



Meeting Report British Society for Gene Therapy Annual Conference 2008

On April 7-9th 2008 the British Society for Gene Therapy held its 5th annual conference at Heriot-Watt University on the outskirts of Edinburgh, UK. The society has a tradition of holding residential conferences at locations throughout the UK. This model allows maximum engagement between students and post doctoral researchers with senior scientists throughout the conference. The 3 day format is structured to include a public engagement day, an educational symposium, a plenary opening session followed by 8 sequential sessions covering important areas of gene and cell therapy research. Within the latter are invited speakers who are research leaders in their field, proffered abstracts of submitted material and the prestigious Fairbairn award symposium for the top 4 abstracts from young researchers.

This year, the public engagement day was attended by over 100 people, including many teenage pupils from local schools and included presentations on cell and gene therapy. The cell therapy discussion, introduced by Stephen Minger (Kings College London) included presentations on neuronal and cardiac therapeutic strategies. The equally well pitched gene therapy discussion was led by Steve Howe (UCL Institute of Child Health) and included scientific and ethical aspects relating to gene therapy for immunodeficiency and cystic fibrosis. This was complemented by smaller workshops to maximise discussion and engagement with attendees. Furthermore, the society also instigated a school outreach programme for the first time. This activity, led by Lizzie Burns, was exceptionally successful in its remit to engage and inspire school children about genetic manipulation. The society, which is a registered charity in the UK, maintains an obligation and desire to ensure the annual meeting includes such important activities.

The two hour education session which followed the open day targeted important areas related to gene therapy with talks on regulation of endogenous gene transcription (Michael Dye, Oxford), miRNA biology (Tamas Dalmay, Norwich), AAV vectors (Hildegard Büning, Cologne) and imaging gene therapy (Iain McNeish, Barts).

Speakers in the opening symposium provided perspectives on a range of different topics. Alan Smith (Genzyme) presented his experience and perspective of translational gene therapy in the commercial environment, a topic that was complemented by Doug Jolly (Tocagen, San Diego) later in the conference. Dusty Miller (Seattle) and Helen Sang (Roslin Institute) completed the day with detailed analysis of lung gene delivery and the use of lentivirus vectors for transgenesis in chickens, respectively. The latter supplied a highly visual analysis detailing the power of lentiviral vectors for generating transgenics with a range of purposes, including protein production in eggs.

The individual symposia this year were designed to provide focus on key areas at the forefront of gene therapy research. The schedule included symposia addressing gene therapy in the cardiovascular system, the lung, the eye, the central nervous system, cancer and immunodeficiency. A pleasing and integrated mixture of basic and clinical research was presented by leaders in their respective fields, reflecting widespread recognition of the importance of information flow from the laboratory to the clinic and back to the laboratory. For example, the fundamental scientific issues relating to the clinical translation of gene and cell therapy for inherited visual disorders were presented by Alberto Auricchio (Naples), Robin Ali and James Bainbridge (London). This included work on the development of AAV

vector technology and the procedures being developed for differentiation and engraftment of stem cells into the eye. Although the latter maybe some time away clinically, AAV gene therapy trials are very much underway in the UK and clinical data eagerly anticipated. The close interface of laboratory science and clinical studies was also apparent in the respiratory symposium, where Uta Griesenbach (London) and Carsten Rudolph (Munich) spoke about the challenges facing gene delivery to cystic fibrotic epithelia, including the relevance of animal model systems to the clinical situation. Equally, clinical translation of the science underpinning cancer gene and virotherapy was presented by Garth Cruickshank (Birmingham), David Eckland (Ark Therapeutics) and Kevin Harrington (London) discussing the various vectors and trials underway in this exciting area. Sandra Diebold (London) presented an insightful perspective on cellular inflammatory responses to the entry of viruses and nucleic acids, and how this could be used to advantage in vaccines. Cardiovascular disease was represented by excellent talks from Walter Koch (Jefferson) and Paolo Madeddu (Bristol) who talked about cardiac function and angiogenesis, respectively. Finally, a special session on vector pathogenesis, bringing together several leaders in the field (Adrian Thrasher, London; Jim Neil, Glasgow; and Ute Modlich, Hannover), at which we were pleased to see an excellent presentation by Samantha Ginn (Melbourne) who was awarded the BSGT/Australasian Travel Fellowship enabling her to come to the UK to attend the meeting.

From research abstracts submitted by young scientists the scientific organising committee selected the top four to be presented in the Fairbairn Award Symposium. This special session in the BSGT programme is dedicated to the memory of Lez Fairbairn, a very active BSGT founder member whose life was unfortunately cut short by a cardiovascular event in 2005. The prize session, sponsored by the Paterson Institute for Cancer Research, showed the tremendous strength of UK Gene Therapy Research. The winner, Veronique Bachy from the group of Linda Klavinskis (London) very elegantly presented her work on the development of novel cell-targeted adenovirus vaccines by polymer coating of adenovirus vectors.

On a scientific and social level, the residential theme of the meeting ensures many opportunities for informal interaction between scientists from diverse laboratories and disciplines. The poster session, as always, was vibrant and, with a glass of wine (or two), drifted into the conference dinner. In true Scottish tradition this was followed by Ceilidh dancing. This turned out to be even more vibrant than the poster session with almost all attendees taking to the dance floor, some willing, some dragged! Who said scientists couldn't dance?

The society is indebted to the scientific and local organising committee, the organising committee for the public engagement day (led by Tom Southgate and Renee Watson), Adrian Thrasher for the education programme and Rachel Mager and Hester Thorp for their exceptional skills that ensured the smooth running of the entire conference. Finally, we acknowledge the tremendous support of our sponsors which, this year, was led by Scottish Enterprise and included The Cystic Fibrosis Trust, Scientific Development and Bioethics Division of the Dept Health, British Heart Foundation, Cancer Research UK and Bioreliance.

Andrew H Baker, Chair, Scientific Organising Committee
Chris Boyd, Chair, Local Organising Committee
Len Seymour, President, BSGT

For more information on the society and its annual conference see www.bsqt.org