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Meeting Summary

359 16th FASEB Science Research Conference on Calcium and Cell Function: Calcium channels and signaling in health and disease. Murali Prakriya and Stefan Feske

Commentary

367 TMEM16 chloride channels are two-faced. H. Criss Hartzell and Jarred M. Whitlock

Research Articles

375 Independent activation of ion conduction pores in the double-barreled calcium-activated chloride channel TMEM16A. Novandy K. Lim, Andy K.M. Lam, and Raimund Dutzler

393 Independent activation of distinct pores in dimeric TMEM16A channels. Grace Jeng, Muskaan Aggarwal, Wei-Ping Yu, and Tsung-Yu Chen

405 The Hv1 proton channel responds to mechanical stimuli. Medha M. Pathak, Truc Tran, Liang Hong, Béla Joós, Catherine E. Morris, and Francesco Tombola

419 Alcohol modulation of BK channel gating depends on β subunit composition. Guruprasad Kuntamallappanavar and Alex M. Dopico

Cover picture: Ethanol increases (left) and decreases (right) BK (cbv1+wt β 2) channel activity at submicromolar and high micromolar calcium, respectively. These responses are shared by cbv1 \pm β 1, β 2-IR, β 3, and β 4. At 3–20 μ M calcium, however, cbv1 \pm β 3/ β 4 are activated by ethanol, whereas cbv1+ β 1/wt β 2/ β 2-IR are inhibited. Using the Horrigan–Aldrich allosteric model, our study reveals the gating mechanisms underlying the differential responses of β subunit-containing BK channels to ethanol (see Research Article by Kuntamallappanavar and Dopico, 419–440).