

Curriculum Vitae

Name: Gary Rudnick

Born: Philadelphia, PA, September 14, 1946

Citizenship: U.S.A.

Academic Training:

1963-1968 Antioch College, Yellow Springs, Ohio.
B.S., Chemistry, June, 1968

1968-1973 Brandeis University, Waltham, Mass.
Graduate Department of Biochemistry
Thesis Advisor: Dr. R. H. Abeles
Ph.D., October, 1974

Professional Experience:

1973-1975 Postdoctoral Fellow, Roche
Institute of Molecular Biology
Nutley, N.J.
Mentor: Dr. H. R. Kaback

1975-1980 Assistant Professor of Pharmacology
Yale University School of Medicine
New Haven, Connecticut

1980-1984 Associate Professor of Pharmacology
(term appointment)
Yale University School of Medicine
New Haven, Connecticut

1982-1983 Visiting Professor
1987 The Hebrew University of Jerusalem
Israel

1984-1991 Associate Professor of Pharmacology
(without term)
Yale University School of Medicine
New Haven, Connecticut

1991-present Professor of Pharmacology
Yale University School of Medicine
New Haven, Connecticut

Honors:

1974 American Cancer Society
Postdoctoral Fellowship

1979 American Heart Association
Established Investigatorship

1987 First annual Pomerenic-Sagov Lecture, Israel Society for the Study of
Membranes and Transport

1995-2003 Editorial Advisory Board Member, Biochemistry

2004-2009 Editorial Board Member, Journal of Biological Chemistry

Professional Societies:

Biophysical Society
American Society for Biochemistry and Molecular Biology

Publications:

Original Articles

1. **Rudnick, G.**, Weil, R., and Kaback, H.R. Photoinactivation of the β -galactoside Transport System in: *E. coli* Membrane Vesicles with 2-Nitro-4-azidophenyl-1-thio- β -D-galactopyranoside. *J. Biol. Chem.* **250**: 1371-1375 (1975).
2. **Rudnick, G.**, and Abeles, R.H. Reaction Mechanism and Structure of the Active Site of Proline Racemase. *Biochemistry* **14**: 4515-4522 (1975).

3. **Rudnick, G.**, Weil, R. and Kaback, H.R. Photoinactivation of the β -galactoside Transport System in *E. coli* Membrane Vesicles with an Impermeant Azidophenylgalactoside. *J. Biol. Chem.* **250**: 6847-6851 (1975).
4. **Rudnick, G.**, Schuldiner, S., and Kaback, H.R. Equilibrium Between Two Forms of the *lac* Carrier Protein in Energized and Nonenergized Membrane Vesicles from *E. coli*. *Biochemistry* **15**: 5126-5131 (1976).
5. **Rudnick, G.** Active Transport of 5-Hydroxytryptamine by Plasma Membrane Vesicles Isolated from Human Blood Platelets. *J. Biol. Chem.* **252**: 2170-2174 (1977).
6. **Rudnick, G.**, and Nelson, P.J. Platelet 5-Hydroxytryptamine Transport. An Electroneutral Mechanism Coupled to Potassium. *Biochemistry* **17**: 4739-4742 (1978).
7. **Rudnick, G.**, and Nelson, P.J. Reconstitution of 5-Hydroxytryptamine Transport from Cholera-Disrupted Platelet Plasma Membrane Vesicles. *Biochemistry* **17**: 5300-5304 (1978).
8. Talvenheimo, J., Nelson, P.J., and **Rudnick, G.** Mechanism of Imipramine Inhibition of Platelet 5-Hydroxytryptamine Transport. *J. Biol. Chem.* **254**: 4631-4635 (1979).
9. Michaelson, D.M., Pinchasi, I., Ophir, I., Sokolovsky, M., and **Rudnick, G.** Energetics of Acetylcholine Release from *Torpedo* Synaptic Vesicles. in *Molecular Mechanisms of Biological Recognition*, M. Balaban, Ed. Elsevier Biomedical Press. 361-371 (1979).
10. Nelson, P.J. and **Rudnick, G.** Coupling Between Platelet 5-Hydroxytryptamine and Potassium Transport. *J. Biol. Chem.* **254**: 10084-10089 (1979).
11. **Rudnick, G.**, Fishkes, H., Nelson, P.J., and Schuldiner, S. Evidence for Two Distinct Serotonin Transport Systems in Platelets. *J. Biol. Chem.* **255**: 3638-3641 (1980).
12. Talvenheimo, J. and **Rudnick, G.** Solubilization of the Platelet Plasma Membrane Serotonin Transporter in an Active Form. *J. Biol. Chem.* **255**: 8606-8611 (1980).
13. **Rudnick, G.**, Bencuya, R., Nelson, P.J., and Zito, R.A. Inhibition of Platelet Serotonin Transport by Propranolol. *Mol. Pharmacol.* **20**: 118-123 (1981).
14. Nelson, P.J. and **Rudnick, G.** Anion-Dependent Na⁺ Conductance of Platelet Plasma Membranes. *Biochemistry* **20**: 4246-4249 (1981).
15. Keyes, S.R. and **Rudnick, G.** Coupling of Transmembrane Proton Gradients to Platelet Serotonin Transport. *J. Biol. Chem.* **257**: 1172-1176 (1982).
16. Fishkes, H. and **Rudnick, G.** Bioenergetics of Serotonin Transport by Membrane Vesicles Derived from Platelet Dense Granules. *J. Biol. Chem.* **257**: 5671-5677 (1982).

17. Nelson, P.J. and **Rudnick, G.** The role of Chloride Ion in Platelet Serotonin Transport. *J. Biol. Chem.* **257**: 6151-6155 (1982).
18. Talvenheimo, J., Fishkes, H., Nelson, P.J. and **Rudnick, G.** The Serotonin Transporter-imipramine 'Receptor': Different Sodium Requirements for Imipramine Binding and Serotonin Translocation. *J. Biol. Chem.* **258**: 6115-6119 (1983).
19. Galloway, C.J., Dean, G.E., Marsh, M., **Rudnick, G.** and Mellman, I. Acidification of Macrophage and Fibroblast Endocytic Vesicles in vitro. *Proc. Nat'l. Acad. Sci.* **80**: 3334-3338 (1983).
20. Nelson, P.J., Dean, G.E., Aronson, P.S. and **Rudnick, G.** Hydrogen Ion Co-transport by the Renal Brush Border Glutamate Transporter. *Biochemistry* **22**: 5459-5463 (1983).
21. **Rudnick, G.**, Talvenheimo, J., Fishkes, H. and Nelson, P. Sodium Ion Requirements for Serotonin Transport and Imipramine Binding. *Psychopharmacology Bull.* **19**: 545-549 (1983).
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23. Dean, G.E., Fishkes, H., Nelson, P.J., and **Rudnick, G.** The Hydrogen Ion Pumping Adenosine Triphosphatase of Platelet Dense Granule Membrane. Differences from F₁F₀ and Phosphoenzyme-type ATPases. *J. Biol.Chem.* **259**: 9569-9574 (1984).
24. Arvan, P., **Rudnick, G.** and Castle, J.D. Osmotic Properties and Internal pH of Isolated Rat Parotid Secretory Granules. *J. Biol. Chem.* **259**: 13567-13572 (1984).
25. Helenius, A., Kielian, M., Wellsted, J., Mellman, I., and **Rudnick, G.** Effects of Monovalent Cations on Semliki Forest Virus Entry into BHK-21 Cells *J. Biol. Chem.* **260**: 5691-5697 (1985).
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27. Dean, G.E., Nelson, P.J., and **Rudnick, G.** Characterization of the Native and Reconstituted Hydrogen ion-pumping ATPase of Chromaffin Granules. *Biochemistry* **25**: 4918-4925 (1986).
28. Dean, G.E., Nelson, P.J., Agnew, W.S., and **Rudnick, G.** Hydrodynamic Properties of the Chromaffin Granule ATPase. *Biochemistry*, **26**: 2301-2305 (1986).

29. Humphreys, C.J., Levin, J. and **Rudnick, G.** Antidepressant binding to the porcine and human platelet serotonin transporters. *Molecular Pharmacology* **33**: 657-663 (1988).
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32. Humphreys, C. J., Cassel, D., and **Rudnick, G.** 2-Iodoimipramine, a Novel Ligand for the Serotonin Transporter. *Molecular Pharmacol.* **36**: 620-626 (1989)
33. Waldman, B. C., and **Rudnick, G.** UDP-GlcNAc Transport Across the Golgi Membrane: Electroneutral Exchange for Dianionic UMP. *Biochemistry*, **29**: 44-52 (1990)
34. **Rudnick, G.**, Steiner-Mordoch, S. S., Fishkes, H., Stern-Bach, Y., and Schuldiner, S. Energetics of Reserpine Binding and Occlusion by the Chromaffin Granule Transporter. *Biochemistry*, **29**: 603-608 (1990)
35. Humphreys, C.J., Beidler, D., and **Rudnick, G.** (1991) Substrate and Inhibitor Binding and Translocation by the Platelet Plasma Membrane Serotonin Transporter. *Biochem. Soc. Trans.* **19**: 95-98
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37. **Rudnick, G.**, and Wall, S.C. (1991) Cocaine and [³H]2β-Carboxymethoxy-3β-(4-fluoro- phenyl)tropane Binding to the Serotonin Transporter *Molec. Pharmacol.* **40**: 421-426
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39. **Rudnick, G.** and Wall, S. C. (1992) The Molecular Mechanism of "ecstasy" [3,4-Methylenedioxymethamphetamine (MDMA)]: Serotonin Transporters are targets for MDMA-induced Serotonin Release. *Proc. Nat. Acad. Sci. U. S. A.* **89**: 1817-1821
40. **Rudnick, G.** and Wall, S. C. (1992) *p*-Chloroamphetamine Induces Serotonin Release Through Serotonin Transporters. *Biochemistry* **31**: 6710-6718

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42. **Rudnick, G.** and Wall, S. C. (1993) Non-neurotoxic Amphetamine Derivatives Release Serotonin through Serotonin Transporters. *Molecular Pharmacology* 43:(2) 271-276
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65. Androutsellis-Theotokis, A. and **Rudnick, G**. Accessibility and Conformational Coupling in Serotonin Transporter Predicted Internal Domains. *J. Neuroscience* **22**: 8370-8378 (2002).
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Perspective in *Molecular Pharmacology*, **64(2)**, 196-198
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Commentaries in *Science* **317**:873 (2007), *Nature Structural and Molecular Biology* **14**: 792-794 (2007) and *Cell* **130**: 963 (2007)
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Commentary in *Nature Structural & Molecular Biology* **15**: 785 (2008)
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Reviews:

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