.

During retirement in Hong Kong, Trevor and Ching-Hei worked for three months per year in 2010, 2011 and 2012 as Consultants at the Shandong Stem Cell Engineering & Technology Research Centre, Yantai, China with Professor JY Li, where they promoted research and initiated studies on the reasons for epididymal resistance to cancer.

Since 1972 Dr Cooper has published over 250 manuscripts (92 as first author), and over 40 book chapters (23 as first author), together with one monograph on the epididymis (1986). He was the Editor-in-Chief of the 5th Edition, WHO laboratory manual for the examination and processing of human semen (2010), and coordinated the accumulation of data from the semen of fertile men that were used to provide the WHO semen manual's reference ranges. He and Ching-Hei were jointly awarded the British Andrology Society's Brian Setchell Medal in 2009.

Relation to AJA:

Dr Cooper's first article in the Asian Journal of Andrology (AJA) was in volume 1 (1999), and since then he has published 17 more papers there, including three Invited Commentaries, three Invited Editorials and two Invited Research highlights. He has been an editor of three of its Special Issues: with Joel Drevet and Barry Hinton on the 4th International Conference on the Epididymis (volume 9, 2007), with David Handelsman on Semen Analysis in 21st Century Medicine (volume 12, 2010) and on the 6th International Conference on the Epididymis (volume 17, 2015). He became a Deputy Editor-in-Chief of AJA in 2014.