

JGPP

The Journal of General Physiology
Vol 127 • No 4 • April 2006

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

355 Shedding light on cones. Barry E. Knox and Eduardo Solessio

ARTICLES

- 359 Physiological features of the S- and M-cone photoreceptors of wild-type mice from single-cell recordings. Sergei S. Nikonov, Roman Kholodenko, Janis Lem, and Edward N. Pugh Jr.
- 375 A single P-loop glutamate point mutation to either lysine or arginine switches the cation–anion selectivity of the CNGA2 channel. Wei Qu, Andrew J. Moorhouse, Meenak Chandra, Kerrie D. Pierce, Trevor M. Lewis, and Peter H. Barry
- 391 Voltage-dependent gating rearrangements in the intracellular T1–T1 interface of a K⁺ channel. Guangyu Wang and Manuel Covarrubias
- 401 Functional roles of charged amino acid residues on the wall of the cytoplasmic pore of Kir2.1. Yuichiro Fujiwara and Yoshihiro Kubo
- 421 TRPM7 channel is regulated by magnesium nucleotides via its kinase domain. Philippe Demeuse, Reinhold Penner, and Andrea Fleig
- 435 Roles of K149, G352, and H401 in the channel functions of CIC-0: testing the predictions from theoretical calculations. Xiao-Dong Zhang, Yong Li, Wei-Ping Yu, and Tsung-Yu Chen
- 449 Mechanism of β 4 subunit modulation of BK channels. Bin Wang, Brad S. Rothberg, and Robert Brenner

Cover picture: (Left) Confocal image of mouse retinal section revealing cones expressing EGFP, overlaid on DIC image. (Right) Traces show responses of several “inner segments” drawn together into a suction pipette; the outer segments were stimulated with 500-nm light steps of graded intensity and a superimposed 361-nm flash. The response to the UV flash originates in a cone (see article by Nikonov et al., 359–374).