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The influence of fatty acids in vitro on mammalian cells from species differing in their fatty acyl desaturase capabilities.

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Menkes, J.H., 1972.
Lipid metabolism of brain tissue in culture.
Lipids, 7, 135-141.

Merck, 1983.
in "Merck Index" 10th ed. (Windholz, M. ed.), Published by Merck and Co. Inc., U.S.A, pg. 998-999.

Mercuri, O., Peluffo, R.O. and Brenner, R.R., 1966.
Depression of microsome desaturation of linoleic to gammalinolenic acid in the alloxan diabetic rat.
Biochim. Biophys. Acta, 116, 407-411.

Mercuri, O., Peluffo, R.O. and Brenner, R.R., 1968.
Effects of arachidonic acid in the alloxan diabetic rat.
Am. J. Physiol., 215, 63-70.

Mercuri, O. Peluffo, R.O. and de Tomas, M.E., 1974.
Effect of different diets on the Δ9-desaturase activity of normal and diabetic rats.
Biochim. Biophys. Acta, 369, 264-268.

Mercuri, O., de Tomas, M.E. and Itarte, H., 1979.
Prenatal protein depletion and delta-9, delta-6 and delta-5 desaturases in the rat.
Lipids, 14, 822-825.

Mest, H.J., Beitz, J., Heimroth, I., Block, H.V. and Forster, W., 1983.
The influence of linseed oil diet on the fatty acid pattern in phospholipids and thromboxane formation in platelets in Man.
Klin. Wochenschr., 61, 187-191.

Metzger, Z., Hoffeld, J.T. and Oppenheim, J.J., 1986.
Suppression of fibroblast proliferation by activated macrophages: involvement of H_2O_2 and a non-prostaglandin E product of the cyclo-oxygenase pathway.
Cell Immunol., 100, 501-514.

Milks, M.M., and Sprecher, H., 1985.
Metabolism of 4,7,10,13,16-docosapentaenoic acid by human platelet cycooxygenase and lipo-xygenase.
Biochim. Biophys. Acta., 835, 29-35.

Miller, J.S., Gavino, V.C., Ackerman, G.A., Sharma, H.M., Milo, G.E., Geer, J.C. and Cornwell, D.G., 1980.
Triglycerides, lipid droplets and lysosomes in aorta smooth muscle cells during the control of cell proliferation with polyunsaturated fatty acids and vitamin E.
Lab. Invest., 42, 495-506.

Minkes, M., Stanford, N. and Chi, M.M.Y., 1977.
Cyclic adenosine monophosphate inhibits the availability of arachidonate to prostaglandin synthetase in human platelet suspensions.
J. Clin. Invest., 59, 449-454.

Mishkin, S., Morris, H.P., Murthy, P.V. and Halperin, M.L., 1977.
Reduced concentrations of Z protein in Morris Hepatomas. Possible role in abnormal regulation of lipid metabolism.
J. Biol. Chem., 252, 3626-3628.

Mizuno, N.S., Stoops, C.E. and Sinha, A.A., 1971.
DNA synthesis associated with the inner membrane of the nuclear envelope.
Nature, 229, 22-24.

Mohrhauer, H. and Holman, R.T., 1963a.
Effect of linolenic acid upon the metabolism of linoleic acid.
J. Nutr., 81:67-74.

Mohrhauer, H., and Holman, R.T. 1963b.
Alteration of the fatty acid composition of brain lipids by varying levels of dietary essential fatty acid.
J. Neurochem., 10, 523-530.

Mohrhauer, H. and Holman, R.T., 1963c.
The fatty acid composition of rat adipose tissue and erythrocytes.
Biochim. Biophys. Acta, 1, 446-452.

Mohrhauer, H. and Holman, R.T., 1963d.
The effect of dose level of essential fatty acids upon fatty acid composition of rat liver.
J. Lipid. Res., 4, 151-159.

Mohrhauer, H. and Holman, R.T., 1963e.
The effect of dietary essential fatty acids upon the composition of polyunsaturated fatty acids in depot fat and erythrocytes in the rat.
J. Lipid Res., 4, 346-350.

Mohrhauer, H., Christiansen, K., Gan, M.V., Deubig, M. and Holman, R.T., 1967.
Chain elongation of linolenic acid and its inhibition by other fatty acids *in vitro*.
J. Biol. Chem., 242, 4507-4514.

Moncada, S., Gryglewski, R., Bunting, J. and Vane, J.R., 1976a.
An enzyme isolated from arteries transforms prostaglandin endoperoxides to an unstable substance that inhibits platelet aggregation.
Nature, 263, 663-665.

Moncada, S., Gryglewski, R. and Bunting, J. 1976b.
A lipid peroxide inhibits the enzyme in blood vessel microsomes that generates from prostaglandin endoperoxides the substance (prostaglandin X) which prevents platelet aggregation.
Prostaglandins, 12, 715-733.

Moncada, S. and Vane, J.R., 1984.
Prostacycline and its clinical applications.
Ann. Clin. Res., 16, 241-252.

Monsen, E.R., Okey, R. and Lyman, R.L., 1962.
Effect of diet and sex on the relative lipid composition of plasma and red blood cells in the rat.
Metabolism, 11, 1113-1124.

Montaudon, D., Louis, J-C. and Robert, J., 1981.
Phospholipid acyl group composition in normal and tumoral nerve cells in culture.
Lipids, 16, 293-297.

Moore, P.K., 1985.
in "Prostanoids: Pharmacological, Physiological and Clinical Relevance", Cambridge University Press, Cambridge.

Morand, O., Fibach, E., Dagan, A. and Gatt, S., 1982a.
Transport of fluorescent derivatives of fatty acids into cultured human leukemic myeloid cells and their subsequent metabolic utilisation.
Biochim. Biophys. Acta, 711, 539-550.

Morand, O., Fibach, E. and Gatt, S., 1982b.
Effect of albumin, low temperature and metabolic inhibitors on transport of fatty acids into cultured human leukemic myeloid cells.
Biochim. Biophys. Acta, 693, 143-150.

Morand, O. and Algrot, M., 1985.
Transport of fatty acids across the membrane of human erythrocyte ghosts.
Biochim. Biophys. Acta, 835, 68-76.

Morisaki, N., Stitts, J., Bartels-Tomei, L., Milo, G.E., Ponganamala, R.V. and Cornwell, D.G., 1982a.
Dipyridamole: an antioxidant that promotes the proliferation of aorta smooth muscle cells.
Artery, 11, 88-107.

Morisaki, N., Sprecher, H., Milo, G.E. and Cornwell, D.G., 1982b.
Fatty acid specificity in the inhibition of cell proliferation and its relationship to lipid peroxidation and prostaglandin biosynthesis.
Lipids, 17, 893-899.

Morisaki, N., Lindsey, J.A., Stitts, J., Zhang, H., and Cornwell, D.G., 1984.
Fatty acid metabolism and cell proliferation. V. Evaluation of pathways for the generation of lipid peroxides.
Lipids, 19, 381-394.

Morita, I., Saito, Y., Chang, W.C. and Murota, S., 1983.
Effects of purified eicosapentaenoic acid on arachidonic acid metabolism in cultured murine aortic muscle smooth muscle cells, vessel walls and platelets.
Lipids, 18, 42-49.

Morton, R.E., Hartz, J.W., Reitz, R.C., Waite, B.M. and Morris, H.P., 1979.
The acyl-CoA desaturases of microsomes from rat liver and the Morris 7777 hepatoma.
Biochim. Biophys. Acta, 573, 321-331.

Moscatelli, E.A., 1972.
Methanolysis of cerebrosides with boron trifluoride-methanol.
Lipids, 7, 268-271.

Mosconi, C., Colli, S., Medini, L., Stragliotto, E., Maderna, P., Trenoli, E. and Galli, C., 1988.
Vitamin E influences the effects of fish oil on fatty acids and eicosanoid production in plasma and circulating cells in the rat.
Biochem. Pharmacol., 37, 3415-3421.

Mounie, J., Faye, B., Magdalou, J., Goudonnet, H., Truchot, R., and Siest, G., 1986.
Modulation of UDP-glucuronyl-s-transferase activity in rats by dietary lipids.
J. Nutr., 116, 2034-2043.

Mouri, K., Ikesu, H., Esaka, T. and Igarashi, O., 1984.
The influence of marine oil intake upon levels of lipids, alpha-tocopherol and lipid peroxidation in serum and liver of rats.
J. Nutr. Sci. Vitaminol., 30, 307-318.

Mulligan, J.J., Lynch, R.D., Schneeberger, E.E., and Geyer, R.P., 1977.
Utilisation of exogenous linolenic acid and oleic acids for plasma membrane phospho-glyceride synthesis in L-fibroblasts.
Biochim. Biophys. Acta, 470, 92-103.

Murphy, R.C., Pickett, W.C., Culp, B.R. and Lands, W.E.M., 1981.
Tetraene and pentaene leukotrienes: selective production from murine mastocytoma cells after dietary manipulation.
Prostaglandins, 22, 613-622.

Nair, V. and Turner, G.A., 1984.
The thiobarbituric acid test for lipid peroxidation: structure of the adduct with malondialdehyde.
Lipids, 19, 804-805.

Nakazawa, I., Mead, J.F. and Yonemoto, R.H., 1976.
In vitro activity of the fatty acyl desaturases of human cancerous and noncancerous tissues.
Lipids, 11, 79-82.

Nassar, B.A., Huang., Y.S., Manku, M.S., Das, U.N., Morse, N. and Horrobin, D.F., 1986.
The influence of dietary manipulation with n-3 and n-6 fatty acids on liver and plasma phosphoglyceride fatty acids in rats.
Lipids, 21, 652-656.

Nassar, B.A., Manku, M.S., Huang., Y.S., Jenkins, D.K. and Horrobin, D.F., 1987.
The influence of dietary marine oil and evening primrose oil on prostaglandin production by the rat mesenteric vasculature.
Prost. Leuk. Med., 26, 253-263.

Naughton, J.M., 1981.
Supply of polyenoic fatty acids to the mammalian brain: the ease of conversion of short-chain polyunsaturated metabolites in the liver, brain, placenta and blood.
Int. J. Biochem., 13, 21-32.

Needleman, P., Raz, A., Minkes, M.S., Ferrendellis, J.A and Spector, M., 1979.
Triene prostaglandins, prostacycline and thromboxane biosynthesis and unique biological properties.
Proc. Natl. Acad. Sci. U.S.A., 76, 944-948.

Needleman, S.W., Spector, A.A. and Hoak, J.C., 1982.
Enrichment of human platelet phospholipids with linoleic acid deminishes thromboxane release.
Prostaglandins, 24, 607-622.

Negrel, R., Grimaldi, P. and Ailhaud, G., 1978.
Proc. Natl. Acad. Sci. U.S.A., 75, 6054-6058.

Negrel, R. and Ailhaud, G., 1981a.
Metabolism of arachidonic acid and prostaglandin synthesis in the preadipocyte clonal line OB_{17},
Biochem. Biophys. Res. Commun., 98, 768-777.

Negrel, R., Grimaldi, P. and Ailhaud, G., 1981b.
Differentiation of Ob17 preadipocytes to adipocytes. Effect of prostaglandin $F_{2\alpha}$ and relationship to prostaglandin synthesis.
Biochim. Biophys. Acta, 666, 15-24.

Nervi, A.M. and Brenner, R.R., 1965.
Rate of linoleic and arachidonic acid incorporation into liver, heart and red cells of essential fatty acid deficient rats and its effect on eicosatrienoic acid depletion.
Acta Physiol. Latinoamer., 15, 308-314.

Nervi, A.M., Brenner, R.R. and Peluffo, R.O., 1968.
Effect of arachidonic acid on the microsomal desaturation of linoleic acid into gamma-linolenic acid and their simultaneous incorporation into phosphoglycerides.
Biochim. Biophys. Acta, 152,539-551.

Nervi, A.M., Peluffo, R.O., Brenner, R.R. and Leikin, A.I., 1980.
Effect of ethanol administration on fatty acid desaturation.
Lipids, 15, 263-268.

Neuringer, M., Connor, W.E., van Petten, C. and Barstadt, L., 1984.
Dietary omega-3 fatty acid deficiency and visual loss in infant rhesus monkeys.
J. Clin. Invest., 73, 272-279.

Newman, J.H. and Sheller, J.R., 1984.
Review: Arachidonic acid metabolites in the healthy and diseased lung.
Am. J. Med. Sci., 288, 75-80.

Nicosia, S. and Galli, G.A., 1975.
A mass fragmentographic method for the quantitative evaluation of brain prostaglandin biosynthesis.
Prostaglandins, 9, 397-403.

Novelot, A., Delbart, C. and Bourre, J.M., 1986.
Hepatic metabolism of dietary alpha-linolenic acid in suckling rats, and its possible importance in polyunsaturated fatty acid uptake by the brain.
Ann. Nutr. Metab., 30, 316-323.

Nugteren, D., 1960.
Fatty acid metabolism in the rat.
Biochim. Biophys. Acta, 60, 656-658.

Nugteren, D., 1962.
Conversion in vitro of linoleic acid to γ-linolenic acid by rat liver.
Biochim. Biophys. Acta, 60, 656-657.

Nugteren, D., 1965.
The enzymic chain elongation of fatty acids by rat liver microsomes.
Biochim. Biophys. Acta, 106, 280-290.

Nugteren, D.H., 1970.
Inhibition of prostaglandin biosynthesis by 8-cis,12-trans, 14-cis-eicosatrienoic acid and 5-cis,8-cis,12-trans,14-cis-eicosatetraenoic acid.
Biochim. Biophys. Acta, 210, 171-176.

Nugteren, D.H. and Hazelhof, E., 1973.
Isolation and properties of intermediates in prostaglandin biosynthesis.
Biochim. Biophys. Acta, 326, 448-461.

Nugteren, D.H., 1975.
Arachidonate lipoxygenase in blood platelets.
Biochim. Biophys. Acta, 380, 299-307.

Obi, F.O. and Nwanze, E.A.C. 1979.
Fatty acid profiles in mental disease. I. Linolenate variations in schizophrenia.
J. Neurol. Sci., 43, 447-454.

O'Brien, S.J., 1986.
Molecular genetics in the domestic cat and its relatives.
T.I.G.S., 2, 137-142.

Ockner, R.K. and Manning, J.A., 1974.
Fatty acid binding protein in small intestine. Identification, isolation and evidence for its role in cellular fatty acid transport.
J. Clin. Invest., 54, 326-338.
Jpn. J. Exp. Med., 45, 533-534.

Okayasu, T., Ono, T., Shinojima, K. and Imai, Yoh., 1976.
Involvement of cytochrome b_5 in the oxidative desaturation of linoleic acid to γ-linolenic acid in rat liver microsomes.
Lipids, 12, 267-271.

Okayasu, T., Nagao, M., Ishibashi, T. and Imai, Y., 1981.
Purification and partial characterisation of linoleoyl-CoA desaturase from rat liver microsomes.
Biochim. Biophys. Acta, 206, 21.

Okazaki, N. and Arabi, E., 1974.
Eicosatrienoic acid ω9 in serum lipids of patients with hepatocellular carcinoma.
Clin. Chim. Acta, 53, 11-21.

Okazaki, N. and Arabi, E. 1978.
Eicosatrienoic acid ω9 in human hepatoma transplanted into athymic nude mice.
Oncology, 35, 153-154.

Oksi, F.A. and Barness, L.A., 1967.
Vitamin E deficiency: a previously unrecognised cause of hemolytic anemia in the premature infant.
J. Pediatr., 70, 211.

Ontko, J.A., 1972.
Metabolism of free fatty acids in isolated liver cells.
J. Biol. Chem., 247, 1788-1800.

Op den Kamp, J.A.F., 1979.
Lipid assymetry in membranes.
Ann. Rev. Biochem., 48, 47-71.

Oshino, N., Imai, Y. and Sato, R., 1966.
Electron-transfer mechanism associated with fatty acid desaturation catalysed by liver microsomes.
Biochim. Biophys. Acta, 128, 13-27.

Oshino, N. and Sato, R., 1971.
Stimulation by phenols of the reoxidation microsomal bound cytochrome b_5 and its implication to fatty acid desaturation.
J. Biochem., 69, 169.

Oshino, N. and Sato, R., 1972.
The dietary control of the microsomal stearoly-CoA desaturation enzyme system in rat liver.
Arch. Biochem. Biophys., 149, 369-377.

Oshino, N. and Omura, T., 1973.
Immunochemical evidence for the participation of cytochrome b_5 in microsomal stearyl-CoA desaturation reaction.
Arch. Biochim. Biophys., 157, 395-404.

Pace-Asciak, C. and Wolfe, L.S., 1968.
Inhibition of prostaglandin synthesis by oleic, linoleic and linolenic acids.
Biochim. Biophys. Acta, 152, 784-787.

Pace-Asciak, C. and Rangaraj, G., 1977.
Distribution of prostaglandin biosynthetic pathways in several rat tissues. Formation of 6-ketoprostaglandin $F_{1\alpha}$.
Biochim. Biophys. Acta, 486, 579-582.

Pande, S.V. and Mead, J.F., 1968.
Long chain fatty acid activation in subcellular preparations of rat liver.
J. Biol. Chem., 243, 352-361.

Panje, W.R., 1981.
Regression of head and neck carcinoma with prostaglandin-synthesis inhibitor.
Arch. Otolaryngol., 107, 658-663.

Patil, G.S. and Cornwell, D.G., 1977.
Surface phase separation and collapse of the stearate anion-alkaline earth cation complex.
J. Lipid Res., 18, 1-5.

Patterson, M.K., Jr., 1979.
Measurement of growth and viability of cells in culture.
Methods Enzymol., 58, 141-152.

Paul, J., 1975.
in 'Cell and Tissue Culture' (5th Edition), Churchill-Livingstone Press London, pg. 368.

Paulsrud, J.R., Stewart, S., Graff, G. and Holman, R.T. 1970.
Desaturation of saturated fatty acids by rat liver microsomes.
Lipids, 5, 611-616.

Peifer, J.J. and Holman, R.T., 1959.
Effect of saturated fatty acid upon essential fatty acid metabolism in the rat.
J. Nutr., 68, 155.

Peifer, J.J. and Holman, R.T., 1965.
Essential fatty acids, diabetes and cholesterol.
Arch Biochem. Biophys., 57, 520-521.

Peluffo, R.O., de Gomez Dumm, I.N.T., de Alaniz, M.J.T. and Brenner, R.R., 1971.
Effect of protein and insulin on linoleic acid desaturation of normal and diabetic rats.
J. Nutr., 101, 1075-1084.

Peluffo, R.O., Nervi, A.M., and Brenner, R.R., 1976.
Linoleic acid desaturation activity of liver microsomes of essential fatty acid deficient and sufficient rats.
Biochim. Biophys. Acta, 441, 25-31.

Peluffo, R.O., Nervi, A.M., Gonzalez, M.S. and Brenner, R.R., 1984.
Effect of different amino acid diets on delta-5, delta-6 and delta-9 desaturases.
Lipids, 19, 154-157.

Pentland, A.P. and Needleman, P., 1986.
Modulation of keritinocyte proliferation in vitro by endogenous prostaglandin synthesis.
J. Clin. Invest., 77, 246-251.

Peterson, J.A. and Rubin, H., 1969.
The exchange of phospholipids between cultured chick embryo fibroblasts and their growth medium.
Exp. Cell Res., 58, 365-378.

Peterson, J.A. and Rubin, H., 1970.
The exchange of phospholipids between cultured chick embryo fibroblasts as observed by autoradiography.
Exp. Cell Res., 60, 383-392.

Piper, P.J., Vane, J.R. and Wyllie, J.H., 1970.
Inactivation of prostaglandins by the lung.
Nature, 225, 600-604.

Pitas, R.E., Boyles, J.K., Lee, S.H., Foss, D. and Mahley, R.W., 1987.
Astrocytes synthesise apolipoprotein E and metabolise apolipoprotein E-containing lipoproteins.
Biochim. Biophys. Acta, 917, 148-161.

Pittman, J.G. and Martin, D.B., 1966.
Fatty acid biosynthesis in human erythrocytes: evidence in mature erythrocytes for an incomplete long chain fatty acid synthesising system.
J. Clin. Invest., 45, 165-172.

Poduslo, S.E. and Norton, W.T., 1975.
Isolation of specific brain cells.
Methods Enzymol., 35, 561-579.

Poisson, J.P., Lemarchal, P., Blond, J.P., Lecerf, J. and Mend, F., 1978.
Influence of alloxan diabetes on the conversion of linoleic acid and γ-linolenic acid to arachidonic acid in the rat in vivo.
Diabetes Metabolism, 4, 39-45.

Pong, S., Hong, S-C.L. and Levine, L., 1977.
Prostaglandin production by methylcholanthrene-transformed mouse BALB/3T3.
J. Biol. Chem., 252, 1408.

Popp-Snijders, C., Schouten, J.A., DeJong, A.P. and van der Veen, E.A., 1984.
Effect of dietary cod liver oil on the lipid composition of human erythrocyte membranes.
Scand. J. Clin. Lab. Invest., 44, 39,-46.

Popp-Snijders, C., Schouten, J.A., van Blitterswijk, W.J. and van der Veen, E.A., 1986a.
Changes in membrane lipid composition of human erythrocytes after dietary supplementation of (n-3) polyunsaturated fatty acids. Maintenance of membrane fluidity.
Biochim. Biophys. Acta, 854, 31-37.

Popp-Snijders, C., Schouten, J.A., van der Meer, J. and van der Veen, E.A., 1986b.
Fatty fish-induced changes in membrane lipid composition and viscosity of human erythrocyte suspensions.
Scand. J. Clin. Lab. Invest., 46, 253-258.

Poubelle, P.E., Borgeat, P. and Pola-Pleszynski, M., 1987.
Assessment of LTB_4 synthesis in human lymphocytes by using HPLC and RIA methods.
J. Immunol., 139, 1273-1277.

Prasad, M.R. and Joshi, U.C. 1979.
Regulation of rat hepatic stearoyl coenzyme A desaturase.
J. Biol. Chem., 254, 997-999.

Privett, O.S., Phillips, F., Shimasaki, H., Nozawa, T. and Nickell, E.C., 1977.
Studies of the effects of trans fatty acids in the diet on lipid metabolism in essential fatty acid deficient rats.
Am. J. Clin. Nutr., 30, 1009-1017.

Pryor, W.A., 1976.
The role of free radical reactions in biological systems.
in "Free Radicals in Biology", vol.1, Academic Press., New York, pg. 1-49.

Pryor, W.A., Stanley, J.P. and Blair, E., 1976.
Auto-oxidation of polyunsaturated fatty acids: II. A suggested mechanism for the formation of TBA-reactive material from prostaglandin-like endoperoxides.
Lipids, 11, 370-379.

Pugh, E.L. and Kates, M., 1979.
Membrane bound phospholipid desaturases.
Lipids, 14, 159-165.

Pugh, E.L. and Kates, M., 1984.
The dietary regulation of acyltransferase and desaturase activities in microsomal membranes of rat liver.
Lipids, 19, 48-55.

Puzicka, T. and Printz, M.P., 1982.
Arachidonic acid metabolism in guinea pig skin.
Biochim. Biophys. Acta, 711, 391.

Rahman, Y.E. and Weil, J.V., 1970.
Evidence of a membrane bound phospholipase A in rat liver microsomes.
Biochim. Biophys. Acta, 38, 670-677.

Raju, P.K. and Reiser, R., 1972.
Stimulation of stearoyl-CoA desaturase activity by sn-glycero-3-phosphate in mouse liver microsomes.
Biochim. Biophys. Acta, 280, 267-274.

Rao, G.A., Siler, K. and Larkin, E.C., 1979.
Diet-induced alterations in the discoid shape and phospholipid fatty acid compositions of erythrocytes.
Lipids, 14, 30-38.

Resch, K. and Ferber, E., 1975.
Phospholipid metabolism of stimulated lymphocytes. Composition of phospholipid fatty acids.
Biochim. Biophys. Acta, 398, 364-376.

Rice, C., Hudig, D., Newton, R.S. and Mendelsohn, J., 1981.
Effect of unsaturated fatty acids on human lymphocytes: disparate influences of oleic and linoleic acids on natural cytotoxicity.
Clin Immunol. Immunopath., 20, 389-401.

Rice, C. and Levine, L., 1984.
Melittin-stimulated arachidonic acid metabolism by cultured malignant human epidermal keritinocytes.
Biochem. Biophys. Res. Commun., 124, 303-307.

Richard, M.J., Holck, J.T. and Beitz, D.C., 1989.
Lipogenesis in liver and adipose tissue of the domestic cat (Felis domestica).
Comp. Biochem. Physiol., 93, 561-564.

Ritzi, E.M., Boto, W.O. and Stylos, W.A., 1975.
Measurement of initial prostaglandin F metabolites in medium of BALB/c 3T3 and SV3T3 mouse fibroblast cultures.
Biochem. Biophys. Res. Commun., 63, 179-186.

Ritzi, E.M. and Stylos, W.A., 1976.
Prostaglandin production in cultures of BALB/3T3 and SV3T3 mouse fibroblasts.
J. Natl. Cancer Inst., 56, 529-533.

Rivers, J.P.W. and Davidson, B.C., 1974a.
Linoleic acid deprivation in mice.
Proc. Nutr. Soc., 33, 48A.

Rivers, J.P.W. and Crawford, M.A., 1974b.
Maternal nutrition and the sex ratio at birth.
Nature, 252, 297-298.

Rivers, J.P.W., Sinclair, A.J. and Crawford, M.A., 1975a.
Inability of the cat to desaturate essential fatty acids.
Nature, 258, 171-173.

Rivers, J.P.W. and Hassam, A.G., 1975b.
Defective essential fatty acid metabolism in cystic fibrosis.
Lancet, 2, 642-643.

Rivers, J.P.W., Hassam, A.G., Crawford, M.A. and Brambell, M.R., 1976.
The inability of the lion, Panthera Leo, L. to desaturate linoleic acid.
Febs. Lett., 67, 269-270.

Robidoux, C., Maclouf, J., Pradelles, P. and Sirois, P., 1988.
Release of prostaglandin E_2 and thromboxane B_2 by mixed isolated human lung cells.
Prost. Leuk. EFA's., 32, 23-28.

Rocklin, R.E, Thistle, L., Gallant, L., Manku, M.S. and Horrobin, D.F., 1986.
Altered arachidonic acid content in polymorphonuclear and mononuclear cells from patients with allergic rhinitis and/or asthma.
Lipids, 21, 17-20.

Rodbell, M., 1964.
Metabolism of isolated fat cells: Effects of hormones on glucose metabolism and lipolysis.
J. Biol. Chem., 239, 375-380.

Rode, H.N., Szamel, M., Schneider, S. and Resch, K., 1982.
Phospholipid metabolism of stimulated lymphocytes: preferential incorporation of polyunsaturated fatty acids into plasma membrane phospholipids upon stimulation with concavalin-A.
Biochim. Biophys. Acta, 686, 66-74.

van Rollins, M., Baker, R.C., Sprecher, H.W. and Murphy, R.C., 1984.
Oxidation of docosahexaenoic acid by rat liver microsomes.
J. Biol. Chem., 259, 5776-6783.

Rosenthal, M.D. and Geyer, R.P., 1978.
Incorporation of moderate and excessive levels of fatty acids by human skin fibroblasts.
Fed. Proc., 37, 1832 (Abst.).

Rosenthal, M.D., 1980.
Selectivity in incorporation, utilisation and retention of oleic and linolenic acids by human skin fibroblasts.
Lipids, 15, 838-848.

Rosenthal, M.D., 1981.
Accumulation of neutral lipids by human skin fibroblasts: differential effects of saturated and unsaturated fatty acids.
Lipids, 16, 173-182.

Rosenthal, M.D. and Whitehurst, M.C., 1982.
Desaturation in human skin fibroblasts.
J. Cell Physiol., 113, 298-306.

Rosenthal, M.D. and Whitehurst, M.C., 1983a.
Selective effects of isomeric cis and trans fatty acids on fatty acyl Δ9 and Δ6 desaturation by human skin fibroblasts.
Biochim. Biophys. Acta, 753, 450-459.

Rosenthal, M.C. and Whitehurst, M.C. 1983b.
Fatty acyl Δ6 desaturation activity of cultured human endothelial cells. Modulation by fetal bovine serum.
Biochim. Biophys. Acta, 750, 490-496.

Rosenthal, M.D. and Doloresco, M.A., 1984.
The effects of trans fatty acids on fatty acyl Δ5 desaturation by human skin fibroblasts.
Lipids, 19, 869-874.

Rosenthal, M.D. and Hill, J.R., 1986.
Elongation of arachidonic and eicosapentaenoic acids limits their availability for thrombin-stimulated release from the glycerolipids of vascular endothelial cells.
Biochem. Biophys. Acta, 875, 382-391.

Rothblat, G.H., 1969.
Lipid metabolism in tissue culture cells.
Adv. Lipid Res., 7, 135-163.

Roubal, W.T. and Tappel, A.L., 1966a.
Damage to proteins, enzymes and amino acids by peroxidising lipids.
Arch. Biochem., 113, 5-8.

Roubal, W.T. and Tappel, A.L., 1966b.
Polymerisation of proteins induced by free-radical lipid peroxidation.
Arch. Biochem., 113, 150-155.

Roubal, W.T., 1971.
Free radicals, malondaldehyde, and protein damage in lipid-protein systems.
Lipids, 6, 62-64.

Ruck, A., Davidson, B.C. and Cantrill, R.C., 1986.
Degree of unsaturation of fatty acid alters monocyte viability in vitro.
Prog. Lipid Res., 25, 375-377.

Rydzik, R., Terano, A. and Tackett, R., 1984.
Picogram detection of eicosanoids by ultraviolet absorbance after narrow-bore high-pressure liquid chromatography.
J. Chromat., 308, 31-41.

Sakai, K., Okuyama, H., Kon, K., Maeda, N, Sekiya, M., Shiga, T. and Reitz, R.C., 1990.
Effects of high α-linolenate and linoleate diets on erythrocyte deformability and hematological indicies in rat lipids.
Lipids, 25, 793-797.

Sakagami, Y., Mizoguchi, Y., Seki, S., Kobayashi, K., Morisawa, S. and Yamamoto, S., 1989.
Effect of arachidonate derivatives on cell viability in isolated hepatocytes: cytotoxicity of 15-hydroperoxyeicosatetraenoic acid.
Gastro. Jpn., 24, 583-590.

Salem, N., Serpentino, P., Puskim, J.S. and Abood, L.G., 1980.
Preparation and spectroscopic characterisation of molecular species of brain phosphatidylserines.
Chem. Phys. Lipids, 27, 289-304.

Samuelsson, B., Granstrom, E., Green, K., Hamberg, M. and Hammerstrom, S., 1975.
Prostaglandins.
Annu. Rev. Biochem., 44, 669-695.

Samuelsson, B., Goldyne, M., Granstrom, E. Hamberg, M., Hammerstrom, S. and Halmsten, L., 1978.
Prostaglandins and thromboxanes.
Annu. Rev. Biochem., 47, 997-1029.

Samuelsson, B., 1981.
Leukotrienes: a novel group of compounds including SRS-A.
Prog. Lipid Res., 20, 23-30.

Samuelsson, B., 1986.
Leukotrienes and other lipoxygenase products.
Prog. Lipid Res., 25, 13-18.

Sanders, T.A.B., Ellis, F.R. and Dickerson, J.W.T., 1978.
Studies of vegans: the fatty acid composition of plasma choline phosphoglycerides, erythrocytes, adipose tissue and breast milk, and some indicators of susceptibility to ischemic heart disease in vegans and omnivore controls.
Am. J. Clin. Nutr., 31, 805-813.

Schafer, T.W. Pascale, A. and Shimonaski, G., 1972.
Evaluation of gentamycin for use in virology and tissue culture.
Science, 176, 1326-1326.

Schneeberger, E.E., Lynch, R.D. and Geyer, R.P., 1971.
Formation and disappearance of triglyceride droplets in strain L fibroblasts.
Exp. Cell Res., 69, 193-206.

de Schrijver, R. and Privett, O.S., 1982.
Effect of dietary long-chain fatty acids on the biosynthesis of unsaturated fatty acids in the rat.
J. Nutr., 112, 619-626.

de Schrijver, R. and Privett, O.S., 1983.
Hepatic fatty acids and acyl desaturases in rats: Effects of dietary carbohydrate and essential fatty acids.
J. Nutr., 113, 2217-2222.

Schwartzman, M., Lieberman, E. and Raz, A., 1981.
Bradykinin and angiotensin II activation of arachidonic acid deacylation and prostaglandin E_2 formation in rabbit kidney. Hormone sensitive versus hormone insensitive lipid pools of arachidonic acid.
J. Biol. Chem., 256, 2329-2333.

Sevanian, A., Hacker, A.D. and Elsayed, N., 1982.
Influence of vitamin E and nitrogen dioxide on lipid peroxidation in rat lung and liver microsomes.
Lipids, 17, 269-277.

Shimakata, T., Mihara, K, and Sato, R., 1972.
Reconstitution of hepatic microsomal stearoyl-CoA deaturase system from solubilised components.
J. Biochem., 72, 1163-1174.

Shinitzky, M. and Inbar, M., 1976.
Microviscosity parameters and protein mobility in biological membranes.
Biochim. Biophys. Acta, 433, 133-149.

Shinitzky, M., 1984.
Membrane fluidity in malignancy. Adversative and recuperative.
Biochim. Biphys. Acta, 738, 251-261.

Shohet, S.D. and Nathan, D.G., 1968.
Stages in the incorporation of fatty acids into red blood cells.
J. Clin. Invest., 47, 1096-1102.

Shohet, S.D., 1976.
in 'Membranes and Diseases' (Bolis, L., Hoffman, J.F. and Leaf, A., eds.), Raven Press, New York, pg. 61-74.

Siegel, M., McConnell, R., Abrahams, S., Porter, N. and Cuatrecasas, P., 1979.
Regulation of arachidonate metabolism via lipoxygenase and cyclooxygenase by 12-HPETE, the product of human platelet lipoxygenase.
Biochem. Biophys. Res. Commun., 89, 1273-1280.

Simon, I., Burns, C.P. and Spector, A.A., 1982.
Electron spin resonance studies on intact cells and isolated lipid droplets from fatty acid modified L1210 murine lekkaemia cells.
Cancer Res., 42, 2715-2721.

Sinclair, H.M. 1956.
Deficiency of essential fatty acids.
Lancet, 1, 381-3.

Sinclair, A.J. and Crawford, M.A., 1972.
The accumulation of arachidonate and docosahexaenoate in the developing rat brain.
J. Neurochem., 19, 1753-1758.

Sinclair, A.J., 1974.
Fatty acid composition of liver lipids during development of rat.
Lipids, 9, 809-818.

Sinclair, A.J., 1975a.
Long chain polyunsaturated fatty acids in the mammalian brain.
Proc. Nutr. Soc., 34, 287-291.

Sinclair, A.J., 1975b.
Incorporation of radioactive fatty acids into liver and brain of developing rat.
Lipids, 10, 175-184.

Sinclair, A.J., 1979.
Metabolism of linoleic acid in the cat.
Lipids, 14, 932-936.

Sinclair, H.M., 1980a.
Dietary fats and coronary heart disease.
Lancet, 1, 414-415.

Sinclair, H.M., 1980b.
Prevention of coronary heart disease: the role of essential fatty acids.
Post. Grad. Med. J., 56, 597-584.

Sinclair, H.M., 1981.
Are Eskimo's obligate carnivores?
Lancet, 1, 1217.

Sinclair, A.J., Slattery, W., McLean, J.G. and Monger, E.A., 1981.
Essertial fatty acid deficiency and evidence for arachidonate synthesis in the cat.
Br. J. Nutr., 46, 93-96.

Sinclair, H.M., 1982.
Essential fatty acids and chronic degenerative diseases.
in 'Nutrition and Killer Diseases' (Rose, J. ed.), New Jersey, Noyes, pg. 69-83.

Sinclair, H.M., 1984.
Essential fatty acids in perspective.
Human Nutrition: Clinical Nutrition, 38C, 245-260.

Sircar, S., Cai, F., Begin, M.E. and Weber, J.M., 1990.
Transformation renders MDR cells more sensitive to polyunsaturated fatty acids.
Anticancer Res., 10, 1783-1786.

Skouteris, G.G., Org, M.G. and Stocken, L.A., 1988.
Regulation of the proliferation of primary rat hepatocytes by eicosanoids.
J. Cell. Physiol., 135, 516-520.

Sly, W.S. and Grubb, J., 1979.
Isolation of fibroblasts from patients.
Methods Enzymol., 58, 444-450.

Smith, W.L. and Lands, W.E.M., 1972.
Oxygenation of polyunsaturated fatty acids during prostaglandin biosynthesis by sheep vesicular gland.
Biochemistry, 11, 3276-3285.

Smith, D.L., Willis, A.L. and Mahmud, I., 1984.
Eicosanoid effects on cell proliferation in vitro: relevance to atherosclerosis.
Prost. Leuk. Med., 16, 1-10.

Smith, W.L., 1987.
in "Handbook of Eicosanoids: Prostaglandins and Related Compounds" Vol. 1 (Willis, A.L. ed.), CRC Press, Boca, Raton, FL.

Smith, W.L., 1989.
The eicosanoids and their biochemical mechanisms of action.
Biochem. J., 259, 315-324.

Spector, A.A, Steinberg, D. and Tanaka, A., 1965a.
Uptake of free fatty acids by Ehrlich ascites tumor cells.
J. Biol. Chem., 240, 1032-1041.

Spector, A.A. and Steinberg, D., 1965b.
The utilisation of unesterified palmitate by Ehrlich ascites tumor cells.
J. Biol. Chem., 240, 3747-3753.

Spector, A.A. and Steinberg, C.J., 1967.
Turnover and utilisation of esterified fatty acids in Ehrlich ascites tumor cells.
J. Biol. Chem., 242, 3057-3062.

Spector, A.A., 1968.
The transport and utilisation of free fatty acid.
Ann. N.Y. Acad. Sci., 149, 768-783.

Spector, A.A, 1971.
Metabolism of free fatty acids.
Prog. Biochem. Pharmacol., 6, 130-176.

Spector, A.A., 1975.
Fatty acid binding to plasma albumin.
J. Lipid Res., 16, 165-179.

Spector, A.A., Kiser, R.E., Denning, G.M., Koh, S.M. and DeBault, L.E., 1979.
Modification of the fatty acid composition of cultured human fibroblasts.
J. Lipid Res., 20, 536-547.

Spector, A.A., Denning, G.M. and Stoll, L.L., 1980a.
Retention of human skin fibroblast fatty acid modifications during maintenance culture.
In Vitro, 16, 932-940.

Spector, A.A., Hoak, J.C., Fry, L., Denning, G.M., Stoll, L.L. and Smith, J. ., 1980b.
Effect of fatty acid modification on prostacyclin production by cultured human endothelial cells.
J. Clin. Invest., 65, 1003-1012.

Spector, A.A., Mathur, S.N., Kaduce, T.L. and Hyman, B.T., 1981a.
Lipid nutrition and metabolism of cultured mammalian cells.
Prog. Lipid Res., 19, 155-186.

Spector, A.A., Kaduce, T.L., Hoak, J.C. and Fry, G.L., 1981b.
Utilisation of arachidonic and linoleic acids by cultured human endothelial cells.
J. Clin. Invest., 68, 1003-1011.

Spector, A.A., Hoak, J.C., Fry, G.L., Stoll, L.L., Tanke, C.T. and Kaduce, T.L., 1981c.
Essential fatty acid availability and prostacyclin production by cultured human endothelial cells.
Prog. Lipid Res., 20, 471-477.

Spector, A.A., Kaduce, T.L., Hoak, J.C. and Czervionke, R.L., 1983.
Arachidonic acid availability and prostacyclin production by cultured human endothelial cells.
Atherosclerosis, 3, 323-331.

Spector, A.A. and Yorek, M.A., 1985.
Membrane lipid composition and cellular function.
J. Lipid Res. 26, 1015-1035.

Sprecher, H. and Lee, C.J., 1975.
The absence of an 8-desaturase in rat liver: a re-evaluation of optional pathways for the metabolism of linoleic and linolenic acids.
Biochim. Biophys. Acta, 388, 113-125.

Sprecher, H., 1977.
in "Polyunsaturated Fatty Acids" (Kanua, W.H. and Holman, R.T., eds.), Am. Oil Chem. Soc., Champaign IL.

Sprecher, H., 1981
Biochemistry of essential fatty acids.
Prog. Lipid Res., 20, 13-22.

Stearns, E.M., Rysary, J.A. and Privett, O.S., 1967.
Metabolism of cis-11,cis-14 and trans-11,trans-14 eicosadienoic acids in the rat.
J. Nutr., 93, 485-490.

Stein, Y. and Stein, O., 1962.
The incorporation and disappearance of fatty acids in the rat epididymal fat pad studied by the *in vivo* incubation technique.
Biochim. Biophys. Acta, 60, 58-71.

Stoffel, W., 1961.
Biosynthesis of polyenoic fatty acids.
Biochem. Biophys. Res. Commun., 6, 270-273.

Stoffel, W. and Ach, K.L., 1964.
Eigenschaften des kettenverlangernden enzyms. Zur frage der biohydrogenierung der ungestattigten fettsauren.
Z. Physiol. Chem., 337, 123-132.

Stone, K.J., Willis, A.L., Heat, M., Kirtland, S.J., Kernoff, R.B.A. and McNicol, G.P., 1979.
The metabolism of dihomo-gamma-linolenic acid in Man.
Lipids, 14, 174-180.

Storch, J. and Kleinfeld, M.A., 1985.
The lipid structure of biological membranes.
Trends Biochem. Sci., 119, 418-421.

Strange, E.F., Scheider, A., Preclik, G. and Ditschuneit, H., 1986.
Prostaglandins are not involved in the differentiation or growth of cultured small intestinal cells.
Digestion, 35, 217-223.

Strittmatter, P., Spatz, L., Corcoran, D., Rogers, M.J., Setlow, B. and Redline, R. 1974.
Proc. Natl. Acad. Sci. U.S.A., 71, 4565-4569.

Stubbs, C.D., Tsang, W.M., Belin, J., Smith, A.D. and Johnson, S.M., 1980.
Incubation of exogenous fatty acids with lymphocytes: changes in fatty acid composition and effects on the rotational relaxation time of 1,6-diphenyl-1,3,5-hexatriene.
Biochemistry, 19, 2756-2762.

Stubbs, C.D., 1983.
Membrane fluidity: structure and dynamics of membrane lipids.
Essays Biochem., 19, 1-39.

Stubbs, C.D. and Smith, A.D., 1984.
The modification of mammalian membrane polyunsaturated fatty acid composition in relation to membrane fluidity and function.
Biochim. Biophys. Acta, 779, 89-137.

Stubbs, C.D. and Kisielewski, A.E., 1990.
Effect of increasing the level of ω3 fatty acids on rat skeletal muscle sarcoplasmic reticulum.
Lipids, 25, 553-558.

Sun, F.F., Chapman, J.P. and McGuire, J.C., 1978.
Metabolism of prostaglandin endoperoxides in animal tissues.
Prostaglandins, 14, 1055-1074.

Svennerholm, L., 1968.
Distribution and fatty acid composition of phosphoglycerides in normal human brain.
J. Lipid Res., 9, 570-579.

Svensson, J., Hamberg, M. and Samuelsson, B., 1975.
Prostaglandin endoperoxides. IX.
Characterisation of rabbit aorta contracting substance (RCS) from guinea pig lung and human platelets.
Acta Physiol. Scand., 94, 222-228.

Svingen, B.A., Buege, J.A., O'Neal, F.O. and Aust, S.D., 1979.
The mechanism of NADPH-dependant lipid peroxidation.
J. Biol. Chem., 254, 5892-5899.

Swanson, J.E., Black, J.M. and Kinsella, J.E., 1987.
Dietary n-3 polyunsaturated fatty acids: rate and extent of modification of fatty acyl composition of lipid classes of mouse lung and kidney.
J. Nutr., 117, 824-832.

Switzer, S. and Eder, H.A., 1965.
Transport of lysolecithin by albumin in human and rat plasma.
J. Lipid Res., 6, 506-510.

Takayasu, K. Okuda, K. and Yoshikawa, I., 1970.
Fatty acid composition of human and rat adrenal lipids: occurence of ω6 docosatrienoic acid in human adrenal cholesterol ester.
Lipids, 5, 743-750.

Takaoka, T. and Katsuta, H., 1971.
Long-term cultivation of mammalian cell strains in protein- and lipid-free chemically defined synthetic media.
Exp. Cell Res., 67, 295-304.

Takasugi, Y. and Imai, Y., 1966.
Distribution of lipids in subcellular fractions of fatty acids. I. Lipids in liver cell fractions of rats fed a high fat and cholesterol diet.
J. Biochem., 60, 191-196.

Tappel, A.L., 1963.
Lipid peroxidation.
Arch. Biochem. Biophys., 44, 378-395.

Tappel, A.L., 1972.
Vitamin E and free radical peroxidation of lipids.
Ann. N.Y. Acad. Sci., 203, 12-28.

Tappel, A.L., 1975.
in "Pathobiology of Cell Membranes" Vol. 1 (Trump and Aristila eds.), Academic Press, New York, pg. 145-170.

Tappel, A.L., 1980.
Measurement of and protection from *in vivo* lipid peroxidation.
in "Free Radicals in Biology", Vol. 4, Academic Press, New York, pg. 1-47.

Tarlov, A.R. and Mulder, E., 1967.
Phospholipid metabolism in rat erythrocytes: quantitative studies of lecithin biosynthesis.
Blood, 30, 853-856.

Taylor, S.L., Lamden, M.P. and Tappel, A.L., 1976.
Sensitive fluorometric method for tissue tocopherol analysis.
Lipids, 11, 530-538.

Taylor, L. and Polgar, P., 1977.
Self regulation of growth by human diploid fibroblasts via prostaglandin production.
Febs. Lett., 79, 69-72.

Taylor, G.W. and Morris, H.R., 1983.
Lipoxygenase pathways.
Br. Med. Bull., 39, 219-222.

Taylor, G.W. and Ritter, J.M., 1986.
Eicosanoids.
T.I.P.S., 7, 96-97.

Terano, T., Hira, A., Hamazaki, T., Kobayashi, S., Fujita, T., Tamura, Y. and Kumagai, A., 1983.
Effect of oral administration of highly purified essential fatty acids on platelet function, blood viscosity, and red blood cell deformability in healthy human subjects.
Atherosclerosis, 46, 321-331.

Thomas, D.R., Philpott, G.W. and Jaffe, B.M., 1974.
The relationship between concentration of prostaglandin E and rates of cell replication.
Exp. Cell. Res., 84, 40-46.

Tolnai, S. and Morgan, J.F., 1962.
Studies on the in vitro antitumor activity of fatty acids. V. Unsaturated acids.
Can. J. Biochem. Physiol., 40, 869-875.

de Tomas, M.E., Peluffo, R.O. and Mercuri, O., 1973.
Effect of dietary glycerol on the [1-^{14}C] stearic acid and [1-^{14}C]linoleic acid desaturation of normal and diabetic rats.
Biochim. Biophys. Acta, 306, 149-155.

de Tomas, M.E., Mercuri, O. and Rodrigo, A., 1980.
Effects of dietary protein and essential fatty acid deficiency on liver delta 5, 6, and 9 desaturase activities in the early developing rat.
J. Nutr., 110, 595-599.

Tompa, A. and Langenbach, R , 1979.
Culture of adult rat lung cells: Benzo(A)pyrene metabolism and mutagenesis.
In Vitro, 15, 569-578.

Traill, K.N. and Wick, G., 1984.
Lipids and lymphocyte function.
Immunology Today, 5, 70-76.

Trotta, R.J., Sullivan, S.G. and Stern, A., 1981.
Lipid peroxidation and hemoglobin degradation in red blood cells exposed to t-butyl hydroperoxide. Dependence on glucose metabolism and hemoglobin status.
Biochim. Biophys. Acta, 678, 230-237.

Trotta, R.J., Sullivan, S.G. and Stern, A., 1982.
Lipid peroxidation and hemoglobin degredation in red blood cells exposed to t-butyl hydroperoxide.
Biochem. J., 204, 405-415.

Tsang, W.M., Weyman, C. and Smith, A.D., 1977.
Effect of fatty acid mixtures on phytohemaglutanin-stimulated lymphocytes of different species.
Biochem. Soc. Trans., 5, 153-154.

Tsuji, S., Ohno, T., Miyatake, T., Suzuki, A. and Yamakawa, T., 1984.
Lipid and fatty acid metabolism.
J. Biochem., 96, 1241-1247.

Ujihara, M., Horiguchi, Y., Ikai, K. and Urade, Y., 1988.
Characterisation and distribution of prostaglandin D synthetase in rat skin.
J. Invest. Dermatol., 90, 448-451.

Ullman, D., and Sprecher, H., 1971a.
An in vitro study of the effects of linoleic, eicosa-8,11,14-trienoic and arachidonic acids on the desaturation of stearic, oleic and eicosa-8,11-dienoic acids.
Biochim. Biophys. Acta, 248, 61-70.

Ullman, D. and Sprecher, H., 1971b.
An in vitro study of the conversion of eicosa-11,14-dienoic acid to eicosa-5,11,14-trienoic acid and of the conversion of eicosa-11-enoic acid to eicosa-5,11-dienoic acid in the rat.
Biochem. Biophys. Acta, 248, 186-197.

Ullman, D. and Sprecher, H., 1972.
An in vitro and in vivo study of the conversion of eicosa-5,11,14-trienoic acid and of the conversion of eicosa-11-enoic acid to eicosa-5,11-dienoic acid in the rat.
Biochem. Biophys. Acta, 248, 186-197.

Urano, S., Hoshi, M., Tochigi, N., Matsuo, M, Shiraki, M. and Ito, H., 1991.
Vitamin E and the susceptibility of erythrocytes and reconstituted liposomes to oxidative stress in aged diabetics.
Lipids, 26, 58-61.

Van, R.L.R., Bayliss, C.E. and Runcari, D.A.K., 1976.
Cytological and enzymological characterisation of adult human adipose precursors in culture.
J. Clin. Invest. 58, 699-704.

Vane, J.R., 1971.
Inhibition of prostaglandin synthesis as a possible mechanism of action for the asprin-like drugs.
Nature, 231, 232-235.

Vane, J.R., Gryglewski, R.J. and Botting, R.M., 1987.
The endothelial cell as a metabolic and endocrine organ.
T.I.P.S., 8, 491-496.

Vignikin, R., Grundt, I.K., Scotto, J., Wolfrom, C., Raulin, J. and Gautier, M., 1989.
Effects of polyunsaturated fatty acids on human and rat cells. In vitro versus in vivo experiments.
In Vivo, 3, 351-358.

Waite, M., Kucera, L., King, L. and Crosland, S., 1977.
Lipid synthesis in cultured human embryonic fibroblasts.
Lipids, 12, 698-706.

Walker, B.L., 1966.
Chromatographic evidence for the oleic acid metabolites in erythrocytes from essential fatty acid deficient rats.
Arch. Biochem. Biophys., 114, 465-471.

Walker, B.L., 1967.
Recovery of rat tissue lipids from essential fatty acid deficiency: plasma, erythrocytes and liver.
J. Nutr., 92, 23-29.

Walker, A., Chapman, J., Bruce, C. and Rumsby, M.J., 1984.
Immunochemical characterisation of cell cultures grown from 1-2 day post-natal rat cerebral tissue. A developmental study.
J. Neuroimmunol., 7, 1-20.

Waring, D.H., Hyman, A.L. Nandiwada, P.A. and Kadowitz, P.J., 1988.
Influence of OKY-1581 on responses to arachidonic acid in the feline pulmonary vascular bed.
Prost. Leuk. EFA's., 31, 117-122.

Watson, W.C., 1963.
The morphology and lipid composition of the erythrocytes in normal and essential fatty acid deficient rats.
Brit. J. Haematol., 9, 32-39.

Wechezak, A.R. and Mansfield, P.B., 1973.
Isolation and growth characteristics of cell lines from bovine venous endothelium.
In Vitro, 9, 39-45.

Wei, E.P., Ellison, M.D., Kontos, H.A. and Povlishock, J.T., 1986.
O_2 radicals in arachidonate-induced increased blood-brain barrier permeability to proteins.
Am. J. Physiol., 251, 693-699.

Weisiger, R., Gollan, J. and Ockner, R., 1981.
Receptor for albumin on the liver cell surface may mediate uptake of fatty acids and other albumin bound substances.
Science, 211, 1048-1051.

Weithmann, K.V., Peterson, H. and Sevanian, A., 1989.
Incorporation of arachidonic, dihomogamma-linolenic and eicosapentaenoic acids into cultured V79 cells.
Lipids, 24, 173-178.

Wene, J.D., Connor, W.E. and DenBesten, L., 1975.
The development of essential fatty acid deficiency in healthy men fed fat-free diets intravenously and orally.
J. Clin. Invest., 56, 127-134.

Weston, P.G. and Johnston, P.V., 1978.
Cerebral prostaglandin synthesis during the dietary and pathologocal stresses of essential fatty acid deficiency and experimental allergic encephalomyelitis.
Lipids, 13, 408-414.

Weyman, C., Belin, J., Smith, A.D. and Thompson, R.H.S., 1975.
Linoleic acid as an immunosupressive agent.
Lancet, 2, 33.

Weyman, C., Morgan, S.J., Belin, J. and Smith, A.D., 1977.
Phytohaemaglutanin stimulation of human leukocytes; effects of fatty acids on uridine uptake and phosphoglyceride fatty acids profile.
Biochim. Biophys. Acta, 496, 155-166.

Wicha, M.S., Liotta, L.A. and Kidwell, W.R., 1979.
Effects of free fatty acids on the growth of normal and neoplastic rat mammary epithelial cells.
Cancer Res., 39, 426-435.

Wickremasinghe, R.G., 1988.
The role of prostaglandins in the regulation of cell proliferation.
Prost. Leuk. EFA's., 31, 171-179.

Williams, R.E., Wisnieski, B.J., Rittenhouse, H.G., Fox, C.F., 1974.
Utilisation of fatty acid supplements by cultured animal cells.
Biochemistry, 13, 1969-1977.

Williams, G., Davidson, B., Stevens, P. and Crawford, M.A., 1977a.
Comparative fatty acids of the dolphin and herring.
J. Am. Oil Chem. Soc., 54, 328-330.

Williams G., Bermudel, E. and Scaramuzzino, D., 1977b.
Rat hepatocyte primary cultures. III. Improved dissociation and attachment techniques and the enhancement of servival by culture medium.
In Vitro, 13, 809-817.

Williams, G. and Crawford, M.A., 1986.
Lessons from the fatty acid composition of structural lipids from marine and land animals.
Prog. Lipid Res., 25, 421-423.

Willis, A.J. and Stone, K.J., 1976.
Properties of prostaglandin, thromboxane, their precursors, intermediates, metabolites and analogs.
in "Handbook of Biochemistry and Molecular Biology," Vol. 2, 3rd Edition (Fashman, G.D., ed.), CRC Press, Cleveland, pg. 312-423.

Willis, A.L., 1981.
Nutritional and pharmacological factors in eicosanoid biology.
Nutr. Rev., 39, 289-300.

Willis, A.L., 1987.
in "Handbook of Eicosanoids: Prostaglandins and Related Lipids" Vol.1 (Willis, A.L. ed.), CRC Press, Boca Raton, FL, pg. 3-46.

Wills, E.D., 1961.
Effect of unsaturated fatty acids and their peroxides on enzymes.
Biochem. Pharmacol., 7, 7-16.

Wisnieski, B.J., Parkes, J.G., Huang, Y.O. and Fox, C.F., 1974.
Physical and physiological evidence for two phase transitions in cytoplasmic membranes of animal cells.
Proc. Natl. Acad. Sci. U.S.A., 71, 4381-4385.

Witting, L.A., 1980
Vitamin E and lipid antioxidants in free-radical-initiated reactions.
in "Free Radicals in Biology" Vol. 4, Academic Press., N.Y., pg. 295-319.

Wolfe, L.S., Rostworowski, K. and Marion, J., 1976.
Endogenous formation of the prostaglandin endoperoxide metabolite, TXB_2, by brain tissue.
Biochem. Biophys. Res. Commun., 70, 907-910.

Wolfe, L.S. and Coceani, F., 1979.
The role of prostaglandins in the central nervous system.
Annu. Rev. Physiol., 41, 669-684.

Wolfson, N., Wilbur, K.M. and Bernheim, F, 1956.
Lipid peroxide formation in regenerating rat liver.
Exp. Cell Res., 10, 556-558.

Yavin, E. and Menkes, J.H., 1974.
Incorporation and metabolism of fatty acids by cultured dissociated cells from rat cerebrum.
Lipids, 9, 248-253.

Yavin, E., Yavin, Z. and Menkes, J.H., 1975.
Polyunsaturated fatty acid metabolism in neuroblastoma cells in culture.
J. Neurochem., 24, 71-77

Yavin, E., 1977.
Base stimulation of phospholipid metabolism in neuroblastoma cells. I. kinetics of incorporation of N-methylated ethanolamine bases.
Biochim. Biophys. Acta, 489, 278-289.

Yavin, E. and Zutra, A., 1979.
Translocation and turnover of phospholipid analogs in plasma membrane-derived vesicles from cell cultures.
Biochim. Biophys. Acta, 553, 424-437.

Yen-Chow, Y.C., Chow, S.Y, Jee, W.S.S. and Moodbury, D.M., 1984.
Membrane potentials, electrolyte contents, cell pH and some enzyme activities of fibroblasts.
In Vitro, 20, 677-684.

Yi, F.J, Funk, C.D., Wetterholm, A. and Radmark, O., 1988.
LTA_4 conversion to LTB4 in human T-cell lines.
Prostaglandins, 36, 241-248.

Zevallos, G.M. and Farkas, T., 1989.
Manipulation of plasma membrane physical state affects desaturation activity in rat lymphocytes.
Arch. Biochem. Biophys., 271, 546-552.

Ziboh, V.A. and Hsia, S.L., 1972.
Effects of prostaglandin E_2 on rat skin: inhibition of sterol ester biosynthesis and clearing of scaly lesions in essential fatty acid deficiency.
J. Lipid Res., 13, 458-467.

Ziboh, V.A., 1973.
Biosynthesis of prostaglandin E_2 in human skin: subcellular localisation and inhibition by unsaturated fatty acids and anti-inflammatory drugs.
J. Lipid Res., 14, 377-384.

Ziboh, V.A., Vanderhoek, J.Y. and Lands, W.E.M., 1974.
Inhibition of sheep vesicular gland oxygenase by unsaturated fatty acids from skin of essential fatty acid deficient rats.
Prostaglandins, 5, 233-240.

Ziboh, V.A., 1981.
Possible role of prostaglandins in scaly dermatosis.
Prog. Lipid Res., 20, 857-866.

Ziboh, V.A. and Chapkin, R.S., 1987.
Biologic significance of polyunsaturated fatty acids in the skin.
Arch. Dermatol., 123, 1686-1690.

Ziboh, V.A. and Chapkin, R.S., 1988.
Metabolism and function of skin lipids.
Prog. Lipid Res., 27, 81-105.

Zirlin, A. and Karel, M., 1969.
Free radicals induce polypeptide chain scission.
J. Food. Sci., 34, 160-162.

Zoeller, R.A. and Wood, R., 1985.
The importance of the stearoyl-CoA desaturase system in octadecenoate metabolism in the Morris hepatoma 7288C.
Biochem. Biophys. Acta, 845, 380-388.

APPENDIX.

Refereed publications to date arising from this work:

Giangregorio, A., Davidson, B.C., Girao, L.A.F., Mendelsohn, D. and Murphy, J.
Comparative effects of "pseudo-oils" on human and rat skin fibroblasts, and rat adipose and brain cells.
Oral presentation at the 2nd International Conference of Anticancer Research, held at Saronis, Greece, from the 11-15 October, 1988; Anticancer Res., 8, 1055, 114A.

Giangregorio, A., Davidson, B.C., Girao, L.A.F. and Mendelsohn, D.
The effects of "pseudo-oils" on skin fibroblasts from human, rat and cat.
Poster presentation at the 1st International Conference on n-6 Essential Fatty Acids in Clinical Medicine, held at Metropole Hotel, Brighton, England, from the 25-29 January, 1989; 2A.

Giangregorio, A., Davidson, B.C. and Mendelsohn, D.
The influence of 'pseudo-oils' on normal cell growth.
Poster presentation at the International Union of Food Science and Technology Symposium: New Aspects of Dietary Lipids; Benifits, Hazards and Use, held at Goteborg, Sweden, from the 18-20 September, 1989; 3A.

Davidson, B.C., Giangregorio, A., Girao, L.A.F., Mendelson, D. and Murphy, J.
The effect of fatty acids, and fatty acid mixtures, on human skin fibroblasts.
Oral presentation at the 3rd International Conference of Anticancer Research, held at Marathon, Greece from the 16-20 October, 1990; Anticancer Res., 10, 1456, 333A.

Davidson, B.C., Giangregorio, A. and Girao, L.A.F.
Choice of controls and conditions for cell culture: have we been making invalid assumptions, has earlier work been poorly interpreted, do we need to re-assess success criteria?
Oral presentation at the 3rd International Conference of Anticancer Research, held at Marathon, Greece from the 16-20 October, 1990; Anticancer Res., 10, 1456-1457, 335A.

Giangregorio, A., Davidson, B.C., Girao, L.A.F., Mendelson, D. and Murphy, J.
Fatty acid incorporation, and eicosanoid production, by human skin fibroblasts.
Oral presentation at the 3rd International Conference of Anticancer Research, held at Marathon, Greece from the 16-20 October, 1990; Anticancer Res., 10, 1457, 337A.

Giangregorio, A., Davidson, B.C., Girao, L.A.F, Mendelson, D. and Murphy, J.
The influence of 'pseudo-oils' on lung fibroblasts from rat, cat and human.
Poster presentation at the 3rd International Conference of Anticancer Research, held at Marathon, Greece from the 16-20 October, 1990; Anticancer Res., 10, 1458, 340A.

Giangregorio, A., Davidson, B.C., Girao, L.A.F., Koch, A.H., Mendelsohn, D.M. and Murphy, J.
'Pseudo-oils' influence the growth of lung fibroblasts from rat, human and cat.
Poster presentation at the 10th Congress of the South African Biochemical Society, held at Pietermaritzburg, South Africa, from the 27-30 January, 1991; 124A.

Author: Giangregorio A
Name of thesis: the influences of fatty acids in vitro on mammalian cells from species differing in their fatty acyl desaturase capabilities (11-20)

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