

Curriculum Vitae

Name: Fredric Samuel Cohen
Date of Birth: January 20, 1947
Place of Birth: Brooklyn, New York
Education: The Cooper Union; B.S.; Physics; 1968
Indiana University; M.S.; Mathematical Physics; 1970
S.U.N.Y. at Stony Brook; Ph.D.; Biophysics; 1976

Professional Experience:

Post-doctoral Fellow; Albert Einstein College of Medicine, Department of Neurosciences, Bronx, New York; February 1976 - January 1979.

Assistant Professor; Rush University, Department of Physiology, Chicago, Illinois; February 1979 - June 1984.

Associate Professor; Rush University, Department of Physiology; July 1984 - June 1991.

Professor, Rush University, Department of Physiology; July 1991 - present

Research Interests:

Viral entry into cells. Receptor-mediated fusion of virus to membranes. Retroviral fusion, particularly HIV. Formation and evolution of fusion pores. Mechanisms of insertion of proteins into membranes. Mechanism for pH dependence of membrane protein activity. Raft formation and growth. Physics of biomembranes.

Publications:

Cohen, F.S., Eisenberg, M., McLaughlin, S. 1977. The Kinetic Mechanism of Action of an Uncoupler of Oxidative Phosphorylation. *J. Membrane Biology* 37: 361-396.

McLaughlin, S., Eisenberg, M., Cohen, F., Dilger, J. 1978. The Unique Ability of Picrate to Uncouple Submitochondrial Particles but not Mitochondria is Consistent with the

Chemiosmotic Hypothesis. In: *Frontiers of Biological Energetics*. P.L. Dutton, J. Leigh, A. Scarpa, eds. Vol. II, pps. 1205-1214. Academic Press, New York.

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Zimmerberg, J., Cohen, F.S., Finkelstein, A. 1980. Micromolar Ca^{2+} Stimulates Fusion of Lipid Vesicles with Planar Bilayers Containing a Calcium-Binding Protein. *Science* 210: 906-908.

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Bullock, J.O., Cohen, F.S., Dankert, J.R., and Cramer, W.A. 1983. Comparison of the Macroscopic and Single Channel Conductance Properties of Colicin E1 and Its COOH-terminal Tryptic Peptide. *J. Biol. Chem.* 258: 9908-9912.

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Akabas, M.H., Cohen, F.S., and Finkelstein, A. 1984. Separation of the Osmotically Driven Fusion Event From Vesicle-Planar Membrane Attachment in a Model System for Exocytosis. *J. Cell Biol.* 98: 1063-1071.

Davidson, V.L., Brunden, K.R., Cramer, W.A., and Cohen, F.S. 1984. Studies on the Mechanism of Action of Channel-forming Colicins Using Artificial Membranes. *J. Membrane Biology* 79: 105-118.

Cohen, F.S., Akabas, M.H., and Finkelstein, A. 1985. The Role of Calcium and Osmosis in Membrane Fusion. In: *Calcium in Biological Systems*. R. Rubin, G. Weiss, J. Putney, eds., Plenum Press, New York, pp. 121-126.

Cohen, F.S. Fusion of liposomes to planar bilayers. 1986. In: *Ion Channel Reconstitution*. C. Miller, ed., Plenum Press, New York, pp. 131-139.

Finkelstein, A., Zimmerberg, J. and Cohen, F.S. 1986. Osmotic Swelling of Vesicles: Its Role in the Fusion of Vesicles with Planar Phospholipid Bilayer Membranes and its Possible Role in Exocytosis. *Ann. Rev. Physiol.* 48: 163-174.

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