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CARIG Literature Citations

(2005) Beta-carotene supplements pose risks. *Health News* 11: 15.

Ablin, R. J. (2005) Lycopene: a word of caution. *Am.J.Health Syst.Pharm.* 62: 899.

Actis-Goretta, L., Carrasquedo, F., & Fraga, C. G. (2004) The regular supplementation with an antioxidant mixture decreases oxidative stress in healthy humans. Gender effect. *Clin.Chim.Acta* 349: 97-103.

Adom, K. K., Sorrells, M. E., & Liu, R. H. (2005) Phytochemicals and antioxidant activity of milled fractions of different wheat varieties. *J.Agric.Food Chem*. 53: 2297-2306.

Aguilo, A., Tauler, P., Fuentespina, E., Tur, J. A., Cordova, A., & Pons, A. (2005) Antioxidant response to oxidative stress induced by exhaustive exercise. *Physiol Behav*. 84: 1-7.

Ahmad, M. S., Sheeba, & Afzal, M. (2004) Amelioration of genotoxic damage by certain phytoproducts in human lymphocyte cultures. *Chem.Biol.Interact*. 149: 107-115.

Ahmadi, A. J., Saari, J. C., Mozaffarian, D., Garwin, G. G., Tarbet, K. J., Orcutt, J. C., Hargiss, J. L., & Sires, B. S. (2005) Decreased carotenoid content in preaponeurotic orbital fat of patients with involutional ptosis. *Ophthal.Plast.Reconstr.Surg.* 21: 46-51.

Ahmed, S. S., Lott, M. N., & Marcus, D. M. (2005) The macular xanthophylls. *Surv.Ophthalmol.* 50: 183-193.

Aman, R., Carle, R., Conrad, J., Beifuss, U., & Schieber, A. (2005) Isolation of carotenoids from plant materials and dietary supplements by high-speed counter-current chromatography. *J.Chromatogr.A* 1074: 99-105.

Andersen, L. F., Veierod, M. B., Johansson, L., Sakhi, A., Solvoll, K., & Drevon, C. A. (2005) Evaluation of three dietary assessment methods and serum biomarkers as measures of fruit and vegetable intake, using the method of triads. *Br.J.Nutr.* 93: 519-527.

Andreeva, A. & Velitchkova, M. (2005) Resonance Raman spectroscopy of carotenoids in Photosystem I particles. *Biophys.Chem.* 114: 129-135.

Ansari, M. S. & Gupta, N. P. (2004) Lycopene: a novel drug therapy in hormone refractory metastatic prostate cancer. *Urol.Oncol.* 22: 415-420.

Ansari, M. S. & Sgupta, N. P. (2005) A comparison of lycopene and orchidectomy vs orchidectomy alone in the management of advanced prostate cancer. *BJU.Int.* 95: 453.

Astley, S. B. & Elliott, R. M. (2005) How strong is the evidence that lycopene supplementation can modify biomarkers of oxidative damage and DNA repair in human lymphocytes? *J.Nutr.* 135: 2071S-2073S.

Azevedo-Meleiro, C. H. & Rodriguez-Amaya, D. B. (2005) Carotenoids of endive and New Zealand spinach as affected by maturity, season and minimal processing. *J.Food Composition and Analysis* 18: 845-855.

Badyaev, A. V. & Young, R. L. (2004) Complexity and integration in sexual ornamentation: an example with carotenoid and melanin plumage pigmentation. *J.Evol.Biol.* 17: 1317-1327.

Bairati, I., Meyer, F., Gelinas, M., Fortin, A., Nabid, A., Brochet, F., Mercier, J. P., Tetu, B., Harel, F.,

Masse, B., Vigneault, E., Vass, S., del Vecchio, P., & Roy, J. (2005) A randomized trial of antioxidant vitamins to prevent second primary cancers in head and neck cancer patients. *J.Natl.Cancer Inst.* 97: 481-488.

Ballottari, M., Govoni, C., Caffarri, S., & Morosinotto, T. (2004) Stoichiometry of LHCI antenna polypeptides and characterization of gap and linker pigments in higher plants Photosystem I. *Eur.J.Biochem.* 271: 4659-4665.

Bando, N., Hayashi, H., Wakamatsu, S., Inakuma, T., Miyoshi, M., Nagao, A., Yamauchi, R., & Terao, J. (2004) Participation of singlet oxygen in ultraviolet-a-induced lipid peroxidation in mouse skin and its inhibition by dietary beta-carotene: an ex vivo study. *Free Radic.Biol.Med.* 37: 1854-1863.

Bando, N., Yamamoto, M., Yamanishi, R., & Terao, J. (2004) Synergistic effect of vitamin E and beta-carotene on the suppression of ovalbumin-specific immunoglobulin E production in mice. *Ann.N.Y.Acad.Sci.* 1031:415-7.: 415-417.

Barbosa, M. J., Zijffers, J. W., Nisworo, A., Vaes, W., Van Schoonhoven, J., & Wijffels, R. H. (2005) Optimization of biomass, vitamins, and carotenoid yield on light energy in a flat-panel reactor using the A-stat technique. *Biotechnol.Bioeng.* 89: 233-242.

Barros Silva, S. S., Carvalho Rondo, P. H., & Erzinger, G. S. (2005) Beta-carotene concentrations in maternal and cord blood of smokers and non-smokers. *Early Hum.Dev.* 81: 313-317.

Bartlett, H. & Eperjesi, F. (2005) Possible contraindications and adverse reactions associated with the use of ocular nutritional supplements. *Ophthalmic Physiol Opt.* 25: 179-194.

Bermudez, O. I., Ribaya-Mercado, J. D., Talegawkar, S. A., & Tucker, K. L. (2005) Hispanic and non-Hispanic white elders from Massachusetts have different patterns of carotenoid intake and plasma concentrations. *J.Nutr.* 135: 1496-1502.

Bertram, J. S. (2004) Dietary carotenoids, connexins and cancer: what is the connection? *Biochem.Soc.Trans.* 32: 985-989.

Bertram, J. S. & Vine, A. L. (2005) Cancer prevention by retinoids and carotenoids: independent action on a common target. *Biochim.Biophys.Acta* 1740: 170-178.

Bhargava, A. (2004) Socio-economic and behavioural factors are predictors of food use in the National Food Stamp Program Survey. *Br.J.Nutr.* 92: 497-506.

Bhosale, P. & Bernstein, P. S. (2004) Beta-carotene production by *Flavobacterium multivorum* in the presence of inorganic salts and urea. *J.Ind.Microbiol.Biotechnol.* 31: 565-571.

Bhosale, P. & Bernstein, P. S. (2005) Synergistic effects of zeaxanthin and its binding protein in the prevention of lipid membrane oxidation. *Biochim.Biophys.Acta* 1740: 116-121.

Bicanic, D., Swarts, J., Luterotti, S., Helander, P., Fogliano, V., & Anese, M. (2005) Optothermistor as a breakthrough in the quantification of lycopene content of thermally processed tomato-based foods: verification versus absorption spectrophotometry and high-performance liquid chromatography. *J.Agric.Food Chem.* 53: 3295-3299.

Bleiweiss, R. (2004) Novel chromatic and structural biomarkers of diet in carotenoid-bearing plumage. *Proc.Biol.Sci.* 271: 2327-2335.

Booker, J., Sieberer, T., Wright, W., Williamson, L., Willett, B., Stirnberg, P., Turnbull, C., Srinivasan, M., Goddard, P., & Leyser, O. (2005) MAX1 encodes a cytochrome P450 family member that acts downstream of MAX3/4 to produce a carotenoid-derived branch-inhibiting hormone. *Dev.Cell* 8: 443-449.

Borel, P., Drai, J., Faure, H., Fayol, V., Galabert, C., Laromiguiere, M., & Le Moel, G. (2005) [Recent knowledge about intestinal absorption and cleavage of carotenoids]. *Ann.Biol.Clin.(Paris)* 63: 165-177.

Botella-Pavia, P., Besumbes, O., Phillips, M. A., Carretero-Paulet, L., Boronat, A., & Rodriguez-Concepcion, M. (2004) Regulation of carotenoid biosynthesis in plants: evidence for a key role of hydroxymethylbutenyl diphosphate reductase in controlling the supply of plastidial isoprenoid precursors. *Plant J.* 40: 188-199.

Bouvier, F., Isner, J. C., Dogbo, O., & Camara, B. (2005) Oxidative tailoring of carotenoids: a prospect towards novel functions in plants. *Trends Plant Sci.* 10: 187-194.

Bovolenta, M., Castronovo, F., Vadala, A., Zanoni, G., & Vidari, G. (2004) A simple and efficient highly enantioselective synthesis of alpha-ionone and alpha-damascone. *J.Org.Chem.* 69: 8959-8962.

Breitenbach, J. & Sandmann, G. (2005) zeta-Carotene *cis* isomers as products and substrates in the plant poly-*cis* carotenoid biosynthetic pathway to lycopene. *Planta* 220: 785-793.

Brighenti, F., Valtuena, S., Pellegrini, N., Ardigo, D., Del Rio, D., Salvatore, S., Piatti, P., Serafini, M., & Zavaroni, I. (2005) Total antioxidant capacity of the diet is inversely and independently related to plasma concentration of high-sensitivity C-reactive protein in adult Italian subjects. *Br.J.Nutr.* 93: 619-625.

Brufau, G., Quilez, J., Angel, C. M., Salas-Salvado, J., Bullo, M. M., & Rafecas, M. (2004) Evaluation of lipid oxidation after ingestion of bakery products enriched with phytosterols, beta-carotene and alpha-tocopherol. *Clin.Nutr.* 23: 1390-1397.

Bub, A., Barth, S. W., Watzl, B., Briviba, K., & Rechkemmer, G. (2005) Paraoxonase 1 Q192R (PON1-192) polymorphism is associated with reduced lipid peroxidation in healthy young men on a low-carotenoid diet supplemented with tomato juice. *Br.J.Nutr.* 93: 291-297.

Bugianesi, R., Salucci, M., Leonardi, C., Ferracane, R., Catasta, G., Azzini, E., & Maiani, G. (2004) Effect of domestic cooking on human bioavailability of naringenin, chlorogenic acid, lycopene and beta-carotene in cherry tomatoes. *Eur.J.Nutr.* 43: 360-366.

Burke, J. D., Curran-Celentano, J., & Wenzel, A. J. (2005) Diet and serum carotenoid concentrations affect macular pigment optical density in adults 45 years and older. *J.Nutr.* 135: 1208-1214.

Canene-Adams, K., Campbell, J. K., Zaripheh, S., Jeffery, E. H., & Erdman, J. W., Jr. (2005) The tomato as a functional food. *J.Nutr.* 135: 1226-1230.

Cardinif, F. & Bonzi, L. M. (2005) Carotenoid composition and its chemotaxonomic significance in leaves of ten species of the genus *Ceratozamia* (Cycads). *J.Plant Physiol* 162: 517-528.

Caris-Veyrat, C., Amiot, M. J., Tyssandier, V., Grasselly, D., Buret, M., Mikolajczak, M., Guilland, J. C., Bouteloup-Demange, C., & Borel, P. (2004) Influence of organic versus conventional agricultural practice on the antioxidant microconstituent content of tomatoes and derived purees; consequences on antioxidant plasma status in humans. *J.Agric.Food Chem.* 52: 6503-6509.

Carmona, M., Zalacain, A., Pardo, J. E., Lopez, E., Alvarruiz, A., & Alonso, G. L. (2005) Influence of different drying and aging conditions on saffron constituents. *J.Agric.Food Chem.* 53: 3974-3979.

Castaneda, M. P., Hirschler, E. M., & Sams, A. R. (2005) Skin pigmentation evaluation in broilers fed natural and synthetic pigments. *Poult.Sci.* 84: 143-147.

Cenci, A., Somma, S., Chantret, N., Dubcovsky, J., & Blanco, A. (2004) PCR identification of durum wheat BAC clones containing genes coding for carotenoid biosynthesis enzymes and their chromosome

localization. *Genome* 47: 911-917.
Chen, F., Li, H. B., Wong, R. N., Ji, B., & Jiang, Y. (2005) Isolation and purification of the bioactive carotenoid zeaxanthin from the microalga *Microcystis aeruginosa* by high-speed counter-current chromatography. *J.Chromatogr.A* 1064: 183-186.

Chen, J. P., Tai, C. Y., & Chen, B. H. (2004) Improved liquid chromatographic method for determination of carotenoids in Taiwanese mango (*Mangifera indica L.*). *J.Chromatogr.A* 1054: 261-268.

Cheng, C. Y., Chung, W. Y., Szeto, Y. T., & Benzie, I. F. (2005) Fasting plasma zeaxanthin response to *Fructus barbarum L*. (wolfberry; Kei Tze) in a food-based human supplementation trial. *Br.J.Nutr.* 93: 123-130.

Chidambara Murthy, K. N., Vanitha, A., Rajesha, J., Mahadeva, S. M., Sowmya, P. R., & Ravishankar, G. A. (2005) In vivo antioxidant activity of carotenoids from *Dunaliella salina*--a green microalga. *Life Sci.* 76: 1381-1390.

Choi, S. & Koo, S. (2005) Efficient syntheses of the keto-carotenoids canthaxanthin, astaxanthin, and astacene. *J.Org.Chem.* 70: 3328-3331.

Christen, W., Glynn, R., Sperduto, R., Chew, E., & Buring, J. (2004) Age-related cataract in a randomized trial of beta-carotene in women. *Ophthalmic Epidemiol.* 11: 401-412.

Cichelli, A. & Pertesana, G. P. (2004) High-performance liquid chromatographic analysis of chlorophylls, pheophytins and carotenoids in virgin olive oils: chemometric approach to variety classification. *J.Chromatogr.A* 1046: 141-146.

Ciulla, T. A. & Hammond, B. R., Jr. (2004) Macular pigment density and aging, assessed in the normal elderly and those with cataracts and age-related macular degeneration. *Am.J.Ophthalmol.* 138: 582-587.

Clements, D. M., Oleesky, D. A., Smith, S. C., Wheatley, H., Hullin, D. A., Havard, T. J., & Bowrey, D. J. (2005) A study to determine plasma antioxidant concentrations in patients with Barrett's oesophagus. *J.Clin.Pathol.* 58: 490-492.

Clinton, S. K. (2005) Tomatoes or lycopene: a role in prostate carcinogenesis? *J.Nutr.* 135: 2057S-2059S.

Cohen, M. M. (2005) Age-related macular degeneration and its possible prevention. *Med.J.Aust.* 182: 310-311.

Cohn, W., Thurmann, P., Tenter, U., Aebischer, C., Schierle, J., & Schalch, W. (2004) Comparative multiple dose plasma kinetics of lycopene administered in tomato juice, tomato soup or lycopene tablets. *Eur.J.Nutr*. 43: 304-312.

Colgan, H. A., Floyd, S., Noone, E. J., Gibney, M. J., & Roche, H. M. (2004) Increased intake of fruit and vegetables and a low-fat diet, with and without low-fat plant sterol-enriched spread consumption: effects on plasma lipoprotein and carotenoid metabolism. *J.Hum.Nutr.Diet.* 17: 561-569.

Connor, S. L., Ojeda, L. S., Sexton, G., Weidner, G., & Connor, W. E. (2004) Diets lower in folic acid and carotenoids are associated with the coronary disease epidemic in Central and Eastern Europe. *J.Am.Diet.Assoc*. 104: 1793-1799.

Coral-Hinostroza, G. N., Ytrestoyl, T., Ruyter, B., & Bjerkeng, B. (2004) Plasma appearance of unesterified astaxanthin geometrical E/Z and optical R/S isomers in men given single doses of a mixture of optical 3 and 3'R/S isomers of astaxanthin fatty acyl diesters. *Comp Biochem.Physiol C. Toxicol.Pharmacol.* 139: 99-110.

Crandall, C. (2004) Vitamin A intake and osteoporosis: a clinical review. *J.Womens Health (Larchmt.)* 13:

939-953.
Cunningham, F. X., Jr. & Gantt, E. (2005) A study in scarlet: enzymes of ketocarotenoid biosynthesis in the flowers of *Adonis aestivalis*. *Plant J.* 41: 478-492.

Cutillo, F., Dellagreca, M., Previtera, L., & Zarrelli, A. (2005) C13 norisoprenoids from *Brassica fruticulosa*. *Nat.Prod.Res.* 19: 99-103.

D'Ambrosio, C., Giorio, G., Marino, I., Merendino, A., Petrozza, A., Salfi, L., Stigliani, A. L., & Cellini, F. (2004) Virtually complete conversion of lycopene into beta-carotene in fruits of tomato plants transformed with the tomato lycopene beta-cyclase (tlcy-b) cDNA. *Plant Science* 166: 207-214.

Dauchet, L., Ferrieres, J., Arveiler, D., Yarnell, J. W., Gey, F., Ducimetiere, P., Ruidavets, J. B., Haas, B., Evans, A., Bingham, A., Amouyel, P., & Dallongeville, J. (2004) Frequency of fruit and vegetable consumption and coronary heart disease in France and Northern Ireland: the PRIME study. *Br.J.Nutr.* 92: 963-972.

Davis, C. D., Clevidence, B., Swanson, C. A., Ziegler, R. G., Dwyer, J. T., & Milner, J. A. (2005) A research agenda for lycopene/tomato supplementation and cancer prevention. *J.Nutr.* 135: 2074S.

Davis, C. D., Swanson, C. A., Ziegler, R. G., Clevidence, B., Dwyer, J. T., & Milner, J. A. (2005) Executive summary report. *J.Nutr.* 135: 2014S-2029S.

Davoli, P., Mierau, V., & Weber, R. W. (2004) [Carotenoids and fatty acids in red yeasts *Sporobolomyces roseus* and *Rhodotorula glutinis*]. *Prikl.Biokhim.Mikrobiol.* 40: 460-465.

Deli, J., Molnar, P., Osz, E., Toth, G., & Zsila, F. (2004) Epimerisation of lutein to 3'-epilutein in processed foods. *Bioorganic & Medicinal Chemistry Letters* 14: 925-928.

Dellagreca, M., Di Marino, C., Zarrelli, A., & D'Abrosca, B. (2004) Isolation and phytotoxicity of apocarotenoids from *Chenopodium album*. *J.Nat.Prod.* 67: 1492-1495.

Dembinska-Kiec, A., Polus, A., Kiec-Wilk, B., Grzybowska, J., Mikolajczyk, M., Hartwich, J., Razny, U., Szumilas, K., Banas, A., Bodzioch, M., Stachura, J., Dyduch, G., Laidler, P., Zagajewski, J., Langman, T., & Schmitz, G. (2005) Proangiogenic activity of beta-carotene is coupled with the activation of endothelial cell chemotaxis. *Biochim.Biophys.Acta* 1740: 222-239.

Dembinska-Kiec, A. (2005) Carotenoids: risk or benefit for health. *Biochim.Biophys.Acta* 1740: 93-94.

Dene, B. A., Maritim, A. C., Sanders, R. A., & Watkins, J. B., III (2005) Effects of antioxidant treatment on normal and diabetic rat retinal enzyme activities. *J.Ocul.Pharmacol.Ther.* 21: 28-35.

Dhuique-Mayer, C., Caris-Veyrat, C., Ollitrault, P., Curk, F., & Amiot, M. J. (2005) Varietal and interspecific influence on micronutrient contents in citrus from the Mediterranean area. *J.Agric.Food Chem*. 53: 2140-2145.

Djuric, Z., Visscher, D. W., Heilbrun, L. K., Chen, G., Atkins, M., & Covington, C. Y. (2005) Influence of lactation history on breast nipple aspirate fluid yields and fluid composition. *Breast J.* 11: 92-99.

Dorgan, J. F., Boakye, N. A., Fears, T. R., Schleicher, R. L., Helsel, W., Anderson, C., Robinson, J., Guin, J. D., Lessin, S., Ratnasinghe, L. D., & Tangrea, J. A. (2004) Serum carotenoids and alpha-tocopherol and risk of nonmelanoma skin cancer. *Cancer Epidemiol.Biomarkers Prev*. 13: 1276-1282.

dos Anjos Ferreira, A. L., Yeum, K. J., Russell, R. M., Krinsky, N. I., & Tang, G. (2004) Enzymatic and oxidative metabolites of lycopene. *J.Nutr.Biochem*. 15: 493-502.

Ducreux, L. J., Morris, W. L., Hedley, P. E., Shepherd, T., Davies, H. V., Millam, S., & Taylor, M. A. (2005)

Metabolic engineering of high carotenoid potato tubers containing enhanced levels of beta-carotene and lutein. *J.Exp.Bot.* 56: 81-89.

Duffield-Lillico, A. J. & Begg, C. B. (2004) Reflections on the landmark studies of beta-carotene supplementation. *J.Natl.Cancer Inst.* 96: 1729-1731.

Dulinska, J., Gil, D., Zagajewski, J., Hartwich, J., Bodzioch, M., Dembinska-Kiec, A., Langmann, T., Schmitz, G., & Laidler, P. (2005) Different effect of beta-carotene on proliferation of prostate cancer cells. *Biochim.Biophys.Acta* 1740: 189-201.

Eboumbou, C., Steghens, J. P., Abdallahi, O. M., Mirghani, A., Gallian, P., van Kappel, A., Qurashi, A., Gharib, B., & De Reggi, M. (2005) Circulating markers of oxidative stress and liver fibrosis in Sudanese subjects at risk of schistosomiasis and hepatitis. *Acta Trop*. 94: 99-106.

Elliott, R. (2005) Mechanisms of genomic and non-genomic actions of carotenoids. *Biochim.Biophys.Acta* 1740: 147-154.

Erdman, J. W., Jr. (2005) How do nutritional and hormonal status modify the bioavailability, uptake, and distribution of different isomers of lycopene? *J.Nutr*. 135: 2046S-2047S.

Eskenazi, B., Kidd, S. A., Marks, A. R., Sloter, E., Block, G., & Wyrobek, A. J. (2005) Antioxidant intake is associated with semen quality in healthy men. *Hum.Reprod.* 20: 1006-1012.

Etminan, M., Gill, S. S., & Samii, A. (2005) Intake of vitamin E, vitamin C, and carotenoids and the risk of Parkinson's disease: a meta-analysis. *Lancet Neurol.* 4: 362-365.

Falk, B., Gorev, R., Zigel, L., Ben Amotz, A., & Neuman, I. (2005) Effect of lycopene supplementation on lung function after exercise in young athletes who complain of exercise-induced bronchoconstriction symptoms. *Ann.Allergy Asthma Immunol.* 94: 480-485.

Faulks, R. M. & Southon, S. (2005) Challenges to understanding and measuring carotenoid bioavailability. *Biochim.Biophys.Acta* 1740: 95-100.

Fawzi, W. W., Rifas-Shiman, S. L., Rich-Edwards, J. W., Willett, W. C., & Gillman, M. W. (2004) Calibration of a semi-quantitative food frequency questionnaire in early pregnancy. *Ann.Epidemiol.* 14: 754-762.

Fenech, M., Baghurst, P., Luderer, W., Turner, J., Record, S., Ceppi, M., & Bonassi, S. (2005) Low intake of calcium, folate, nicotinic acid, vitamin E, retinol, beta-carotene and high intake of pantothenic acid, biotin and riboflavin are significantly associated with increased genome instability--results from a dietary intake and micronucleus index survey in South Australia. *Carcinogenesis* 26: 991-999.

Fiedor, L., Akahane, J., & Koyama, Y. (2004) Carotenoid-induced cooperative formation of bacterial photosynthetic LH1 complex. *Biochemistry* 43: 16487-16496.

Fiedor, L. & Scheer, H. (2005) Trapping of an assembly intermediate of photosynthetic LH1 antenna beyond B820 subunit. Significance for the assembly of photosynthetic LH1 antenna. *J.Biol.Chem*. 280: 20921-20926.

Finley, J. W. (2005) Proposed criteria for assessing the efficacy of cancer reduction by plant foods enriched in carotenoids, glucosinolates, polyphenols and selenocompounds. *Ann.Bot.(Lond)* 95: 1075-1096.

Fratianni, A., Irano, M., Panfili, G., & Acquistucci, R. (2005) Estimation of color of durum wheat. Comparison of WSB, HPLC, and reflectance colorimeter measurements. *J.Agric.Food Chem*. 53: 2373-2378.

Fukuoka, S., Ajiki, Y., Ohga, T., Kawanami, Y., & Izumori, K. (2004) Production of dihydroxy C50-carotenoid by *Aureobacterium* sp. FERM P-18698. *Biosci.Biotechnol.Biochem.* 68: 2646-2648.

Furuichi, N., Hara, H., Osaki, T., Nakano, M., Mori, H., & Katsumura, S. (2004) Stereocontrolled total synthesis of a polyfunctional carotenoid, peridinin. *J.Org.Chem.* 69: 7949-7959.

Gainer, J. L., Stennett, A. K., & Murray, R. J. (2005) The effect of *trans* sodium crocetinate (TSC) in a rat oleic acid model of acute lung injury. *Pulm.Pharmacol.Ther.* 18: 213-216.

Galindo-Cuspinera, V. & Rankin, S. A. (2005) Bioautography and chemical characterization of antimicrobial compound(s) in commercial water-soluble annatto extracts. *J.Agric.Food Chem.* 53: 2524-2529.

Gamble, M. V., Palafox, N. A., Dancheck, B., Ricks, M. O., Briand, K., & Semba, R. D. (2004) Carotenoid status among preschool children with vitamin A deficiency in the Republic of the Marshall Islands. *Asia Pac.J.Clin.Nutr.* 13: 336-340.

Ganji, V. & Kafai, M. R. (2005) Population determinants of serum lycopene concentrations in the United States: data from the Third National Health and Nutrition Examination Survey, 1988-1994. *J.Nutr.* 135: 567-572.

Gann, P. H. (2005) Intermediate biomarkers of lycopene/tomato effects in high-risk prostatic tissue. *J.Nutr.* 135: 2065S-2067S.

Garcia-Gonzalez, M., Moreno, J., Manzano, J. C., Florencio, F. J., & Guerrero, M. G. (2005) Production of *Dunaliella salina* biomass rich in 9-*cis*-beta-carotene and lutein in a closed tubular photobioreactor. *J.Biotechnol.* 115: 81-90.

Genkinger, J. M., Platz, E. A., Hoffman, S. C., Comstock, G. W., & Helzlsouer, K. J. (2004) Fruit, vegetable, and antioxidant intake and all-cause, cancer, and cardiovascular disease mortality in a community-dwelling population in Washington County, Maryland. *Am.J.Epidemiol*. 160: 1223-1233.

Giammarioli, S., Filesi, C., Vitale, B., Cantagallo, A., Dragoni, F., & Sanzini, E. (2004) Effect of high intakes of fruit and vegetables on redox status in type 2 onset diabetes: a pilot study. *Int.J.Vitam.Nutr.Res*. 74: 313-320.

Giovannucci, E. (2005) Tomato products, lycopene, and prostate cancer: A review of the epidemiological literature. *J.Nutr*. 135: 2030S-2031S.

Gireesh, T., Nair, P. P., & Sudhakaran, P. R. (2004) Studies on the bioavailability of the provitamin A carotenoid, beta-carotene, using human exfoliated colonic epithelial cells. *Br.J.Nutr*. 92: 241-245.

Giuliani, M., Antuzzi, D., Lajolo, C., Mistura, L., & Ricci, R. (2004) Influence of beta-carotene on lysosomal hydrolases and their natural substrates in major salivary glands of hamsters treated with 7,12-dimethylbenzanthracene (DMBA). *Comp Biochem.Physiol C.Toxicol.Pharmacol*. 138: 445-452.

Giuntini, D., Graziani, G., Lercari, B., Fogliano, V., Soldatini, G. F., & Ranieri, A. (2005) Changes in carotenoid and ascorbic acid contents in fruits of different tomato genotypes related to the depletion of UV-B radiation. *J.Agric.Food Chem.* 53: 3174-3181.

Goodman, G. E., Thornquist, M. D., Balmes, J., Cullen, M. R., Meyskens, F. L., Jr., Omenn, G. S., Valanis, B., & Williams, J. H., Jr. (2004) The Beta-Carotene and Retinol Efficacy Trial: incidence of lung cancer and cardiovascular disease mortality during 6-year follow-up after stopping beta-carotene and retinol supplements. *J.Natl.Cancer Inst.* 96: 1743-1750.

Goralczyk, R., Wertz, K., Lenz, B., Riss, G., Buchwald, H. P., Geatrix, B., Aebischer, C. P., & Bachmann, H. (2005) Beta-carotene interaction with NNK in the AJ-mouse model: effects on cell proliferation, tumor formation and retinoic acid responsive genes. *Biochim.Biophys.Acta* 1740: 179-188.

Gorelik, S., Lapidot, T., Shaham, I., Granit, R., Ligumsky, M., Kohen, R., & Kanner, J. (2005) Lipid peroxidation and coupled vitamin oxidation in simulated and human gastric fluid inhibited by dietary polyphenols: health implications. *J.Agric.Food Chem.* 53: 3397-3402.

Goss, R., Lohr, M., Latowski, D., Grzyb, J., Vieler, A., Wilhelm, C., & Strzalka, K. (2005) Role of hexagonal structure-forming lipids in diadinoxanthin and violaxanthin solubilization and de-epoxidation. *Biochemistry* 44: 4028-4036.

Gruszecki, W. I., Stiel, H., Niedzwiedzki, D., Beck, M., Milanowska, J., Lokstein, H., & Leupold, D. (2005) Towards elucidating the energy of the first excited singlet state of xanthophyll cycle pigments by X-ray absorption spectroscopy. *Biochim.Biophys.Acta* 1708: 102-107.

Gruszecki, W. I. & Strzalka, K. (2005) Carotenoids as modulators of lipid membrane physical properties. *Biochim.Biophys.Acta* 1740: 108-115.

Guaratini, T., Vessecchi, R. L., Lavarda, F. C., Maia Campos, P. M., Naal, Z., Gates, P. J., & Lopes, N. P. (2004) New chemical evidence for the ability to generate radical molecular ions of polyenes from ESI and HR-MALDI mass spectrometry. *Analyst* 129: 1223-1226.

Hammond, B. R., Jr., Wooten, B. R., & Smollon, B. (2005) Assessment of the validity of in vivo methods of measuring human macular pigment optical density. *Optom.Vis.Sci*. 82: 387-404.

Han, J. R., Zhao, W. J., Gao, Y. Y., & Yuan, J. M. (2005) Effect of oxidative stress and exogenous beta-carotene on sclerotial differentiation and carotenoid yield of Penicillium sp. PT95. *Lett.Appl.Microbiol.* 40: 412-417.

Hantz, H. L., Young, L. F., & Martin, K. R. (2005) Physiologically attainable concentrations of lycopene induce mitochondrial apoptosis in LNCaP human prostate cancer cells. *Exp.Biol.Med.(Maywood.)* 230: 171-179.

He, S. Y., Qian, Z. Y., & Tang, F. T. (2004) Effect of crocin on intracellular calcium concentration in cultured bovine aortic smooth muscle cells. *Yao Xue.Xue.Bao*. 39: 778-781.

Hejazi, M. A., Kleinegris, D., & Wijffels, R. H. (2004) Mechanism of extraction of beta-carotene from microalga *Dunaliellea salina* in two-phase bioreactors. *Biotechnol.Bioeng.* 88: 593-600.

Hercberg, S., Galan, P., Preziosi, P., Bertrais, S., Mennen, L., Malvy, D., Roussel, A. M., Favier, A., & Briancon, S. (2004) The SU.VI.MAX Study: a randomized, placebo-controlled trial of the health effects of antioxidant vitamins and minerals. *Arch.Intern.Med.* 164: 2335-2342.

Hill, G. E. & Farmer, K. L. (2005) Carotenoid-based plumage coloration predicts resistance to a novel parasite in the house finch. *Naturwissenschaften* 92: 30-34.

Hirsch, F. R. & Lippman, S. M. (2005) Advances in the biology of lung cancer chemoprevention. *J.Clin.Oncol.* 23: 3186-3197.

Hogg, R. & Chakravarthy, U. (2004) AMD and micronutrient antioxidants. *Curr.Eye Res*. 29: 387-401.

Horton, P. & Ruban, A. (2005) Molecular design of the photosystem II light-harvesting antenna: photosynthesis and photoprotection. *J.Exp.Bot.* 56: 365-373.

Hosokawa, M., Kudo, M., Maeda, H., Kohno, H., Tanaka, T., & Miyashita, K. (2004) Fucoxanthin induces

apoptosis and enhances the antiproliferative effect of the PPARgamma ligand, troglitazone, on colon cancer cells. *Biochim.Biophys.Acta* 1675: 113-119.

Hosotani, K., Kawahata, A., Koyama, K., Murakami, C., Yoshida, H., Yamaji, R., Inui, H., & Nakano, Y. (2004) Effect of carotenoids and ascorbic acid of Japanese persimmons on cellular lipid peroxidation in HepG2 cells. *Biofactors* 21: 241-245.

Hu, P., Reuben, D. B., Crimmins, E. M., Harris, T. B., Huang, M. H., & Seeman, T. E. (2004) The effects of serum beta-carotene concentration and burden of inflammation on all-cause mortality risk in high-functioning older persons: MacArthur studies of successful aging. *J.Gerontol.A Biol.Sci.Med.Sci*. 59: 849-854.

Hussein, G., Nakamura, M., Zhao, Q., Iguchi, T., Goto, H., Sankawa, U., & Watanabe, H. (2005) Antihypertensive and neuroprotective effects of astaxanthin in experimental animals. *Biol.Pharm.Bull.* 28: 47-52.

Hymavathi, T. V. & Khader, V. (2005) Carotene, ascorbic acid and sugar content of vacuum dehydrated ripe mango powders stored in flexible packaging material. *J.Food Composition and Analysis* 18: 181-192.

Inoue, K. (2004) Carotenoid hydroxylation--P450 finally! *Trends Plant Sci*. 9: 515-517.

Isaacson, T., Ohad, I., Beyer, P., & Hirschberg, J. (2004) Analysis in vitro of the enzyme CRTISO establishes a poly-*cis*-carotenoid biosynthesis pathway in plants. *Plant Physiol* 136: 4246-4255.

Ishikawa, E. & Abe, H. (2004) Lycopene accumulation and cyclic carotenoid deficiency in heterotrophic Chlorella treated with nicotine. *J.Ind.Microbiol.Biotechnol.* 31: 585-589.

Ishikita, H. & Knapp, E. W. (2005) Redox potentials of chlorophylls and beta-carotene in the antenna complexes of photosystem II. *J.Am.Chem.Soc*. 127: 1963-1968.

Ito, Y., Kurata, M., Hioki, R., Suzuki, K., Ochiai, J., & Aoki, K. (2005) Cancer mortality and serum levels of carotenoids, retinol, and tocopherol: a population-based follow-up study of inhabitants of a rural area of Japan. *Asian Pac.J.Cancer Prev.* 6: 10-15.

Jacobsson, L. S., Yuan, X. M., Zieden, B., & Olsson, A. G. (2004) Effects of alpha-tocopherol and astaxanthin on LDL oxidation and atherosclerosis in WHHL rabbits. *Atherosclerosis* 173: 231-237.

Jenab, M., Ferrari, P., Mazuir, M., Tjonneland, A., Clavel-Chapelon, F., Linseisen, J., Trichopoulou, A., Tumino, R., Bueno-de-Mesquita, H. B., Lund, E., Gonzalez, C. A., Johansson, G., Key, T. J., & Riboli, E. (2005) Variations in lycopene blood levels and tomato consumption across European countries based on the European Prospective Investigation into Cancer and Nutrition (EPIC) Study. *J.Nutr.* 135: 2032S-2036S.

Jian, L., Du, C. J., Lee, A. H., & Binns, C. W. (2005) Do dietary lycopene and other carotenoids protect against prostate cancer? *Int.J.Cancer* 113: 1010-1014.

Johnson, E. J., Neuringer, M., Russell, R. M., Schalch, W., & Snodderly, D. M. (2005) Nutritional manipulation of primate retinas, III: Effects of lutein or zeaxanthin supplementation on adipose tissue and retina of xanthophyll-free monkeys. *Invest Ophthalmol.Vis.Sci.* 46: 692-702.

Jones, S. T., Aryana, K. J., & Losso, J. N. (2005) Storage stability of lutein during ripening of cheddar cheese. *J.Dairy Sci.* 88: 1661-1670.

Kabagambe, E. K., Furtado, J., Baylin, A., & Campos, H. (2005) Some dietary and adipose tissue carotenoids are associated with the risk of nonfatal acute myocardial infarction in Costa Rica. *J.Nutr*. 135: 1763-1769.

Kammerer, C. & Getoff, N. (2004) Synergistic effect of dehydroascorbic acid and mixtures with vitamin E and beta-carotene on mitomycin C efficiency under irradiation in vitro. *In Vivo* 18: 795-798.

Keijer, J., Bunschoten, A., Palou, A., & Franssen-van Hal, N. L. (2005) Beta-carotene and the application of transcriptomics in risk-benefit evaluation of natural dietary components. *Biochim.Biophys.Acta* 1740: 139-146.

Kennedy, D. D., Santella, R. M., Wang, Q., Ladas, E. J., & Kelly, K. M. (2004) 8-oxo-dG elevated in children during leukemia treatment. *Integr.Cancer Ther*. 3: 301-309.

Kim, E. S. & Hong, W. K. (2005) An apple a day...does it really keep the doctor away? The current state of cancer chemoprevention. *J.Natl.Cancer Inst*. 97: 468-470.

Kishimoto, S., Maoka, T., Nakayama, M., & Ohmiya, A. (2004) Carotenoid composition in petals of chrysanthemum (*Dendranthema grandiflorum* (Ramat.) Kitamura). *Phytochemistry* 65: 2781-2787.

Kloer, D. P., Ruch, S., Al Babili, S., Beyer, P., & Schulz, G. E. (2005) The structure of a retinal-forming carotenoid oxygenase. *Science* 308: 267-269.

Koch, T. C. & Goldman, I. L. (2005) Relationship of carotenoids and tocopherols in a sample of carrot root-color accessions and carrot germplasm carrying Rp and rp alleles. *J.Agric.Food Chem*. 53: 325-331.

Kotake-Nara, E., Asai, A., & Nagao, A. (2005) Neoxanthin and fucoxanthin induce apoptosis in PC-3 human prostate cancer cells. *Cancer Lett*. 220: 75-84.

Kotake-Nara, E., Terasaki, M., & Nagao, A. (2005) Characterization of apoptosis induced by fucoxanthin in human promyelocytic leukemia cells. *Biosci.Biotechnol.Biochem*. 69: 224-227.

Krapels, I. P., van Rooij, I. A., Ocke, M. C., West, C. E., van der Horst, C. M., & Steegers-Theunissen, R. P. (2004) Maternal nutritional status and the risk for orofacial cleft offspring in humans. *J.Nutr*. 134: 3106-3113.

Krinsky, N. I. (2005) James Allen Olson Memorial Lecture: The biological activity of carotenoid metabolites. CARIG Workshop, April 2005.

Kristal, A. R. & Schenk, J. M. (2005) Directions for future epidemiological research in lycopene and prostate cancer risk. *J.Nutr.* 135: 2037S-2039S.

Kumar, G., Banu, G. S., Kannan, V., & Pandian, M. R. (2005) Antihepatotoxic effect of beta-carotene on paracetamol induced hepatic damage in rats. *Indian J.Exp.Biol*. 43: 351-355.

Lakshminarayana, R., Raju, M., Krishnakantha, T. P., & Baskaran, V. (2005) Determination of major carotenoids in a few Indian leafy vegetables by high-performance liquid chromatography. *J.Agric.Food Chem*. 53: 2838-2842.

Ledford, H. K., Baroli, I., Shin, J. W., Fischer, B. B., Eggen, R. I., & Niyogi, K. K. (2004) Comparative profiling of lipid-soluble antioxidants and transcripts reveals two phases of photo-oxidative stress in a xanthophyll-deficient mutant of *Chlamydomonas reinhardtii*. *Mol.Genet.Genomics* 272: 470-479.

Lee, B. L., Su, J., & Ong, C. N. (2004) Monomeric C18 chromatographic method for the liquid chromatographic determination of lipophilic antioxidants in plants. *J.Chromatogr.A* 1048: 263-267.

Lee, C. O. (2005) Complementary and alternative medicine patients are talking about: lycopene. *Clin.J.Oncol.Nurs.* 9: 245-246.

Lee, J. H., Kim, Y. S., Choi, T. J., Lee, W. J., & Kim, Y. T. (2004) *Paracoccus haeundaensis sp. nov.*, a Gram-negative, halophilic, astaxanthin-producing bacterium. *Int.J.Syst.Evol.Microbiol.* 54: 1699-1702.

Leeds, A. R., Ferris, E. A. E., Staley, J., Ayesh, R., & Ross, F. (2005) Availability of micronutrients from dried, encapsulated fruit and vegetable preparations: a study in healthy volunteers. *J.Hum.Nutr.Diet*. 13: 21-27.

Leeson, S. & Caston, L. (2004) Enrichment of eggs with lutein. *Poult.Sci*. 83: 1709-1712.

Lewinsohn, E., Sitrit, Y., Bar, E., Azulay, Y., Meir, A., Zamir, D., & Tadmor, Y. (2005) Carotenoid pigmentation affects the volatile composition of tomato and watermelon fruits, as revealed by comparative genetic analyses. *J.Agric.Food Chem.* 53: 3142-3148.

Li, H., Tyndale, S. T., Heath, D. D., & Letcher, R. J. (2005) Determination of carotenoids and all-*trans*-retinol in fish eggs by liquid chromatography-electrospray ionization-tandem mass spectrometry. *J.Chromatogr.B Analyt.Technol.Biomed.Life Sci.* 816: 49-56.

Li, H., Kantoff, P. W., Giovannucci, E., Leitzmann, M. F., Gaziano, J. M., Stampfer, M. J., & Ma, J. (2005) Manganese superoxide dismutase polymorphism, prediagnostic antioxidant status, and risk of clinical significant prostate cancer. *Cancer Res.* 65: 2498-2504.

Li, W., Hellsten, A., Jacobsson, L. S., Blomqvist, H. M., Olsson, A. G., & Yuan, X. M. (2004) Alpha-tocopherol and astaxanthin decrease macrophage infiltration, apoptosis and vulnerability in atheroma of hyperlipidaemic rabbits. *J.Mol.Cell Cardiol.* 37: 969-978.

Lichtenstein, A. H. (2005) Nutrients and cardiovascular disease: no easy answers. *Curr.Opin.Lipidol.* 16: 1-3.

Liu, H. L., Kao, T. H., & Chen, B. H. (2004) Determination of carotenoids in the Chinese medical herb Jiao-Gu-Lan (*Gynostemma pentaphyllum Makino*) by liquid chromatography. *Chromatographia* 60: 411-417.

Liu, Y., Wu, Y., & Xu, C. (2004) Elimination of polarity in the carotenoid terminus promotes the exposure of B850-binding sites (Tyr 44, 45) and ANS-mediated energy transfer in LH2 complexes of *Rhodobacter sphaeroides*. *Biochem.Biophys.Res.Commun.* 325: 600-604.

Lu, Q. Y., Arteaga, J. R., Zhang, Q., Huerta, S., Go, V. L., & Heber, D. (2005) Inhibition of prostate cancer cell growth by an avocado extract: role of lipid-soluble bioactive substances. *J.Nutr.Biochem.* 16: 23-30.

Macias, F. A., Lopez, A., Varela, R. M., Torres, A., & Molinillo, J. M. (2004) Bioactive apocarotenoids annuionones F and G: structural revision of annuionones A, B and E. *Phytochemistry* 65: 3057-3063.

Mahattanatawee, K., Rouseff, R., Valim, M. F., & Naim, M. (2005) Identification and aroma impact of norisoprenoids in orange juice. *J.Agric.Food Chem.* 53: 393-397.

Masamoto, K., Hisatomi, S., Sakurai, I., Gombos, Z., & Wada, H. (2004) Requirement of carotene isomerization for the assembly of photosystem II in *Synechocystis* sp. PCC 6803. *Plant Cell Physiol* 45: 1325-1329.

Matsubara, S., Naumann, M., Martin, R., Nichol, C., Rascher, U., Morosinotto, T., Bassi, R., & Osmond, B. (2005) Slowly reversible de-epoxidation of lutein-epoxide in deep shade leaves of a tropical tree legume may 'lock-in' lutein-based photoprotection during acclimation to strong light. *J.Exp.Bot.* 56: 461-468.

McCarthy, S. S., Kobayashi, M. C., & Niyogi, K. K. (2004) White mutants of *Chlamydomonas reinhardtii* are defective in phytoene synthase. *Genetics* 168: 1249-1257.

McGowan, R., Beattie, J., & Galloway, P. (2004) Carotenaemia in children is common and benign: most can stay at home. *Scott.Med.J.* 49: 82-84.
McKeever, T. M., Lewis, S. A., Smit, H., Burney, P., Britton, J., & Cassano, P. A. (2004) Serum nutrient markers and skin prick testing using data from the Third National Health and Nutrition Examination Survey. *J.Clin.Immunol. Allergy* 114: 1398-1402.

McNaughton, S. A., Marks, G. C., Gaffney, P., Williams, G., & Green, A. (2005) Validation of a food-frequency questionnaire assessment of carotenoid and vitamin E intake using weighed food records and plasma biomarkers: the method of triads model. *Eur.J.Clin.Nutr.* 59: 211-218.

Merzlyak, M., Solovchenko, A., & Pogosyan, S. (2005) Optical properties of rhodoxanthin accumulated in *Aloe arborescens* Mill. leaves under high-light stress with special reference to its photoprotective function. *Photochem.Photobiol.Sci.* 4: 333-340.

Mielcarek, J., Grobelny, P., & Szamburska, O. (2005) The effect of beta-carotene on the photostability of nisoldipine. *Methods Find.Exp.Clin.Pharmacol.* 27: 167-171.

Moise, A. R., Von Lintig, J., & Palczewski, K. (2005) Related enzymes solve evolutionarily recurrent problems in the metabolism of carotenoids. *Trends Plant Sci.* 10: 178-186.

Molnar, P., Deli, J., Osz, E., Matus, Z., Toth, G., & Zsila, F. (2004) (E/Z)-Isomerization of 3'-Epilutein. *Helv.Chim.Acta* 87: 2169-2179.

Molnar, P., Deli, J., Zsila, F., Steck, A., Pfander, H., & Toth, G. (2004) Preparation and (E/Z)-isomerization of the diastereoisomers of violaxanthin. *Helv.Chim.Acta* 87: 11-27.

Molnar, P., Deli, J., Osz, E., Zsila, F., Simonyi, M., & Toth, G. (2004) Confirmation of the absolute (3R,3'S,6'R)-configuration of (all-E)-3'-epilutein. *Helv.Chim.Acta* 87: 2159-2168.

Morganti, P., Fabrizi, G., & Bruno, C. (2004) Protective effects of oral antioxidants on skin and eye function. *Skinmed.* 3: 310-316.

Most, M. M. (2004) Estimated phytochemical content of the dietary approaches to stop hypertension (DASH) diet is higher than in the Control Study Diet. *J.Am.Diet.Assoc.* 104: 1725-1727.

Muzandu, K., El Bohi, K., Shaban, Z., Ishizuka, M., Kazusaka, A., & Fujita, S. (2005) Lycopene and beta-carotene ameliorate catechol estrogen-mediated DNA damage. *Jpn.J.Vet.Res*. 52: 173-184.

Nabae, K., Ichihara, T., Hagiwara, A., Hirota, T., Toda, Y., Tamano, S., Nishino, M., Ogasawara, T., Sasaki, Y., Nakamura, M., & Shirai, T. (2005) A 90-day oral toxicity study of beta-carotene derived from *Blakeslea trispora*, a natural food colorant, in F344 rats. *Food Chem.Toxicol.* 43: 1127-1133.

Nagovitsyn, I. A., Chudinova, G. K., Savranskii, V. V., & Komissarov, G. G. (2004) [Photovoltaic behavior of chlorophyll a and beta-carotene in Langmuir films]. *Biofizika* 49: 646-652.

Naldi, L., Gallus, S., Tavani, A., Imberti, G. L., & La Vecchia, C. (2004) Risk of melanoma and vitamin A, coffee and alcohol: a case-control study from Italy. *Eur.J.Cancer Prev.* 13: 503-508.

Natarajan, L., Rock, C. L., Major, J. M., Thomson, C. A., Caan, B. J., Flatt, S. W., Chilton, J. A., Hollenbach, K. A., Newman, V. A., Faerber, S., Ritenbaugh, C. K., Gold, E., Stefanick, M. L., Jones, L. A., Marshall, J. R., & Pierce, J. P. (2004) On the importance of using multiple methods of dietary assessment. *Epidemiology* 15: 738-745.

Neelam, K., O'Gorman, N., Nolan, J., O'Donovan, O., Wong, H. B., Au Eong, K. G., & Beatty, S. (2005) Measurement of macular pigment: Raman spectroscopy versus heterochromatic flicker photometry. *Invest Ophthalmol.Vis.Sci.* 46: 1023-1032.

Nicolle, C., Gueux, E., Lab, C., Jaffrelo, L., Rock, E., Mazur, A., Amouroux, P., & Remesy, C. (2004) Lyophilized carrot ingestion lowers lipemia and beneficially affects cholesterol metabolism in cholesterol-fed C57BL/6J mice. *Eur.J.Nutr*. 43: 237-245.

Niedzwiedzki, D., Krupa, Z., & Gruszecki, W. I. (2005) Temperature-induced isomerization of violaxanthin in organic solvents and in light-harvesting complex II. *J.Photochem.Photobiol.B* 78: 109-114.

Niizu, P. Y. & Rodriguez-Amaya, D. B. (2005) New data on the carotenoid composition of raw salad vegetables. *J.Food Composition and Analysis* 18: 739-749.

Nkondjock, A., Ghadirian, P., Johnson, K. C., & Krewski, D. (2005) Dietary intake of lycopene is associated with reduced pancreatic cancer risk. *J.Nutr.* 135: 592-597.

Nolan, J., O'Donovan, O., Kavanagh, H., Stack, J., Harrison, M., Muldoon, A., Mellerio, J., & Beatty, S. (2004) Macular pigment and percentage of body fat. *Invest Ophthalmol.Vis.Sci.* 45: 3940-3950.

Norris, D. R., Marra, P. P., Montgomerie, R., Kyser, T. K., & Ratcliffe, L. M. (2004) Reproductive effort, molting latitude, and feather color in a migratory songbird. *Science.* 306: 2249-2250.

Novotny, J. A. (2005) What can pharmacokinetic models tell us about the disposition of lycopene and the potential role of lycopene in cancer prevention? *J.Nutr*. 135: 2048S-2049S.

Orosa, M., Franqueira, D., Cid, A., & Abalde, J. (2005) Analysis and enhancement of astaxanthin accumulation in *Haematococcus pluvialis*. *Bioresour.Technol.* 96: 373-378.

Ortega, H., Castilla, P., Gomez-Coronado, D., Garces, C., Benavente, M., Rodriguez-Artalejo, F., de Oya, M., & Lasuncion, M. A. (2005) Influence of apolipoprotein E genotype on fat-soluble plasma antioxidants in Spanish children. *Am.J.Clin.Nutr.* 81: 624-632.

Ovesen, L. F. (2005) [Increased consumption of fruits and vegetables reduces the risk of ischemic heart disease]. *Ugeskr.Laeger* 167: 2742-2747.

Ozasa, K., Ito, Y., Suzuki, K., Watanabe, Y., Hayashi, K., Mikami, K., Nakao, M., Miki, T., Mori, M., Sakauchi, F., Washio, M., Kubo, T., Wakai, K., & Tamakoshi, A. (2005) Serum carotenoids and other antioxidative substances associated with urothelial cancer risk in a nested case-control study in Japanese men. *J.Urol.* 173: 1502-1506.

Paine, J. A., Shipton, C. A., Chaggar, S., Howells, R. M., Kennedy, M. J., Vernon, G., Wright, S. Y., Hinchliffe, E., Adams, J. L., Silverstone, A. L., & Drake, R. (2005) Improving the nutritional value of Golden Rice through increased pro-vitamin A content. *Nat.Biotechnol.* 23:482-487.

Palozza, P. (2005) Can beta-carotene regulate cell growth by a redox mechanism? An answer from cultured cells. *Biochim.Biophys.Acta* 1740: 215-221.

Paolillo, D. J., Jr., Garvin, D. F., & Parthasarathy, M. V. (2004) The chromoplasts of Or mutants of cauliflower (*Brassica oleracea L. var. botrytis*). *Protoplasma* 224: 245-253.

Papagiannakis, E., Larsen, D. S., van Stokkum, I. H., Vengris, M., Hiller, R. G., & van Grondelle, R. (2004) Resolving the excited state equilibrium of peridinin in solution. *Biochemistry* 43: 15303-15309.

Parry, J., Su, L., Luther, M., Zhou, K., Yurawecz, M. P., Whittaker, P., & Yu, L. (2005) Fatty acid composition and antioxidant properties of cold-pressed marionberry, boysenberry, red raspberry, and blueberry seed oils. *J.Agric.Food Chem*. 53: 566-573.

Parslow, R. A., Sachdev, P., Salonikas, C., Lux, O., Jorm, A. F., & Naidoo, D. (2005) Associations

between plasma antioxidants and hypertension in a community-based sample of 415 Australians aged 60-64. *J.Hum.Hypertens*. 19: 219-226.
Pattison, D. J., Symmons, D. P., Lunt, M., Welch, A., Bingham, S. A., Day, N. E., & Silman, A. J. (2005) Dietary bet}-cryptoxanthin and inflammatory polyarthritis: results from a population-based prospective study. *Am.J.Clin.Nutr.* 82: 451-455.

Phadwal, K. (2005) Carotenoid biosynthetic pathway: molecular phylogenies and evolutionary behavior of *crt* genes in eubacteria. *Gene* 345: 35-43.

Pol, J., Hyotylanen, T., Ranta-Aho, O., & Riekkola, M. L. (2004) Determination of lycopene in food by on-line SFE coupled to HPLC using a single monolithic column for trapping and separation. *J.Chromatogr.A* 1052: 25-31.

Polivka, T., Kerfeld, C. A., Pascher, T., & Sundstrom, V. (2005) Spectroscopic properties of the carotenoid 3'-hydroxyechinenone in the orange carotenoid protein from the cyanobacterium *Arthrospira maxima*. *Biochemistry* 44: 3994-4003.

Polli, D., Cerullo, G., Lanzani, G., De Silvestri, S., Yanagi, K., Hashimoto, H., & Cogdell, R. J. (2004) Conjugation length dependence of internal conversion in carotenoids: role of the intermediate state. *Phys.Rev.Lett.* 93: 163002.

Porrini, M., Riso, P., Brusamolino, A., Berti, C., Guarnieri, S., & Visioli, F. (2005) Daily intake of a formulated tomato drink affects carotenoid plasma and lymphocyte concentrations and improves cellular antioxidant protection. *Br.J.Nutr*. 93: 93-99.

Porrini, M. & Riso, P. (2005) What are typical lycopene intakes? *J.Nutr.* 135: 2042S-2045S.

Putzbach, K., Krucker, M., Albert, K., Grusak, M. A., Tang, G., & Dolnikowski, G. G. (2005) Structure determination of partially deuterated carotenoids from intrinsically labeled vegetables by HPLC-MS and 1H NMR. *J.Agric.Food Chem.* 53: 671-677.

Puvogel, G., Baumrucker, C. R., Sauerwein, H., Ruhl, R., Ontsouka, E., Hammon, H. M., & Blum, J. W. (2005) Effects of an enhanced vitamin A intake during the dry period on retinoids, lactoferrin, IGF system, mammary gland epithelial cell apoptosis, and subsequent lactation in dairy cows. *J.Dairy Sci.* 88: 1785-1800.

Quiles-Rosillo, M. D., Ruiz-Vazquez, R. M., Torres-Martinez, S., & Garre, V. (2005) Light induction of the carotenoid biosynthesis pathway in *Blakeslea trispora*. *Fungal.Genet.Biol.* 42: 141-153.

Quilliot, D., Walters, E., Bonte, J. P., Fruchart, J. C., Duriez, P., & Ziegler, O. (2005) Diabetes mellitus worsens antioxidant status in patients with chronic pancreatitis. *Am.J.Clin.Nutr.* 81: 1117-1125.

Raju, J., Swamy, M. V., Cooma, I., Patlolla, J. M., Pittman, B., Reddy, B. S., Steele, V. E., & Rao, C. V. (2005) Low doses of beta-carotene and lutein inhibit AOM-induced rat colonic ACF formation but high doses augment ACF incidence. *Int.J.Cancer* 113: 798-802.

Reboul, E., Borel, P., Mikail, C., Abou, L., Charbonnier, M., Caris-Veyrat, C., Goupy, P., Portugal, H., Lairon, D., & Amiot, M. J. (2005) Enrichment of tomato paste with 6% tomato peel increases lycopene and beta-carotene bioavailability in men. *J.Nutr.* 135: 790-794.

Reboul, E., Abou, L., Mikail, C., Ghiringhelli, O., Andre, M., Portugal, H., Jourdheuil-Rahmani, D., Amiot, M. J., Lairon, D., & Borel, P. (2005) Lutein transport by Caco-2 TC-7 cells occurs partly by a facilitated

process involving the scavenger receptor class B type I (SR-BI). *Biochem.J.* 387: 455-461.

Rietjens, I. M., Martena, M. J., Boersma, M. G., Spiegelenberg, W., & Alink, G. M. (2005) Molecular mechanisms of toxicity of important food-borne phytotoxins. *Mol.Nutr.Food Res.* 49: 131-158.

Rios, A. D., Borsarelli, C. D., & Mercadante, A. Z. (2005) Thermal degradation kinetics of bixin in an aqueous model system. *J.Agric.Food Chem*. 53: 2307-2311.

Riso, P., Visioli, F., Gardana, C., Grande, S., Brusamolino, A., Galvano, F., Galvano, G., & Porrini, M. (2005) Effects of blood orange juice intake on antioxidant bioavailability and on different markers related to oxidative stress. *J.Agric.Food Chem.* 53: 941-947.

Rodriguez-Saiz, M., Marcos, A. T., Paz, B., De La Fuente, J. L., & Barredo, J. L. (2005) The gamma-actin encoding gene from the beta-carotene producer *Blakeslea trispora*. *FEMS Microbiol.Lett.* 244: 221-228.

Rodriguez, A. M., Sastre, S., Ribot, J., & Palou, A. (2005) Beta-carotene uptake and metabolism in human lung bronchial epithelial cultured cells depending on delivery vehicle. *Biochim.Biophys.Acta* 1740: 132-138.

Rogers, E. W. & Molinski, T. F. (2005) A cytotoxic carotenoid from the marine sponge *Prianos osiros*. *J.Nat.Prod.* 68: 450-452.

Rousseau, A. S., Hininger, I., Palazzetti, S., Faure, H., Roussel, A. M., & Margaritis, I. (2004) Antioxidant vitamin status in high exposure to oxidative stress in competitive athletes. *Br.J.Nutr*. 92: 461-468.

Ruch, S., Beyer, P., Ernst, H., & Al Babili, S. (2005) Retinal biosynthesis in Eubacteria: in vitro characterization of a novel carotenoid oxygenase from *Synechocystis* sp. PCC 6803. *Mol.Microbiol.* 55: 1015-1024.

Ruhl, R., Sczech, R., Landes, N., Pfluger, P., Kluth, D., & Schweigert, F. J. (2004) Carotenoids and their metabolites are naturally occurring activators of gene expression via the pregnane X receptor. *Eur.J.Nutr.* 43: 336-343.

Ruhl, R. (2005) Induction of PXR-mediated metabolism by beta-carotene. *Biochim.Biophys.Acta* 1740: 162-169.

Sacha, T., Zawada, M., Hartwich, J., Lach, Z., Polus, A., Szostek, M., Zdzi, O. E., Libura, M., Bodzioch, M., Dembinska-Kiec, A., Skotnicki, A. B., Goralczyk, R., Wertz, K., Riss, G., Moele, C., Langmann, T., & Schmitz, G. (2005) The effect of beta-carotene and its derivatives on cytotoxicity, differentiation, proliferative potential and apoptosis on the three human acute leukemia cell lines: U-937, HL-60 and TF-1. *Biochim.Biophys.Acta* 1740: 206-214.

Sachindra, N. M. & Mahendrakar, N. S. (2005) Process optimization for extraction of carotenoids from shrimp waste with vegetable oils. *Bioresour.Technol.* 96: 1195-1200.

Sale, T. A. & Stratman, E. (2004) Carotenemia associated with green bean ingestion. *Pediatr.Dermatol*. 21: 657-659.

Salguero, A., Leon, R., Mariotti, A., de la, M. B., Vega, J. M., & Vilchez, C. (2005) UV-A mediated induction of carotenoid accumulation in *Dunaliella bardawil* with retention of cell viability. *Appl.Microbiol.Biotechnol.* 66: 506-511.

Sayyah, M., Yousefi-Pour, M., & Narenjkar, J. (2005) Anti-epileptogenic effect of beta-carotene and vitamin

A in pentylenetetrazole-kindling model of epilepsy in mice. *Epilepsy Res.* 63: 11-16.

Schierle, J., Pietsch, B., Ceresa, A., Fizet, C., & Waysek, E. H. (2004) Method for the determination of beta-carotene in supplements and raw materials by reversed-phase liquid chromatography: single laboratory validation. *J.AOAC Int.* 87: 1070-1082.

Schwartz, S. J. (2005) How can the metabolomic response to lycopene (exposures, durations, intracellular concentrations) in humans be adequately evaluated? *J.Nutr*. 135: 2040S-2041S.

Scott, C. E. & Eldridge, A. L. (2005) Comparison of carotenoid content in fresh, frozen and canned corn. *J.Food Composition and Analysis* 18: 551-559.

Seo, J. S., Burri, B. J., Quan, Z., & Neidlinger, T. R. (2005) Extraction and chromatography of carotenoids from pumpkin. *J.Chromatogr.A* 1073: 371-375.

Serrano, J., Goni, I., & Saura-Calixto, F. (2005) Determination of beta-carotene and lutein available from green leafy vegetables by an in vitro digestion and colonic fermentation method. *J.Agric.Food Chem*. 53: 2936-2940.

Sesso, H. D., Buring, J. E., Norkus, E. P., & Gaziano, J. M. (2005) Plasma lycopene, other carotenoids, and retinol and the risk of cardiovascular disease in men. *Am.J.Clin.Nutr.* 81: 990-997.

Shai, I., Rosner, B. A., Shahar, D. R., Vardi, H., Azrad, A. B., Kanfi, A., Schwarzfuchs, D., & Fraser, D. (2005) Dietary evaluation and attenuation of relative risk: multiple comparisons between blood and urinary biomarkers, food frequency, and 24-hour recall questionnaires: the DEARR study. *J.Nutr.* 135: 573-579.

Shi, J., Kakuda, Y., & Yeung, D. (2004) Antioxidative properties of lycopene and other carotenoids from tomatoes: synergistic effects. *Biofactors* 21: 203-210.

Siegel, E. M., Craft, N. E., Roe, D. J., Duarte-Franco, E., Villa, L. L., Franco, E. L., & Giuliano, A. R. (2004) Temporal variation and identification of factors associated with endogenous retinoic acid isomers in serum from Brazilian women. *Cancer Epidemiol.Biomarkers Prev.* 13: 1693-1703.

Simkin, A. J., Underwood, B. A., Auldridge, M., Loucas, H. M., Shibuya, K., Schmelz, E., Clark, D. G., & Klee, H. J. (2004) Circadian regulation of the PhCCD1 carotenoid cleavage dioxygenase controls emission of beta-ionone, a fragrance volatile of petunia flowers. *Plant Physiol* 136: 3504-3514.

Simkin, A. J., Schwartz, S. H., Auldridge, M., Taylor, M. G., & Klee, H. J. (2004) The tomato carotenoid cleavage dioxygenase 1 genes contribute to the formation of the flavor volatiles beta-ionone, pseudoionone, and geranylacetone. *Plant J.* 40: 882-892.

Slimestad, R. & Verheul, M. J. (2005) Seasonal variations in the level of plant constituents in greenhouse production of cherry tomatoes. *J.Agric.Food Chem.* 53: 3114-3119.

Smit, N., Vicanova, J., Cramers, P., Vrolijk, H., & Pavel, S. (2004) The combined effects of extracts containing carotenoids and vitamins E and C on growth and pigmentation of cultured human melanocytes. *Skin Pharmacol.Physiol* 17: 238-245.

Srivastava, A. R. & Dalela, D. (2004) Prostate cancer: altering the natural history by dietary changes. *Natl.Med.J.India* 17: 248-253.

Stacewicz-Sapuntzakis, M. & Bowen, P. E. (2005) Role of lycopene and tomato products in prostate health.

Biochim.Biophys.Acta 1740: 202-205.

Stahl, W. (2005) Macular carotenoids: lutein and zeaxanthin. *Dev.Ophthalmol.* 38:70-88.: 70-88.

Stahl, W. & Sies, H. (2005) Bioactivity and protective effects of natural carotenoids. *Biochim.Biophys.Acta* 1740: 101-107.

Storf, S., Jansson, S., & Schmid, V. H. (2005) Pigment binding, fluorescence properties, and oligomerization behavior of Lhca5, a novel light-harvesting protein. *J.Biol.Chem.* 280: 5163-5168.

Stringham, J. M. & Hammond, B. R., Jr. (2005) Dietary lutein and zeaxanthin: possible effects on visual function. *Nutr.Rev*. 63: 59-64.

Sugiura, M., Matsumoto, H., Kato, M., Ikoma, Y., Yano, M., & Nagao, A. (2004) Seasonal changes in the relationship between serum concentration of beta-cryptoxanthin and serum lipid levels. *J.Nutr.Sci.Vitaminol.(Tokyo)* 50: 410-415.

Sugiura, M., Matsumoto, H., Kato, M., Ikoma, Y., Yano, M., & Nagao, A. (2004) Multiple linear regression analysis of the seasonal changes in the serum concentration of beta-cryptoxanthin. *J.Nutr.Sci.Vitaminol.(Tokyo)* 50: 196-202.

Sujak, A., Gabrielska, J., Milanowska, J., Mazurek, P., Strzalka, K., & Gruszecki, W. I. (2005) Studies on canthaxanthin in lipid membranes. *Biochim.Biophys.Acta* 1712: 17-28.

Takano, H., Obitsu, S., Beppu, T., & Ueda, K. (2005) Light-induced carotenogenesis in *Streptomyces coelicolor* A3(2): identification of an extracytoplasmic function sigma factor that directs photodependent transcription of the carotenoid biosynthesis gene cluster. *J.Bacteriol.* 187: 1825-1832.

Takishita, K., Ishida, K., & Maruyama, T. (2004) Phylogeny of nuclear-encoded plastid-targeted GAPDH gene supports separate origins for the peridinin- and the fucoxanthin derivative-containing plastids of dinoflagellates. *Protist*. 155: 447-458.

Tamimi, R. M., Hankinson, S. E., Campos, H., Spiegelman, D., Zhang, S., Colditz, G. A., Willett, W. C., & Hunter, D. J. (2005) Plasma carotenoids, retinol, and tocopherols and risk of breast cancer. *Am.J.Epidemiol.* 161: 153-160.

Tang, G., Ferreira, A. L., Grusak, M. A., Qin, J., Dolnikowski, G. G., Russell, R. M., & Krinsky, N. I. (2005) Bioavailability of synthetic and biosynthetic deuterated lycopene in humans. *J.Nutr.Biochem.* 16: 229-235.

Tang, L., Yan, F., Xu, Y., Rong, F., Li, S., & Chen, F. (2004) [Determination of crocin-1 in rabbit plasma and the pharmacokinetics by RP-HPLC]. *Yao Xue.Xue.Bao*. 39: 854-856.

Tanumihardjo, S. A., Li, J., & Dosti, M. P. (2005) Lutein absorption is facilitated with cosupplementation of ascorbic acid in young adults. *J.Am.Diet.Assoc.* 105: 114-118.

Tao, L. & Cheng, Q. (2004) Novel beta-carotene ketolases from non-photosynthetic bacteria for canthaxanthin synthesis. *Mol.Genet.Genomics* 272: 530-537.

Tao, L., Jackson, R. E., Rouviere, P. E., & Cheng, Q. (2005) Isolation of chromosomal mutations that affect carotenoid production in *Escherichia coli*: mutations alter copy number of ColE1-type plasmids. *FEMS Microbiol.Lett.* 243: 227-233.

Tao, L., Jackson, R. E., & Cheng, Q. (2005) Directed evolution of copy number of a broad host range plasmid for metabolic engineering. *Metab Eng* 7: 10-17.

TenBrook, P. L. & Tjeerdema, R. S. (2005) Comparative actions of clomazone on beta-carotene levels and growth in rice (*Oryza sativa*) and watergrasses (*Echinochloa spp*). *Pest.Manag.Sci.* 61: 567-571.

Thomas, S., Prabhu, R., & Balasubramanian, K. A. (2005) Retinoid metabolism in the rat small intestine. *Br.J.Nutr.* 93: 59-63.

Thomson, C. A., Harris, R. B., Craft, N. E., & Hakim, I. A. (2005) A cross-sectional analysis demonstrated the healthy volunteer effect in smokers. *J.Clin.Epidemiol.* 58: 378-382.

Thurmann, P. A., Schalch, W., Aebischer, J. C., Tenter, U., & Cohn, W. (2005) Plasma kinetics of lutein, zeaxanthin, and 3-dehydro-lutein after multiple oral doses of a lutein supplement. *Am.J.Clin.Nutr.* 82: 88-97.

Tiboni, G. M., Bucciarelli, T., Giampietro, F., Sulpizio, M., & Di Ilio, C. (2004) Influence of cigarette smoking on vitamin E, vitamin A, beta-carotene and lycopene concentrations in human pre-ovulatory follicular fluid. *Int.J.Immunopathol.Pharmacol*. 17: 389-393.
Trumbo, P. R. (2005) Are there adverse effects of lycopene exposure? *J.Nutr*. 135: 2060S-2061S.

Tsao, R., Yang, R., Young, J. C., Zhu, H., & Manolis, T. (2004) Separation of geometric isomers of native lutein diesters in marigold (*Tagetes erecta L.*) by high-performance liquid chromatography-mass spectrometry. *J.Chromatogr.A* 1045: 65-70.

Tsao, R. & Deng, Z. (2004) Separation procedures for naturally occurring antioxidant phytochemicals. *J.Chromatogr.B Analyt.Technol.Biomed.Life Sci.* 812: 85-99.

Tschirren, B., Fitze, P. S., & Richner, H. (2005) Carotenoid-based nestling colouration and parental favouritism in the great tit. *Oecologia.* 143: 477-482.

Tsuchida, K., Katagiri, C., Tanaka, Y., Tabunoki, H., Sato, R., Maekawa, H., Takada, N., Banno, Y., Fujii, H., Wells, M. A., & Jouni, Z. E. (2004) The basis for colorless hemolymph and cocoons in the Y-gene recessive *Bombyx mori* mutants: a defect in the cellular uptake of carotenoids. *J.Insect Physiol* 50: 975-983.

Tsuchiya, T., Takaichi, S., Misawa, N., Maoka, T., Miyashita, H., & Mimuro, M. (2005) The cyanobacterium *Gloeobacter violaceus* PCC 7421 uses bacterial-type phytoene desaturase in carotenoid biosynthesis. *FEBS Lett.* 579: 2125-2129.

Tulley, R. T., Vaidyanathan, J., Wilson, J. B., Rood, J. C., Lovejoy, J. C., Most, M. M., Volaufova, J., Peters, J. C., & Bray, G. A. (2005) Daily intake of multivitamins during long-term intake of olestra in men prevents declines in serum vitamins A and E but not carotenoids. *J.Nutr*. 135: 1456-1461.

Tung, K. H., Wilkens, L. R., Wu, A. H., McDuffie, K., Hankin, J. H., Nomura, A. M., Kolonel, L. N., & Goodman, M. T. (2005) Association of dietary vitamin A, carotenoids, and other antioxidants with the risk of ovarian cancer. *Cancer Epidiomol. Biomarkers Prev.* 14:669-676.

Tzeng, M. S., Yang, F. L., Wang-Hsu, G. S., & Chen, B. S. (2004) Determination of major carotenoids in human serum by liquid chromatography. *Journal of Food and Drug Analysis* 12: 79-83.

Ugocsai, K., Varga, A., Molnar, P., Antus, S., & Molnar, J. (2005) Effects of selected flavonoids and carotenoids on drug accumulation and apoptosis induction in multidrug-resistant colon cancer cells expressing MDR1/LRP. *In Vivo* 19: 433-438.

Umeno, D., Tobias, A. V., & Arnold, F. H. (2005) Diversifying carotenoid biosynthetic pathways by directed evolution. *Microbiol.Mol.Biol.Rev.* 69: 51-78.

Unlu, N. Z., Bohn, T., Clinton, S. K., & Schwartz, S. J. (2005) Carotenoid absorption from salad and salsa by humans is enhanced by the addition of avocado or avocado oil. *J.Nutr.* 135: 431-436.

van Bennekum, A., Werder, M., Thuahnai, S. T., Han, C. H., Duong, P., Williams, D. L., Wettstein, P., Schulthess, G., Phillips, M. C., & Hauser, H. (2005) Class B scavenger receptor-mediated intestinal absorption of dietary beta-carotene and cholesterol. *Biochemistry* 44: 4517-4525.

van Jaarsveld, P. J., Faber, M., Tanumihardjo, S. A., Nestel, P., Lombard, C. J., & Benade, A. J. (2005) Beta-carotene-rich orange-fleshed sweet potato improves the vitamin A status of primary school children assessed with the modified-relative-dose-response test. *Am.J.Clin.Nutr*. 81: 1080-1087.

van Lieshout, M. & de Pee, S. (2005) Vitamin A equivalency estimates: understanding apparent differences. *Am.J.Clin.Nutr.* 81: 943-945.

van Wijk, A. A., Spaans, A., Uzunbajakava, N., Otto, C., de Groot, H. J., Lugtenburg, J., & Buda, F. (2005) Spectroscopy and quantum chemical modeling reveal a predominant contribution of excitonic interactions to the bathochromic shift in alpha-crustacyanin, the blue carotenoprotein in the carapace of the lobster *Homarus gammarus*. *J.Am.Chem.Soc*. 127: 1438-1445.

Vanamala, J., Cobb, G., Turner, N. D., Lupton, J. R., Yoo, K. S., Pike, L. M., & Patil, B. S. (2005) Bioactive compounds of grapefruit (*Citrus paradisi* Cv. Rio Red) respond differently to postharvest irradiation, storage, and freeze drying. *J.Agric.Food Chem*. 53: 3980-3985.

Villamor, E., Saathoff, E., Bosch, R. J., Hertzmark, E., Baylin, A., Manji, K., Msamanga, G., Hunter, D. J., & Fawzi, W. W. (2005) Vitamin supplementation of HIV-infected women improves postnatal child growth. *Am.J.Clin.Nutr.* 81: 880-888.

Von Lintig, J., Hessel, S., Isken, A., Kiefer, C., Lampert, J. M., Voolstra, O., & Vogt, K. (2005) Towards a better understanding of carotenoid metabolism in animals. *Biochim.Biophys.Acta* 1740: 122-131.

Voutilainen, S. & Rissanen, T. H. (2004) Carotenoids and cardiovascular health. *Agro Food Industry Hi-Tech* 15: 34-37.

Vustin, M. M., Belykh, E. N., & Kishilova, S. A. (2004) [Relationship between astaxanthin production and the intensity of anabolic processes in the yeast *Phaffia rhodozyma*]. *Mikrobiologiia* 73: 751-757.

Walrand, S., Farges, M. C., Dehaese, O., Cardinault, N., Minet-Quinard, R., Grolier, P., Bouteloup-Demange, C., Ribalta, J., Winklhofer-Roob, B. M., Rock, E., & Vasson, M. P. (2005) In vivo and in vitro evidences that carotenoids could modulate the neutrophil respiratory burst during dietary manipulation. *Eur.J.Nutr.* 44: 114-120.

Wang, X. D. (2005) Can smoke-exposed ferrets be utilized to unravel the mechanisms of action of lycopene? *J.Nutr.* 135: 2053S-2056S.

Washam, C. (2005) An ounce of prevention from a ton of tomatoes. *Environ.Health Perspect.* 113: A178-A181.

Wenk, S. O., Schneider, D., Boronowsky, U., Jager, C., Klughammer, C., de Weerd, F. L., van Roon, H., Vermaas, W. F., Dekker, J. P., & Rogner, M. (2005) Functional implications of pigments bound to a

cyanobacterial cytochrome b6f complex. *FEBS J.* 272: 582-592.

Wertz, K., Hunziker, P. B., Seifert, N., Riss, G., Neeb, M., Steiner, G., Hunziker, W., & Goralczyk, R. (2005) beta-Carotene interferes with ultraviolet light A-induced gene expression by multiple pathways. *J.Invest Dermatol.* 124: 428-434.

Whitworth, D. E., Bryan, S. J., Berry, A. E., McGowan, S. J., & Hodgson, D. A. (2004) Genetic dissection of the light-inducible carQRS promoter region of *Myxococcus xanthus*. *J.Bacteriol.* 186: 7836-7846.

Winklhofer-Roob, B. M., Meinitzer, A., Maritschnegg, M., Roob, J. M., Khoschsorur, G., Ribalta, J., Sundl, I., Wuga, S., Wonisch, W., Tiran, B., & Rock, E. (2004) Effects of vitamin E depletion/repletion on biomarkers of oxidative stress in healthy aging. *Ann.N.Y.Acad.Sci.* 1031:361-4.: 361-364.

Witschi, H. (2005) Carcinogenic activity of cigarette smoke gas phase and its modulation by beta-carotene and N-acetylcysteine. *Toxicol.Sci.* 84: 81-87.

Yan, Y., Zhu, Y. H., Jiang, J. G., & Song, D. L. (2005) Cloning and sequence analysis of the phytoene synthase gene from a unicellular chlorophyte, *Dunaliella salina*. *J.Agric.Food Chem.* 53: 1466-1469.

Yang, S. C., Huang, C. C., Chu, J. S., & Chen, J. R. (2004) Effects of beta-carotene on cell viability and antioxidant status of hepatocytes from chronically ethanol-fed rats. *Br.J.Nutr.* 92: 209-215.

Yuan, J. M., Ross, R. K., Gao, Y. T., Qu, Y. H., Chu, X. D., & Yu, M. C. (2004) Prediagnostic levels of serum micronutrients in relation to risk of gastric cancer in Shanghai, China. *Cancer Epidemiol.Biomarkers Prev*. 13: 1772-1780.

Zhou, K., Yin, J. J., & Yu, L. L. (2005) Phenolic acid, tocopherol and carotenoid compositions, and antioxidant functions of hard red winter wheat bran. *J.Agric.Food Chem*. 53: 3916-3922.