

February 6, 2007

**Lionel F. Jaffe**  
**Senior Scientist**

**Personal:**

Born on 12/28/27 in Brooklyn, N.Y. Married to Miriam Jaffe from 6/14/49 to the present. I have three children and four grandsons.

**Education:**

- 1948 Harvard College, BS  
*Biochemical Sciences*
- 1954 California Institute of Technology, PhD  
*Developmental Physiology with Albert Tyler and Frits Went*

**Professional Experience:**

- 1953-1955 Hopkins Marine Station  
*Postdoctoral with John Blinks Developmental Physiology*
- 1955-1956 Scripps Institute of Oceanography  
*Postdoctoral in Developmental Physiology*
- 1956-1960 Brandeis University  
*Assistant Professor of Biology*
- 1960-1967 University of Pennsylvania  
*Assistant to the Associate Professor of Biology*
- 1967-1984 Purdue University  
*Professor of Biology*
- 1982-1994 Marine Biological Laboratory  
*Director, National Vibrating Probe Facility*
- 1982-Present Marine Biological Laboratory  
*Senior Scientist*
- 2003 Hopkins Marine Station  
*Visiting Investigator*
- 2005 Friday Harbor Laboratory  
*Visiting Investigator*

**Honors:**

- 1947 Third place in the Westinghouse Science Talent Search
- 1978 Albert Tyler Memorial Lecture at Cal Tech
- 1982 Jenkinson Memorial Lecture at Oxford
- 1985 Sigma Xi Annual Research Award at Purdue
- 1991 Friday Evening Lecture at the Marine Biological Lab
- 2003 Blinks Memorial Lecture at the Hopkins Marine Station

## Publications:

1. Jaffe, L.F. 1954. Stimulation of the discharge of gametangia from a brown alga by a change from light to darkness. *Nature* : 743.
2. Jaffe, L.F. 1955 Do *Fucus* eggs interact through a CO<sub>2</sub>-pH gradient? *Proc. Nat. Acad. Sci.* 41: 267-270.
3. Jaffe, L.F. 1956 Effect of polarized light on polarity of *Fucus*. *Science* 123: 1081-1082.
4. Jaffe, L.F. 1958 Morphogenesis in lower plants. *Ann. Rev. Plant Physiol.* 9: 359-84.
5. Jaffe, L.F. 1958 Tropistic responses of zygotes of the *Fucaceae* to polarized light. *Exp. Cell Res.* 15: 282-99.
6. Jaffe, L.F. 1960 The effect of polarized light on the growth of a transparent cell. A theoretical analysis. *J. Gen. Physiol.* 43: 897-911.
7. Jaffe, L.F., H. Etzold and S. McKinley. 1960 Orientation of cell growth of polarized radiation. *Proc. Third Int. Cong. on Photobiology*, 365-367.
8. Jaffe, L.F. and H. Etzold. 1962 Orientation and locus of tropic photoreceptor molecules in spores of *Botrytis* and *Osmunda*. *J. Cell Biol.* 13: 13-31.
9. Jaffe, L.F. 1962. Evidence that the electric vector governs light absorption in vision, phototropism and phototaxis. *J. Photochem. Photobiol* 1: 211-16.
10. Etzold, H. and L.F. Jaffe. 1963. Die Polaritätsinduktion bei der *Equisetum* spore durch Polarisiertes Licht und Partielle Belichtung. *Exp. Cell Res.* 29: 188-93.
11. Muller, D. and L.F. Jaffe. 1965. A quantitative study of cellular rheotropism. *Biophys. J.* 5: 317-335.
12. Jaffe, L.F. 1965 On the concentration gradient across a spherical source washed by slow flow. *Biophys. J.* 5: 201-10.
13. Jaffe, L.F. and H. Etzold. 1965. Tropic responses of *Funaria* spores to red light. *Biophys. J.* 5: 201-10.
14. Jaffe, L.F. 1966. On autotropism in *Botrytis*: Measurement technique and control by CO<sub>2</sub>. *Plant Physiol.* 41: 303-6.
15. Jaffe, L.F. 1966 Electrical currents through the developing *Fucus* egg. *Proc. Nat. Acad. Sci.* 56: 1102-9.
16. Bentrup, F., T. Sandan and L.F. Jaffe. 1967. Induction of polarity in *Fucus* eggs by potassium ion gradients. *Protoplasma*: 64: 254-266.
17. Bentrup, F. and L.F. Jaffe. 1968. Analyzing the "group effect": Rheotropic responses of developing *Fucus* eggs. *Protoplasma.* 65: 25-35.
18. Jaffe, L.F. 1968. Localization in the developing *Fucus* egg and the general role of localizing currents. *Adv. Morphogenesis* 7: 295-328.

19. Jaffe, L.F. and W. Neuscheler. 1969. On the mutual polarization of nearby pairs of fucaceous eggs. *Dev. Biol.* 19: 549-65.
20. Jaffe, L.F. 1969. On the centripetal course of development, the *Fucus* egg and self-electrophoresis. 28th Symp. Soc. Dev. Biol., *Dev. Biol. Suppl.* 3: (A.Lang, ed.) 83-111.
21. Allen, R.D., L. Jacobsen, J. Joaquin and L.F. Jaffe. 1972. Ionic concentrations in developing *Pelvetia* eggs. *Dev. Biol.* 27: 538-45.
22. Weisenseel, M.H. and L.F. Jaffe. 1972 Membrane potential and impedance of developing fucoid eggs. *Dev. Biol.* 27: 555-74.
23. Nelson, D.R. and L.F. Jaffe. 1973. Cells without cytoplasmic movements respond to cytochalasin. *Dev. Biol.* 30: 206-8.
24. Robinson, K.R. and L.F. Jaffe. 1973. Ion movements in a developing fucoid egg. *Dev. Biol.* 35: 349-61.
25. Jaffe, L.F. and R. Nuccitelli. 1974. An ultrasensitive vibrating probe for measuring steady extracellular currents. *J. Cell Biol.* 63: 614-28.
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43. Ridgway, E.B., J.C. Gilkey and L.F. Jaffe. 1977. Free calcium increases explosively in activating medaka eggs. *Proc. Nat. Acad. Sci.* 74: 623-7.

44. Jaffe, L.F. 1977. Electrophoresis along cell membranes. *Nature* 265: 600-2.

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- pulses following fertilization in the ascidian egg. *Dev. Biol.* 135: 182-90.
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