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CARIG Literature Citations

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Abbet, C., Slacanin, I., Hamburger, M., & Potterat, O. (2013) Comprehensive analysis of *Phyteuma orbiculare* L., a wild Alpine food plant. Food Chem. 136: 595-603.

Abdel-Aal, e., Akhtar, H., Zaheer, K., & Ali, R. (2013) Dietary sources of lutein and zeaxanthin carotenoids and their role in eye health. Nutrients. 5: 1169-1185.

Abugri, D. A., Tiimob, B. J., Apalangya, V. A., Pritchett, G., & McElhenney, W. H. (2013) Bioactive and nutritive compounds in *Sorghum bicolor* (Guinea corn) red leaves and their health implication. Food Chem. 138: 718-723.

Agca, C. A., Tuzcu, M., Gencoglu, H., Akdemir, F., Ali, S., Sahin, K., & Kucuk, O. (2012) Lycopene counteracts the hepatic response to 7,12-dimethylbenz[a]anthracene by altering the expression of Bax, Bcl-2, caspases, and oxidative stress biomarkers. Pharm.Biol. 50: 1513-1518.

The Age-Related Eye Disease Study 2 (AREDS2) Research Group. (2013) Lutein + zeaxanthin and omega-3 fatty acids for age-related macular degeneration: the Age-Related Eye Disease Study 2 (AREDS2) randomized clinical trial. JAMA. 309: 2005-2015.

Ahn, J., Lee, H., Jung, C. H., & Ha, T. (2012) Lycopene inhibits hepatic steatosis via microRNA-21-induced downregulation of fatty acid-binding protein 7 in mice fed a high-fat diet. Mol.Nutr.Food Res. 56: 1665-1674.

Alami, M., Lazar, D., & Green, B. R. (2012) The harmful alga *Aureococcus anophagefferens* utilizes 19'-butanoyloxyfucoxanthin as well as xanthophyll cycle carotenoids in acclimating to higher light intensities. Biochim.Biophys.Acta. 1817: 1557-1564.

Ampomah-Dwamena, C., Dejnoprat, S., Lewis, D., Sutherland, P., Volz, R. K., & Allan, A. C. (2012) Metabolic and gene expression analysis of apple (*Malus x domestica*) carotenogenesis. J Exp.Bot. 63: 4497-4511.

Anarjan, N. & Tan, C. P. (2013) Effects of selected polysorbate and sucrose ester emulsifiers on the physicochemical properties of astaxanthin nanodispersions. Molecules. 18: 768-777.

Anese, M., Mirolo, G., Beraldo, P., & Lippe, G. (2013) Effect of ultrasound treatments of tomato pulp on microstructure and lycopene *in vitro* bioaccessibility. Food Chem. 136: 458-463.

Arnold, C., Winter, L., Frohlich, K., Jentsch, S., Dawczynski, J., Jahreis, G., & Bohm, V. (2013) Macular xanthophylls and omega-3 long-chain polyunsaturated fatty acids in age-related macular degeneration: a randomized trial. JAMA Ophthalmol. 131: 564-572.

Atri, N., Sharma, S. K., Joshi, R., Gulati, A., & Gulati, A. (2013) Nutritional and neutraceutical composition of five wild culinary-medicinal species of genus *Pleurotus* (higher *Basidiomycetes*) from northwest India. Int J Med.Mushrooms. 15: 49-56.

Aydin, S., Tokac, M., Taner, G., Arikok, A. T., Dundar, H. Z., Ozkardes, A. B., Taslipinar, M. Y., Kilic, M., Basaran, A. A., & Basaran, N. (2013) Antioxidant and antigenotoxic effects of lycopene in

obstructive jaundice. J Surg.Res. 182: 285-295.

Babu, R., Rojas, N. P., Gao, S., Yan, J., & Pixley, K. (2013) Validation of the effects of molecular marker polymorphisms in LcyE and CrtRB1 on provitamin A concentrations for 26 tropical maize populations. Theor.Appl.Genet. 126: 389-399.

Baieva, S., Ihalainen, J. A., & Toppari, J. J. (2013) Strong coupling between surface plasmon polaritons and beta-carotene in nanolayered system. J Chem Phys. 138: 044707.

Barrero, A. F., Herrador, M. M., Artega, P., Gonzalez, J. A., & Arteaga, J. F. (2012) A minor dihydropyran apocarotenoid from mated cultures of *Blakeslea trispora*. Molecules. 17: 12553-12559.

Bayramoglu, A., Bayramoglu, G., & Senturk, H. (2013) Lycopene partially reverses symptoms of diabetes in rats with streptozotocin-induced diabetes. J Med.Food. 16: 128-132.

Beatty, S., Chakravarthy, U., Nolan, J. M., Muldrew, K. A., Woodside, J. V., Denny, F., & Stevenson, M. R. (2013) Secondary outcomes in a clinical trial of carotenoids with coantioxidants versus placebo in early age-related macular degeneration. Ophthalmology. 120: 600-606.

Berrow, E. J., Bartlett, H. E., Eperjesi, F., & Gibson, J. M. (2013) The effects of a lutein-based supplement on objective and subjective measures of retinal and visual function in eyes with age-related maculopathy -- a randomised controlled trial. Br.J Nutr. 109: 2008-2014.

Beydoun, M. A., Beydoun, H. A., Boueiz, A., Shroff, M. R., & Zonderman, A. B. (2013) Antioxidant status and its association with elevated depressive symptoms among US adults: National Health and Nutrition Examination Surveys 2005-6. Br.J Nutr. 109: 1714-1729.

Bhuvaneswari, S. & Anuradha, C. V. (2012) Astaxanthin prevents loss of insulin signaling and improves glucose metabolism in liver of insulin resistant mice. Can.J Physiol Pharmacol. 90: 1544-1552.

Biltoft-Jensen, A., Bysted, A., Trolle, E., Christensen, T., Knuthsen, P., Damsgaard, C. T., Andersen, L. F., Brockhoff, P., & Tetens, I. (2013) Evaluation of Web-based Dietary Assessment Software for Children: comparing reported fruit, juice and vegetable intakes with plasma carotenoid concentration and school lunch observations. Br.J Nutr. 110: 186-195.

Blesso, C. N., Andersen, C. J., Bolling, B. W., & Fernandez, M. L. (2013) Egg intake improves carotenoid status by increasing plasma HDL cholesterol in adults with metabolic syndrome. Food Funct. 4: 213-221.

Boehm, J. K., Williams, D. R., Rimm, E. B., Ryff, C., & Kubzansky, L. D. (2013) Association between optimism and serum antioxidants in the midlife in the United States study. Psychosom.Med. 75: 2-10.

Bonifacio, A., Guidetti, R., Altiero, T., Sergo, V., & Rebecchi, L. (2012) Nature, source and function of pigments in tardigrades: *in vivo* Raman imaging of carotenoids in *Echiniscus blumi.* PLoS.ONE. 7: e50162.

Borel, P., Lietz, G., Goncalves, A., Szabo, d. E., Lecompte, S., Curtis, P., Goumidi, L., Caslake, M. J., Miles, E. A., Packard, C., Calder, P. C., Mathers, J. C., Minihane, A. M., Tourniaire, F., Kesse-Guyot, E., Galan, P., Hercberg, S., Breidenassel, C., Gonzalez, G. M., Moussa, M., Meirhaeghe, A., & Reboul, E. (2013) CD36 and SR-BI are involved in cellular uptake of provitamin A carotenoids by Caco-2 and HEK cells, and some of their genetic variants are associated with plasma concentrations

of these micronutrients in humans. J Nutr. 143: 448-456.

Bosio, G. N., Breitenbach, T., Parisi, J., Reigosa, M., Blaikie, F. H., Pedersen, B. W., Silva, E. F., Martire, D. O., & Ogilby, P. R. (2013) Antioxidant beta-carotene does not quench singlet oxygen in mammalian cells. J Am.Chem Soc. 135: 272-279.

Breitenbach, J., Gerjets, T., & Sandmann, G. (2013) Catalytic properties and reaction mechanism of the CrtO carotenoid ketolase from the cyanobacterium *Synechocystis* sp. PCC 6803. Arch.Biochem.Biophys. 529: 86-91.

Bresnahan, K. A., Arscott, S. A., Khanna, H., Arinaitwe, G., Dale, J., Tushemereirwe, W., Mondloch, S., Tanumihardjo, J. P., de Moura, F. F., & Tanumihardjo, S. A. (2012) Cooking enhances but the degree of ripeness does not affect provitamin A carotenoid bioavailability from bananas in Mongolian gerbils. J Nutr. 142: 2097-2104.

Caballo, C., Costi, E. M., Sicilia, M. D., & Rubio, S. (2012) Determination of supplemental feeding needs for astaxanthin and canthaxanthin in salmonids by supramolecular solvent-based microextraction and liquid chromatography-UV/VIS spectroscopy. Food Chem. 134: 1244-1249.

Caliandro, R., Nagel, K. A., Kastenholz, B., Bassi, R., Li, Z., Niyogi, K. K., Pogson, B. J., Schurr, U., & Matsubara, S. (2013) Effects of altered alpha- and beta-branch carotenoid biosynthesis on photoprotection and whole-plant acclimation of *Arabidopsis* to photo-oxidative stress. Plant Cell Environ. 36: 438-453.

Campenni', L., Nobre, B. P., Santos, C. A., Oliveira, A. C., Aires-Barros, M. R., Palavra, A. M., & Gouveia, L. (2013) Carotenoid and lipid production by the autotrophic microalga *Chlorella protothecoides* under nutritional, salinity, and luminosity stress conditions. Appl.Microbiol.Biotechnol. 97: 1383-1393.

Cao, H., Zhang, J., Xu, J., Ye, J., Yun, Z., Xu, Q., Xu, J., & Deng, X. (2012) Comprehending crystalline beta-carotene accumulation by comparing engineered cell models and the natural carotenoid-rich system of citrus. J Exp.Bot. 63: 4403-4417.

Carelli, S., Hebda, D. M., Traversa, M. V., Messaggio, F., Giuliani, G., Marzani, B., Benedusi, A., Di Giulio, A. M., & Gorio, A. (2012) A specific combination of zeaxanthin, spermidine and rutin prevents apoptosis in human dermal papilla cells. Exp.Dermatol. 21: 953-955.

Castagna, A., Chiavaro, E., Dall'asta, C., Rinaldi, M., Galaverna, G., & Ranieri, A. (2013) Effect of postharvest UV-B irradiation on nutraceutical quality and physical properties of tomato fruits. Food Chem. 137: 151-158.

Catalano, A., Simone, R. E., Cittadini, A., Reynaud, E., Caris-Veyrat, C., & Palozza, P. (2013) Comparative antioxidant effects of lycopene, apo-10'-lycopenoic acid and apo-14'-lycopenoic acid in human macrophages exposed to H2O2 and cigarette smoke extract. Food Chem Toxicol. 51:71-9.

Chandra, H. M., Shanmugaraj, B. M., Srinivasan, B., & Ramalingam, S. (2012) Influence of genotypic variations on antioxidant properties in different fractions of tomato. J Food Sci. 77: C1174-C1178.

Chen, B., McClements, D. J., & Decker, E. A. (2013) Design of foods with bioactive lipids for improved health. Annu.Rev.Food Sci.Technol. 4:35-56.

Cheng, T. Y. & Neuhouser, M. L. (2012) Serum 25-hydroxyvitamin D, vitamin A, and lung cancer

mortality in the US population: a potential nutrient-nutrient interaction. Cancer Causes Control. 23: 1557-1565.

Chong, M. F., George, T. W., Alimbetov, D., Jin, Y., Weech, M., Macready, A. L., Spencer, J. P., Kennedy, O. B., Minihane, A. M., Gordon, M. H., & Lovegrove, J. A. (2013) Impact of the quantity and flavonoid content of fruits and vegetables on markers of intake in adults with an increased risk of cardiovascular disease: the FLAVURS trial. Eur.J Nutr. 52: 361-378.

Christian, P., Klemm, R., Shamim, A. A., Ali, H., Rashid, M., Shaikh, S., Wu, L., Mehra, S., Labrique, A., Katz, J., & West, K. P., Jr. (2013) Effects of vitamin A and beta-carotene supplementation on birth size and length of gestation in rural Bangladesh: a cluster-randomized trial. Am.J Clin Nutr. 97: 188-194.

Ciftci, O. N., Calderon, J., & Temelli, F. (2012) Supercritical carbon dioxide extraction of corn distiller's dried grains with solubles: experiments and mathematical modeling. J Agric.Food Chem. 60: 12482-12490.

Cordero, B. F., Couso, I., Leon, R., Rodriguez, H., & Vargas, M. A. (2012) Isolation and characterization of a lycopene epsilon-cyclase gene of *Chlorella (Chromochloris) zofingiensis.* Regulation of the carotenogenic pathway by nitrogen and light. Mar.Drugs. 10: 2069-2088.

Costa, S., Giannantonio, C., Cota, F., & Romagnoli, C. (2012) May be the formula supplementation with lutein actually effective on visual development in preterm infants? J Perinatol. 32: 563.

Courraud, J., Berger, J., Cristol, J. P., & Avallone, S. (2013) Stability and bioaccessibility of different forms of carotenoids and vitamin A during in vitro digestion. Food Chem. 136: 871-877.

Couso, I., Cordero, B. F., Vargas, M. A., & Rodriguez, H. (2012) Efficient heterologous transformation of *Chlamydomonas reinhardtii* npq2 mutant with the zeaxanthin epoxidase gene isolated and characterized from *Chlorella zofingiensis*. Mar.Drugs. 10: 1955-1976.

D'Adamo, C. R., Miller, R. R., Shardell, M. D., Orwig, D. L., Hochberg, M. C., Ferrucci, L., Semba, R. D., Yu-Yahiro, J. A., Magaziner, J., & Hicks, G. E. (2012) Higher serum concentrations of dietary antioxidants are associated with lower levels of inflammatory biomarkers during the year after hip fracture. Clin Nutr. 31: 659-665.

Darvin, M. E., Sandhagen, C., Koecher, W., Sterry, W., Lademann, J., & Meinke, M. C. (2012) Comparison of two methods for noninvasive determination of carotenoids in human and animal skin: Raman spectroscopy versus reflection spectroscopy. J Biophotonics. 5: 550-558.

Darvin, M. E., Meinke, M. C., Sterry, W., & Lademann, J. (2013) Optical methods for noninvasive determination of carotenoids in human and animal skin. J Biomed.Opt. 18: 61230.

de Abreu, F. P., Dornier, M., Dionisio, A. P., Carail, M., Caris-Veyrat, C., & Dhuique-Mayer, C. (2013) Cashew apple (*Anacardium occidentale* L.) extract from by-product of juice processing: a focus on carotenoids. Food Chem. 138: 25-31.

Degrou, A., George, S., Renard, C. M., & Page, D. (2013) Physicochemical parameters that influence carotenoids bioaccessibility from a tomato juice. Food Chem. 136: 435-441.

Demmig-Adams, B., Cohu, C. M., Amiard, V., Zadelhoff, G., Veldink, G. A., Muller, O., & Adams, W. W., III (2013) Emerging trade-offs - impact of photoprotectants (PsbS, xanthophylls, and vitamin E) on

oxylipins as regulators of development and defense. New Phytol. 197: 720-729.

Devore, E. E., Kang, J. H., Stampfer, M. J., & Grodstein, F. (2013) The association of antioxidants and cognition in the Nurses' Health Study. Am.J Epidemiol. 177: 33-41.

Dey, S. & Rathod, V. K. (2013) Ultrasound assisted extraction of beta-carotene from *Spirulina platensis*. Ultrason.Sonochem. 20: 271-276.

Di Silvestro, R., Marotti, I., Bosi, S., Bregola, V., Carretero, A. S., Sedej, I., Mandic, A., Sakac, M., Benedettelli, S., & Dinelli, G. (2012) Health-promoting phytochemicals of Italian common wheat varieties grown under low-input agricultural management. J Sci.Food Agric. 92: 2800-2810.

Di Valentin, M., Buchel, C., Giacometti, G. M., & Carbonera, D. (2012) Chlorophyll triplet quenching by fucoxanthin in the fucoxanthin-chlorophyll protein from the diatom *Cyclotella meneghiniana*. Biochem.Biophys.Res.Commun. 427: 637-641.

Dimitrova, S., Pavlova, K., Lukanov, L., Korotkova, E., Petrova, E., Zagorchev, P., & Kuncheva, M. (2013) Production of metabolites with antioxidant and emulsifying properties by antarctic strain *Sporobolomyces salmonicolor* AL(1). Appl.Biochem.Biotechnol. 169: 301-311.

Ding, Q., Zhong, H., Qi, Y., Cheng, Y., Li, W., Yan, S., & Wang, X. (2013) Anti-arthritic effects of crocin in interleukin-1beta-treated articular chondrocytes and cartilage in a rabbit osteoarthritic model. Inflamm.Res. 62: 17-25.

Domenech-Asensi, G., Garcia-Alonso, F. J., Martinez, E., Santaella, M., Martin-Pozuelo, G., Bravo, S., & Periago, M. J. (2013) Effect of the addition of tomato paste on the nutritional and sensory properties of mortadella. Meat.Sci. 93: 213-219.

Donaldson, M. (2012) Development of a rapid, simple assay of plasma total carotenoids. BMC.Res.Notes. 5:521-525.

Dong, J. Z., Wang, Y., Wang, S. H., Yin, L. P., Xu, G. J., Zheng, C., Lei, C., & Zhang, M. Z. (2013) Selenium increases chlorogenic acid, chlorophyll and carotenoids of *Lycium chinense* leaves. J Sci.Food Agric. 93: 310-315.

Du, X. J., Wang, F., Lu, X., Rasco, B. A., & Wang, S. (2012) Biochemical and genetic characteristics of *Cronobacter sakazakii* biofilm formation. Res.Microbiol. 163: 448-456.

Durchan, M., Fuciman, M., Slouf, V., Kesan, G., & Polivka, T. (2012) Excited-state dynamics of monomeric and aggregated carotenoid 8'-apo-beta-carotenal. J Phys.Chem A. 116: 12330-12338.

Durst, R. W. & Weaver, G. W. (2013) Nutritional content of fresh and canned peaches. J Sci.Food Agric. 93: 593-603.

El Agamey, A. & Fukuzumi, S. (2012) The remarkable effect of the manganese ion with dioxygen on the stability of pi-conjugated radical cations. Chemistry. 18: 14660-14670.

El Beshbishy, H. A., Hassan, M. H., Aly, H. A., Doghish, A. S., & Alghaithy, A. A. (2012) Crocin "saffron" protects against beryllium chloride toxicity in rats through diminution of oxidative stress and enhancing gene expression of antioxidant enzymes. Ecotoxicol.Environ.Saf. 83:47-54.

Ermakov, I. V. & Gellermann, W. (2012) Dermal carotenoid measurements via pressure mediated

reflection spectroscopy. J Biophotonics. 5: 559-570.

Erturan, I., Naziroglu, M., & Akkaya, V. B. (2012) Isotretinoin treatment induces oxidative toxicity in blood of patients with acne vulgaris: a clinical pilot study. Cell Biochem.Funct. 30: 552-557.

Farges, M. C., Minet-Quinard, R., Walrand, S., Thivat, E., Ribalta, J., Winklhofer-Roob, B., Rock, E., & Vasson, M. P. (2012) Immune status is more affected by age than by carotenoid depletion-repletion in healthy human subjects. Br.J Nutr. 108: 2054-2065.

Firdous, A. P., Sindhu, E. R., Ramnath, V., & Kuttan, R. (2013) Amelioration of radiation-induced damages in mice by carotenoid meso-zeaxanthin. Int J Radiat.Biol. 89: 171-181.

Fitzgerald, K. C., O'Reilly, E. J., Fondell, E., Falcone, G. J., McCullough, M. L., Park, Y., Kolonel, L. N., & Ascherio, A. (2013) Intakes of vitamin C and carotenoids and risk of amyotrophic lateral sclerosis: pooled results from 5 cohort studies. Ann.Neurol. 73: 236-245.

Focsan, A. L., Bowman, M. K., Shamshina, J., Krzyaniak, M. D., Magyar, A., Polyakov, N. E., & Kispert, L. D. (2012) EPR study of the astaxanthin n-octanoic acid monoester and diester radicals on silica-alumina. J Phys.Chem B. 116: 13200-13210.

Fu, W., Magnusdottir, M., Brynjolfson, S., Palsson, B. O., & Paglia, G. (2012) UPLC-UV-MS(E) analysis for quantification and identification of major carotenoid and chlorophyll species in algae. Anal.Bioanal.Chem. 404: 3145-3154.

Fung, A., Hamid, N., & Lu, J. (2013) Fucoxanthin content and antioxidant properties of *Undaria pinnatifida*. Food Chem. 136: 1055-1062.

Gao, Q. H., Wu, C. S., Wang, M., Xu, B. N., & Du, L. J. (2012) Effect of drying of jujubes (*Ziziphus jujuba* Mill.) on the contents of sugars, organic acids, alpha-tocopherol, beta-carotene, and phenolic compounds. J Agric.Food Chem. 60: 9642-9648.

Gao, Y. Y., Xie, Q. M., Ma, J. Y., Zhang, X. B., Zhu, J. M., Shu, D. M., Sun, B. L., Jin, L., & Bi, Y. Z. (2013) Supplementation of xanthophylls increased antioxidant capacity and decreased lipid peroxidation in hens and chicks. Br.J Nutr. 109: 977-983.

Gao, Z., Meng, C., Zhang, X., Xu, D., Zhao, Y., Wang, Y., Lv, H., Liming, Y., Chen, L., & Ye, N. (2012) Differential expression of carotenogenic genes, associated changes on astaxanthin production and photosynthesis features induced by JA in *H. pluvialis*. PLoS.ONE. 7: e42243.

George, T. W., Waroonphan, S., Niwat, C., Gordon, M. H., & Lovegrove, J. A. (2013) Effects of acute consumption of a fruit and vegetable puree-based drink on vasodilation and oxidative status. Br.J Nutr. 109: 1442-1452.

Gerster, D., Reichert, J., Bi, H., Barth, J. V., Kaniber, S. M., Holleitner, A. W., Visoly-Fisher, I., Sergani, S., & Carmeli, I. (2012) Photocurrent of a single photosynthetic protein. Nat.Nanotechnol. 7: 673-676.

Giovannucci, E. (2013) Nutrient biomarkers are not always simple markers of nutrient intake. Am.J Clin Nutr. 97: 657-659.

Gleize, B., Tourniaire, F., Depezay, L., Bott, R., Nowicki, M., Albino, L., Lairon, D., Kesse-Guyot, E., Galan, P., Hercberg, S., & Borel, P. (2013) Effect of type of TAG fatty acids on lutein and zeaxanthin

bioavailability. Br.J Nutr. 110: 1-10.

Gomes, S., Torres, A. G., Godoy, R., Pacheco, S., Carvalho, J., & Nutti, M. (2013) Effects of boiling and frying on the bioaccessibility of beta-carotene in yellow-fleshed cassava roots (*Manihot esculenta* Crantz cv. BRS Jari). Food Nutr.Bull. 34: 65-74.

Gong, W. F., Lu, L. J., Liu, X., Chen, X. W., & Chen, D. F. (2013) [Effect of silencing lycB gene on the carotenoid synthesis in *Haematococcus pluvialis*]. Yi.Chuan. 35: 233-240.

Gostukhina, O. L., Soldatov, A. A., Golovina, I. V., & Borodina, A. V. (2012) [Content of carotenoids and the state of tissue antioxidant enzymatic complex in bivalve mollusc *Anadara inaequivalvis* Br]. Zh.Evol.Biokhim.Fiziol. 48: 542-547.

Guerra, B. A., Bolin, A. P., Morandi, A. C., & Otton, R. (2012) Glycolaldehyde impairs neutrophil biochemical parameters by an oxidative and calcium-dependent mechanism--protective role of antioxidants astaxanthin and vitamin C. Diabetes Res.Clin Pract. 98: 108-118.

Gundermann, K. & Buchel, C. (2012) Factors determining the fluorescence yield of fucoxanthin-chlorophyll complexes (FCP) involved in non-photochemical quenching in diatoms. Biochim.Biophys.Acta. 1817: 1044-1052.

Gupta, N., Kumar, S., Mishra, M. N., & Tripathi, A. K. (2013) A constitutively expressed pair of rpoE2-chrR2 in *Azospirillum brasilense* Sp7 is required for survival under antibiotic and oxidative stress. Microbiology. 159: 205-218.

Gupta, P., Bansal, M. P., & Koul, A. (2013) Spectroscopic characterization of lycopene extract from *Lycopersicum esculentum* (Tomato) and its evaluation as a chemopreventive agent against experimental hepatocarcinogenesis in mice. Phytother.Res. 27: 448-456.

Gupta, P., Bansal, M. P., & Koul, A. (2013) Evaluating the effect of lycopene from *Lycopersicum esculentum* on apoptosis during NDEA induced hepatocarcinogenesis. Biochem.Biophys.Res.Commun. 434: 479-485.

Hadad, N. & Levy, R. (2012) The synergistic anti-inflammatory effects of lycopene, lutein, beta-carotene, and carnosic acid combinations via redox-based inhibition of NF-kappaB signaling. Free Radic.Biol.Med. 53: 1381-1391.

Hallmann, E. (2012) The influence of organic and conventional cultivation systems on the nutritional value and content of bioactive compounds in selected tomato types. J Sci.Food Agric. 92: 2840-2848.

Hammond, B. R., Jr. & Fletcher, L. M. (2012) Influence of the dietary carotenoids lutein and zeaxanthin on visual performance: application to baseball. Am.J Clin Nutr. 96: 1207S-1213S.

Hammond, B. R., Jr., Fletcher, L. M., & Elliott, J. G. (2013) Glare disability, photostress recovery, and chromatic contrast: relation to macular pigment and serum lutein and zeaxanthin. Invest Ophthalmol.Vis.Sci. 54: 476-481.

Harnkarnsujarit, N., Charoenrein, S., & Roos, Y. H. (2012) Porosity and water activity effects on stability of crystalline beta-carotene in freeze-dried solids. J Food Sci. 77: E313-E320.

Harnkarnsujarit, N., Charoenrein, S., & Roos, Y. H. (2012) Reversed phase HPLC analysis of stability and microstructural effects on degradation kinetics of beta-carotene encapsulated in freeze-dried

maltodextrin-emulsion systems. J Agric.Food Chem. 60: 9711-9718.

Harrison, E. H., dela Sena, C., Eroglu, A., & Fleshman, M. K. (2012) The formation, occurrence, and function of beta-apocarotenoids: beta-carotene metabolites that may modulate nuclear receptor signaling. Am.J Clin Nutr. 96: 1189S-1192S.

Hashtroudi, M. S., Shariatmadari, Z., Riahi, H., & Ghassempour, A. (2013) Analysis of *Anabaena vaginicola* and *Nostoc calcicola* from Northern Iran, as rich sources of major carotenoids. Food Chem. 136: 1148-1153.

Haskell, M. J. (2012) The challenge to reach nutritional adequacy for vitamin A: beta-carotene bioavailability and conversion--evidence in humans. Am.J Clin Nutr. 96: 1193S-1203S.

Hemshekhar, M., Sebastin, S. M., Sunitha, K., Thushara, R. M., Kemparaju, K., Rangappa, K. S., & Girish, K. S. (2012) A dietary colorant crocin mitigates arthritis and associated secondary complications by modulating cartilage deteriorating enzymes, inflammatory mediators and antioxidant status. Biochimie. 94: 2723-2733.

Hill, G. E. & Johnson, J. D. (2012) The vitamin A-redox hypothesis: a biochemical basis for honest signaling via carotenoid pigmentation. Am.Nat. 180: E127-E150.

Horton, P. (2012) Optimization of light harvesting and photoprotection: molecular mechanisms and physiological consequences. Philos.Trans.R.Soc.Lond B Biol.Sci. 367: 3455-3465.

Hoshyar, R., Bathaie, S. Z., & Sadeghizadeh, M. (2013) Crocin triggers the apoptosis through increasing the Bax/Bcl-2 ratio and caspase activation in human gastric adenocarcinoma, AGS, cells. DNA Cell Biol. 32: 50-57.

Howells, O., Eperjesi, F., & Bartlett, H. (2013) Macular pigment optical density in young adults of South Asian origin. Invest Ophthalmol.Vis.Sci. 54: 2711-2719.

Howells, O., Eperjesi, F., & Bartlett, H. (2013) Improving the repeatability of heterochromatic flicker photometry for measurement of macular pigment optical density. Graefes Arch.Clin Exp.Ophthalmol. 251: 871-880.

Hu, X., Sun, J., & Yuan, Q. (2012) Improved beta-carotene biosynthesis and gene transcription in *Blakeslea trispora* with arachidonic acid. Biotechnol.Lett. 34: 2107-2111.

Huang, C. S., Chuang, C. H., Lo, T. F., & Hu, M. L. (2013) Anti-angiogenic effects of lycopene through immunomodualtion of cytokine secretion in human peripheral blood mononuclear cells. J Nutr.Biochem. 24: 428-434.

Huang, Y. M., Yan, S. F., Ma, L., Zou, Z. Y., Xu, X. R., Dou, H. L., & Lin, X. M. (2013) Serum and macular responses to multiple xanthophyll supplements in patients with early age-related macular degeneration. Nutrition. 29: 387-392.

Hughes, M. C., Williams, G. M., Baker, P., & Green, A. C. (2013) Sunscreen and prevention of skin aging: a randomized trial. Ann.Intern.Med. 158: 781-790.

Hwang, E. S., Stacewicz-Sapuntzakis, M., & Bowen, P. E. (2012) Effects of heat treatment on the carotenoid and tocopherol composition of tomato. J Food Sci. 77: C1109-C1114.

Hwang, E. S. & Kim, G. H. (2013) Effects of various heating methods on glucosinolate, carotenoid and tocopherol concentrations in broccoli. Int J Food Sci.Nutr. 64: 103-111.

Ibanez, E. & Cifuentes, A. (2013) Benefits of using algae as natural sources of functional ingredients. J Sci.Food Agric. 93: 703-709.

Ibiebele, T. I., Hughes, M. C., Nagle, C. M., Bain, C. J., Whiteman, D. C., & Webb, P. M. (2013) Dietary antioxidants and risk of Barrett's esophagus and adenocarcinoma of the esophagus in an Australian population. Int J Cancer. 133: 214-224.

Iwasaki, M., Moynihan, P., Manz, M. C., Taylor, G. W., Yoshihara, A., Muramatsu, K., Watanabe, R., & Miyazaki, H. (2013) Dietary antioxidants and periodontal disease in community-based older Japanese: a 2-year follow-up study. Public Health Nutr. 16: 330-338.

Jeknic, Z., Morre, J. T., Jeknic, S., Jevremovic, S., Subotic, A., & Chen, T. H. (2012) Cloning and functional characterization of a gene for capsanthin-capsorubin synthase from tiger lily (*Lilium lancifolium* Thunb. 'Splendens'). Plant Cell Physiol. 53: 1899-1912.

Jeon, B. Y., Kim, B. Y., Jung, I. L., & Park, D. H. (2012) Metabolic roles of carotenoid produced by non-photosynthetic bacterium *Gordonia alkanivorans* SKF120101. J Microbiol.Biotechnol. 22: 1471-1477.

Jeong, T. H., Ji, K., & Kim, Y. T. (2013) Overexpression and characterization of lycopene cyclase (CrtY) from marine bacterium *Paracoccus haeundaensis*. J Microbiol.Biotechnol. 23: 144-148.

Jia, H., Forster, B., Chow, W. S., Pogson, B. J., & Osmond, C. B. (2013) Decreased photochemical efficiency of photosystem II following sunlight exposure of shade-grown leaves of avocado: because of, or in spite of, two kinetically distinct xanthophyll cycles? Plant Physiol. 161: 836-852.

Jlali, M., Graulet, B., Chauveau-Duriot, B., Chabault, M., Godet, E., Leroux, S., Praud, C., Bihan-Duval, E., Duclos, M. J., & Berri, C. (2012) A mutation in the promoter of the chicken beta,beta-carotene 15,15'-monooxygenase 1 gene alters xanthophyll metabolism through a selective effect on its mRNA abundance in the breast muscle. J Anim Sci. 90: 4280-4288.

Johnson, E. J. (2012) A possible role for lutein and zeaxanthin in cognitive function in the elderly. Am.J Clin Nutr. 96: 1161S-1165S.

Johnson, J. D. & Hill, G. E. (2013) Is carotenoid ornamentation linked to the inner mitochondria membrane potential? A hypothesis for the maintenance of signal honesty. Biochimie. 95: 436-444.

Kaczor, A., Reva, I., & Fausto, R. (2013) Influence of cage confinement on the photochemistry of matrix-isolated *E*-beta-ionone: FT-IR and DFT study. J Phys.Chem A. 117: 888-897.

Kanazashi, M., Okumura, Y., Al Nassan, S., Murakami, S., Kondo, H., Nagatomo, F., Fujita, N., Ishihara, A., Roy, R. R., & Fujino, H. (2013) Protective effects of astaxanthin on capillary regression in atrophied soleus muscle of rats. Acta Physiol (Oxf). 207: 405-415.

Kaneko, M., Nagamine, T., Nakazato, K., & Mori, M. (2013) The anti-apoptotic effect of fucoxanthin on carbon tetrachloride-induced hepatotoxicity. J Toxicol.Sci. 38: 115-126.

Karppi, J., Laukkanen, J. A., Makikallio, T. H., & Kurl, S. (2012) Low serum lycopene and beta-carotene increase risk of acute myocardial infarction in men. Eur.J Public Health. 22: 835-840.

Karppi, J., Laukkanen, J. A., Makikallio, T. H., Ronkainen, K., & Kurl, S. (2013) Serum beta-carotene and the risk of sudden cardiac death in men: a population-based follow-up study. Atherosclerosis. 226: 172-177.

Khan, M. B., Hoda, M. N., Ishrat, T., Ahmad, S., Moshahid, K. M., Ahmad, A., Yusuf, S., & Islam, F. (2012) Neuroprotective efficacy of *Nardostachys jatamansi* and crocetin in conjunction with selenium in cognitive impairment. Neurol.Sci. 33: 1011-1020.

Kim, K. N., Ahn, G., Heo, S. J., Kang, S. M., Kang, M. C., Yang, H. M., Kim, D., Roh, S. W., Kim, S. K., Jeon, B. T., Park, P. J., Jung, W. K., & Jeon, Y. J. (2013) Inhibition of tumor growth *in vitro* and *in vivo* by fucoxanthin against melanoma B16F10 cells. Environ.Toxicol.Pharmacol. 35: 39-46.

Kim, M. J., Kim, J. K., Kim, H. J., Pak, J. H., Lee, J. H., Kim, D. H., Choi, H. K., Jung, H. W., Lee, J. D., Chung, Y. S., & Ha, S. H. (2012) Genetic modification of the soybean to enhance the beta-carotene content through seed-specific expression. PLoS.ONE. 7: e48287.

Kim, Y. S., Seo, E. S., & Oh, D. K. (2012) Characterization of an apo-carotenoid 13,14-dioxygenase from *Novosphingobium aromaticivorans* that converts beta-apo-8'-carotenal to beta-apo-13-carotenone. Biotechnol.Lett. 34: 1851-1856.

Klein, J., Darvin, M. E., Muller, K. E., & Lademann, J. (2012) Noninvasive measurements of carotenoids in bovine udder by reflection spectroscopy. J Biomed.Opt. 17: 101514.

Klein, J., Darvin, M. E., Muller, K. E., & Lademann, J. (2012) Serial non-invasive measurements of dermal carotenoid concentrations in dairy cows following recovery from abomasal displacement. PLoS.ONE. 7: e47706.

Klein, J., Darvin, M. E., Meinke, M. C., Schweigert, F. J., Muller, K. E., & Lademann, J. (2013) Analyses of the correlation between dermal and blood carotenoids in female cattle by optical methods. J Biomed.Opt. 18: 061219.

Klenina, I. B., Makhneva, Z. K., Moskalenko, A. A., Kuz'min, A. N., & Proskuriakov, I. I. (2013) [Singlet-triplet excitation fission in light-harvesting complexes of photosynthetic bacteria and in isolated carotenoids]. Biofizika. 58: 54-63.

Knockaert, G., Pulissery, S. K., Lemmens, L., Van Buggenhout, S., Hendrickx, M., & Van Loey, A. (2012) Carrot beta-carotene degradation and isomerization kinetics during thermal processing in the presence of oil. J Agric.Food Chem. 60: 10312-10319.

Konopka, I., Tanska, M., Faron, A., Stepien, A., & Wojtkowiak, K. (2012) Comparison of the phenolic compounds, carotenoids and tocochromanols content in wheat grain under organic and mineral fertilization regimes. Molecules. 17: 12341-12356.

Kopec, A., Cieslik, E., Leszczynska, T., Filipiak-Florkiewicz, A., Wielgos, B., Piatkowska, E., Bodzich, A., & Grzych-Tuleja, E. (2013) Assessment of polyphenols, beta-carotene, and vitamin C intake with daily diets by primary school children. Ecol.Food Nutr. 52: 21-33.

Kyriakoudi, A., Chrysanthou, A., Mantzouridou, F., & Tsimidou, M. Z. (2012) Revisiting extraction of bioactive apocarotenoids from *Crocus sativus* L. dry stigmas (saffron). Anal.Chim.Acta. 755:77-85. doi: 10.1016/j.aca.2012.10.016. Epub@2012 Oct 13.: 77-85.

Lamers, P. P., Janssen, M., De Vos, R. C., Bino, R. J., & Wijffels, R. H. (2012) Carotenoid and fatty

acid metabolism in nitrogen-starved *Dunaliella salina*, a unicellular green microalga. J Biotechnol. 162: 21-27.

Landrier, J. F., Marcotorchino, J., & Tourniaire, F. (2012) Lipophilic micronutrients and adipose tissue biology. Nutrients. 4: 1622-1649.

Larsen, M. K., Frette, X. C., Kristensen, T., Eriksen, J., Soegaard, K., & Nielsen, J. H. (2012) Fatty acid, tocopherol and carotenoid content in herbage and milk affected by sward composition and season of grazing. J Sci.Food Agric. 92: 2891-2898.

Lavrinchuk, V. I., Holembiovs'ka, S. L., & Matseliukh, B. P. (2012) [The action of hydrogen peroxide on mutants of *Streptomyces globisporus* 1912 with different carotene-synthesizing activity]. Mikrobiol.Z. 74: 87-91.

Lee, Y. & Choe, E. (2013) Effects of fatty acid composition and beta-carotene on the chlorophyll photosensitized oxidation of W/O emulsion affected by phosphatidylcholine. J Food Sci. 78: C31-C36.

Leefmann, T., Heim, C., Siljestrom, S., Blumenberg, M., Sjovall, P., & Thiel, V. (2013) Spectral characterization of ten cyclic lipids using time-of-flight secondary ion mass spectrometry. Rapid Commun.Mass Spectrom. 27: 565-581.

Leejae, S., Hasap, L., & Voravuthikunchai, S. P. (2013) Inhibition of staphyloxanthin biosynthesis in *Staphylococcus aureus* by rhodomyrtone, a novel antibiotic candidate. J Med.Microbiol. 62: 421-428.

Lennie, T. A., Moser, D. K., Biddle, M. J., Welsh, D., Bruckner, G. G., Thomas, D. T., Rayens, M. K., & Bailey, A. L. (2013) Nutrition intervention to decrease symptoms in patients with advanced heart failure. Res.Nurs.Health. 36: 120-145.

Lepetit, B., Sturm, S., Rogato, A., Gruber, A., Sachse, M., Falciatore, A., Kroth, P. G., & Lavaud, J. (2013) High light acclimation in the secondary plastids containing diatom *Phaeodactylum tricornutum* is triggered by the redox state of the plastoquinone pool. Plant Physiol. 161: 853-865.

Lesellier, E. (2012) Extension of the carotenoid test to superficially porous C18 bonded phases, aromatic ligand types and new classical C18 bonded phases. J Chromatogr.A. 1266:34-42.

Li, H., Deng, Z., Liu, R., Loewen, S., & Tsao, R. (2013) Carotenoid compositions of coloured tomato cultivars and contribution to antioxidant activities and protection against H(2)O(2)-induced cell death in H9c2. Food Chem. 136: 878-888.

Li, Y., Fabiano-Tixier, A. S., Tomao, V., Cravotto, G., & Chemat, F. (2013) Green ultrasound-assisted extraction of carotenoids based on the bio-refinery concept using sunflower oil as an alternative solvent. Ultrason.Sonochem. 20: 12-18.

Li, Y., Guo, H., Wu, M., & Liu, M. (2013) Serum and dietary antioxidant status is associated with lower prevalence of the metabolic syndrome in a study in Shanghai, China. Asia Pac.J Clin Nutr. 22: 60-68.

Li, Z., Sun, M., Li, Q., Li, A., & Zhang, C. (2012) Profiling of carotenoids in six microalgae (*Eustigmatophyceae*) and assessment of their beta-carotene productions in bubble column photobioreactor. Biotechnol.Lett. 34: 2049-2053.

Liang, J., Ning, J. C., & Zhao, H. (2013) Coordinated induction of multi-gene pathways in *Saccharomyces cerevisiae*. Nucleic Acids Res. 41: e54.

Liang, R., Liu, Y., Fu, L. M., Ai, X. C., Zhang, J. P., & Skibsted, L. H. (2012) Antioxidants and physical integrity of lipid bilayers under oxidative stress. J Agric.Food Chem. 60: 10331-10336.

Liu, F. X., Fu, S. F., Bi, X. F., Chen, F., Liao, X. J., Hu, X. S., & Wu, J. H. (2013) Physico-chemical and antioxidant properties of four mango (*Mangifera indica* L.) cultivars in China. Food Chem. 138: 396-405.

Liu, L., Wei, J., Zhang, M., Zhang, L., Li, C., & Wang, Q. (2012) Ethylene independent induction of lycopene biosynthesis in tomato fruits by jasmonates. J Exp.Bot. 63: 5751-5761.

Liu, L., Wang, P. P., Roebothan, B., Ryan, A., Tucker, C. S., Colbourne, J., Baker, N., Cotterchio, M., Yi, Y., & Sun, G. (2013) Assessing the validity of a self-administered food-frequency questionnaire (FFQ) in the adult population of Newfoundland and Labrador, Canada. Nutr.J. 12:49.

Lo, H. M., Chen, C. L., Yang, C. M., Wu, P. H., Tsou, C. J., Chiang, K. W., & Wu, W. B. (2013) The carotenoid lutein enhances matrix metalloproteinase-9 production and phagocytosis through intracellular ROS generation and ERK1/2, p38 MAPK, and RARbeta activation in murine macrophages. J Leukoc.Biol. 93: 723-735.

Lobo, G. P., Amengual, J., Baus, D., Shivdasani, R. A., Taylor, D., & Von Lintig, J. (2013) Genetics and diet regulate vitamin A production via the homeobox transcription factor ISX. J Biol.Chem. 288: 9017-9027.

Loto, I., Gutierrez, M. S., Barahona, S., Sepulveda, D., Martinez-Moya, P., Baeza, M., Cifuentes, V., & Alcaino, J. (2012) Enhancement of carotenoid production by disrupting the C22-sterol desaturase gene (CYP61) in *Xanthophyllomyces dendrorhous.* BMC.Microbiol. 12:235-12.

Loughman, J., Nolan, J. M., & Beatty, S. (2012) Impact of dietary carotenoid deprivation on macular pigment and serum concentrations of lutein and zeaxanthin. Br.J Nutr. 108: 2102-2103.

Mandalari, G., Bisignano, C., Filocamo, A., Chessa, S., Saro, M., Torre, G., Faulks, R. M., & Dugo, P. (2013) Bioaccessibility of pistachio polyphenols, xanthophylls, and tocopherols during simulated human digestion. Nutrition. 29: 338-344.

Manzoni, P., Guardione, R., Bonetti, P., Priolo, C., Maestri, A., Mansoldo, C., Mostert, M., Anselmetti, G., Sardei, D., Bellettato, M., Biban, P., & Farina, D. (2013) Lutein and zeaxanthin supplementation in preterm very low-birth-weight neonates in neonatal intensive care units: a multicenter randomized controlled trial. Am.J Perinatol. 30: 25-32.

Marles, M. A., Warkentin, T. D., & Bett, K. E. (2013) Genotypic abundance of carotenoids and polyphenolics in the hull of field pea (*Pisum sativum* L.). J Sci.Food Agric. 93: 463-470.

Matthaus, C., Schubert, S., Schmitt, M., Krafft, C., Dietzek, B., Schubert, U. S., & Popp, J. (2013) Resonance Raman spectral imaging of intracellular uptake of beta-carotene loaded poly(D,L-lactide-co-glycolide) nanoparticles. Chemphyschem. 14: 155-161.

Maurya, D. K., Nair, C. K., & Devasagayam, T. P. (2012) A novel microplate-based assay for screening radioprotectors and its validation based on DNA and membrane system. Mutat.Res. 749: 93-96.

McEneny, J., Wade, L., Young, I. S., Masson, L., Duthie, G., McGinty, A., McMaster, C., & Thies, F. (2013) Lycopene intervention reduces inflammation and improves HDL functionality in moderately

overweight middle-aged individuals. J Nutr.Biochem. 24: 163-168.

McLaren, D. S. & Kraemer, K. (2012) Vitamin A in nature. World Rev.Nutr.Diet. 103:7-17.

McLaren, D. S. & Kraemer, K. (2012) Methods of analysis. World Rev.Nutr.Diet. 103:18-9.

McLaren, D. S. & Kraemer, K. (2012) Food sources. World Rev.Nutr.Diet. 103:20-6.

McLaren, D. S. & Kraemer, K. (2012) Bioavailability of carotenoids. World Rev.Nutr.Diet. 103:27-32.

McLaren, D. S. & Kraemer, K. (2012) Vitamin A in health. World Rev.Nutr.Diet. 103:33-51.

McLaren, D. S. & Kraemer, K. (2012) Epidemiology. World Rev.Nutr.Diet. 103:124-36.

McLaren, D. S. & Kraemer, K. (2012) Retinoids and carotenoids in general medicine. World Rev.Nutr.Diet. 103:137-47.

Mendes-Pinto, M. M., LaFountain, A. M., Stoddard, M. C., Prum, R. O., Frank, H. A., & Robert, B. (2012) Variation in carotenoid-protein interaction in bird feathers produces novel plumage coloration. J R.Soc.Interface. 9: 3338-3350.

Meyers, K. J., Johnson, E. J., Bernstein, P. S., Iyengar, S. K., Engelman, C. D., Karki, C. K., Liu, Z., Igo, R. P., Jr., Truitt, B., Klein, M. L., Snodderly, D. M., Blodi, B. A., Gehrs, K. M., Sarto, G. E., Wallace, R. B., Robinson, J., LeBlanc, E. S., Hageman, G., Tinker, L., & Mares, J. A. (2013) Genetic determinants of macular pigments in women of the Carotenoids in Age-Related Eye Disease Study. Invest Ophthalmol.Vis.Sci. 54: 2333-2345.

Migliori, C., Di Cesare, L. F., Lo, S. R., Campanelli, G., & Ferrari, V. (2012) Effects of organic farming and genotype on alimentary and nutraceutical parameters in tomato fruits. J Sci.Food Agric. 92: 2833-2839.

Milaneschi, Y., Bandinelli, S., Penninx, B. W., Corsi, A. M., Lauretani, F., Vazzana, R., Semba, R. D., Guralnik, J. M., & Ferrucci, L. (2012) The relationship between plasma carotenoids and depressive symptoms in older persons. World J Biol.Psychiatry. 13: 588-598.

Mlalazi, B., Welsch, R., Namanya, P., Khanna, H., Geijskes, R. J., Harrison, M. D., Harding, R., Dale, J. L., & Bateson, M. (2012) Isolation and functional characterisation of banana phytoene synthase genes as potential cisgenes. Planta. 236: 1585-1598.

Mori, M., Hamada, A., Mori, H., Yamori, Y., & Tsuda, K. (2012) Effects of cooking using multi-ply cookware on absorption of potassium and vitamins: a randomized double-blind placebo control study. Int J Food Sci.Nutr. 63: 530-536.

Nagal, S., Kaur, C., Choudhary, H., Singh, J., Bhushan, S. B., & Singh, K. N. (2012) Lycopene content, antioxidant capacity and colour attributes of selected watermelon (*Citrullus lanatus* (Thunb.) Mansfeld) cultivars grown in India. Int J Food Sci.Nutr. 63: 996-1000.

Nakajima, H., Fukazawa, K., Wakabayashi, Y., Wakamatsu, K., Senda, K., & Imokawa, G. (2012) Abrogating effect of a xanthophyll carotenoid astaxanthin on the stem cell factor-induced stimulation of human epidermal pigmentation. Arch.Dermatol.Res. 304: 803-816.

Nam, H. K., Choi, J. G., Lee, J. H., Kim, S. W., & Oh, D. K. (2013) Increase in the production of beta-

carotene in recombinant *Escherichia coli* cultured in a chemically defined medium supplemented with amino acids. Biotechnol.Lett. 35: 265-271.

Nimalaratne, C., Lopes-Lutz, D., Schieber, A., & Wu, J. (2012) Effect of domestic cooking methods on egg yolk xanthophylls. J Agric.Food Chem. 60: 12547-12552.

Nokubi, T., Yasui, S., Yoshimuta, Y., Kida, M., Kusunoki, C., Ono, T., Maeda, Y., Nokubi, F., Yokota, K., & Yamamoto, T. (2013) Fully automatic measuring system for assessing masticatory performance using beta-carotene-containing gummy jelly. J Oral Rehabil. 40: 99-105.

Ocampo-Alvarez, H., Garcia-Mendoza, E., & Govindjee (2013) Antagonist effect between violaxanthin and de-epoxidated pigments in nonphotochemical quenching induction in the qE deficient brown alga *Macrocystis pyrifera*. Biochim.Biophys.Acta. 1827: 427-437.

Ogawa, M., Kariya, Y., Kitakaze, T., Yamaji, R., Harada, N., Sakamoto, T., Hosotani, K., Nakano, Y., & Inui, H. (2013) The preventive effect of beta-carotene on denervation-induced soleus muscle atrophy in mice. Br.J Nutr. 109: 1349-1358.

Oliveira e Silva LG, Manso, J. E., Silva, R. A., Pereira, S. E., Saboya Sobrinho, C. J., & Rangel, C. W. (2012) Relationship of the nutritional status of vitamin A and the regression of hepatic steatosis after Roux-en-Y gastric bypass surgery for treatment of class III obesity. Arq Bras.Cir.Dig. 25: 250-256.

Ostroumov, E. E., Mulvaney, R. M., Cogdell, R. J., & Scholes, G. D. (2013) Broadband 2D electronic spectroscopy reveals a carotenoid dark state in purple bacteria. Science. 340: 52-56.

Ozaydin, B., Burd, H., Lee, T. S., & Keasling, J. D. (2013) Carotenoid-based phenotypic screen of the yeast deletion collection reveals new genes with roles in isoprenoid production. Metab Eng. 15:174-83.

Ozmutlu, S., Dede, S., & Ceylan, E. (2012) The effect of lycopene treatment on ACE activity in rats with experimental diabetes. J Renin.Angiotensin.Aldosterone.Syst. 13: 328-333.

Paoletti, F., Raffo, A., Kristensen, H. L., Thorup-Kristensen, K., Seljasen, R., Torp, T., Busscher, N., Ploeger, A., & Kahl, J. (2012) Multi-method comparison of carrot quality from a conventional and three organic cropping systems with increasing levels of nutrient recycling. J Sci.Food Agric. 92: 2855-2869.

Park, E., Stacewicz-Sapuntzakis, M., Sharifi, R., Wu, Z., Freeman, V. L., & Bowen, P. E. (2013) Diet adherence dynamics and physiological responses to a tomato product whole-food intervention in African-American men. Br.J Nutr. 109: 2219-2230.

Paschenko, V. Z., Gorokhov, V. V., Korvatovskiy, B. N., Bocharov, E. A., Knox, P. P., Sarkisov, O. M., Theiss, C., Eichler, H. J., Renger, G., & Rubin, A. B. (2012) The rate of Q(x)-->Q(y) relaxation in bacteriochlorophylls of reaction centers from *Rhodobacter sphaeroides* determined by kinetics of the ultrafast carotenoid bandshift. Biochim.Biophys.Acta. 1817: 1399-1406.

Penas, E., Sidro, B., Ullate, M., Vidal-Valverde, C., & Frias, J. (2013) Impact of storage under ambient conditions on the vitamin content of dehydrated vegetables. Food Sci.Technol Int. 19: 133-141.

Peng, J., Yuan, J. P., & Wang, J. H. (2012) Effect of diets supplemented with different sources of astaxanthin on the gonad of the sea urchin *Anthocidaris crassispina*. Nutrients. 4: 922-934.

Pestana, J. M., Costa, A. S., Martins, S. V., Alfaia, C. M., Alves, S. P., Lopes, P. A., Bessa, R. J., & Prates, J. A. (2012) Effect of slaughter season and muscle type on the fatty acid composition, including conjugated linoleic acid isomers, and nutritional value of intramuscular fat in organic beef. J Sci.Food Agric. 92: 2428-2435.

Picone, S., Ritieni, A., Fabiano, A., Troise, A. D., Graziani, G., Paolillo, P., Li, V. G., D'Orazio, N., Galvano, F., & Gazzolo, D. (2012) Arterial cord blood lutein levels in preterm and term healthy newborns are sex and gestational age dependent. Clin Biochem. 45: 1558-1563.

Pierpaoli, E., Viola, V., Barucca, A., Orlando, F., Galli, F., & Provinciali, M. (2013) Effect of annatto-tocotrienols supplementation on the development of mammary tumors in HER-2/neu transgenic mice. Carcinogenesis. 34: 1352-1360.

Polesel, J., Negri, E., Serraino, D., Parpinel, M., Barzan, L., Libra, M., Bosetti, C., Garavello, W., Montella, M., La Vecchia, C., Franceschi, S., & Talamini, R. (2012) Dietary intakes of carotenoids and other nutrients in the risk of nasopharyngeal carcinoma: a case-control study in Italy. Br.J Cancer. 107: 1580-1583.

Poliakov, E., Gubin, A. N., Stearn, O., Li, Y., Campos, M. M., Gentleman, S., Rogozin, I. B., & Redmond, T. M. (2012) Origin and evolution of retinoid isomerization machinery in vertebrate visual cycle: hint from jawless vertebrates. PLoS.ONE. 7: e49975.

Polivka, T., Chabera, P., & Kerfeld, C. A. (2013) Carotenoid-protein interaction alters the S(1) energy of hydroxyechinenone in the Orange Carotenoid Protein. Biochim.Biophys.Acta. 1827: 248-254.

Preet, R., Mohapatra, P., Das, D., Satapathy, S. R., Choudhuri, T., Wyatt, M. D., & Kundu, C. N. (2013) Lycopene synergistically enhances quinacrine action to inhibit Wnt-TCF signaling in breast cancer cells through APC. Carcinogenesis. 34: 277-286.

Prum, R. O., LaFountain, A. M., Berro, J., Stoddard, M. C., & Frank, H. A. (2012) Molecular diversity, metabolic transformation, and evolution of carotenoid feather pigments in cotingas (*Aves: Cotingidae*). J Comp Physiol B. 182: 1095-1116.

Psencik, J., Arellano, J. B., Collins, A. M., Laurinmaki, P., Torkkeli, M., Loflund, B., Serimaa, R. E., Blankenship, R. E., Tuma, R., & Butcher, S. J. (2013) Structural and functional roles of carotenoids in chlorosomes. J Bacteriol. 195: 1727-1734.

Qi, Y., Chen, L., Zhang, L., Liu, W. B., Chen, X. Y., & Yang, X. G. (2013) Crocin prevents retinal ischaemia/reperfusion injury-induced apoptosis in retinal ganglion cells through the PI3K/AKT signalling pathway. Exp.Eye Res. 107:44-51.

Qv, X. Y. & Jiang, J. G. (2013) Toxicity evaluation of two typical surfactants to *Dunaliella bardawil*, an environmentally tolerant alga. Environ.Toxicol.Chem. 32: 426-433.

Rajput, N., Naeem, M., Ali, S., Zhang, J. F., Zhang, L., & Wang, T. (2013) The effect of dietary supplementation with the natural carotenoids curcumin and lutein on broiler pigmentation and immunity. Poult.Sci. 92: 1177-1185.

Ramalho, H. M., Santos, J., Casal, S., Alves, M. R., & Oliveira, M. B. (2012) Fat-soluble vitamin (A, D, E, and beta-carotene) contents from a Portuguese autochthonous cow breed--Minhota. J Dairy Sci. 95: 5476-5484.

Raman, R. & Mohamad, S. E. (2012) Astaxanthin production by freshwater microalgae *Chlorella sorokiniana* and marine microalgae *Tetraselmis* sp. Pak.J Biol.Sci. 15: 1182-1186.

Ramel, F., Mialoundama, A. S., & Havaux, M. (2013) Nonenzymic carotenoid oxidation and photooxidative stress signalling in plants. J Exp.Bot. 64: 799-805.

Razavi, B. M., Hosseinzadeh, H., Movassaghi, A. R., Imenshahidi, M., & Abnous, K. (2013) Protective effect of crocin on diazinon induced cardiotoxicity in rats in subchronic exposure. Chem Biol.Interact. 203: 547-555.

Richer, S., Cho, J., Stiles, W., Levin, M., Wrobel, J. S., Sinai, M., & Thomas, C. (2012) Retinal spectral domain optical coherence tomography in early atrophic age-related macular degeneration (AMD) and a new metric for objective evaluation of the efficacy of ocular nutrition. Nutrients. 4: 1812-1827.

Rink, S. M., Mendola, P., Mumford, S. L., Poudrier, J. K., Browne, R. W., Wactawski-Wende, J., Perkins, N. J., & Schisterman, E. F. (2013) Self-report of fruit and vegetable intake that meets the 5 a day recommendation is associated with reduced levels of oxidative stress biomarkers and increased levels of antioxidant defense in premenopausal women. J Acad.Nutr.Diet. 113: 776-785.

Rivera, S. & Canela, R. (2012) Influence of sample processing on the analysis of carotenoids in maize. Molecules. 17: 11255-11268.

Rodrigues, E., Mariutti, L. R., & Mercadante, A. Z. (2012) Scavenging capacity of marine carotenoids against reactive oxygen and nitrogen species in a membrane-mimicking system. Mar.Drugs. 10: 1784-1798.

Rodrigues, E., Mariutti, L. R., Faria, A. F., & Mercadante, A. Z. (2012) Microcapsules containing antioxidant molecules as scavengers of reactive oxygen and nitrogen species. Food Chem. 134: 704-711.

Roman, M. J., Burri, B. J., & Singh, R. P. (2012) Release and bioaccessibility of beta-carotene from fortified almond butter during *in vitro* digestion. J Agric.Food Chem. 60: 9659-9666.

Romero-Diaz, C., Richner, H., Granado-Lorencio, F., Tschirren, B., & Fitze, P. S. (2013) Independent sources of condition dependency and multiple pathways determine a composite trait: lessons from carotenoid-based plumage colouration. J Evol.Biol. 26: 635-646.

Rosenlund, H., Magnusson, J., Kull, I., Hakansson, N., Wolk, A., Pershagen, G., Wickman, M., & Bergstrom, A. (2012) Antioxidant intake and allergic disease in children. Clin Exp.Allergy. 42: 1491-1500.

Ross, A. C. (2012) Vitamin A and retinoic acid in T cell-related immunity. Am.J Clin Nutr. 96: 1166S-1172S.

Rossi, C., Guantario, B., Ferruzza, S., Guguen-Guillouzo, C., Sambuy, Y., Scarino, M. L., & Bellovino, D. (2012) Co-cultures of enterocytes and hepatocytes for retinoid transport and metabolism. Toxicol.In Vitro. 26: 1256-1264.

Russo, M., Bonaccorsi, I., Torre, G., Cotroneo, A., Dugo, P., & Mondello, L. (2013) Determination of bioactive compounds in the juice of pummelo (*Citrus grandis* Osbeck). Nat.Prod.Commun. 8: 171-174.

Saez, P. L., Bravo, L. A., Latsague, M. I., Toneatti, M. J., Sanchez-Olate, M., & Rios, D. G. (2013) Light energy management in micropropagated plants of *Castanea sativa*, effects of photoinhibition. Plant Sci. 201-202: 12-24.

Sakudoh, T., Kuwazaki, S., Iizuka, T., Narukawa, J., Yamamoto, K., Uchino, K., Sezutsu, H., Banno, Y., & Tsuchida, K. (2013) CD36 homolog divergence is responsible for the selectivity of carotenoid species migration to the silk gland of the silkworm *Bombyx mori*. J Lipid Res. 54: 482-495.

Sangiovanni, J. P. & Neuringer, M. (2012) The putative role of lutein and zeaxanthin as protective agents against age-related macular degeneration: promise of molecular genetics for guiding mechanistic and translational research in the field. Am.J Clin Nutr. 96: 1223S-1233S.

Santabarbara, S., Casazza, A. P., Ali, K., Economou, C. K., Wannathong, T., Zito, F., Redding, K. E., Rappaport, F., & Purton, S. (2013) The requirement for carotenoids in the assembly and function of the photosynthetic complexes in *Chlamydomonas reinhardtii*. Plant Physiol. 161: 535-546.

Sarkar, P. D., Gupt, T., & Sahu, A. (2012) Comparative analysis of lycopene in oxidative stress. J Assoc.Physicians India. 60:17-9.: 17-19.

Sawa, M., Gomi, F., Ueno, C., Suzuki, M., & Nishida, K. (2013) Comparison of macular pigment in three types of macular telangiectasia. Graefes Arch.Clin Exp.Ophthalmol. 251: 689-696.

Schleicher, R. L., Sternberg, M. R., & Pfeiffer, C. M. (2013) Race-ethnicity is a strong correlate of circulating fat-soluble nutrient concentrations in a representative sample of the U.S. population. J Nutr. 143: 966S-976S.

Sebastin, S. M., Hemshekhar, M., Thushara, R. M., Devaraja, S., Kemparaju, K., & Girish, K. S. (2013) *Vipera russelli* venom-induced oxidative stress and hematological alterations: amelioration by crocin a dietary colorant. Cell Biochem.Funct. 31: 41-50.

Serrano-Diaz, J., Sanchez, A. M., Maggi, L., Martinez-Tome, M., Garcia-Diz, L., Murcia, M. A., & Alonso, G. L. (2012) Increasing the applications of *Crocus sativus* flowers as natural antioxidants. J Food Sci. 77: C1162-C1168.

Seyyed, A. M., Neisi, N., Darbor, M., Hassanpour, M., Makvandi, M., & Solgi, G. (2012) beta-Carotene protects the gastric mucosa against ischemia-reperfusion injury in rats. Eur.Cytokine Netw. 23: 173-178.

Sharoni, Y., Linnewiel-Hermoni, K., Zango, G., Khanin, M., Salman, H., Veprik, A., Danilenko, M., & Levy, J. (2012) The role of lycopene and its derivatives in the regulation of transcription systems: implications for cancer prevention. Am.J Clin Nutr. 96: 1173S-1178S.

Shen, Y. C., Chng, L. M., Wang, Y. C., Shieh, C. J., Lin, K. L., Hsu, S. L., Chou, H. N., & Chang, C. M. (2012) Production of all-*trans* beta-carotene by using impinging flow of supercritical carbon dioxide anti-solvent pulverization. J Chromatogr.A. 1270:1-8.

Shim, Y. S., Kim, K. J., Seo, D., Ito, M., Nakagawa, H., Arai, S., & Ha, J. (2013) Simultaneous determination of free capsorubin and capsanthin in red pepper powder using u-HPLC. J AOAC Int. 96: 341-345.

Shivanna, V. B. & Subban, N. (2013) Carotenoids retention in processed curry leaves (*Murraya koenigii* L. Spreng). Int J Food Sci.Nutr. 64: 58-62.

Siener, R., Petzold, J., Bitterlich, N., Alteheld, B., & Metzner, C. (2013) Determinants of urolithiasis in patients with intestinal fat malabsorption. Urology. 81: 17-24.

Simonovska, B., Vovk, I., Glavnik, V., & Cernelic, K. (2013) Effects of extraction and high-performance liquid chromatographic conditions on the determination of lutein in spinach. J Chromatogr.A. 1276: 95-101.

Sloan, D. B. & Moran, N. A. (2012) Endosymbiotic bacteria as a source of carotenoids in whiteflies. Biol.Lett. 8: 986-989.

Smit, E., Winters-Stone, K. M., Loprinzi, P. D., Tang, A. M., & Crespo, C. J. (2013) Lower nutritional status and higher food insufficiency in frail older US adults. Br.J Nutr. 110: 172-178.

Smolensky, K. E., Hirshfeld, A., & Sheves, M. (2013) Retinal beta-ionone ring-salinixanthin interactions in xanthorhodopsin: a study using artificial pigments. Biochemistry. 52: 1290-1301.

Sogi, D. S., Siddiq, M., Roidoung, S., & Dolan, K. D. (2012) Total phenolics, carotenoids, ascorbic acid, and antioxidant properties of fresh-cut mango (*Mangifera indica* L., cv. Tommy Atkin) as affected by infrared heat treatment. J Food Sci. 77: C1197-C1202.

Sommer, A. & Vyas, K. S. (2012) A global clinical view on vitamin A and carotenoids. Am.J Clin Nutr. 96: 1204S-1206S.

Song, B. J., Jouni, Z. E., & Ferruzzi, M. G. (2013) Assessment of phytochemical content in human milk during different stages of lactation. Nutrition. 29: 195-202.

Song, G. H., Kim, S. H., Choi, B. H., Han, S. J., & Lee, P. C. (2013) Heterologous carotenoid-biosynthetic enzymes: functional complementation and effects on carotenoid profiles in *Escherichia coli*. Appl.Environ.Microbiol. 79: 610-618.

Song, X., Wang, M., Zhang, L., Zhang, J., Wang, X., Liu, W., Gu, X., & Lv, C. (2012) Changes in cell ultrastructure and inhibition of JAK1/STAT3 signaling pathway in CBRH-7919 cells with astaxanthin. Toxicol.Mech.Methods. 22: 679-686.

Stachowiak, B. (2013) Efficiency of selected mutagens in generating *Xanthophyllomyces dendrorhous* strains hyperproducing astaxanthin. Pol.J Microbiol. 62: 67-72.

Stahl, W. & Sies, H. (2012) beta-Carotene and other carotenoids in protection from sunlight. Am.J Clin Nutr. 96: 1179S-1184S.

Stancanelli, R., Lojkner, L. D., Larsen, K. L., Guardo, M., Cannava, C., Tommasini, S., Ventura, C. A., Calabro, M. L., Micali, N., Villari, V., & Mazzaglia, A. (2012) Structural and spectroscopic features of lutein/butanoyl-beta-cyclodextrin nanoassemblies. J Pharm.Biomed.Anal. 71:214-8.

Steiger, S., Perez-Fons, L., Fraser, P. D., & Sandmann, G. (2012) The biosynthetic pathway to a novel derivative of 4,4'-diapolycopene-4,4'-oate in a red strain of *Sporosarcina aquimarina*. Arch.Microbiol. 194: 779-784.

Steiger, S., Perez-Fons, L., Fraser, P. D., & Sandmann, G. (2012) Biosynthesis of a novel C30 carotenoid in *Bacillus firmus* isolates. J Appl.Microbiol. 113: 888-895.

Sugiura, M., Nakamura, M., Ogawa, K., Ikoma, Y., & Yano, M. (2012) High serum carotenoids

associated with lower risk for bone loss and osteoporosis in post-menopausal Japanese female subjects: prospective cohort study. PLoS.ONE. 7: e52643.

Sugiura, M., Ogawa, K., & Yano, M. (2013) Absorption, storage and distribution of beta-cryptoxanthin in rat after chronic administration of Satsuma mandarin (*Citrus unshiu* MARC.) juice. Biol.Pharm.Bull. 36: 147-151.

Sun, J., Sun, X. X., Tang, P. W., & Yuan, Q. P. (2012) Molecular cloning and functional expression of two key carotene synthetic genes derived from *Blakeslea trispora* into *E. coli* for increased beta-carotene production. Biotechnol.Lett. 34: 2077-2082.

Sun, Y. D., Liang, Y., Wu, J. M., Li, Y. Z., Cui, X., & Qin, L. (2012) Dynamic QTL analysis for fruit lycopene content and total soluble solid content in a *Solanum lycopersicum* x *S. pimpinellifolium* cross. Genet.Mol.Res. 11: 3696-3710.

Suzuki, K., Ishii, J., Kitagawa, F., Kuno, A., Kusuhara, Y., Ochiai, J., Ichino, N., Osakabe, K., Sugimoto, K., Yamada, H., Ito, Y., Hamajima, N., & Inoue, T. (2013) Association of serum carotenoid levels with N-terminal pro-brain-type natriuretic peptide: a cross-sectional study in Japan. J Epidemiol. 23: 163-168.

Tafuku, S., Ishikawa, C., Yasumoto, T., & Mori, N. (2012) Anti-neoplastic effects of fucoxanthin and its deacetylated product, fucoxanthinol, on Burkitt's and Hodgkin's lymphoma cells. Oncol.Rep. 28: 1512-1518.

Takaichi, S., Mochimaru, M., Uchida, H., Murakami, A., Hirose, E., Maoka, T., Tsuchiya, T., & Mimuro, M. (2012) Opposite chirality of alpha-carotene in unusual cyanobacteria with unique chlorophylls, *Acaryochloris* and *Prochlorococcus*. Plant Cell Physiol. 53: 1881-1888.

Takaishi, N., Satsu, H., Takayanagi, K., Mukai, K., & Shimizu, M. (2012) *In vivo* and *in vitro* studies on the absorption characteristics of beta-cryptoxanthin in the intestine. Biosci.Biotechnol.Biochem. 76: 2124-2128.

Takashima, M., Shichiri, M., Hagihara, Y., Yoshida, Y., & Niki, E. (2012) Capacity of fucoxanthin for scavenging peroxyl radicals and inhibition of lipid peroxidation in model systems. Free Radic.Res. 46: 1406-1412.

Takashima, M., Shichiri, M., Hagihara, Y., Yoshida, Y., & Niki, E. (2012) Capacity of peroxyl radical scavenging and inhibition of lipid peroxidation by beta-carotene, lycopene, and commercial tomato juice. Food Funct. 3: 1153-1160.

Takata, Y., Xiang, Y. B., Yang, G., Li, H., Gao, J., Cai, H., Gao, Y. T., Zheng, W., & Shu, X. O. (2013) Intakes of fruits, vegetables, and related vitamins and lung cancer risk: results from the Shanghai Men's Health Study (2002-2009). Nutr.Cancer. 65: 51-61.

Takayama, K., Nishiko, E., Matsumoto, G., & Inakuma, T. (2013) Study on the expression of c-Fos protein in the brain of rats after ingestion of food rich in lycopene. Neurosci.Lett. 536: 1-5.

Tang, G. (2012) Techniques for measuring vitamin A activity from beta-carotene. Am.J Clin Nutr. 96: 1185S-1188S.

Teixeira, V. H., Valente, H. F., Casal, S. I., Marques, F. P., & Moreira, P. A. (2013) Blood antioxidant and oxidative stress biomarkers acute responses to a 1000-m kayak sprint in elite male kayakers. J

Sports Med.Phys.Fitness. 53: 71-79.

Thorne-Lyman, A. L. & Fawzi, W. W. (2012) Vitamin A and carotenoids during pregnancy and maternal, neonatal and infant health outcomes: a systematic review and meta-analysis. Paediatr.Perinat.Epidemiol. 26 Suppl 1:36-54.

Thushara, R. M., Hemshekhar, M., Santhosh, M. S., Jnaneshwari, S., Nayaka, S. C., Naveen, S., Kemparaju, K., & Girish, K. S. (2013) Crocin, a dietary additive protects platelets from oxidative stress-induced apoptosis and inhibits platelet aggregation. Mol.Cell Biochem. 373: 73-83.

Tokarz, D., Cisek, R., Prent, N., Fekl, U., & Barzda, V. (2012) Measuring the molecular second hyperpolarizability in absorptive solutions by the third harmonic generation ratio technique. Anal.Chim.Acta. 755:86-92.

Torkildsen, O., Loken-Amsrud, K. I., Wergeland, S., Myhr, K. M., & Holmoy, T. (2013) Fat-soluble vitamins as disease modulators in multiple sclerosis. Acta Neurol.Scand.Suppl. 16-23.

Tran, P. T., Sharifi, M. N., Poddar, S., Dent, R. M., & Niyogi, K. K. (2012) Intragenic enhancers and suppressors of phytoene desaturase mutations in *Chlamydomonas reinhardtii*. PLoS.ONE. 7: e42196.

Tuan, P. A. & Park, S. U. (2013) Molecular cloning and characterization of cDNAs encoding carotenoid cleavage dioxygenase in bitter melon (*Momordica charantia*). J Plant Physiol. 170: 115-120.

Tyburczy, C., Mossoba, M. M., Fardin-Kia, A. R., & Rader, J. I. (2012) Evaluation of low *trans* fat edible oils by attenuated total reflection-Fourier transform infrared spectroscopy and gas chromatography: a comparison of analytical approaches. Anal.Bioanal.Chem. 404: 809-819.

Uppala, P. T., Dissmore, T., Lau, B. H., Andacht, T., & Rajaram, S. (2013) Selective inhibition of cell proliferation by lycopene in MCF-7 breast cancer cells *in vitro*: a proteomic analysis. Phytother.Res. 27: 595-601.

Ural, M. S. (2013) Chlorpyrifos-induced changes in oxidant/antioxidant status and haematological parameters of *Cyprinus carpio carpio*: ameliorative effect of lycopene. Chemosphere. 90: 2059-2064.

Vallverdu-Queralt, A., Oms-Oliu, G., Odriozola-Serrano, I., Lamuela-Raventos, R. M., Martin-Belloso, O., & Elez-Martinez, P. (2013) Metabolite profiling of phenolic and carotenoid contents in tomatoes after moderate-intensity pulsed electric field treatments. Food Chem. 136: 199-205.

Valmalette, J. C., Dombrovsky, A., Brat, P., Mertz, C., Capovilla, M., & Robichon, A. (2012) Light-induced electron transfer and ATP synthesis in a carotene synthesizing insect. Sci.Rep. 2:579.

van Helden, Y. G., Godschalk, R. W., van Schooten, F. J., & Keijer, J. (2013) Organ specificity of beta-carotene induced lung gene-expression changes in Bcmo1-/- mice. Mol.Nutr.Food Res. 57: 307-319.

Vereshchagina, O. A., Memorskaia, A. S., Kochkina, G. A., & Tereshina, V. M. (2012) [Trisporoids and carotenoids in *Blakeslea trispora* strains differing in capacity for zygote formation]. Mikrobiologiia. 81: 561-569.

Verger, E. O., Mariotti, F., Holmes, B. A., Paineau, D., & Huneau, J. F. (2012) Evaluation of a diet

quality index based on the probability of adequate nutrient intake (PANDiet) using national French and US dietary surveys. PLoS.ONE. 7: e42155.

Vinas, P., Bravo-Bravo, M., Lopez-Garcia, I., & Hernandez-Cordoba, M. (2013) Quantification of beta-carotene, retinol, retinyl acetate and retinyl palmitate in enriched fruit juices using dispersive liquid-liquid microextraction coupled to liquid chromatography with fluorescence detection and atmospheric pressure chemical ionization-mass spectrometry. J Chromatogr.A. 1275:1-8.

Vioque, J., Navarrete-Munoz, E. M., Gimenez-Monzo, D., Garcia-de-la-Hera, M., Granado, F., Young, I. S., Ramon, R., Ballester, F., Murcia, M., Rebagliato, M., & Iniguez, C. (2013) Reproducibility and validity of a food frequency questionnaire among pregnant women in a Mediterranean area. Nutr.J. 12: 26-12.

Vitek, P., Jehlicka, J., Edwards, H. G., Hutchinson, I., Ascaso, C., & Wierzchos, J. (2012) The miniaturized Raman system and detection of traces of life in halite from the Atacama Desert: some considerations for the search for life signatures on Mars. Astrobiology. 12: 1095-1099.

Von Lintig, J. (2012) Provitamin A metabolism and functions in mammalian biology. Am.J Clin Nutr. 96: 1234S-1244S.

Wang, J., Chen, S., Xu, S., Yu, X., Ma, D., Hu, X., & Cao, X. (2012) *In vivo* induction of apoptosis by fucoxanthin, a marine carotenoid, associated with down-regulating STAT3/EGFR signaling in sarcoma 180 (S180) xenografts-bearing mice. Mar.Drugs. 10: 2055-2068.

Wang, X. D. (2012) Lycopene metabolism and its biological significance. Am.J Clin Nutr. 96: 1214S-1222S.

Wang, Y., Yang, M., Lee, S. G., Davis, C. G., Kenny, A., Koo, S. I., & Chun, O. K. (2012) Plasma total antioxidant capacity is associated with dietary intake and plasma level of antioxidants in postmenopausal women. J Nutr.Biochem. 23: 1725-1731.

Wang, Y., Liu, Z., & Qin, S. (2013) Effects of iron on fatty acid and astaxanthin accumulation in mixotrophic *Chromochloris zofingiensis*. Biotechnol.Lett. 35: 351-357.

Wang, Y. Q., Yang, Y., Fei, Z., Yuan, H., Fish, T., Thannhauser, T. W., Mazourek, M., Kochian, L. V., Wang, X., & Li, L. (2013) Proteomic analysis of chromoplasts from six crop species reveals insights into chromoplast function and development. J Exp.Bot. 64: 949-961.

Wayama, M., Ota, S., Matsuura, H., Nango, N., Hirata, A., & Kawano, S. (2013) Three-dimensional ultrastructural study of oil and astaxanthin accumulation during encystment in the green alga *Haematococcus pluvialis*. PLoS.ONE. 8: e53618.

West, C. E., Dunstan, J., McCarthy, S., Metcalfe, J., D'Vaz, N., Meldrum, S., Oddy, W. H., Tulic, M. K., & Prescott, S. L. (2012) Associations between maternal antioxidant intakes in pregnancy and infant allergic outcomes. Nutrients. 4: 1747-1758.

Whitehead, R. D., Ozakinci, G., & Perrett, D. I. (2012) Attractive skin coloration: harnessing sexual selection to improve diet and health. Evol.Psychol. 10: 842-854.

Wilk, L., Grunwald, M., Liao, P. N., Walla, P. J., & Kuhlbrandt, W. (2013) Direct interaction of the major light-harvesting complex II and PsbS in nonphotochemical quenching. Proc.Natl.Acad.Sci.U.S.A. 110: 5452-5456.

Wu, C., Han, L., Riaz, H., Wang, S., Cai, K., & Yang, L. (2013) The chemopreventive effect of beta-cryptoxanthin from mandarin on human stomach cells (BGC-823). Food Chem. 136: 1122-1129.

Wu, X., Jiang, J., & Hu, J. (2013) Determination and occurrence of retinoids in a eutrophic lake (Taihu Lake, China): cyanobacteria blooms produce teratogenic retinal. Environ.Sci.Technol. 47: 807-814.

Xu, X. R., Zou, Z. Y., Huang, Y. M., Xiao, X., Ma, L., & Lin, X. M. (2012) Serum carotenoids in relation to risk factors for development of atherosclerosis. Clin Biochem. 45: 1357-1361.

Yamagata, K., Tanaka, N., Matsufuji, H., & Chino, M. (2012) beta-Carotene reverses the IL-1beta-mediated reduction in paraoxonase-1 expression via induction of the CaMKKII pathway in human endothelial cells. Microvasc.Res. 84: 297-305.

Yamagata, K., Nakayama, C., & Suzuki, K. (2013) Dietary beta-carotene regulates interleukin-1beta-induced expression of apolipoprotein E in astrocytes isolated from stroke-prone spontaneously hypertensive rats. Neurochem.Int. 62: 43-49.

Ye, Q., Huang, B., Zhang, X., Zhu, Y., & Chen, X. (2012) Astaxanthin protects against MPP(+)-induced oxidative stress in PC12 cells via the HO-1/NOX2 axis. BMC.Neurosci. 13:156.

Yuan, C., Du, L., Jin, Z., & Xu, X. (2013) Storage stability and antioxidant activity of complex of astaxanthin with hydroxypropyl-beta-cyclodextrin. Carbohydr.Polym. 91: 385-389.

Yue, R., Hu, H., Yiu, K. H., Luo, T., Zhou, Z., Xu, L., Zhang, S., Li, K., & Yu, Z. (2012) Lycopene protects against hypoxia/reoxygenation-induced apoptosis by preventing mitochondrial dysfunction in primary neonatal mouse cardiomyocytes. PLoS.ONE. 7: e50778.

Yusuf, M., Khan, R. A., Khan, M., & Ahmed, B. (2012) Plausible antioxidant biomechanics and anticonvulsant pharmacological activity of brain-targeted beta-carotene nanoparticles. Int J Nanomedicine. 7:4311-21..

Zelcbuch, L., Antonovsky, N., Bar-Even, A., Levin-Karp, A., Barenholz, U., Dayagi, M., Liebermeister, W., Flamholz, A., Noor, E., Amram, S., Brandis, A., Bareia, T., Yofe, I., Jubran, H., & Milo, R. (2013) Spanning high-dimensional expression space using ribosome-binding site combinatorics. Nucleic Acids Res. 41: e98.

Zhang, Q. Y., Wang, L. Y., Kong, F. Y., Deng, Y. S., Li, B., & Meng, Q. W. (2012) Constitutive accumulation of zeaxanthin in tomato alleviates salt stress-induced photoinhibition and photooxidation. Physiol Plant. 146: 363-373.

Zhu, C., Sanahuja, G., Yuan, D., Farre, G., Arjo, G., Berman, J., Zorrilla-Lopez, U., Banakar, R., Bai, C., Perez-Massot, E., Bassie, L., Capell, T., & Christou, P. (2013) Biofortification of plants with altered antioxidant content and composition: genetic engineering strategies. Plant Biotechnol.J. 11: 129-141.