The CSATVB Scientific Meeting (Montréal; Oct 24-25, 2010): Celebrating 25 years of scientific communication and collegiality

Our 25th annual scientific meeting was held at the Palais de Congrès, Montréal, as a participating society within the Canadian Cardiovascular Congress. The meeting followed a similar format to those of recent years, that is, four Oral Sessions interspersed with three Symposia and three special lectures. Such a compact program entirely filled the two-day meeting and left this note-taking delegate exhausted at the end! I was pleasantly surprised to see a good attendance at Oral Session I (entitled 'Vascular Signalling') so early on a wet Monday morning. I was even more surprised and delighted to hear a 10-min presentation on the signaling properties of angiostatin on MMP-2 production in endothelial cells from Dr. Paul Jurasz (University of British Columbia). Angiostatin was the first natural product with strong antiangiogenic properties to be isolated and characterized by the late Dr. Judah Folkman and his group in 1994. Ten years ago, my research group, having long been interested in fibrinolysis, compared the antiangiogenic properties of the two glycoforms of angiostatin and measured their relative presence in intratumoral fluid relative to the turnovers of the plasminogen glycoforms *in vivo*. But already I digress dreadfully from the Montréal Meeting. Unfortunately, space does not allow me to give an account of this or the other three excellent oral sessions, or the poster sessions which were held at this meeting; I must confine my report to the Seminars and special lectures.

After Oral Session I, we heard a special lecture given by **Dr. Zhi-Shen Jiang**, Vice President of the Chinese Atherosclerosis Society and a CSATVB invited guest to the Meeting, who convincingly presented PCSK9 as a possible future target molecule to inhibit hypercholesterolemia and hence atherosclerosis. The first Symposium on Monday, entitled "microRNA regulation of cardiovascular signaling and development"

Dr. Scott Heximer

and co-organized and co-chaired by **Scott Heximer** and **Jason Fish**, was very well attended. Dr. Fish (University of Toronto) introduced us to miRNA, dicer, RISC and much more terminology to help us through the symposium. He then demonstrated the role played by miRNAs, using miR-218 signalling in endothelial cells as an example, in the development of the heart tube in drosophila and zebra fish embryos. **Dr. Nathan Lawson** (University of Massachusetts), the second speaker, explained his interests in the role of miRNAs in vascular development of the zebra fish embryo by introducing the advantages of the morpholino knockdown technique to highlight the roles of miRNAs in angiogenesis and endothelial cell sprouting. Finally, **Dr. William Sessa** (Yale University) discussed the effect of inhibiting dicer on the production of mature miRNAs in endothelial cells and SMCs in dicer-knock down mice, and subsequently on angiogenesis and vascular remodelling.

The second Symposium, “Vascular complications of diabetes” (organized and chaired by **Spencer Proctor**, University of Alberta) followed on Monday afternoon. **Dr. Mark Cooper** (Baker Heart Institute, Melbourne, Australia) lead off with a stimulating talk on the key pathways that may be targeted to reduce the high incidence of cardiovascular disease in diabetics, in particular the increased production of advanced glycation products and the damaging effects of oxidative stress. The potent effects of methylglyoxal on increasing protein glycation and its clear links to vascular disease, metabolic syndrome and diabetes were further stressed by the second speaker, **Dr. Lingyun Wu** (University of Saskatchewan). The last speaker, **Dr. David Cherney** (University of Toronto), emphasized the progressive nature of renal disease in type 1 diabetics which is generally caused by pre-glomerular dilatation coupled with arterial stiffness and endothelial dysfunction which lead to hyperfiltration,

Dr. Murrray Huff

and pointed out effect of various pharmacological agents that can control hyperfiltration. The sessions on Monday afternoon were concluded with Oral session II, entitled “Vascular and valvular diseases” which included a special lecture given by **Dr. Murray Huff** (University of Western Ontario) to commemorate the scientific legacy which was left by the late **Dr. Stewart Whitman** who died earlier in 2010. Dr. Huff explained that years earlier Stewart had been a very successful graduate student in his lab and gave several examples of Stewart’s extraordinary discoveries first as a graduate student and then later in his research career as a post doctoral fellow and as a faculty member at the University of Ottawa. Murray spoke movingly about Stewart as a researcher, a colleague and as a family man.

Appropriately a call for one minute of silence was honoured by the packed audience. Murray Huff then went on to explain some of his own important research findings over the years, many of which had directly or indirectly involved Stewart Whitman. In all, the lecture was a fitting and revealing tribute to Stewart Whitman, a courageous researcher and family man who died so young.

Dr. Philip Marsden and Dr. Avrum Gotlieb.

On Tuesday morning, I was up bright and early to co-chair Oral session III (“Micro- and macrovascular aspects of atherosclerosis”) with **Geoff Pickering**. This session was followed by the **CSATVB Scientific Excellence Award** lecture from the well-deserved 2010 recipient, **Dr. Philip Marsden** (University of Toronto). Dr. Marsden, clearly a speaker of great ability, spoke about his pioneering work on the epigenetic regulation of gene expression in endothelial cells. Dr. Marsden provided his good-sized audience with an insight into

cytosine methylation and post-translational acylation of certain Lys or Arg groups of histones, and the effects of these epigenetic changes on DNA transcription and consequently gene expression in endothelial and other types of cells. His studies on the regulation of eNOS activity in endothelial cells under shear stress or hypoxic conditions were used for good example. After his fine presentation, Dr. Marsden was awarded a cheque and a symbolic plaque to mark the occasion by **Avrum Gotlieb**.

The excitement of Dr. Marsden's lecture was followed by Oral Session IV ("Atherosclerosis and Metabolism"; co-chaired by **Jim Russell** and **Teik Ooi**). After lunch, we gathered to attend the **'25th Anniversary Symposium'** which was appropriately organized by **Bassam Nassar**, the President of CSATVB. Aptly named "Breakthroughs in atherosclerosis research and treatment", the Symposium was co-chaired by Bassam and Avrum Gotlieb , and featured three prominent speakers who were all accomplished clinician-scientists and senior members of the society. The lead speaker was **Dr. Jean Davignon** (IRCM, McGill University, Montreal), a co-founder of the society in the early 1980s (but see the interview with JD below), who spoke with depth and authority on the "Lessons learned from the statin era". Dr. Davignon led his packed audience through the early days of statin isolation and the characterization of a HMG CoA reductase inhibitor, the chances taken by the Merck company to bring this drug from bench to bedside, the positive and negative pleiotropic effects of variant statins, and finally to the present generation of statins. The presentation was a splendid capsule of a vast amount of information.

Dr. Jean Davignon

Dr. Rob Hegele

Dr. Rob Hegele (Robarts Institute, University of Western Ontario) followed with a presentation on "Human genetics and cardiometabolic risk". He introduced the audience to the benefits of new information gained from genome-wide association studies to evaluate the links between single-nucleotide polymorphisms and the onset of atherosclerosis. The profiles of common and rare variants observed in patients with various types of hypertriglyceridemia were used as examples. Dr. Hegele stressed the

expected advantages in the future of the availability of whole genome sequencing to forecast the incidence of atherosclerosis and for more clearly defining diagnosis and medication for individual patients. The last speaker was **Dr. Jean-Pierre Després** (Université Laval) who spoke on the topic: "Metabolic syndrome has a rich history but does it have a future". He mentioned the confusion that the term 'metabolic syndrome' had introduced to pathophysiologists and particularly to those in clinical practice. Whereas a diagnosis of metabolic syndrome may be predictive of an increased risk of type 2 diabetes, it is less a direct predictor of cardiovascular disease. Nevertheless, the label 'metabolic syndrome' is highly associated with a sedentary lifestyle and poor nutrition and efforts must be made to better define the cause of this condition. Dr. Després proposed that observing the increasing deposition of visceral and liver fat would be a more accurate marker of increasing cardiovascular disease rather than metabolic syndrome. For me, the 25th Anniversary Symposium was a great success and the large audience was not disappointed by three excellent, engaging expert speakers. Indeed all of the oral sessions, the poster sessions and the Symposia and special lectures contributed to another successful Meeting. 'Thank you' to all, the organizers (particularly **Scott Heximer,** Chair of the Education Committee), the speakers and poster presenters, and of course the audience.

Our 25th annual scientific meeting ended late in the afternoon on Tuesday with the annual general meeting; the main item on the agenda was the approval of a revised CSATVB constitution by the attending regular members. I'm pleased to report that our new constitution was approved unanimously. Au revoir Montréal! Our next annual scientific meeting will be held in Vancouver, October 23 – 25th, 2011.

Mark Hatton (*Editor*), **Mary Richardson** (*Assistant Editor*)