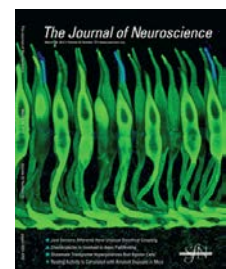


John O'Brien, Ph.D.

Selected recent publications:

1. **O'Brien, J.** The ever-changing electrical synapse. [Current Opinion in Neurobiology 29:64-72](#), 2014.
2. Li, H., Chuang, A.Z., and **O'Brien, J.** Regulation of photoreceptor gap junction phosphorylation by adenosine in zebrafish retina. [Vis. Neurosci. 31\(3\): 237-243](#), 2014. doi:[10.1017/S095252381300062X](#) Full Text
3. Rash, J.E., Curti, S., Davidson, K.G.V., Kamasawa, N., Nannapaneni, S., Flores, C.E., Yasumura, T., **O'Brien, J.**, Lynn, B.D., Nagy, J.I., and Pereda, A.E. Molecular and functional asymmetry at a vertebrate electrical synapse. [Neuron 79\(5\): 957-969](#), 2013. PMID: [PMC4020187](#). Full Text
4. Palacios-Prado, N., Hoge, G., Marandykina, A., Rimkute, L., Chapuis, S., Paulauskas, N., Skeberdis, V.A., **O'Brien, J.**, Pereda, A.E., Bennett, M.V.L., and Bukauskas, F.F. Intracellular magnesium-dependent modulation of gap junction channels formed by neuronal connexin36. [J. Neurosci. 33\(11\): 4741-4753](#), 2013. PMID: [PMC3635812](#). Full Text
5. Li, H., Zhang, Z., Blackburn, M.R., Wang, S.W., Ribelayga, C.P. and **O'Brien, J.** Adenosine and dopamine receptors co-regulate photoreceptor coupling via gap junction phosphorylation in mouse retina. [J. Neurosci. 33\(7\): 3135-3150](#), 2013. PMID: [PMC3711184](#). Full Text
6. Kothmann, W.W., Trexler, E.B., Whitaker, C.M., Li, W., Massey, S.C., and **O'Brien, J.** Nonsynaptic NMDA receptors mediate activity-dependent plasticity of gap junctional coupling in the AII amacrine cell network. [J. Neurosci. 32\(20\): 6747-6759](#), 2012. PMID: [PMC3367513](#). Full Text
7. Li, H., and O'Brien, J.: Regulation of gap junctional coupling in photoreceptors. In [Photoreceptors: Physiology, Types and Abnormalities](#). Eds. E. Akutagawa and K. Ozaki. Nova Science (Hauppauge, NY). pp 97-112, 2012. Full Text
8. O'Brien J.J., Chen, X., MacLeish, P.R., **O'Brien J.**, and Massey S.C. Photoreceptor Coupling mediated by Connexin 36 in the Primate Retina. [J. Neurosci. 32\(13\): 4675-4687](#), 2012. PMID: [PMC3335500](#) Full Text
9. Pan, F., Keung, J., Kim, I.-B., Snuggs, M.B., Mills, S.L., **O'Brien, J.**, and Massey, S.C. Connexin 57 is expressed by the axon terminal network of B-type horizontal cells in the rabbit retina. [J. Comp. Neurol. 520\(10\): 2256-2274](#), 2012. Full Text
10. Vila, A., Satoh, H., Rangel, C., Mills, S.L., Hoshi, H., **O'Brien, J.**, Marshak, D.R., MacLeish, P.R., and Marshak, D.W. Histamine receptors of cones and horizontal cells in old world monkey retinas. [J. Comp. Neurol. 520\(3\): 528-543](#), 2012. [PMCID: PMC3272842](#) Full Text
11. Li, H., Chuang, A.Z., and **O'Brien, J.** Photoreceptor coupling is controlled by connexin 35 phosphorylation in zebrafish retina. [J. Neurosci. 29\(48\): 15178-15186](#), 2009. [PMCID: PMC2909833](#) Full Text

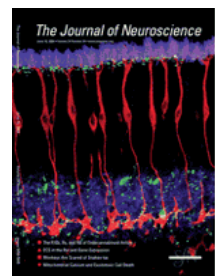


12. Kothmann, W.W., Massey, S.C., and **O'Brien, J.** Dopamine-stimulated dephosphorylation of connexin 36 mediates AII amacrine cell uncoupling. *J. Neurosci.* 29(47): 14903-14911, 2009. [PMCID: PMC2839935](#) Full Text

Older publications with full text:

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1. González-Nieto, D., Gómez-Hernández, J.M., Larrosa, B., Gutiérrez, C., Muñoz, M.D., Fasciani, I., **O'Brien, J.**, Zappalà, A., Cicirata, F., and Barrio, L.C. Regulation of neuronal connexin-36 channels by pH. *Proc. Nat. Acad. Sci. USA* 105: 17169-17174, 2008. [PMCID: PMC2579396](#) Full Text
2. Kothmann, W.W., X. Li, Burr, G.S., and **O'Brien, J.** Connexin35/36 is phosphorylated at regulatory sites in the retina. *Vis. Neurosci.* 24(3): 363-375, 2007. [PMCID: PMC2170900](#) Full Text
3. Cachope, R., Mackie, K., Triller, A., **O'Brien, J.**, and Pereda, A.E. Potentiation of electrical and chemical synaptic transmission mediated by endocannabinoids. *Neuron* 56: 1034-1047, 2007. [PMCID: PMC2770950](#) Full Text
4. O'Brien J.J., Li W., Pan, F., Keung, J., **O'Brien J.**, and Massey S.C. Coupling between A-type horizontal cells is mediated by connexin 50 gap junctions in the rabbit retina. *J. Neurosci.* 26(45): 11624-11636, 2006. Full Text
5. Hoshi, H., **O'Brien, J.**, and Mills, S.L. A novel fluorescent tracer for visualizing coupled cells in neural circuits of living tissue. *J. Histochem. Cytochem.* 54(10): 1169-1176, 2006. [PMCID: PMC1851887](#) Full Text
6. Patel, L.S., Mitchell, C.K., Dubinsky, W.P., and **O'Brien, J.** Regulation of gap junction coupling through the neuronal connexin Cx35 by nitric oxide and cGMP. *Cell Commun. Adhes.* 13(1-2): 41-54, 2006. [PMCID: PMC2189984](#) Full Text
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8. Ouyang, X., Winbow, V.M., Patel, L.S., Burr, G.S., Mitchell, C.K., and **O'Brien, J.** Protein kinase A mediates reversible regulation of electrical synapses containing connexin35 through a complex pathway. *Mol. Brain Res.* 135(1-2): 1-11, 2005. [PMCID: PMC2212611](#) Full Text
9. **O'Brien, J.**, Nguyen, H.B., and Mills, S.L. Cone photoreceptors in bass retina use two connexins to mediate electrical coupling. *J. Neurosci.* 24(24): 5632-5642, 2004. [PMCID: PMC2222551](#) Full Text
10. Pereda, A., **O'Brien, J.**, Nagy, J.I., Bukauskas, F., Davidson, K.G.V., Yasumura, T., and Rash, J.E. Connexin35 mediates electrical transmission at mixed synapses on Mauthner cells. *J. Neurosci.* 23(20): 7489-7503, 2003. [PMCID: PMC1805790](#) Full Text
11. Pereda, A., **O'Brien, J.**, Nagy, J.I., Smith, F., Bukauskas, F., Davidson, K.G.V., Kamasawa, N., Yasumura, T., and Rash, J.E. Short-range functional interaction between connexin35 and



neighboring chemical synapses. *Cell Commun. Adhes.* 10: 419-423, 2003. [PMCID: PMC1803252](#) Full Text

12. Li, C., Ding, X.-Q., **O'Brien, J.**, Al-Ubaidi, M.R. and Naash, M.I. Molecular characterization of the skate peripherin/*rds* gene: relationship to its orthologues and paralogues. *Invest. Ophthalm. Vis. Sci.* 44(6): 2433-2441, 2003. Full Text
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14. White, T.W., Deans, M.R., **O'Brien, J.**, Al-Ubaidi, M.R., Goodenough, D.A., Ripps, H., and Bruzzone, R.: Functional characteristics of skate connexin35, a member of the γ subfamily of connexins expressed in the vertebrate retina. *Eur. J. Neurosci.* 11(6): 1883-1890, 1999. Full Text
15. **O'Brien, J.**, Bruzzone, R., White, T.W., Al-Ubaidi, M.R., and Ripps, H.: Cloning and expression of two related connexins from the perch retina define a new subgroup of the connexin family. *J. Neurosci.* 18 (19): 7625-7637, 1998. Full Text
16. Desbruyères, D., Chevalloné, P., Alayse, A.-M., Jollivet, D., Lallier, F.H., Jouin-Toulmond, C., Zal, F., Sarradin, P.-M., Cosson, R., Caprais, J.-C., Arndt, C., **O'Brien, J.**, Guezennec, J., Hourdez, S., Riso, R., Gaill, F., Laubier, L., Toulmond, A.: Biology and ecology of the "Pompeii worm" (*Alvinella pompejana* Desbruyères and Laubier), a normal dweller of an extreme deep-sea environment: A synthesis of current knowledge and recent developments. *Deep-Sea Res. II* 45: 383-422, 1998. Full Text
17. **O'Brien, J.**, Ripps, H., and Al-Ubaidi, M.R.: Molecular cloning of a rod opsin cDNA from the skate retina. *Gene* 193: 141-150, 1997. Full Text
18. **O'Brien, J.**, and Block, B.A.: Effects of calcium on oxidative phosphorylation in mitochondria from the thermogenic organ of billfishes. *J. Exp. Biol.* 199(12): 2679-2687, 1996. Full Text
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21. Block, B.A., **O'Brien, J.**, and Meissner, G.: Characterization of the sarcoplasmic reticulum proteins in the thermogenic muscles of fish. *J. Cell Biol.* 127(5): 1275-1288, 1994. [PMCID: PMC2120256](#) Full Text
22. **O'Brien, J.**, Meissner, G., and Block, B.A.: The fastest contracting skeletal muscles of non-mammalian vertebrates express only one isoform of the ryanodine receptor. *Biophys. J.* 65(12): 2418-2427, 1993. [PMCID: PMC1225982](#) Full Text

23. Dahlhoff, E., **O'Brien, J.**, Somero, G.N., and Vetter, R.D.: Temperature effects on mitochondria from hydrothermal vent invertebrates: evidence for adaptation to elevated and variable habitat temperatures. *Physiol. Zool.* *64(6)*: 1490-1508, 1991. Full Text
24. **O'Brien, J.**, Dahlhoff, E., and Somero, G.N.: Thermal resistance of mitochondrial respiration: hydrophobic interactions of membrane proteins may limit thermal tolerance. *Physiol. Zool.* *64(6)*: 1509-1526, 1991. Full Text
25. **O'Brien, J.**, and Vetter, R.D.: Production of thiosulphate during sulphide oxidation by mitochondria of the symbiont-containing bivalve *Solemya reidi*. [*J. Exp. Biol.* *149*: 133-148](#), 1990. Full Text