

**John Marshall, Ph.D.**  
**Publications**

**Chapters in books:**

**Marshall, J.**, David, J.A. Darlison, M. G. and Barnard, E.A. (1989). Pharmacology, cloning and expression of insect nicotinic acetylcholine receptors. In: *Nicotinic Acetylcholine Receptors in the Nervous System*. Clementi, F., Gotti, C., and Sher, E., eds). NATO ASI Series, H, Vol. 25, pp. 257-281.

Barnard, E.A., Darlison, M.G., **Marshall, J.** and Sattelle, D.B. (1989) Structural characteristics of cation and anion channels operated by agonists. In: *Ion Transport*. (Keeling, D. and Benham, C., eds). Academic Press, pp. 159-176.

Barnard EA, Darlinson MG, Harvey R, **Marshall J**, Moss SJ, Sattelle DB, Smart TG, Vreugdenhil E. Cloned genes for ligand-operated ion channels and their expression in vitro. *Adv Second Messenger Phosphoprotein Res.* 1990;24:20-9.

**Marshall, J.**, Barnard, E.A. and Sattelle, D.B. (1991). The cloning and expression in *Xenopus* oocytes of an insect nicotinic acetylcholine receptor  $\alpha$  subunit. In: *Molecular Insect Science*. (Hagedorn, H. and Law, J.H., eds). pp. 67-75.

Sattelle, D.B., **Marshall, J.** (1991). GABA and L-glutamate receptors of the insect nervous tissue. In: *Transmitter Amino Acid Receptors: Structures, Transduction and Models for Drug Development*. (Costa, E., ed) Raven Press. pp. 80-101.

Blair, L.A.C., K.K. Bence and **J. Marshall**. (1998) The jellyfish green fluorescent protein: a tool for studying ion channels and second messenger signalling in neurons. *Meth. Enzymol.*, **302**, 213-25.

Blair, L.A.C., K.K. Bence and **J. Marshall**. (2000) GFP in the Study of Neuronal Signalling Pathways. *Current Protocols Neurosci.*, vol. 5.15.

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Auld, V., Goldin, A.L., Kraft, D.S., **Marshall, J.**, Dunn, J.M., Catterall, W.A., Lester, H.A., Davidson, N. and Dunn, R.J. (1988). A rat brain  $\text{Na}^+$  channel  $\alpha$  subunit with novel gating properties. *Neuron* **1**, 449-1.

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**Marshall J.**, Darlison M. G., Lunt G.G. and Barnard E.A. (1988) Cloning of putative nicotinic acetylcholine receptor genes from the locust. *Biochem Soc Trans.* 1988

Jackson, R.T., Blair, L.A.C., **Marshall, J.**, Goedert, M. and Hanley, M.R. (1988). Mas oncogene is an angiotensin receptor. *Nature* **335**, 437-40.

Swanson, R., **Marshall, J.**, Smith, J.S., Williams, J.B., Boyle, M.B., Folander, K., Luneau, C.J., Antanavage, J., Oliva, C., Buhrow, S.A., Bennett, C., Stein, R.B. and Kaczmarek, L.K. (1990). Cloning and expression of cDNA and genomic clones encoding three delayed rectifier potassium channels in rat brain. *Neuron* **4**, 929-939.

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**Marshall, J.**, Martin, K.A., Picciotto, M., Hockfield, S., Nairn, A.C. and Kaczmarek, L.K. (1991). Identification and localization of a dogfish homolog of human cystic fibrosis transmembrane conductance regulator. *J. Biol. Chem.* **266**, 22749-54.

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- Moss, G.W.J., **Marshall, J.**, Morabito, M., Howe, J.R. and Moczydowski, E.G. (1996) An Evolutionarily Conserved Binding Site for Serine Proteinase Inhibitors in Large Conductance Calcium-Activated Potassium Channels. *Biochemistry* **35**, 16024-16035.
- Blair, L.A.C. and **Marshall, J.** (1997) IGF-1 modulates N- and L- calcium channels in a PI 3-kinase-dependent manner. *Neuron* **19**, 421-429.
- Blair, L.A.C., K.K. Bence and **J. Marshall**. (1998) The jellyfish green fluorescent protein: a tool for studying ion channels and second messenger signalling in neurons. *Meth.Enzymol.*, **302**, 213-25.
- Garcia, E.P., Mehta, S., Blair, L.A.C., Wells, D.G., Shang, J., Fukushima. T., Fallon, J.R., Garner, C.C., and **Marshall, J.** (1998) SAP90 binds and clusters kainate receptors causing incomplete desensitization. *Neuron* **21**, 727-39.
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- Mehta, S., Wu, H., Garner, C.C., and **Marshall, J** (2001) Intramolecular interactions regulate SAP97 binding to kainate receptors. *J. Biol. Chem.* **276**: 16092-16099.
- Piserchio, A., Pellegrini, M., Mehta, S., Blackman, S.M., Garcia, E.P., **Marshall, J.**, and Mierke, D.F (2002) Structural Characterization of the Intermolecular Interaction of SAP90 with the GluR6-subunit of Kainate Receptors *J. Biol. Chem.* **277**: 6967-6973.

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Piserchio, A., Spaller, M., **Marshall, J.**, and Mierke, D.F (2004) Targeting specific PDZ domains of PSD-95: Structural basis for enhanced affinity and enzymatic stability of a cyclic peptide Chemistry&Biology 11, 468-473.

### **Non Refereed Journal Articles:**

Barnard EA, Darlinson MG, Harvey R, **Marshall J**, Moss SJ, Sattelle DB, Smart TG, Vreugdenhil E. Cloned genes for ligand-operated ion channels and their expression in vitro. *Adv Second Messenger Phosphoprotein Res.* 1990;24:20-9.

### **Selected Abstracts:**

Blair, L.A.C. and **J. Marshall.** (1996) Rapid modulation of N- and L-calcium channels in cerebellar granule neurons by insulin-like growth factor-1 is dependent on TK activation of PI 3-kinase. *Neurosci. Abstr.* 22, 712.

**Marshall, J.** (1996) Rapid modulation of N- and L-calcium channels in cerebellar granule neurons by insulin-like growth factor-1 is dependent on TK activation of PI 3-kinase. *New England Pharmacology Meeting.*

Bence, K.K., M.G. Rioult, O.S. Andersen, M.F. Bear, L.A.C. Blair and **J. Marshall.** (1997) Functional localization of insulin-like growth factor-1 receptors and IGF-1-sensitive calcium channels in rat cerebellar granule neurons. *Neurosci. Abstr.* 23, 1185.

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Kumaresan, V. and **J. Marshall** (2001) Modulation of kainate receptors by neuronal activity and implications for excitotoxicity. *New England Pharmacology Meeting*.

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