The symposium, which took place at the University of Edinburgh on 6–8 December 2011, began with Casey van Breemen who introduced the concept with the first identified cellular nanospace, the ‘sarcoplasmic reticulum’ – ‘plasma membrane’ junction. I provided supporting evidence for this and the concept of lysosome–sarcoplasmic reticulum junctions within a segregated cytoplasmic space calcium-dependent contraction. Mike Zhu added the Two–Pore Segment Channels, David Beech the TRP channels and Ian Parker the IP3 receptors. Nicola Fameli then blinded everybody with mathematical ‘proof’ that only nanospaces, and not microdomains, could support compartmentalised calcium signalling.

Graeme Nixon then escorted us through the plasticity of proliferating smooth muscle cells, ably assisted by John McCarron, Maria Gomez and Teresa Perez-Garcia. Casey then rounded things off with an integrated model of nanojunctions within smooth muscle – Martin Bootman suggested that “…smooth muscle may be more complicated than cardiac muscle…”

The oral and poster presentations were of the highest standard and added to what was a vibrant meeting. The prize winners were as follows:

**Oral Communication Competition**
Winner: Junxi Wu
University of Strathclyde

Runner up: Thomas Jepps
St George’s University of London

**Poster Competition**
Winner: Lynn McKeown
University of Leeds

Runner up: Oluseye Ogunbayo
University of Edinburgh

When the call for a Vascular and Smooth Muscle Themed Meeting was circulated, it seemed a great opportunity to propose a symposium based on the idea that processes as diverse as contraction, migration and gene expression without membrane–membrane junctions providing for segregated calcium signalling. The proposal was accepted and The Physiological Society’s Events Team seamlessly engaged and delivered what proved to be a very successful programme of events.

**Experimental Physiology**

**Joseph Bruton**
Joseph Bruton obtained his PhD on malignant hyperthermia at Trinity College Dublin in 1985. Following a spell studying shoulder pain in stroke patients, he switched to research on striated muscle using rodent models. Much of his research has focused on warm-up and muscle fatigue. Currently he is investigating the adaptations in muscle to a range of muscle diseases.

**Ulf Simonsen**
Ulf Simonsen is Professor of Pharmacology at the Department of Biomedicine, Aarhus University, Denmark.

He obtained a medical degree from Aarhus University and a PhD on cholinergic and endothelial regulation of coronary resistance circulation from the Universidad Complutense, Madrid, Spain in 1994. His research focuses on developing novel pharmacological approaches to improve endothelial function in cardiovascular disease. Endothelial dysfunction plays an important role in the development of pulmonary hypertension, which affects survival in patients with chronic obstructive pulmonary disease and interstitial lung disease. The aim is to target signal pathways in the lungs and heart involved in the pathophysiology of these diseases. Another focus is to improve endothelial and erectile function in patients with diabetes.

**Peying Fong**
Peying Fong earned baccalaureate and PhD degrees from Yale University and the University of California, San Francisco, respectively. After postdoctoral studies at the University of California, Berkeley, she expanded her repertoire as a Long Term scholar of the Human Frontiers Program Organization, working at the Center for Molecular Neurobiology, Hamburg. Peying has integrated structure–function analysis into many aspects of her research, which is broadly directed at understanding epithelial ion transport in health and in genetic and acquired diseases. Currently Assistant Professor at Kansas State University. Peying focuses primarily on functional interactions between ion channels and transporters in thyroid epithelium.

**Louise Robson**
Louise Robson is a senior lecturer in Biomedical Science at the University of Sheffield, moving from Leeds where she obtained her PhD and completed postdoctoral research in renal physiology. Louise’s current research looks at the processes that regulate CFTR, the Cl– channel mutated in cystic fibrosis. She has chaired the Education and Outreach Committee at The Society since 2008, and sat on Council and the Executive Committee. She teaches a wide range of physiology topics at Sheffield, across all levels, and is also passionate about taking physiology out to the public, lecturing for the Royal Institution and during National Science Week.

**Derek Bowie**
Derek Bowie studied at Strathclyde University in Scotland before completing a PhD in Neuropharmacology at the University of London. He then spent two years as an Eli-Lilly postdoctoral fellow at the Universities of Strasbourg and Zurich before moving to the USA for eight years to work at the National Institutes of Health and Emory University. He is currently a tenured Professor at McGill University and recipient of the Canada Research Chair award in Receptor Pharmacology. His research focuses on understanding the role of glutamate and GABA-A receptors in neuronal circuits.