

## Curriculum Vitae

Name: Richard A. Levis

Date of Birth: September 29, 1949

### Education:

- Michigan State University, B.A., 1971
- Michigan State University, B.Sc., Psychology, 1972
- University of California, Los Angeles, Ph.D., Physiology, 1981

### Professional Experience:

- Assistant, Department of Physiology, Rush Medical College, 1976-1981
- Instructor, Department of Physiology, Rush Medical College, 1981-1985
- Assistant Professor, Department of Physiology, Rush Medical College, 1986-1994
- Guest Senior Physicist, Brookhaven National Laboratory, 1992-2005
- Course Director for Physiology 451 (Medical Physiology), 1994-2005
- Associate Professor, Department of Molecular Biophysics and Physiology, 1994-2005

### Honors:

- Phi Kappa Phi
- Phi Beta Kappa
- Bachelor of Art received summa cum laude
- Bachelor of Science received summa cum laude
- National Science Foundation Graduate Fellowship
- Lamport Award from the Biophysical Society (1979)

### Thesis:

Levis, R.A. 1981. Patch and axial wire voltage clamp techniques and impedance measurements of cardiac Purkinje fibers. Ph.D. Dissertation, UCLA.

### Publications:

Mathias, R.T., Levis, R.A. and Eisenberg, R.S. 1980. Electrical models of excitation contraction coupling and charge movement in skeletal muscle. *J. Gen. Physiol.* 76:1-31.

Mathias, R.T., Levis, R.A. and Eisenberg, R.S. 1981. An alternative interpretation of charge movement in skeletal muscle. In: *Proceedings of the Symposium on Regulation of Muscle Contraction: Excitation-Contraction Coupling*, Academic Press, New York, pp. 39-52.

- Levis, R.A., Mathias, R.T. and Eisenberg, R.S. 1983. Electrical properties of sheep Purkinje strands. Electrical chemical potential in the clefts. *Biophys. J.* 44:225-248.
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- Niles, W.D., Levis, R.A. and Cohen, F.S. 1988. Planar bilayer membranes made from phospholipid monolayers form by a thinning process. *Biophys. J.* 53:327-335.
- Rae, J.L. and Levis, R.A. 1992. A method of exceptionally low noise single channel recordings. *Pflügers Arch.* 42:618-620.
- Shirokov, R., Levis, R.A., Shirokova, N. and Rios, E. 1992. Two classes of gating current from L-type Ca channel in guinea pig ventricular myocytes. *J. Gen. Physiol.* 99:863-895.
- Levis, R.A. and Rae, J.L. 1992. Constructing a patch clamp setup. In: *Methods in Enzymology* 207:14-66. L. Iverson and B. Rudy (Eds), Academic Press, San Diego, CA.
- Rae, J.L. and Levis, R.A. 1992. Glass technology for patch clamp electrodes. *Methods in Enzymology* 207:66-92. L. Iverson and B. Rudy (Eds), Academic Press, San Diego, CA.
- Ma, J., Anderson, R., Shirokov, R., Levis, R., Gonzalez, A., Karhanek, A., Hosey, M., Meissner, G. and Rios, E. 1993. Effects of perchlorate on the molecules of excitation-contraction coupling of skeletal and cardiac muscle. *J. Gen. Physiol.* 102:423-448.
- Levis, R.A. and Rae, J.L. 1993. The use of quartz patch pipettes for low noise single channel recording. *Biophys. J.* 65:1666-1677.
- Shirokov, R., Levis, R.A., Shirokova, N. and Rios, E. 1993.  $Ca^{2+}$ -dependent inactivation of cardiac L-type  $Ca^{2+}$  channels does not affect their voltage sensor. *J. Gen. Physiol.* 102:1005-1030.
- Hainsworth, A.H., Levis, R.A. and Eisenberg, R.S. 1994. Origins of open-channels noise in the large potassium channel of sarcoplasmic reticulum. *J. Gen. Physiol.* 104:857-883.

- Rae, J.L. and Levis, R.A. 1994. Patch clamping. In: Cell Biology: A Laboratory Handbook. J. Celis, Ed., Academic Press, pp. 355-363.
- Levis, R.A. and Rae, J.L. 1995. Technology of patch clamp recording electrodes. In: Neuromethods Series. W. Walz, a. Boulton and G. Baker (Eds) Humana Press, pp. 1-36.
- Levis, R.A. and Rae, J.L. 1998. Low-noise patch clamp techniques. Methods in Enzymology 293:218-266.
- Rae, J.L. and Levis, R.L. 2000. An electrode coating elastomer to replace sylgard 184. Axobits. 29:6-7.
- Rae, J.L. and Levis, R.A. 2002. Single-cell electroporation. Pflüger's Arch-Eur. J. Physiol. 443:664-670.
- Cherny, V.V., Murphy, R., Sokolov, V., Levis, R.A. ad DeCoursey, T.E. 2003. Properties of single voltage-gated proton channels in human eosinophils estimated by noise analysis and by direct measurement. J. Gen. Physiol. 121:615-625.
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#### Abstracts:

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- Mathias, R.T., R.A. Levis and R.S. Eisenberg. 1979. Charge movement expected from current flow into the sarcoplasmic reticulum. Biophys. J. 25: 118a.
- Levis, R.A. and Bezanilla, F. 1983. Noise performance of a giant axon voltage clamp. Biophys. J. 41: 53a.
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- Moghaddamjoo, A., Levis, R.A. and Eisenberg, R.S. 1988. Automatic detection of channels currents. *Biophys. J.* 53: 153a.
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