

General Physiology is the study of biological mechanisms through analytical investigations, which decipher the molecular and cellular mechanisms underlying biological function at all levels of organization.

The mission of the *Journal of General Physiology* is to publish articles that elucidate important biological, chemical, or physical mechanisms of broad physiological significance.

## **COMMENTARIES**

- 631 Amyloid ion channels: a porous argument or a thin excuse? David Eliezer
- 635 Extracellular blockade of potassium channels by TEA<sup>+</sup>: the tip of the iceberg? Benoît Roux

## **ARTICLES**

- **Soluble amyloid oligomers increase bilayer conductance by altering dielectric structure.** Yuri Sokolov, J. Ashot Kozak, Rakez Kayed, Alexandr Chanturiya, Charles Glabe, and James E. Hall
- A cation–π interaction between extracellular TEA and an aromatic residue in potassium channels. Christopher A. Ahern, Amy L. Eastwood, Henry A. Lester, Dennis A. Dougherty, and Richard Horn
- Dynamic inositol trisphosphate-mediated calcium signals within astrocytic endfeet underlie vasodilation of cerebral arterioles. Stephen V. Straub, Adrian D. Bonev, M. Keith Wilkerson, and Mark T. Nelson
- Turning cones off: the role of the 9-methyl group of retinal in red cones. Maureen E. Estevez, Petri Ala-Laurila, Rosalie K. Crouch, and M. Carter Cornwall
- **Constraints on voltage sensor movement in the** *Shaker* K<sup>+</sup> **channel.** Rachel B. Darman, Allison A. Ivy, Vina Ketty, and Robert O. Blaustein
- 701 Conformational dynamics of hSGLT1 during Na<sup>+</sup>/glucose cotransport. Donald D.F. Loo, Bruce A. Hirayama, Movses H. Karakossian, Anne-Kristine Meinild, and Ernest M. Wright
- 721 Secondary structure of a KCNE cytoplasmic domain. Jessica M. Rocheleau, Steven D. Gage, and William R. Kobertz
- 731 An S6 mutation in BK channels reveals β1 subunit effects on intrinsic and voltage-dependent gating.
  Bin Wang and Robert Brenner
- A dipeptidyl aminopeptidase–like protein remodels gating charge dynamics in Kv4.2 channels. Kevin Dougherty and Manuel Covarrubias
- 755 Correction

Cover picture: (Top) Neuronal activity induces regenerative calcium waves and local calcium release events in a perivascular astrocytic endfoot and processes abutting an arteriole in a cortical brain slice. (Bottom) Calcium release from spatially localized regions summates into a global calcium signal in an astrocytic endfoot (see article by Straub et al., 659–669).