

RESEARCH NEWS

- e202012740 **How calcium helps $\alpha 7$ nicotinic acetylcholine receptors fulfill their potential**
Ben Short

VIEWPOINT

- e202012619 **Roles for the SNAP25 linker domain in the fusion pore and a dynamic plasma membrane SNARE “acceptor” complex**
Ronald W. Holz and Mary A. Bittner

ARTICLES

- e202012606 **Mechanism of calcium potentiation of the $\alpha 7$ nicotinic acetylcholine receptor**
Kathiresan Natarajan, Nuriya Mukhtasimova, Jeremías Corradi, Matías Lasala, Cecilia Bouzat, and Steven M. Sine
- e202012585 **Zn²⁺-induced changes in Ca_v2.3 channel function: An electrophysiological and modeling study**
Felix Neumaier, Serdar Alpdogan, Jürgen Hescheler, and Toni Schneider
- e201812239 **Cell-wide mapping of Orai1 channel activity reveals functional heterogeneity in STIM1-Orai1 puncta**
Joseph L. Dynes, Andriy V. Yeromin, and Michael D. Cahalan
- e202012595 **E1784K, the most common Brugada syndrome and long-QT syndrome type 3 mutant, disrupts sodium channel inactivation through two separate mechanisms**
Colin H. Peters, Abeline R. Watkins, Olivia L. Poirier, and Peter C. Ruben
- e202012596 **Rational design of a mutation to investigate the role of the brain protein TRIP8b in limiting the cAMP response of HCN channels in neurons**
Alessandro Porro, Anna Binda, Matteo Pisoni, Chiara Donadoni, Ilaria Rivolta, and Andrea Saponaro



ON THE COVER

Map of STIM1:Orai1 ratio from the basal surface of a transfected HEK 293A cell. Circles represent Orai1 channel clusters (puncta); STIM1:Orai1 ratio is color coded from blue (low) to red (high). Gradients in STIM1:Orai1 ratio, combined with optical and electrical recording of Orai1-GCaMP6f channel activity, reveal functional heterogeneity in Orai1 puncta and enable systematic study of STIM1-Orai1 channel states.

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