

Final Report to ORD, NIH
FASEB Summer Research Conference on
Ion Channel Regulation
Snowmass Village, Colorado
June 9-14, 2007

The 2007 FASEB Conference on “Ion Channel Regulation” took place on June 9-14 at Snowmass Village, Colorado. The aim of this biannual meeting was to foster dialog among diverse scientists with interests beyond the topics most often highlighted at ion channel conferences (gating and structural basis of function). The format of the meeting featured a combination of formal, structured sessions and informal, spontaneous interactions between attendees during the 5 days in residence at the conference site. A bound volume containing abstracts of the posters, arranged by Session topic, was made available to all attendees at the beginning of the conference.

The major goals of the conference were met. Specifically, the meeting was attended by a diverse group of young investigators and seasoned experts, the presentations featured multidisciplinary approaches to the study of ion channel regulation by complex and simple signal cascades and ample time was allowed for informal interactions among the attendees. The Meeting was attended by a total of 89 participants: 70 scientists were from the USA and 19 were from the other countries (Australia, France, Italy, United Kingdom, Japan). These numbers were almost identical to the 2005 meeting. Among the participants were 27 female scientists, and 10 graduate students. There was one keynote lecture, 34 full-length presentations and 8 short oral poster presentations by the young investigators for a total of 42 invited speakers who participated in the 8 formal sessions plus one workshop. Thirty-six posters were presented in two poster sessions (two days each). Financial support was provided by FASEB, National Institutes of Health (Office of Rare Diseases, NIEHS, NIGMS) and the National Science Foundation.

Session topics included the molecular basis of mechanosensation, regulation of pacemaking in neurons, modulation of currents and transporters by fatty acids, molecular basis of store-operated Ca^{2+} channels, complex and ever-expanding field of TRPM channel regulation, channels as macromolecular complexes, calmodulin and role of alternative splicing in channel function, and untraditional roles for K^+ channels in vascular tone and energy homeostasis. As in the 2005 meeting, rare channelopathies remained a key focus area for many of the sessions

Overall, the 2007 FASEB Summer Research Conference on Ion Channel Regulation can be considered a success. The Conference provided a wonderful venue for the meeting of the minds of a diverse group of young and very experienced scientists who shared a common interest in how channels are regulated by diverse cellular and molecular mechanisms. In addition, the meeting fostered interaction and facilitated new collaborations between attendees. Dr. Lori Isom (University of Michigan) and Dr. John Adelman (Vollum Institute, Portland, OR) volunteered to co-Chair the Ion Channel Regulation Conference in 2009.

Michael Sanguinetti, Ph.D.
(University of Utah)

Victoria Bolotina, Ph.D.
(Boston University)

(co-organizers)