

Literaturverzeichnis

- Adams, S. R., Kao, J. P. Y., Grynkiewicz, G., Minta, A., & Tsien, R. Y. (1988). Biologically useful chelators that release Ca^{2+} upon illumination. *J. Am. Chem. Soc.*, **110**, 3212–3220.
- Berridge, M. J. (1987). Inositol trisphosphate and diacylglycerol: two interacting second messengers. *Annu. Rev. Biochem.*, **56**, 159–193.
- Berridge, M. J. (1990). Calcium oscillations. *J. Biol. Chem.*, **265**, 9583–9586.
- Berridge, M. J. (1997). The AM and FM of calcium signalling. *Nature*, **386**, 759–760.
- Berridge, M. J., Bootman, M. D., & Roderick, H. L. (2003). Calcium signalling: dynamics, homeostasis and remodelling. *Nat. Rev. Mol. Cell. Biol.*, **4**, 517–529.
- Berridge, M. J. & Galione, A. (1988). Cytosolic calcium oscillators. *FASEB J.*, **2**, 3074–3082.
- Bezannilla, F. (2000). The voltage sensor in voltage-dependent ion channels. *Physiol. Rev.*, **80**, 555–592.
- Bezprozvanny, I., Watras, J., & Ehrlich, B. E. (1991). Bell-shaped calcium-response curves of InsP_3 - and calcium-gated channels from endoplasmic reticulum of cerebellum. *Nature*, **351**, 751–754.
- Bigay, J., Deterre, P., Pfister, C., & Chabre, M. (1987). Fluoride complexes of aluminium or beryllium act on G-proteins as reversibly bound analogues of the γ phosphate of GTP. *EMBO J.*, **6**, 2907–2913.
- Bouas-Laurent, H. & Dürr, H. (2001). Organic photochromism (IUPAC technical report). *Pure Appl. Chem.*, **73**, 639–665.
- Broad, L. M., Armstrong, D. L., & Putney Jr, J. W. (1999). Role of the inositol 1,4,5-trisphosphate receptor in Ca^{2+} feedback inhibition of calcium release-activated calcium current (I_{crac}). *J. Biol. Chem.*, **274**, 32881–32888.

LITERATURVERZEICHNIS

- Brock, R., Vamosi, G., Vereb, G., & Jovin, T. M. (1999). Rapid characterization of green fluorescent protein fusion proteins on the molecular and cellular level by fluorescence correlation microscopy. *Proc. Natl. Acad. Sci. USA*, **96**, 10123–10128.
- Brose, N. & Rosenmund, C. (2002). Move over protein kinase C, you've got company: alternative cellular effectors of diacylglycerol and phorbol esters. *J. Cell Sci.*, **115**, 4399–4411.
- Caterina, M. J., Schumacher, M. A., Tominaga, M., Rosen, T. A., Levine, J. D., & Julius, D. (1997). The capsaicin receptor: a heat-activated ion channel in the pain pathway. *Nature*, **389**, 861–824.
- Chuang, H., Prescott, E. D., Kong, H., Shields, S., Jordt, S.-E., Basbaum, A. I., Chao, M. V., & Julius, D. (2001). Bradykinin and nerve growth factor release the capsaicin receptor from PtdIns(4,5)P₂-mediated inhibition. *Nature*, **411**, 957–962.
- Clapham, D. E. (2003). TRP channels as cellular sensors. *Nature*, **426**, 517–523.
- Cobbold, P., Cuthbertson, R., & Woods, N. (1988). The generation of repetitive free calcium transients in a hormone-stimulated hepatocyte. In Nunez, J., Dumont, J., & Carafoli, E. (Eds.), *Proc. 12th Symp. Hormones and Cell Regulation*, Vol. 165, pp. 135–146. Colloque INSERM, Montrouge, France: John Libbey Eurotext Ltd.
- Conesa-Zamora, P., Lopez-Andreo, M. J., Gómez-Fernández, J. C., & Corbalán-García, S. (2001). Identification of the phosphatidylserine binding site in the C2 domain that is important for PKC α activation and in vivo cell localization. *Biochemistry*, **40**, 13898–13905.
- Corbalán-García, S., Rodríguez-Alfaro, J. A., & Gómez-Fernández, J. C. (1999). Determination of the calcium-binding sites of the C2 domain of protein kinase C α that are critical for its translocation to the plasma membrane. *Biochem. J.*, **337**, 513–521.
- Cubitt, A. B., Heim, R., Adams, S. R., Boyd, A. E., Gross, L. A., & Tsien, R. Y. (1995). Understanding, improving and using green fluorescent proteins. *Trends Biochem. Sci.*, **20**, 448–455.
- Dale, L. B., Babwah, A. V., Bhattacharya, M., Kelvin, D. J., & Ferguson, S. S. G. (2001). Spatial-temporal patterning of metabotropic glutamate receptor-mediated inositol 1,4,5-triphosphate, calcium, and protein kinase C oscillations. *J. Biol. Chem.*, **276**, 35900–35908.
- Dickson, R. M., Cubitt, A. B., Tsien, R. Y., & Moerner, W. E. (1997). On/off blinking and switching behaviour of single molecules of green fluorescent protein. *Nature*, **388**, 355–358.

LITERATURVERZEICHNIS

- Dolmetsch, R. M., Lewis, R. S., Goodnow, C. C., & Healy, J. L. (1997). Differential activation of transcription factors induced by Ca^{2+} response amplitude duration. *Nature*, **386**, 855–858.
- Fasolato, C. & Nilius, B. (1998). Store depletion triggers the calcium release-activated calcium current (I_{CRAC}) in macrovascular endothelial cells: a comparison with jurkat and embryonic kidney cell lines. *Pflügers Arch.*, **436**, 69–74.
- Feng, X., Becker, K. P., Stribling, S. D., Peters, K. G., & Hannun, Y. A. (2000). Regulation of receptor-mediated protein kinase C membrane trafficking by autophosphorylation. *J. Biol. Chem.*, **275**, 17024–17034.
- Feng, X. & Hannun, Y. A. (1998). An essential role for autophosphorylation in the dissociation of activated protein kinase C from the plasma membrane. *J. Biol. Chem.*, **273**, 26870–26874.
- Fontainhas, A. M., Obukhov, A. G., & Nowycky, M. C. (2005). Protein kinase $\text{C}\alpha$ modulates depolarization-evoked changes of intracellular Ca^{2+} concentration in a rat pheochromocytoma cell line. *Neuron*, **133**, 393–403.
- Gilman, A. G. (1987). G proteins: transducers of receptor-generated signals. *Annu. Rev. Biochem.*, **56**, 615–649.
- Griesbeck, O., Baird, G. S., Campbell, R. E., Zacharias, D. A., & Tsien, R. Y. (2001). Reducing the environmental sensitivity of yellow fluorescent protein. *J. Biol. Chem.*, **276**, 29188–29194.
- Grynkiewicz, G., Poenie, M., & Tsien, R. Y. (1985). A new generation of Ca^{2+} indicators with greatly improved fluorescence properties. *J. Biol. Chem.*, **260**, 3440–3450.
- Gu, X. & Spitzer, N. C. (1995). Distinct aspects of neuronal differentiation encoded by frequency of spontaneous Ca^{2+} transients. *Nature*, **375**, 784–787.
- Hajnóczky, G. & Thomas, A. P. (1997). Minimal requirements for calcium oscillations driven by the IP_3 receptor. *EMBO J.*, **16**, 3533–3543.
- Hamill, O. P., Marty, A., Neher, E., Sakmann, B., & Sigworth, F. J. (1981). Improved patch clamp techniques for high-resolution current recording from cells and cell-free membrane patches. *Pflügers Arch.*, **391**, 85–100.
- Harteneck, C., Plant, T. D., & Schultz, G. (2000). From worm to man: three subfamilies of TRP channels. *Trends Neurosci.*, **23**, 159–166.

LITERATURVERZEICHNIS

- Haupts, U., Maiti, S., Schwille, P., & Webb, W. W. (1998). Dynamics of fluorescence fluctuations in green fluorescent protein observed by fluorescence correlation spectroscopy. *Proc. Natl. Acad. Sci. USA*, **95**, 13573–13578.
- Heikal, A. A., Hess, S. T., Baird, G. S., Tsien, R. Y., & Webb, W. W. (2000). Molecular spectroscopy and dynamics of intrinsically fluorescent proteins: Coral red (dsRed) and yellow (Citrine). *Proc. Natl. Acad. Sci. USA*, **97**, 11996–12001.
- Hellwig, N., Plant, T. D., Janson, W., Schäfer, M., Schultz, G., & Schaefer, M. (2004). TRPV1 acts as a proton channel to induce acidification in nociceptive neurons. *J. Biol. Chem.*, **279**, 34553–34561.
- Hermosura, M. C., Monteilh-Zoller, M. K., Scharenberg, A. M., Penner, R., & Fleig, A. (2002). Dissociation of the store-operated calcium current I_{CRAC} and the Mg-nucleotide-regulated metal ion current MagNum. *J. Physiol.*, **539**, 445–458.
- Hilgeman, D. W., Feng, S., & Nasuhoglu, C. (2001). The complex and intriguing lives of PIP_2 with ion channels and transporters. *Sci. STKE*, **2001**, re19.
- Hirose, K., Kadowaki, S., Tanabe, M., Takeshima, H., & Iino, M. (1999). Spatiotemporal dynamics of inositol 1,4,5-trisphosphate that underlies complex Ca^{2+} mobilization patterns. *Science*, **284**, 1527–1530.
- Hofmann, T., Obukhof, A. G., Schaefer, M., Harteneck, C., Gudermann, T., & Schultz, G. (1999). Direct activation of human TRPC6 and TRPC3 channels by diacylglycerol. *Nature*, **397**, 259–263.
- Jung, S., Mühle, A., Schaefer, M., Strotmann, R., Schultz, G., & Plant, T. D. (2003). Lanthanides potentiate TRPC5 currents by an action at extracellular sites close to the pore mouth. *J. Biol. Chem.*, **278**, 3562–3571.
- Kavran, J. M., Klein, D. E., Lee, A., Falasca, M., Isakoff, S. J., Skolnik, E. Y., & Lemmon, M. A. (1998). Specificity and promiscuity in phosphoinositide binding by pleckstrin homology domains. *J. Biol. Chem.*, **273**, 30497–30508.
- Kazanietz, M. G. (2002). Novel “nonkinase” phorbol ester receptors: the C1 domain connection. *Mol. Pharmacol.*, **61**, 759–767.
- Kiselyov, K. & Muallem, S. (1999). Fatty acids, diacylglycerol, $InsP_3$ receptors and Ca^{2+} influx. *Trends Neurosci.*, **22**, 334–337.

LITERATURVERZEICHNIS

- Kouchi, Z., Fukami, K., Shikano, T., Oda, S., Nakamura, Y., Takenawa, T., & Miyazaki, S. (2004). Recombinant phospholipase C ζ has high Ca²⁺ sensitivity and induces Ca²⁺ oscillations in mouse eggs. *J. Biol. Chem.*, **279**, 10408–10412.
- Kozak, J. A., Kerschbaum, H. H., & Cahalan, M. D. (2002). Distinct properties of CRAC and MIC channels in RBL cells. *J. Gen. Physiol.*, **120**, 221–235.
- Krause, E., Schmid, A., González, A., & Schulz, I. (1999). Low cytoplasmic [Ca²⁺] activates I_{CRAC} independently of global Ca²⁺ store depletion in RBL-1 cells. *J. Biol. Chem.*, **274**, 36957–36962.
- Laemmli, U. K. (1970). Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature*, **5259**, 680–685.
- Lemmon, M. A., Ferguson, K. M., O'Brien, R., Sigler, P. B., & Schlessinger, J. (1995). Specific and high-affinity binding of inositol phosphates to an isolated pleckstrin homology domain. *Proc. Natl. Acad. Sci. USA*, **92**, 10472–10476.
- Lenz, J. C., Reusch, H. P., Albrecht, N., Schultz, G., & Schaefer, M. (2002). Ca²⁺-controlled competitive diacylglycerol binding of protein kinase C isoenzymes in living cells. *J. Cell Biol.*, **159**, 291–302.
- Li, W., Llopis, J., Whitney, M., Zlokarnik, G., & Tsien, R. Y. (1998). Cell-permeant caged InsP₃ ester shows that Ca²⁺ spike frequency can optimize gene expression. *Nature*, **392**, 936–941.
- Liu, B. & Quin, F. (2005). Functional control of cold- and menthol-sensitive TRPM8 ion channels by phosphatidylinositol 4,5-bisphosphate. *J. Neurosci.*, **25**, 1674–1681.
- Liu, D. & Liman, E. R. (2003). Intracellular Ca²⁺ and the phospholipid PIP₂ regulate the taste transduction ion channel TRPM5. *Proc. Natl. Acad. Sci. USA*, **100**, 15160–15165.
- Mak, D.-O. D., McBride, S., & Foskett, J. K. (1998). Inositol 1,4,5-tris-phosphate activation of inositol tris-phosphate receptor Ca²⁺ channel by ligand tuning of Ca²⁺ inhibition. *Proc. Natl. Acad. Sci. USA*, **95**, 15821–15825.
- McAnaney, T. B., Zeng, W., Doe, C. F. E., Bhanji, N., Wakelin, S., Pearson, D. S., Abbyad, P., Shi, X., Boxer, S. G., & Bagshaw, C. R. (2005). Protonation, photobleaching, and photoactivation of yellow fluorescent protein (YFP 10C): a unifying mechanism. *Biochemistry*, **44**, 5510–5524.

LITERATURVERZEICHNIS

- Mellor, H. & Parker, P. J. (1998). The extended protein kinase C superfamily. *Biochem. J.*, **332**, 281–292.
- Meyer, T., Holowka, D., & Stryer, L. (1988). Highly cooperative opening of calcium channels by inositol 1,4,5-trisphosphate. *Science*, **240**, 653–656.
- Mignen, O., Thompson, J. L., & Shuttleworth, T. J. (2001). Reciprocal regulation of capacitative and arachidonate-regulated noncapacitative Ca^{2+} entry pathways. *J. Biol. Chem.*, **276**, 35676–35683.
- Miyawaki, A. (2003). Visualization of the spatial and temporal dynamics of intracellular signaling. *Dev. Cell*, **4**, 295–305.
- Miyawaki, A. & Tsien, R. Y. (2000). Monitoring protein conformations and interactions by fluorescence resonance energy transfer between mutants of green fluorescent protein. *Methods Enzymol.*, **327**, 472–500.
- Moerner, W. E., Peterman, E. J. G., Brasselet, S., Kummer, S., & Dickson, R. M. (1999). Optical methods for exploring dynamics of single copies of green fluorescent protein. *Cytometry*, **36**, 232–238.
- Montell, C. (2001). Physiology, phylogeny, and functions of the TRP superfamily of cation channels. *Sci. STKE*, **2001**, re1.
- Nakahara, M., Shimosawa, M., Nakamura, Y., Irino, Y., Morita, M., Kudo, Y., & Fukami, K. (2005). A novel phospholipase C, PLC η 2, is a neuron-specific isozyme. *J. Biol. Chem.*, **280**, 29128–29134.
- Nalefski, E. A. & Newton, A. C. (2001). Membrane binding kinetics of protein kinase C β II mediated by the C2 domain. *Biochemistry*, **40**, 13216–13229.
- Nalefski, E. A., Wisner, M. A., & Chen, J. Z. (2001). C2 domains from different Ca^{2+} signaling pathways display functional and mechanistic diversity. *Biochemistry*, **40**, 3089–3100.
- Nash, M. S., Schell, M. J., Atkinson, P. J., Johnston, N. R., Nahorski, S. R., & Challiss, R. A. J. (2003). Determinants of metabotropic glutamate receptor-5-mediated Ca^{2+} and inositol 1,4,5-trisphosphate oscillation frequency. *J. Biol. Chem.*, **277**, 35947–35960.
- Nash, M. S., Young, K. W., Challiss, R. A. J., & Nahorski, S. R. (2001a). Intracellular signalling. receptor-specific messenger oscillations. *Nature*, **413**, 381–382.

LITERATURVERZEICHNIS

- Nash, M. S., Young, K. W., Willars, G. B., Challiss, R. A. J., & Nahorski, S. R. (2001b). Single-cell imaging of graded Ins(1,4,5)P₃ production following G-protein-coupled-receptor activation. *Biochem. J.*, **356**, 137–142.
- Neuhoff, V., Stamm, R., & Eibl, H. (1985). Clear background and highly sensitive protein staining with Coomassie Blue dyes in polyacrylamide gels: a systematic analysis. *Electrophoresis*, **9**, 427–448.
- Nilius, B., Talavera, K., Owsianik, G., Prenen, J., Droogmans, G., & Voets, T. (2005). Gating of TRP channels: a voltage connection. *J. Physiol.*, **567.1**, 35–44.
- Nishizuka, Y. (1992). Intracellular signaling by hydrolysis of phospholipids and activation of protein kinase C. *Science*, **258**, 607–614.
- Oancea, E. & Meyer, T. (1996). Reversible desensitization of inositol trisphosphate-induced calcium release provides a mechanism for repetitive calcium spikes. *J. Biol. Chem.*, **271**, 17253–17260.
- Oancea, E. & Meyer, T. (1998). Protein kinase C as a molecular machine for decoding calcium and diacylglycerol signals. *Cell*, **95**, 307–318.
- Obukhov, A. G. & Nowycky, M. C. (2005). A cytosolic residue mediates Mg²⁺ block and regulates inward current amplitude of a transient receptor potential channel. *J. Neurosci.*, **25**, 1234–1239.
- Okada, T., Inoue, R., Yamazaki, K., Maeda, A., Kurosaki, T., Yamakuni, T., Tanaka, I., Shimizu, S., Ikenaka, K., Imoto, K., & Mori, Y. (1999). Molecular and functional characterization of a novel mouse transient receptor potential protein homologue TRP7. *J. Biol. Chem.*, **274**, 27359–27370.
- Patterson, G. H. & Lippincott-Schwartz, J. (2002). A photoactivatable GFP for selective photolabeling of proteins and cells. *Science*, **297**, 1873–1877.
- Peterman, E. J. G., Brasselet, S., & Moerner, W. E. (1999). The fluorescence dynamics of single molecules of green fluorescent protein. *J. Phys. Chem. A*, **103**, 10553–10560.
- Prescott, E. D. & Julius, D. (2003). A modular PIP₂ binding site as a determinant of capsaicin receptor sensitivity. *Science*, **300**, 1284–1288.

LITERATURVERZEICHNIS

- Reits, E. A. J. & Neefjes, J. N. (2001). From fixed to FRAP: measuring protein mobility and activity in living cells. *Nat. Cell Biol.*, **3**, E145–E147.
- Rhee, S. G. (2001). Regulation of phosphoinositide-specific phospholipase C. *Annu. Rev. Biochem.*, **70**, 281–312.
- Rohács, T., Lopes, C. M. B., Michailidis, I., & Logothetis, D. E. (2005). PI(4,5)P₂ regulates the activation and desensitization of TRPM8 channels through the TRP domain. *Nat. Neurosci.*, **8**, 626–634.
- Runnels, L. W., Yue, L., & Clapham, D. C. (2002). The TRPM7 channel is inactivated by PIP₂ hydrolysis. *Nat. Cell Biol.*, **4**, 329–336.
- Sambrook, J. & Russel, D. W. (2001). *Molecular cloning: a laboratory manual* (3rd edition). Cold Spring Harbor Press, New York.
- Schaefer, M., Albrecht, N., Hofmann, T., Gudermann, T., & Schultz, G. (2001). Diffusion-limited translocation mechanism of protein kinase C isotypes. *FASEB J.*, **15**, 1634–1636.
- Schaefer, M., Plant, T. D., Obukhov, A. G., Hofmann, T., Gudermann, T., & Schultz, G. (2000). Receptor-mediated regulation of the nonselective cation channels TRPC4 and TRPC5. *J. Biol. Chem.*, **275**, 1757–17526.
- Schaefer, M., Plant, T. D., Stresow, N., Albrecht, N., & Schultz, G. (2002). Functional differences between TRPC4 splice variants. *J. Biol. Chem.*, **277**, 3752–3759.
- Schmid, J. A., Scholze, P., Kudlacek, O., Freissmuth, M., Singer, E. A., & Sitte, H. H. (2001). Oligomerization of the human serotonin transporter and of the rat GABA transporter 1 visualized by fluorescence resonance energy transfer microscopy in living cells. *J. Biol. Chem.*, **267**, 3805–3810.
- Scholze, P., Freissmuth, M., & Sitte, H. H. (2002). Mutations within an intramembrane leucine heptad repeat disrupt oligomer formation of the rat GABA transporter 1. *J. Biol. Chem.*, **46**, 43682–43690.
- Schwille, P., Kummer, S., Heikal, A. A., Moerner, W. E., & Webb, W. W. (2000). Fluorescence correlation spectroscopy reveals fast optical excitation-driven intramolecular dynamics of yellow fluorescent proteins. *Proc. Natl. Acad. Sci. USA*, **97**, 151–156.

LITERATURVERZEICHNIS

- Sprague, B. L. & McNally, J. G. (2005). FRAP analysis of binding: proper and fitting. *Trends Cell Biol.*, **15**, 84–91.
- Stauffer, T. P., Ahn, S., & Meyer, T. (1998). Receptor-induced transient reduction in plasma membrane PtdIns(4,5)P₂ concentration monitored in living cells. *Curr. Biol.*, **8**, 343–346.
- Sternweis, P. C. & Gilman, A. G. (1982). Aluminium: a requirement for activation of the regulatory component of adenylate cyclase by fluoride. *Proc. Natl. Acad. Sci. USA*, **79**, 4888–4891.
- Suh, B.-C. & Hille, B. (2005). Regulation of ion channels by phosphatidylinositol 4,5-bisphosphate. *Curr. Opin. Neurobiol.*, **15**, 370–378.
- Tanimura, A., Nezu, A., Morita, T., Hashimoto, N., & Tojyo, Y. (2002). Interplay between calcium, diacylglycerol, and phosphorylation in the spatial and temporal regulation of PKC α -GFP. *J. Biol. Chem.*, **277**, 29054–29062.
- Teruel, M. N. & Meyer, T. (2002). Parallel single-cell monitoring of receptor-triggered membrane translocation of a calcium-sensing protein module. *Science*, **295**, 1910–1912.
- Truong, K. & Ikura, M. (2001). The use of FRET imaging microscopy to detect protein-protein interactions and protein conformational changes *in vivo*. *Curr. Opin. Struct. Biol.*, **11**, 573–578.
- Tsien, R. Y. (1998). The green fluorescent protein. *Annu. Rev. Biochem.*, **67**, 509–544.
- Tu, H., Wang, Z., & Bezprozvanny, I. (2005). Modulation of mammalian inositol 1,4,5-trisphosphate receptor isoforms by calcium: a role of calcium sensor region. *Biophys. J.*, **88**, 1056–1069.
- van Thor, J. J., Gensch, T., Hellingwerf, K. J., & Johnson, L. N. (2002). Phototransformation of green fluorescent protein with UV and visible light leads to decarboxylation of glutamate 222. *Nat. Struct. Biol.*, **9**, 37–41.
- Visentin, S. & Levi, G. (1998). Arachidonic acid-induced inhibition of microglial outward-rectifying K⁺ current. *Glia*, **22**, 1–10.
- Visser, N. V., Hink, M. A., Borst, J. W., van der Krogt, G. N. M., & Visser, A. J. W. G. (2002). Circular dichroism spectroscopy of fluorescent proteins. *FEBS Lett.*, **521**, 31–35.

LITERATURVERZEICHNIS

- Voets, T., Droogmans, G., Wissenbach, U., Janssens, A., Flockerzi, V., & Nilius, B. (2004). The principle of temperature-dependent gating in cold- and heat-sensitive TRP channels. *Nature*, **430**, 31–35.
- Voigt, P., Brock, C., Nürnberg, B., & Schaefer, M. (2005). Assigning functional domains within the p101 regulatory subunit of phosphoinositide 3-kinase γ . *J. Biol. Chem.*, **280**, 5121–5127.
- Várnai, P. & Balla, T. (1998). Visualization of phosphoinositides that bind pleckstrin homology domains: calcium- and agonist-induced dynamic changes and relationship to myo-[³H]inositol-labeled phosphoinositide pools. *J. Cell Biol.*, **143**, 501–510.
- Weiss, A. & Schlessinger, J. (1998). Switching signals on or off by receptor dimerization. *Cell*, **94**, 277–280.
- Woods, N. M., Cuthbertson, K. S., & Cobbold, P. H. (1986). Repetitive transient rises in cytoplasmic free calcium concentration in hormone-stimulated hepatocytes. *Nature*, **319**, 600–602.
- Yokoe, H. & Meyer, T. (1996). Spatial dynamics of GFP-tagged proteins investigated by local fluorescence enhancement. *Nat. Biotechnol.*, **14**, 1252–1256.
- Zaccolo, M. (2004). Use of chimeric fluorescent proteins and fluorescence resonance energy transfer to monitor cellular responses. *Circ Res.*, **94**, 866–873.
- Zhang, G., Kazanietz, M. G., Blumberg, P. M., & Hurley, J. H. (1995). Crystal structure of the cys2 activator-binding domain of protein kinase C δ in complex with phorbol ester. *Cell*, **81**, 917–924.
- Zhang, Z., Okawa, H., Wang, Y., & Liman, E. R. (2005). Phosphatidylinositol 4,5-bisphosphate rescues TRPM4 channels from desensitization. *J. Biol. Chem.*, **280**, 39185–39192.
- Zimmermann, T., Rietdorf, J., & Pepperkok, R. (2003). Spectral imaging and its applications in live cell microscopy. *FEBS Lett.*, **546**, 87–92.