

CURRICULUM VITAE

I. PERSONAL

A. Name: Edward Blake Nelson, M.D., Ph.D.

B. [REDACTED] [REDACTED]
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C. Office Martek Biosciences Corporation
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II. EMPLOYMENT HISTORY,

Medical Director 11/2004- current
Vice President, Medical Research, 11/2004- 3/2008
Martek Biosciences

Consulting Services 2004

[REDACTED]

Vice President, Scientific Affairs 2001 2004
Management Board Member 1994 2004
Vice President, Medical/ R&D 1997 2002
Vice President, Medical 1994 1997

Senior Director, Clinical Research 1993 1994
Director, Clinical Research 1989 1993
Merck & Co., Inc.
West Point, Pennsylvania

Associate Attending Physician 1987 1989

Methodist Hospital Houston, Texas Assistant Attending Physician	1980	1987
Assistant Professor of Medicine Section on Hypertension and Clinical Pharmacology/Toxicology and the Center for Experimental Therapeutics Department of Internal Medicine Baylor College of Medicine	1980	1989
Assistant Clinical Director Hypertension-Clinical Pharmacology Laboratory The Methodist Hospital	1986	1989
Assistant Professor of Medicine and Assistant Professor of Pharmacology and Therapeutics School of Medicine, State University of New York and Attending Physician Buffalo Veteran's Administration Medical Center Buffalo, New York	1977	1980
Resident, Department of Internal Medicine University of Texas Medical Branch	1975	1977
Intern, Department of Internal Medicine University of Texas Medical Branch	1974	1975
Senior Research Scientist, Clinical Research Center University of Texas Medical Branch	1971	1974
Postdoctoral Fellow, Department of Biochemistry, Southwestern Medical School with Dr. [REDACTED] NIH Fellowship Dallas, Texas	1970	1971
Graduate Teaching Assistant, Department of Biochemistry	1965	1970

Michigan State University

Chemist, Rubber Products 1965
The West Company
Phoenixville, Pennsylvania

III PROFESSIONAL CERTIFICATION

Diplomate: American Board of Internal Medicine, 1977
Diplomate: American Board of Medical Examiners, 1975

Texas Medical License (active)
New York Medical License (inactive)
Pennsylvania Medical License (active retired)

SOCIETY MEMBERSHIP

American College of Physicians – Fellow
American Society for Clinical Pharmacology and Therapeutics
American Medical Association
Texas Medical Association/Harris County Medical Society (1980-1990)

V. ACADEMIC AND PROFESSIONAL HONORS

M.D. With High Honors
Alpha Omega Alpha
Outstanding Alumni, Eberly College of Science Penn State, 1997
Member USP - Advisory Panel, 1980-1990
Editorial Board - Clinical Pharmacology and Therapeutics, 1989 - 2003
Editorial Review - Annals of Internal Medicine - At Request
Member of Southeastern Pennsylvania Research Committee for the American Heart Association, 1991-1995
N.I.H. Postdoctoral Fellowship
Phi Lambda Upsilon
Phi Sigma Society



VI. EDUCATION

	<u>Date</u>	<u>Major Field</u>	<u>Degree</u>
Pennsylvania State University	1965	Biochemistry	B.S.
Michigan State University	1970	Biochemistry	Ph.D.
University of Texas Medical Branch	1974	Medicine	M.D.

VII PUBLICATIONS (excluding Abstracts)

1. Glycolate metabolism in green algae. Ph.D. Thesis, Department of Biochemistry, Michigan State University, 1970.
2. Nelson E.B., Tolbert N.E., and Hess J.L. Glycolate stimulation of oxygen evolution during photosynthesis. *Plant Physiol.* 44: 55, 1969.
3. Nelson E.B., and Tolbert N.E. The regulation of glycolate metabolism in *Chlamydomonas*. *Biochem. Biophys. Acta* 84: 264, 1969.
4. Nelson E.B., Cenedella A. and Tolbert N.E. Carbonic anhydrase levels in *Chlamydomonas*. *Phytochem.* 8: 2305, 1969.
5. Bruin W.J., Nelson E.B. and Tolbert N.E. The glycolate pathway in green algae. *Plant Physiol.* 46: 386, 1970.
6. Nelson E.B. and Tolbert N.E. Glycolate dehydrogenase in green algae. *Arch. Biochem. Biophys.* 141: 102, 1970.
7. Tolbert N.E., Nelson E.B., and Bruin W.J. Glycolate pathway in algae. In: Photosynthesis and Photorespiration, M. Hatch, ed. New York: John Wiley and Sons, 1971, pp. 506-513.
8. Nelson E.B., Master B.S.S., and Peterson J.A. Use of a large capacity titanium zonal rotor as a batch type rotor in the preparation of liver microsomes. *Anal. Biochem.* 39: 128, 1971.
9. Raj P., Nelson E.B., and Estabrook R.W. Studies on drug metabolism in human liver microsomes. *Chem. Biol. Interactions* 3: 303, 1971.
10. Master B.S.S., Nelson E.B., et al. Immunochemical studies utilizing antibody to NADPH-cytochrome c reductase as a specific inhibitor of microsome electron transport. *Chem. Biol. Interactions* 3: 296, 1971.
11. Nelson E.B., Raj P.P., Belfi K.J., and Master B.S.S. Oxidative drug metabolism in human liver microsomes. *J. Pharmacol. Exp. Ther.* 178: 580, 1971.
12. Schacter B.A., Nelson E.B., Master B.S.S., and Marver H.S. Immunochemical evidence for an association of heme oxygenase with microsomal electron transport. *J. Biol. Chem.* 247: 3601, 1972.
13. Nelson E.B., Kohl K.B., and Masters B.S.S. The role of NADPH-cytochrome c reductase in the microsomal oxidation of ethanol and methanol. *Drug Metabol. Dispos.* 1: 455, 1973.
14. Masters B.S.S., Taylor W., Isaacson E., Baron J., Harkins J., Nelson E.B. and Bryan G. Studies on the function of adrenodoxin and TPNH-cytochrome c reductase in mitochondria and

IX. PUBLICATIONS AND PATENTS

PUBLICATIONS (continued)

- microsomes of adrenal cortex utilizing immunochemical techniques. *Ann. N.Y. Acad. Sci.* 212: 76, 1973.
15. Harkins J.B., Nelson E.B., Masters B.S.S. and Bryan G.T. Preparation and properties of microsomal membranes from isozonal cells of beef adrenal cortex. *Endocrinology* 94: 897, 1974.
 16. Nelson E.B. and Bryan G.T. Steroid hydroxylation by human adrenal cortex microsomes. *J. Clin. Endo. Metab.* 41: 7, 1975.
 17. Goldstein M. and Nelson E.B. Metyrapone as a treatment for acetaminophen (paracetamol) toxicity in mice. *Res. Comm. Chem. Path. Pharmacol.* 23: 203, 1979.
 18. Hart R., Renskers K.J., Nelson E.B., and Roth J.A. Localization and characterization of phenol sulfotransferase in human platelets. *Life Sci.* 24: 125, 1979.
 19. Nelson E.B. The pharmacology and toxicology of meta-substituted acetanilide. I: Acute toxicity of 3-hydroxyacetanilide in mice. *Res. Comm. Chem. Path. Pharmacol.* 28: 447, 1980.
 20. Nelson E.B., Montes M. and Goldstein M. Effectiveness of metyrapone in the treatment of acetaminophen toxicity in mice. *Toxicology* 17: 73, 1980.
 21. Nelson E.B. and Levitt J.R. Aspirin absorption from a feeding jejunostomy. *J. Am. Geriatric Soc.* XXVIII: 556, 1980.
 22. Hall K., Nightingale C.H., Gibaldi M.G., Nelson E.B., Bates T. and DiSando A.R. Bioavailability of erythromycin in normal and alcoholic liver disease subjects. *J. Clin. Pharmacol.* 22: 231, 1982.
 23. Mitchell J.R., Corcoran G.B., Smith C.V., Hughes H., Lauterburg B.H. and Nelson E.B. Acetaminophen metabolism and toxicity. In: Drug Reactions and the Liver, M. Davis, J. Tredger and R. Williams, eds. London: Pitman Medical Publishers, 1981, pp. 130-143.
 24. Taylor A.A., Fennell W.H., Ruud C.O., Pool J.L., Nelson E.B., Ginos J.Z., and Mitchell J.R. Propylbutyldopamine: mechanism of blood pressure lowering in hypertensive patients. *Hypertension* 6: 140, 1984.
 25. Paranka M.S., Myers B.M., Binmoeller K., and Nelson E.B. Cellulitis at vein donor sites. *Ann. Int. Med.* 101: 881, 1985 (letter).

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PUBLICATIONS (continued)

26. Schwartz J.B., et al., including Nelson E.B. Pharmacokinetics and pharmacodynamics of enalapril in patients with congestive heart failure and patients with hypertension. *J. Cardiovascular Pharmacol.* 7: 767, 1985.
27. Nelson E.B., Abernethy D.R., Greenblatt D. and Ameer B. Paracetamol absorption from a feeding jejunostomy. *Br. J. Clin. Pharmacol.* 22: 111, 1986.
28. Schonwetter R.S. and Nelson E.B. Alopecia areata and the acquired immune deficiency syndrome related complex. *Ann. Int. Med.* 104: 227, 1986 (letter).
29. Fagan T.C., Nelson E.B., et al. Once and twice daily nitrendipine in hypertension and non-insulin-dependent diabetes. *Pharmacotherapy* 6: 128, 1986.
30. Nelson E.B., Pool J.L. and Taylor A.A. Antihypertensive effects of isradipine, a new dihydropyridine calcium channel antagonist. *Clin. Pharmacol. Therap.* 40: 694, 1986.
31. Nelson E.B., Pool J.L. and Taylor A.A. The pharmacology of angiotensin converting enzyme inhibitors. *Am. J. Med.* 81 (4c): 13, 1986.
32. Nelson E.B., Egan J.M. and Abernethy D.R. The effect of propylene glycol on antipyrine clearance in man. *Clin. Pharmacol. Therap.* 41: 571, 1987.
33. Pool J.L., Nelson E.B., et al. Controlled multicenter study of the antihypertensive effects of lisinopril, hydrochlorothiazide and lisinopril plus hydrochlorothiazide in the treatment of 394 patients with essential hypertension. *J. Cardiovascular Pharmacol.* 9 (suppl 13): S36, 1987.
34. Kirkendall W.M., Adlin V., Canzanello V., Cubberly R., Haider B., McCarthy P., Mroczek W., Nelson E.B., Scheonberger J. and Solomon R. Comparative study of the safety and effectiveness of nitrendipine, atenolol and hydrochlorothiazide in combination in the treatment of hypertension. *J. Cardiovascular Pharmacol.* 9 (suppl. 4): S232, 1987.
35. Schmedtje J.F., Sax S., Pool J.L., Goldfarb R.A. and Nelson E.B. The localization of ectopic pheochromocytomas by magnetic resonance imaging. *Am. J. Med.* 83: 70, 1987.
36. Galinsky R.E., Nelson E.B. and Rollins D.E. Acetaminophen elimination in man: Pharmacokinetic consequences of cytochrome P450 inhibition by metyrapone. *Eur. J. Clin. Pharmacol.* 33: 391, 1987.
37. Nelson E.B., Pool J.P. and Levine L. Effect of drugs on macronutrient status: Obesity and serotonin modulating agents. In: Nutrition, Pharmacology and Toxicology, A. McLean, M. Wahlquist, eds. London: J. Libbey Publishers, 1988.

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PUBLICATIONS (continued)

38. Pool J.L., Nelson E.B. and Taylor A.A. Lisinopril and thiazide diuretic therapy as initial treatment for hypertension. *Curr. Opin. Cardiol.* 3: S9, 1988.
39. Cubeddu L.X., Pool J.L., Nelson E.B., et al. Effects of doxazosin monotherapy on blood pressure and plasma lipids in patients with essential hypertension. *Am. J. Hypertens.* 1: 1585, 1988.
40. Choi R.L., Kochak G.M., Bax-Reydel P. and Nelson E.B. Effects of food on the bioavailability of CGS 16617, an angiotensin converting inhibitor, in healthy subjects. *J. Clin. Pharmacol.* 28: 848, 1988.
41. Taylor A.A., Davies A.O., Nelson E.B., et al. The spectrum of dysautonomia in mitral valve prolapse. *Am. J. Med.* 86: 267, 1989.
42. Pool J.L., Nelson E.B. and Taylor A.A. Clinical experience and rationale for angiotensin converting enzyme inhibitor (ACEI) with lisinopril as the initial treatment for hypertension in elderly patients. *Am. J. Med.* 85 (suppl 3B): 19, 1988.
43. Varughese A., Taylor A.A. and Nelson E.B. Consequences of angiotensin converting enzyme inhibitor overdose. *Am. J. Hypertens.* 2: 355, 1989.
44. Pool J.L., Taylor A.A. and Nelson E.B. Review of the effects of doxazosin, a new selective alpha-adrenergic inhibitor, on lipoproteins in patients with essential hypertension. *Am. J. Med.* 87 (suppl 2A): 57, 1989.
45. Nelson E.B. Drug substitution and rational therapeutics. *Post. Med.* 86: 247, 1989.
46. Pool J.L., Smith S.G. III, Nelson E.B., Taylor A.A. and Gomez H.J. Angiotensin converting enzyme inhibitors compared with thiazide diuretics or beta-blockers as monotherapy for the treatment of mild essential hypertension. *Curr. Opin. Cardiol.* 4 (suppl 1): S11, 1989.
47. Levine L.R., Enas G.G., Thompson W.L., Byyny R.L., Dauer A.D., Kirby R.W., Kreindler T.G., Levy B., Lucas C.P., McIlwain H.H. and Nelson E.B. Use of fluoxetine, a selective serotonin-uptake inhibitor, in the treatment of obesity: a dose-response study. *Int. J. Obes.* 13: 635, 1989.
48. Gomez H.J., Cirillo V.J., Sromovsky J.A., Otterbein E.S., Shaw W.C., Rush J.E., Chyrant S.G., Gradman A.H., Leon A.S., MacCarthy E.P., Nelson E.B., Pool J.L. and Vedin A. Lisinopril dose-response relationship in essential hypertension. *Br. J. Clin. Pharmacol.* 28: 415, 1989.
49. Prisant L.M., Carr A.A., Nelson E.B., Winer E.B., Velasquez M.T. and Conasun L.M. Isradipine vs. propranolol in hydrochlorothiazide-treated hypertensives, a multicenter evaluation. *Arch. Intern. Med.* 149: 2453, 1989.

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50. Chang W.L. and Nelson E.B. The case of the perplexed pastor. *Hosp. Pract.* 1989, 65-72.
51. Sweet C.S. and Nelson E.B. How well have animal studies with losartan predicted responses in man? *J. Hypertens.* 11 (supp 3): S63, 1993.
52. Nelson E.B., Sweet C.S., Shahinfar S. and Goldberg M.R. Losartan potassium: current clinical status. In: Medicinal Chemistry of Renin Angiotensin System, P.B.M.W.M. Timmermans and R.R. Wexler, eds. New York: Elsevier, 1994.
53. Weber M.A., Goldberg A.I., Faison E.P., Lipschutz K., Shapiro D.A., Nelson E.B. and Irvin J.D. Extended-release felodipine in patients with mild-to-moderate hypertension. *Clin. Pharmacol. Ther.*, 55: 346 (1994)
54. Nelson E.B., et al. Clinical profile of the first angiotensin II (AT-1 specific) receptor antagonist. In: Hypertension: Pathophysiology, Diagnosis and Management, 2nd edition. New York: Raven Press, 55: 346 (1994)
55. Lacourcière Y., Brunner H., Irwin R., Karlberg B.E., Ramsay L.E., Snavely D.B., Dobbins T.W., Faison E.P., Nelson E.B. and the Losartan Cough Study Group. Effects of modulators of the renin-angiotensin-aldosterone system on cough. *J. Hypertens.* 12: 1387, (1994)
56. Weber M.A., Byyny R.L., Pratt J.H., Faison E.P., Snavely D.B., Goldberg A.I., and Nelson E.B. Blood pressure effects of the angiotensin II receptor blocker, losartan. *Arch. Intern. Med.* 155: 405, 1995.
57. Gradman A.H., Arcuri K.E., Goldberg A.I., Ikeda L.S., Nelson E.B., Snavely D.B. and Sweet C.S. A randomized, placebo-controlled, double-blind, parallel study of various doses of losartan potassium compared with enalapril maleate in patients with essential hypertension. *Hypertension* 25: 1345, 1995.
58. Nelson E.B. and Temple A.R. Acetaminophen hepatotoxicity, fasting, and ethanol. *JAMA* 274:301, 1995 (letter).
59. Lanza F.L., Codispoti J.R., Nelson E.R. An endoscopic comparison of gastroduodenal injury with over-the-counter doses of ketoprofen and acetaminophen. *Am J Gastro*; 93:1051 1054 (1998)
60. Kaplan M.A., Prior M.J., Ash R.R., McKonly K.I., Helzner E.C., Nelson E.B. Loperamide-simethicone vs loperamide alone, simethicone alone, and placebo in the treatment of diarrhea with gas-related abdominal discomfort. *Arch Fam Med*; 8:243-248 (1999)

61. Kaplan M.A., Prior M.J., McKonly K.I., DuPont H.L., Temple A.R., Nelson E.B. A multicenter randomized controlled trial of a liquid loperamide product versus placebo in the treatment of acute diarrhea in children. *Clin Pediatr.* 38:579-591 (1999)
62. Prior, M J, Nelson,E B , Temple,A R Pediatric ibuprofen use increases while incidence of Reye's Syndrome continues to decline *Clin Pediatr* 39 245-247 (2000)
63. Codispoti, JR, Prior, MJ, Fu, M, Harte, CM, Nelson, EB Efficacy of new prescription doses of ibuprofen for treating migraine headache pain. *Headache*, 41: 665 (2001)
64. Nelson, E. B. and Hoffman,J letter, *Ann.Intern Med*, Jan 13, 2005 Non fish sources of long chain omega 3-fatty acids, electronic response to *Ann Intern Med* 2004;141:977-980
65. Kurato,C, Arterburn, L., Hoffman, J., Nelson, E.B. letter, Importance of arashadonic acid in long chain polyunsaturated fatty acid-supplemented infant formula, *Am J Clin Nutr.* 2005;82:153
66. Bailey-Hall, E. Nelson, E.B. Ryan, A.R. Validation of a Rapid Measure of Blood PUFA Levels in Humans, *Lipids*, 2008;43:181-186
67. Ryan, A.R. Nelson, E.B. Assessing the Effect of DHA on Cognitive Functions in Healthy Preschool Children: A Randomized, Placebo Controlled, Double Blind Study, *Clin. Pediatr.* 2008;47:355-362

VIII. PATENTS

1. The Method for Analgesia Using 3-Hydroxy-Acetanilide-USA patent 4,238,508, 1980.
2. Method and Composition for Reducing the Toxicity of Acetaminophen - USA patent 4,307,073, (1981)
3. Treatment of Atherosclerosis with Angiotensin II Receptor Blocking Imidazoles,
USA patent 5,663,186, (1997)
USA patent 5,663,187, (1997)
4. Acetaminophen and Dimenhydrinate Analgesics
USA patent 5,739,139, (1998)
Others submitted

IX.. BOOK REVIEW

1. Nelson E.B. "Angiotensin Converting Enzyme Inhibitors" by R.K. Ferguson and P.H. Vlasses. Crit. Care Med. 17: 302, 1989.