

## **Literature About the npi Drug Application Instruments MVCS Iontophoresis, and PDES / DAD / OctaFlow Pressure Systems**

### *Iontophoresis and drug application during single electrode voltage clamp experiments*

- ❑ Richter, D.W., Pierrefiche, O., Lalley, P.M. and Polder, H.R. (1996) Voltage-clamp analysis of neurons within deep layers of the brain. *J. Neurosci. Methods* 67:121-131.

### *IONTOPHORESIS*

#### *General methods*

- ❑ Brecht, M., Fee, M. S., Garaschuk, O., Helmchen, F., Margrie, T. W., Svoboda, K., & Osten, P. (2004). Novel approaches to monitor and manipulate single neurons in vivo. *Journal of Neuroscience* **24**, 9223-9227.
- ❑ Lalley, P.M. (1999) Microiontophoresis and Pressure Ejection, in: U. Windhorst, and H. Johansson (eds.) *Modern Techniques in Neuroscience Research*, Springer, Berlin Heidelberg, New York
- ❑ Purves, R.D. (1981) *Microelectrode Methods for Intracellular Recording and Ionophoresis*. Academic Press London
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#### *General*

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- ❑ Brustein, E., Marandi, N., Kovalchuk, Y., Drapeau, P., & Konnerth, A. (2003). "In vivo" monitoring of neuronal network activity in zebrafish by two-photon Ca(2+) imaging. *Pflugers Arch.* **446**, 766-773.
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- ❑ Detsch, O., Kochs, E., Siemers, M., Bromm, B., & Vahle-Hinz, C. (2002). Differential effects of isoflurane on excitatory and inhibitory synaptic inputs to thalamic neurones in vivo. *Br.J.Anaesth.* **89**, 294-300.
- ❑ Durand, G. M., Marandi, N., Herberger, S. D., Blum, R., & Konnerth, A. (2006). Quantitative single-cell RT-PCR and Ca(2+) imaging in brain slices. *Pflugers Arch.* **451**, 716-726.

- ❑ Heim, N., Garaschuk, O., Friedrich, M. W., Mank, M., Milos, R. I., Kovalchuk, Y., Konnerth, A., & Griesbeck, O. (2007). Improved calcium imaging in transgenic mice expressing a troponin C-based biosensor. *Nat.Methods*. **4**, 127-129.
- ❑ Milenkovic, I., Rinke, I., Witte, M., Dietz, B., & Rubsamen, R. (2009). P2 receptor-mediated signaling in spherical bushy cells of the mammalian cochlear nucleus. *Journal of Neurophysiology*
- ❑ Pfeiffer, K., Panek, I., Hoyer, U., French, A. S., & Torkkeli, P. H. (2009). Random stimulation of spider mechanosensory neurons reveals long-lasting excitation by GABA and muscimol. *J.Neurophysiol.* **101**, 54-66.
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#### *High voltage (HVTR-150)*

- ❑ Pecka, M., Brand, A., Behrend, O., & Grothe, B. (2008). Interaural time difference processing in the mammalian medial superior olive: the role of glycinergic inhibition. *Journal of Neuroscience* **28**, 6914-6925.

#### *Simulation of synaptic events / fast iontophoresis (MVCS-C System)*

- ❑ Behrends, J. C., Lambert, J. D. C. and K. Jensen (2002) Repetitive activation of postsynaptic GABAA receptors by rapid, focal agonist application onto intact rat striatal neurons in vitro, *Pflügers Arch* 443: 707–712
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## MICROINJECTION

### General Methods

- ❑ Hahnel, C. (1992) Quantitative Microinjection, in: H. Kettenmann and R. Grantyn (eds.) Practical Electrophysiological methods, Wiley-Liss, New York
- ❑ Hofmeier G, Lux HD (1981) The time course of intracellular free calcium and related electrical effects after injection of CaCl<sub>2</sub> into neurons of the snail, *Helix pomatia* Pflügers Arch. 391:242-251
- ❑ Lalley, P.M. (1999) Microiontophoresis and Pressure Ejection, in: U. Windhorst, and H. Johansson (eds) Modern Techniques in Neuroscience Research, Springer, Berlin Heidelberg, New York
- ❑ Misgeld, U (1992) Droplet application of Agonists, in: H. Kettenmann and R. Grantyn (eds.) Practical Electrophysiological methods, Wiley-Liss, New York

### General

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- ❑ Marandi, N., Konnerth, A., & Garaschuk, O. (2002). Two-photon chloride imaging in neurons of brain slices. *Pflugers Arch.* **445**, 357-365.

- ❑ Partridge, L.D., H.U. Zeilhofer and D. Swandulla (1998) Combined Whole-Cell and Single-Channel Current Measurement with Quantitative Ca<sup>2+</sup> Injection or Fura-2 Measurement of Ca<sup>2+</sup>, in P.M. Conn (Ed.) *Ion Channels Part B, Methods in Enzymology Vol. 293*, Academic Press SanDiego.
- ❑ Ponimaskin, E., Dumuis, A., Gaven, F., Barthet, G., Heine, M., Glebov, K., Richter, D. W., & Oppermann, M. (2005). Palmitoylation of the 5-Hydroxytryptamine<sub>4a</sub> Receptor Regulates Receptor Phosphorylation, Desensitization, and {beta}-Arrestin-Mediated Endocytosis. *Molecular Pharmacology* **67**, 1434-1443.
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#### *Microinjection into Oocytes*

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- ❑ Courjaret, R., Troger, M., & Deitmer, J. W. (2009). Suppression of GABA input by A1 adenosine receptor activation in rat cerebellar granule cells. *Neuroscience.* **162**, 946-958.
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#### *Focal drug application (DAD / OctaFlow Systems)*

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