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## CARIG Literature Citations

(compiled by Harold Furr, University of Wisconsin-Madison)

Abu-Zahra, T. R. (2011) Influence of agricultural practices on fruit quality of bell pepper. *Pak.J Biol.Sci.* 14: 876-881.

Agarwal, M., Parameswari, R. P., Vasanthi, H. R., & Das, D. K. (2012) Dynamic action of carotenoids in cardioprotection and maintenance of cardiac health. *Molecules.* 17: 4755-4769.

Aggarwal, A., Shetti, A., Keluskar, V., & Bagewadi, A. (2011) Estimation of serum beta carotene levels in patients with oral submucous fibrosis in India. *J Oral Sci.* 53: 427-431.

Altincicek, B., Kovacs, J. L., & Gerardo, N. M. (2012) Horizontally transferred fungal carotenoid genes in the two-spotted spider mite *Tetranychus urticae*. *Biol.Lett.* 8: 253-257.

Aly, H. A., El Beshbishi, H. A., & Banjar, Z. M. (2012) Mitochondrial dysfunction induced impairment of spermatogenesis in LPS-treated rats: modulatory role of lycopene. *Eur.J Pharmacol.* 677: 31-38.

Anunciato, T. P. & Rocha Filho, P. A. (2012) Carotenoids and polyphenols in nutricosmetics, nutraceuticals, and cosmeceuticals. *J Cosmet.Dermatol.* 11: 51-54.

Araya-Garay, J. M., Feijoo-Siota, L., Rosa-Dos-Santos, F., Veiga-Crespo, P., & Villa, T. G. (2012) Construction of new *Pichia pastoris* X-33 strains for production of lycopene and beta-carotene. *Appl.Microbiol.Biotechnol.* 93: 2483-2492.

Arunkumar, E., Bhuvaneswari, S., & Anuradha, C. V. (2012) An intervention study in obese mice with astaxanthin, a marine carotenoid--effects on insulin signaling and pro-inflammatory cytokines. *Food Funct.* 3: 120-126.

Asgari, M. M., Brasky, T. M., & White, E. (2012) Association of vitamin A and carotenoid intake with melanoma risk in a large prospective cohort. *J Invest Dermatol.* 132: 1573-1582.

Asokkumar, S., Naveenkumar, C., Raghunandhakumar, S., Kamaraj, S., Anandakumar, P., Jagan, S., & Devaki, T. (2012) Antiproliferative and antioxidant potential of beta-ionone against benzo(a)pyrene-induced lung carcinogenesis in Swiss albino mice. *Mol.Cell Biochem.* 363: 335-345.

Atkinson, N. J., Dew, T. P., Orfila, C., & Urwin, P. E. (2011) Influence of combined biotic and abiotic stress on nutritional quality parameters in tomato (*Solanum lycopersicum*). *J Agric.Food Chem.* 59: 9673-9682.

Augustynska, D., Jemiola-Rzeminska, M., Burda, K., & Strzalka, K. (2012) Atomic force microscopy studies of the adhesive properties of DPPC vesicles containing beta-carotene. *Acta Biochim.Pol.* 59: 125-128.

Bafteh, P. R., Siegesmund, M., Hanneken, S., & Neumann, N. J. (2012) Protective effects of beta-carotene and melanin against protoporphyrine IX-induced phototoxicity in the photo hen's egg test. *Photodermat.Photoimmunol.Photomed.* 28: 12-16.

Baldermann, S., Kato, M., Fleischmann, P., & Watanabe, N. (2012) Biosynthesis of alpha- and beta-ionone, prominent scent compounds, in flowers of *Osmanthus fragrans*. *Acta Biochim.Pol.* 59: 79-81.

Barba-Ostria, C., Lledias, F., & Georgellis, D. (2011) The *Neurospora crassa* DCC-1 protein, a putative histidine kinase, is required for normal sexual and asexual development and carotenogenesis.

Eukaryot.Cell. 10: 1733-1739.

Barros, M. P., Marin, D. P., Bolin, A. P., Cassia Santos, M. R., Campoio, T. R., Fineto, C., Jr., Guerra, B. A., Polotow, T. G., Vardaris, C., Mattei, R., & Otton, R. (2012) Combined astaxanthin and fish oil supplementation improves glutathione-based redox balance in rat plasma and neutrophils. *Chem Biol.Interact.* 197: 58-67.

Belefant-Miller, H., Miller, G. H., & Moldenhauer, K. A. (2012) Utilizing the genetic diversity within rice cultivars. *Planta.* 235: 641-647.

Bemrah, N., Vin, K., Sirot, V., Aguilar, F., Ladrat, A. C., Ducasse, C., Gey, J. L., Retho, C., Nougadere, A., & Leblanc, J. C. (2012) Assessment of dietary exposure to annatto (E160b), nitrites (E249-250), sulphites (E220-228) and tartaric acid (E334) in the French population: the second French total diet study. *Food Addit.Contam Part A Chem Anal.Control Expo.Risk Assess.* 29: 875-885.

Berera, R., van Stokkum, I. H., Gwizdala, M., Wilson, A., Kirilovsky, D., & van Grondelle, R. (2012) The photophysics of the orange carotenoid protein, a light-powered molecular switch. *J Phys.Chem B.* 116: 2568-2574.

Bjelakovic, G., Nikolova, D., Gluud, L. L., Simonetti, R. G., & Gluud, C. (2012) Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases. *Cochrane.Database.Syst.Rev.* 3: CD007176.

Boaventura, B. C., Di Pietro, P. F., de Assis, M. A., Ambrosi, C., Nesello, L. A., Da Silva, F. O., Vasconcelos, F. A., Moreira, J. C., & Fausto, M. A. (2012) Antioxidant biomarkers and food intake in elderly women. *J Nutr.Health Aging.* 16: 21-25.

Bohm, F., Edge, R., & Truscott, T. G. (2012) Interactions of dietary carotenoids with singlet oxygen ( ${}^1\text{O}_2$ ) and free radicals: potential effects for human health. *Acta Biochim.Pol.* 59: 27-30.

Bohm, F., Edge, R., & Truscott, G. (2012) Interactions of dietary carotenoids with activated (singlet) oxygen and free radicals: potential effects for human health. *Mol.Nutr.Food Res.* 56: 205-216.

Bohm, V. (2012) Lycopene and heart health. *Mol.Nutr.Food Res.* 56: 296-303.

Bone, R. A., Gibert, J. C., & Mukherjee, A. (2012) Light distributions on the retina: relevance to macular pigment photoprotection. *Acta Biochim.Pol.* 59: 91-96.

Borel, P. (2012) Genetic variations involved in interindividual variability in carotenoid status. *Mol.Nutr.Food Res.* 56: 228-240.

Borneo, R. & Leon, A. E. (2012) Whole grain cereals: functional components and health benefits. *Food Funct.* 3: 110-119.

Bose, K. S., Vyas, P., & Singh, M. (2012) Plasma non-enzymatic antioxidants-vitamin C, E, beta-carotenes, reduced glutathione levels and total antioxidant activity in oral sub mucous fibrosis. *Eur.Rev.Med.Pharmacol Sci.* 16: 530-532.

Bountagkidou, O., van der Klift, E. J., Tsimidou, M. Z., Ordoudi, S. A., & van Beek, T. A. (2012) An on-line high performance liquid chromatography-crocin bleaching assay for detection of antioxidants. *J Chromatogr.A.* 1237: 80-85.

Brand, A., Borovsky, Y., Meir, S., Rogachev, I., Aharoni, A., & Paran, I. (2012) pc8.1, a major QTL for pigment content in pepper fruit, is associated with variation in plastid compartment size. *Planta.* 235: 579-588.

- Brantley, M. A., Jr., Osborn, M. P., Sanders, B. J., Rezaei, K. A., Lu, P., Li, C., Milne, G. L., Cai, J., & Sternberg, P., Jr. (2012) The short-term effects of antioxidant and zinc supplements on oxidative stress biomarker levels in plasma: a pilot investigation. *Am.J Ophthalmol.* 153: 1104-1109.
- Breitenbach, J., Fraser, P. D., & Sandmann, G. (2012) Carotenoid synthesis and phytoene synthase activity during mating of *Blakeslea trispora*. *Phytochemistry.* 76:40-5.
- Butalla, A. C., Crane, T. E., Patil, B., Wertheim, B. C., Thompson, P., & Thomson, C. A. (2012) Effects of a carrot juice intervention on plasma carotenoids, oxidative stress, and inflammation in overweight breast cancer survivors. *Nutr.Cancer.* 64: 331-341.
- Campoio, T. R., Oliveira, F. A., & Otton, R. (2011) Oxidative stress in human lymphocytes treated with fatty acid mixture: role of carotenoid astaxanthin. *Toxicol.In Vitro.* 25: 1448-1456.
- Celik, S. E., Ozyurek, M., Guclu, K., & Apak, R. (2012) Differences in responsivity of original cupric reducing antioxidant capacity and cupric-bathocuproine sulfonate assays to antioxidant compounds. *Anal.Biochem.* 423: 36-38.
- Chan, K. C., Pen, P. J., & Yin, M. C. (2012) Anticoagulatory and antiinflammatory effects of astaxanthin in diabetic rats. *J Food Sci.* 77: H76-H80.
- Chan, S. T., Chuang, C. H., Yeh, C. L., Liao, J. W., Liu, K. L., Tseng, M. J., & Yeh, S. L. (2012) Quercetin supplementation suppresses the secretion of pro-inflammatory cytokines in the lungs of Mongolian gerbils and in A549 cells exposed to benzo[a]pyrene alone or in combination with beta-carotene: in vivo and ex vivo studies. *J Nutr.Biochem.* 23: 179-185.
- Chatterjee, M., Roy, K., Janarthan, M., Das, S., & Chatterjee, M. (2012) Biological activity of carotenoids: its implications in cancer risk and prevention. *Curr.Pharm.Biotechnol.* 13: 180-190.
- Chen, H. Y., Huang, S. M., Yang, C. M., & Hu, M. L. (2012) Diverse effects of beta-carotene on secretion and expression of VEGF in human hepatocarcinoma and prostate tumor cells. *Molecules.* 17: 3981-3988.
- Chen, J. F., Fu, G. M., Wan, Y., Liu, C. M., Chai, J. X., Li, H. G., Wang, J. T., Ming, H., & Zhang, L. N. (2012) Enrichment and purification of gardenia yellow from *Gardenia jasminoides* var. *radicans* Makino by column chromatography technique. *J Chromatogr.B Analyt.Technol Biomed.Life Sci.* 893-894:43-8.
- Chew, P. Y., Riley, L., Graham, D. L., Rahman, K., & Lowe, G. M. (2012) Does lycopene offer human LDL any protection against myeloperoxidase activity? *Mol.Cell Biochem.* 361: 181-187.
- Chiou, T. H., Place, A. R., Caldwell, R. L., Marshall, N. J., & Cronin, T. W. (2012) A novel function for a carotenoid: astaxanthin used as a polarizer for visual signalling in a mantis shrimp. *J Exp.Biol.* 215: 584-589.
- Chiplonkar, S. A. & Kawade, R. (2012) Effect of zinc- and micronutrient-rich food supplements on zinc and vitamin A status of adolescent girls. *Nutrition.* 28: 551-558.
- Choi, W. J., Ford, E. S., Curhan, G., Rankin, J. I., & Choi, H. K. (2012) Independent association of serum retinol and beta-carotene levels with hyperuricemia: A national population study. *Arthritis Care Res.(Hoboken.).* 64: 389-396.
- Cornacchia, L. & Roos, Y. H. (2011) State of dispersed lipid carrier and interface composition as determinants of beta-carotene stability in oil-in-water emulsions. *J Food Sci.* 76: C1211-C1218.
- Costa, M. G., Moreira, C. D., Melton, J. R., Otoni, W. C., & Moore, G. A. (2012) Characterization and

developmental expression of genes encoding the early carotenoid biosynthetic enzymes in *Citrus paradisi* Macf. Mol.Biol.Rep. 39: 895-902.

Cristina, P. M., De Spirt, S., Stahl, W., & Pientka, L. (2012) Conflict of evidence: carotenoids and other micronutrients in the prevention and treatment of cognitive impairment. Biofactors. 38: 167-171.

Damaraju, S., Schlede, S., Eckhardt, U., Lokstein, H., & Grimm, B. (2011) Functions of the water soluble chlorophyll-binding protein in plants. J Plant Physiol. 168: 1444-1451.

Dani, C., Lori, I., Favelli, F., Frosini, S., Messner, H., Wanker, P., De Marini, S., Oretti, C., Boldrini, A., Massimiliano, C., Bragetti, P., & Germini, C. (2012) Lutein and zeaxanthin supplementation in preterm infants to prevent retinopathy of prematurity: a randomized controlled study. J Matern.Fetal Neonatal Med. 25: 523-527.

Dayan, S. H., Arkins, J. P., Sharma, V., Paterson, E., & Barnes, D. (2011) A phase 2, double-blind, randomized, placebo-controlled trial of a novel nutritional supplement product to promote healthy skin. J Drugs Dermatol. 10: 1106-1114.

Deere, K. A., Grether, G. F., Sun, A., & Sinsheimer, J. S. (2012) Female mate preference explains countergradient variation in the sexual coloration of guppies (*Poecilia reticulata*). Proc.Biol.Sci. 279: 1684-1690.

Deng, Y., Xu, Z., Liu, W., Yang, H., Xu, B., & Wei, Y. (2012) Effects of lycopene and proanthocyanidins on hepatotoxicity induced by mercuric chloride in rats. Biol.Trace Elem.Res. 146: 213-223.

Dhibi, M., Mechri, B., Brahmi, F., Skhiri, F., Alsaif, M. A., & Hammami, M. (2012) Fatty acid profiles, antioxidant compounds and antiradical properties of *Pinus halepensis* Mill. cones and seeds. J Sci.Food Agric. 92: 1702-1708.

Di Franco, R., Calvanese, M., Murino, P., Manzo, R., Guida, C., Di Gennaro, D., Anania, C., & Ravo, V. (2012) Skin toxicity from external beam radiation therapy in breast cancer patients: protective effects of Resveratrol, Lycopene, Vitamin C and anthocianin (Ixor(R)). Radiat.Oncol. 7:12.: 12.

Di Tomo, P., Canali, R., Ciavardelli, D., Di Silvestre, S., De Marco, A., Giardinelli, A., Pipino, C., Di Pietro, N., Virgili, F., & Pandolfi, A. (2012) beta-Carotene and lycopene affect endothelial response to TNF-alpha reducing nitro-oxidative stress and interaction with monocytes. Mol.Nutr.Food Res. 56: 217-227.

Dietzel, M., Zeimer, M., Heimes, B., Pauleikhoff, D., & Hense, H. W. (2011) The ringlike structure of macular pigment in age-related maculopathy: results from the Muenster Aging and Retina Study (MARS). Invest Ophthalmol.Vis.Sci. 52: 8016-8024.

Dos Santos, G. C., Mendonca, L. M., Antonucci, G. A., Dos Santos, A. C., Antunes, L. M., & Bianchi, M. L. (2012) Protective effect of bixin on cisplatin-induced genotoxicity in PC12 cells. Food Chem Toxicol. 50: 335-340.

Duffy, C. D. & Ruban, A. V. (2012) A theoretical investigation of xanthophyll-protein hydrogen bonding in the photosystem II antenna. J Phys.Chem B. 116: 4310-4318.

Dvorak, P., Suchy, P., Strakova, E., & Kopriva, V. (2012) Possibilities of enhancing the colour of egg yolk. J Sci.Food Agric. 92: 853-856.

Dymova, O. & Golovko, T. (2012) Seasonal changes of violaxanthin cycle pigment de-epoxidation in wintergreen and evergreen plants. Acta Biochim.Pol. 59: 143-144.

- Eller, A. W., Gorovoy, I. R., & Mayercik, V. A. (2012) Yellow corneal ring associated with vitamin supplementation for age-related macular degeneration. *Ophthalmology*. 119: 1011-1016.
- Eroglu, A., Hruszkewycz, D. P., dela, S. C., Narayanasamy, S., Riedl, K. M., Kopec, R. E., Schwartz, S. J., Curley, R. W., Jr., & Harrison, E. H. (2012) Naturally occurring eccentric cleavage products of provitamin A beta-carotene function as antagonists of retinoic acid receptors. *J Biol.Chem.* 287: 15886-15895.
- Evans, J. R. & Lawrenson, J. G. (2012) Antioxidant vitamin and mineral supplements for preventing age-related macular degeneration. *Cochrane.Database.Syst.Rev.* 6: CD000253.
- Failla, M. L., Chitchumroonchokchai, C., Siritunga, D., de Moura, F. F., Fregene, M., Manary, M. J., & Sayre, R. T. (2012) Retention during processing and bioaccessibility of beta-carotene in high beta-carotene transgenic cassava root. *J Agric.Food Chem.* 60: 3861-3866.
- Farre, G., Naqvi, S., Sanahuja, G., Bai, C., Zorrilla-Lopez, U., Rivera, S. M., Canela, R., Sandman, G., Twyman, R. M., Capell, T., Zhu, C., & Christou, P. (2012) Combinatorial genetic transformation of cereals and the creation of metabolic libraries for the carotenoid pathway. *Methods Mol.Biol.* 847: 419-435.
- Fernandez-Marin, B., Miguez, F., Becerril, J. M., & Garcia-Plazaola, J. I. (2011) Dehydration-mediated activation of the xanthophyll cycle in darkness: is it related to desiccation tolerance? *Planta*. 234: 579-588.
- Fernandez-Marin, B., Miguez, F., Becerril, J. M., & Garcia-Plazaola, J. I. (2011) Activation of violaxanthin cycle in darkness is a common response to different abiotic stresses: a case study in *Pelvetia canaliculata*. *BMC.Plant Biol.* 11:181.: 181.
- Fiedor, J., Sulikowska, A., Orzechowska, A., Fiedor, L., & Burda, K. (2012) Antioxidant effects of carotenoids in a model pigment-protein complex. *Acta Biochim.Pol.* 59: 61-64.
- Fiore, A., Dall'Osto, L., Cazzaniga, S., Diretto, G., Giuliano, G., & Bassi, R. (2012) A quadruple mutant of *Arabidopsis* reveals a beta-carotene hydroxylation activity for LUT1/CYP97C1 and a regulatory role of xanthophylls on determination of the PSI/PSII ratio. *BMC.Plant Biol.* 12: 50.
- Fleshman, M. K., Riedl, K. M., Novotny, J. A., Schwartz, S. J., & Harrison, E. H. (2012) An LC/MS method for d8-beta-carotene and d4-retinyl esters: beta-carotene absorption and its conversion to vitamin A in humans. *J Lipid Res.* 53: 820-827.
- Fluhr, J. W., Sassning, S., Lademann, O., Darvin, M. E., Schanzer, S., Kramer, A., Richter, H., Sterry, W., & Lademann, J. (2012) In vivo skin treatment with tissue-tolerable plasma influences skin physiology and antioxidant profile in human stratum corneum. *Exp.Dermatol.* 21: 130-134.
- Fontan, N., Alvarez, R., & de Lera, A. R. (2012) Stereoselective synthesis by olefin metathesis and characterization of eta-carotene (7,8,7',8'-tetrahydro-beta,beta-carotene). *J Nat.Prod.* 75: 975-979.
- Ford, N. A. & Erdman, J. W., Jr. (2012) Are lycopene metabolites metabolically active? *Acta Biochim.Pol.* 59: 1-4.
- Ford, N. A., Moran, N. E., Smith, J. W., Clinton, S. K., & Erdman, J. W., Jr. (2012) An interaction between carotene-15,15'-monooxygenase expression and consumption of a tomato or lycopene-containing diet impacts serum and testicular testosterone. *Int J Cancer*. 131: E143-E148.
- Fuciman, M., Enriquez, M. M., Polivka, T., Dall'Osto, L., Bassi, R., & Frank, H. A. (2012) Role of xanthophylls in light harvesting in green plants: a spectroscopic investigation of mutant LHCII and LhcB

pigment-protein complexes. *J Phys.Chem B.* 116: 3834-3849.

Fuentes, P., Pizarro, L., Moreno, J. C., Handford, M., Rodriguez-Concepcion, M., & Stange, C. (2012) Light-dependent changes in plastid differentiation influence carotenoid gene expression and accumulation in carrot roots. *Plant Mol.Biol.* 79: 47-59.

Galbis-Martinez, M., Padmanabhan, S., Murillo, F. J., & Elias-Arnanz, M. (2012) CarF mediates signaling by singlet oxygen, generated via photoexcited protoporphyrin IX, in *Myxococcus xanthus* light-induced carotenogenesis. *J Bacteriol.* 194: 1427-1436.

Gao, J. X., Li, Y., Zhang, H. Y., He, X. L., & Bai, A. S. (2012) Lycopene ameliorates erectile dysfunction in streptozotocin-induced diabetic rats. *Pharmazie.* 67: 256-259.

Gao, S., Qin, T., Liu, Z., Caceres, M. A., Ronchi, C. F., Chen, C. Y., Yeum, K. J., Taylor, A., Blumberg, J. B., Liu, Y., & Shang, F. (2011) Lutein and zeaxanthin supplementation reduces H<sub>2</sub>O<sub>2</sub>-induced oxidative damage in human lens epithelial cells. *Mol.Vis.* 17:3180-90.

Garama, D., Bremer, P., & Carne, A. (2012) Extraction and analysis of carotenoids from the New Zealand sea urchin *Evechinus chloroticus* gonads. *Acta Biochim.Pol.* 59: 83-85.

Garcia-Rodriguez, C. E., Mesa, M. D., Olza, J., Vlachava, M., Kremmyda, L. S., Diaper, N. D., Noakes, P. S., Miles, E. A., Ramirez-Tortosa, M. C., Liaset, B., Froyland, L., Rossary, A., Farges, M. C., Vasson, M. P., Aguilera, C. M., Helmersson-Karlqvist, J., Godfrey, K. M., Calder, P. C., Basu, S., & Gil, A. (2012) Does consumption of two portions of salmon per week enhance the antioxidant defense system in pregnant women? *Antioxid.Redox.Signal.* 16: 1401-1406.

Gellenbeck, K., Salter-Venzon, D., Lala, R., & Chavan, J. (2012) A multicarotenoid beadlet for human nutrition - proof of concept of *in vitro* timed release. *Acta Biochim.Pol.* 59: 35-38.

Giuffrida, D., Dugo, P., Dugo, G., Torre, G., & Mondello, L. (2011) Analysis of native carotenoid composition of sweet bell peppers by serially coupled C30 columns. *Nat.Prod.Commun.* 6: 1817-1820.

Giuffrida, D., Pintea, A., Dugo, P., Torre, G., Pop, R. M., & Mondello, L. (2012) Determination of carotenoids and their esters in fruits of sea buckthorn (*Hippophae rhamnoides* L.) by HPLC-DAD-APCI-MS. *Phytochem.Anal.* 23: 267-273.

Golovko, T., Dymova, O., Zakhozhii, I., Dalke, I., & Tabalenkova, G. (2012) Photoprotection by carotenoids of *Plantago media* photosynthetic apparatus in natural conditions. *Acta Biochim.Pol.* 59: 145-147.

Gopinath, B., Flood, V. M., McMahon, C. M., Burlutsky, G., Spankovich, C., Hood, L. J., & Mitchell, P. (2011) Dietary antioxidant intake is associated with the prevalence but not incidence of age-related hearing loss. *J Nutr.Health Aging.* 15: 896-900.

Greenstein, R. J., Su, L., & Brown, S. T. (2012) Vitamins A & D inhibit the growth of mycobacteria in radiometric culture. *PLoS.ONE.* 7: e29631.

Gruber, C., Taner, C., Mihaly, J., Matricardi, P. M., Wahn, U., & Ruhl, R. (2012) Serum retinoic acid and atopy among children of different ethnic origin living in Germany. *J Pediatr.Gastroenterol.Nutr.* 54: 558-560.

Guo, C. H., Liu, P. J., Lin, K. P., & Chen, P. C. (2012) Nutritional supplement therapy improves oxidative stress, immune response, pulmonary function, and quality of life in allergic asthma patients: an open-label pilot study. *Altern.Med.Rev.* 17: 42-56.

- Gupta, A., Raman, R., & Biswas, S. (2012) Re: Assessment of macular pigment optical density (MPOD) in patients with unilateral wet age-related macular degeneration (AMD). *Acta Ophthalmol.* 90: e235-3768.
- Gutheil, W. G., Reed, G., Ray, A., Anant, S., & Dhar, A. (2012) Crocetin: an agent derived from saffron for prevention and therapy for cancer. *Curr.Pharm.Biotechnol.* 13: 173-179.
- Hada, M., Nagy, V., Deli, J., & Agocs, A. (2012) Hydrophilic carotenoids: recent progress. *Molecules.* 17: 5003-5012.
- Hashimoto, T., Ozaki, Y., Mizuno, M., Yoshida, M., Nishitani, Y., Azuma, T., Komoto, A., Maoka, T., Tanino, Y., & Kanazawa, K. (2012) Pharmacokinetics of fucoxanthinol in human plasma after the oral administration of kombu extract. *Br.J Nutr.* 107: 1566-1569.
- He, K. H., Zou, X. L., Liu, X., & Zeng, H. Y. (2012) [Determination of canthaxanthin and astaxanthin in egg yolks by reversed phase high performance liquid chromatography with diode array detection]. *Sichuan.Da.Xue.Xue.Bao.Yi.Xue.Ban.* 43: 113-117.
- Hernandez-Espinoza, A. B., Pinon-Muniz, M. I., Rascon-Chu, A., Santana-Rodriguez, V. M., & Carvajal-Millan, E. (2012) Lycopene/arabinoxylan gels: rheological and controlled release characteristics. *Molecules.* 17: 2428-2436.
- Hernandez-Marin, E., Barbosa, A., & Martinez, A. (2012) The metal cation chelating capacity of astaxanthin. Does this have any influence on antiradical activity? *Molecules.* 17: 1039-1054.
- Horibe, T., Nakagawa, K., Kusumoto, T., Fujii, R., Cogdell, R. J., Nango, M., & Hashimoto, H. (2012) Polarization angle dependence of stark absorption spectra of spirilloxanthin bound to the reconstituted LH1 complexes using LH1-subunits isolated from the purple photosynthetic bacterium *Rhodospirillum rubrum*. *Acta Biochim.Pol.* 59: 97-100.
- Horvath, G., Molnar, P., Rado-Turcsi, E., Deli, J., Kawase, M., Satoh, K., Tanaka, T., Tani, S., Sakagami, H., Gyemant, N., & Molnar, J. (2012) Carotenoid composition and *in vitro* pharmacological activity of rose hips. *Acta Biochim.Pol.* 59: 129-132.
- Hosseinzadeh, H., Sadeghnia, H. R., Ghaeni, F. A., Motamedshariaty, V. S., & Mohajeri, S. A. (2012) Effects of saffron (*Crocus sativus* L.) and its active constituent, crocin, on recognition and spatial memory after chronic cerebral hypoperfusion in rats. *Phytother.Res.* 26: 381-386.
- Hsu, Y. T. & Lee, T. M. (2012) Modulation of gene expression of carotene biosynthesis-related protein by photosynthetic electron transport for the acclimation of intertidal macroalga *Ulva fasciata* to hypersalinity and excess light. *Physiol Plant.* 144: 225-237.
- Hu, F., Wang, Y. B., Zhang, W., Liang, J., Lin, C., Li, D., Wang, F., Pang, D., & Zhao, Y. (2012) Carotenoids and breast cancer risk: a meta-analysis and meta-regression. *Breast Cancer Res.Treat.* 131: 239-253.
- Hyun, T. K., Rim, Y., Jang, H. J., Kim, C. H., Park, J., Kumar, R., Lee, S., Kim, B. C., Bhak, J., Nguyen-Quoc, B., Kim, S. W., Lee, S. Y., & Kim, J. Y. (2012) *De novo* transcriptome sequencing of *Momordica cochinchinensis* to identify genes involved in the carotenoid biosynthesis. *Plant Mol.Biol.* 79: 413-427.
- Ilic, D., Forbes, K. M., & Hassed, C. (2011) Lycopene for the prevention of prostate cancer. *Cochrane.Database.Syst.Rev.* CD008007.
- Imagama, S., Hasegawa, Y., Seki, T., Matsuyama, Y., Sakai, Y., Ito, Z., Ishiguro, N., Ito, Y., Hamajima, N., & Suzuki, K. (1976) The effect of beta-carotene on lumbar osteophyte formation. *Spine (Phila Pa 1983)* 36:

2293-2298.

Jaakkola, M., Korpelainen, V., Hoppula, K., & Virtanen, V. (2012) Chemical composition of ripe fruits of *Rubus chamaemorus* L. grown in different habitats. *J Sci.Food Agric.* 92: 1324-1330.

Jang, S. H., Lim, J. W., Morio, T., & Kim, H. (2012) Lycopene inhibits *Helicobacter pylori*-induced ATM/ATR-dependent DNA damage response in gastric epithelial AGS cells. *Free Radic.Biol.Med.* 52: 607-615.

Jintasataporn, O. & Yuangsoi, B. (2012) Stability of carotenoid diets during feed processing and under different storage conditions. *Molecules.* 17: 5651-5660.

Joas, J., Vulcain, E., Desvignes, C., Morales, E., & Lechaudel, M. (2012) Physiological age at harvest regulates the variability in postharvest ripening, sensory and nutritional characteristics of mango (*Mangifera indica* L.) cv. Coghshall due to growing conditions. *J Sci.Food Agric.* 92: 1282-1290.

Jorge-Villar, S. E., Edwards, H. G., & Benning, L. G. (2011) Raman spectroscopic analysis of arctic nodules: relevance to the astrobiological exploration of Mars. *Anal.Bioanal.Chem.* 401: 2927-2933.

Kabat, G. C., Kim, M. Y., Sarto, G. E., Shikany, J. M., & Rohan, T. E. (2012) Repeated measurements of serum carotenoid, retinol and tocopherol levels in relation to colorectal cancer risk in the Women's Health Initiative. *Eur.J Clin Nutr.* 66: 549-554.

Kaestel, P., Martinussen, T., Aaby, P., Michaelsen, K. F., & Friis, H. (2012) Serum retinol is associated with stage of pregnancy and the acute phase response in pregnant women in Guinea-Bissau. *J Nutr.* 142: 942-947.

Kajikawa, T., Okumura, S., Iwashita, T., Kosumi, D., Hashimoto, H., & Katsumura, S. (2012) Stereocontrolled total synthesis of fucoxanthin and its polyene chain-modified derivative. *Org.Lett.* 14: 808-811.

Kang, S. I., Shin, H. S., Kim, H. M., Yoon, S. A., Kang, S. W., Kim, J. H., Ko, H. C., & Kim, S. J. (2012) *Petalonia binghamiae* extract and its constituent fucoxanthin ameliorate high-fat diet-induced obesity by activating AMP-activated protein kinase. *J Agric.Food Chem.* 60: 3389-3395.

Kawashima, C., Matsui, M., Shimizu, T., Kida, K., & Miyamoto, A. (2012) Nutritional factors that regulate ovulation of the dominant follicle during the first follicular wave postpartum in high-producing dairy cows. *J Reprod.Dev.* 58: 10-16.

Kelkel, M., Schumacher, M., Dicato, M., & Diederich, M. (2011) Antioxidant and anti-proliferative properties of lycopene. *Free Radic.Res.* 45: 925-940.

Kelman, D., Posner, E. K., McDermid, K. J., Tabandera, N. K., Wright, P. R., & Wright, A. D. (2012) Antioxidant activity of Hawaiian marine algae. *Mar.Drugs.* 10: 403-416.

Khachik, F. (2012) Partial synthesis of serum carotenoids and their metabolites. *Acta Biochim.Pol.* 59: 75-78.

Khandaker, M. M., Boyce, A. N., & Osman, N. (2012) The influence of hydrogen peroxide on the growth, development and quality of wax apple (*Syzygium samarangense*, [Blume] Merrill & L.M. Perry var. jambu madu) fruits. *Plant Physiol Biochem.* 53: 101-110.

Kiko, T., Nakagawa, K., Tsuduki, T., Suzuki, T., Arai, H., & Miyazawa, T. (2012) Significance of lutein in red blood cells of Alzheimer's disease patients. *J Alzheimers.Dis.* 28: 593-600.

- Kim, D. M., Hyun, S. S., Yun, P., Lee, C. H., & Byun, S. Y. (2012) Identification of an emulsifier and conditions for preparing stable nanoemulsions containing the antioxidant astaxanthin. *Int J Cosmet.Sci.* 34: 64-73.
- Kim, S. H., Ahn, Y. O., Ahn, M. J., Lee, H. S., & Kwak, S. S. (2012) Down-regulation of beta-carotene hydroxylase increases beta-carotene and total carotenoids enhancing salt stress tolerance in transgenic cultured cells of sweetpotato. *Phytochemistry.* 74:69-78.
- Kim, S. M., Jung, Y. J., Kwon, O. N., Cha, K. H., Um, B. H., Chung, D., & Pan, C. H. (2012) A potential commercial source of fucoxanthin extracted from the microalga *Phaeodactylum tricornutum*. *Appl.Biochem.Biotechnol.* 166: 1843-1855.
- Kishimoto, S. & Ohmiya, A. (2012) Carotenoid isomerase is key determinant of petal color of *Calendula officinalis*. *J Biol.Chem.* 287: 276-285.
- Kłodawska, K., Malec, P., Kis, M., Gombos, Z., & Strzalka, K. (2012) EPR study of thylakoid membrane dynamics in mutants of the carotenoid biosynthesis pathway of *Synechocystis* sp. PCC6803. *Acta Biochim.Pol.* 59: 87-90.
- Koh, E., Charoenprasert, S., & Mitchell, A. E. (2012) Effects of industrial tomato paste processing on ascorbic acid, flavonoids and carotenoids and their stability over one-year storage. *J Sci.Food Agric.* 92: 23-28.
- Koulakioti, N. S., Pittenauer, E., Halabalaki, M., Tsarbopoulos, A., & Allmaier, G. (2012) Comparison of different tandem mass spectrometric techniques (ESI-IT, ESI- and IP-MALDI-QRTOF and vMALDI-TOF/RTOF) for the analysis of crocins and picrocrocin from the stigmas of *Crocus sativus* L. *Rapid Commun.Mass Spectrom.* 26: 670-678.
- Koyama, Y., Kakitani, Y., & Nagae, H. (2012) Excited-state dynamics of overlapped optically-allowed 1B(u)+ and optically-forbidden 1B(u)- or 3A(g)- vibronic levels of carotenoids: possible roles in the light-harvesting function. *Acta Biochim.Pol.* 59: 5-9.
- Kruczek, M., Swiderski, A., Mech-Nowak, A., & Krol, K. (2012) Antioxidant capacity of crude extracts containing carotenoids from the berries of various cultivars of Sea buckthorn (*Hippophae rhamnoides* L.). *Acta Biochim.Pol.* 59: 135-137.
- Kuczynska, P., Latowski, D., Niczyporuk, S., Olchawa-Pajor, M., Jahns, P., Gruszecki, W. I., & Strzalka, K. (2012) Zeaxanthin epoxidation - an *in vitro* approach. *Acta Biochim.Pol.* 59: 105-107.
- Kumar, A., Srikanta, A. H., Peddha, M. S., Sukumaran, U. K., & Govindaswamy, V. (2012) A short-term toxicity study of *Aspergillus carbonarius* carotenoid. *Int J Toxicol.* 31: 158-165.
- Kuo, F. S., Chien, Y. H., & Chen, C. J. (2012) Effects of light sources on growth and carotenoid content of photosynthetic bacteria *Rhodopseudomonas palustris*. *Bioresour.Technol.* 113: 315-318.
- Lashmanova, K. A., Kuzivanova, O. A., & Dymova, O. V. (2012) Northern berries as a source of carotenoids. *Acta Biochim.Pol.* 59: 133-134.
- Latowski, D., Goss, R., Bojko, M., & Strzalka, K. (2012) Violaxanthin and diadinoxanthin de-epoxidation in various model lipid systems. *Acta Biochim.Pol.* 59: 101-103.
- Le Prell, C. G., Johnson, A. C., Lindblad, A. C., Skjonsberg, A., Ulfendahl, M., Guire, K., Green, G. E., Campbell, K. C., & Miller, J. M. (2011) Increased vitamin plasma levels in Swedish military personnel treated with nutrients prior to automatic weapon training. *Noise.Health.* 13: 432-443.

- Lebda, M. A., El Neweshy, M. S., & El Sayed, Y. S. (2012) Neurohepatic toxicity of subacute manganese chloride exposure and potential chemoprotective effects of lycopene. *Neurotoxicology*. 33: 98-104.
- Lee, J. M., Joung, J. G., McQuinn, R., Chung, M. Y., Fei, Z., Tieman, D., Klee, H., & Giovannoni, J. (2012) Combined transcriptome, genetic diversity and metabolite profiling in tomato fruit reveals that the ethylene response factor SIERF6 plays an important role in ripening and carotenoid accumulation. *Plant J.* 70: 191-204.
- Lee, S. A., Lee, K. M., Yoo, K. Y., Noh, D. Y., Ahn, S. H., & Kang, D. (2012) Combined effects of antioxidant vitamin and NOS3 genetic polymorphisms on breast cancer risk in women. *Clin Nutr.* 31: 93-98.
- Lennikov, A., Kitaichi, N., Fukase, R., Murata, M., Noda, K., Ando, R., Ohguchi, T., Kawakita, T., Ohno, S., & Ishida, S. (2012) Amelioration of ultraviolet-induced photokeratitis in mice treated with astaxanthin eye drops. *Mol.Vis.* 18: 455-464.
- Lenucci, M. S., Serrone, L., De Caroli, M., Fraser, P. D., Bramley, P. M., Piro, G., & Dalessandro, G. (2012) Isoprenoid, lipid, and protein contents in intact plastids isolated from mesocarp cells of traditional and high-pigment tomato cultivars at different ripening stages. *J Agric.Food Chem.* 60: 1764-1775.
- Levi, L., Ziv, T., Admon, A., Levavi-Sivan, B., & Lubzens, E. (2012) Insight into molecular pathways of retinal metabolism, associated with vitellogenesis in zebrafish. *Am.J Physiol Endocrinol.Metab.* 302: E626-E644.
- Li, L., Yang, Y., Xu, Q., Owsiany, K., Welsch, R., Chitchumroonchokchai, C., Lu, S., Van Eck, J., Deng, X. X., Failla, M., & Thannhauser, T. W. (2012) The Or gene enhances carotenoid accumulation and stability during post-harvest storage of potato tubers. *Mol.Plant.* 5: 339-352.
- Li, Z., Keasling, J. D., & Niyogi, K. K. (2012) Overlapping photoprotective function of vitamin E and carotenoids in *Chlamydomonas*. *Plant Physiol.* 158: 313-323.
- Lietz, G., Oxley, A., Boesch-Saadatmandi, C., & Kobayashi, D. (2012) Importance of beta,beta-carotene 15,15'-monoxygenase 1 (BCMO1) and beta,beta-carotene 9',10'-dioxygenase 2 (BCDO2) in nutrition and health. *Mol.Nutr.Food Res.* 56: 241-250.
- Lindshield, B. L. (2012) Carotenoids. In: *Present Knowledge in Nutrition* (Erdman, J. W., Macdonald, I. A., & Zeisel, S. H., eds.), pp. 185-198. Wiley-Blackwell, Ames, Iowa.
- Litonjua, A. A. (2012) Fat-soluble vitamins and atopic disease: what is the evidence? *Proc.Nutr.Soc.* 71: 67-74.
- Liu, C. L., Liang, A. L., & Hu, M. L. (2011) Protective effects of fucoxanthin against ferric nitrilotriacetate-induced oxidative stress in murine hepatic BNL CL.2 cells. *Toxicol.In Vitro.* 25: 1314-1319.
- Liu, C. L., Lim, Y. P., & Hu, M. L. (2012) Fucoxanthin attenuates rifampin-induced cytochrome P450 3A4 (CYP3A4) and multiple drug resistance 1 (MDR1) gene expression through pregnane X receptor (PXR)-mediated pathways in human hepatoma HepG2 and colon adenocarcinoma LS174T cells. *Mar.Drugs.* 10: 242-257.
- Liu, H., Zhang, Y., Zheng, B., Li, Q., & Zou, Y. (2011) Microwave-assisted hydrolysis of lutein and zeaxanthin esters in marigold (*Tagetes erecta* L.). *Int J Food Sci.Nutr.* 62: 851-856.
- Liu, J., Huang, J., Jiang, Y., & Chen, F. (2012) Molasses-based growth and production of oil and astaxanthin by *Chlorella zofingiensis*. *Bioresour.Technol.* 107:393-8.

- Liu, L. & Zhan, W. (2012) Molecular photovoltaic system based on fullerenes and carotenoids co-assembled in lipid/alkanethiol hybrid bilayers. *Langmuir*. 28: 4877-4882.
- Liu, X. J., Wu, Y. H., Zhao, L. C., Xiao, S. Y., Zhou, A. M., & Liu, X. (2011) Determination of astaxanthin in *Haematococcus pluvialis* by first-order derivative spectrophotometry. *J AOAC Int.* 94: 1752-1757.
- Lo, H. M., Tsai, Y. J., Du, W. Y., Tsou, C. J., & Wu, W. B. (2012) A naturally occurring carotenoid, lutein, reduces PDGF and H(2)O(2) signaling and compromised migration in cultured vascular smooth muscle cells. *J Biomed.Sci.* 19: 18.
- Lorenz, M., Fechner, M., Kalkowski, J., Frohlich, K., Trautmann, A., Bohm, V., Liebisch, G., Lehneis, S., Schmitz, G., Ludwig, A., Baumann, G., Stangl, K., & Stangl, V. (2012) Effects of lycopene on the initial state of atherosclerosis in New Zealand White (NZW) rabbits. *PLoS.ONE*. 7: e30808.
- Lucini, L., Pellizzoni, M., Baffi, C., & Molinari, G. P. (2012) Rapid determination of lycopene and beta-carotene in tomato by liquid chromatography/electrospray tandem mass spectrometry. *J Sci.Food Agric.* 92: 1297-1303.
- Lugtenburg, J. & Dawadi, P. B. (2012) Synthesis of highly 13C enriched carotenoids: access to carotenoids enriched with 13C at any position and combination of positions. *Acta Biochim.Pol.* 59: 11-16.
- Luque, E. M., Gutierrez, G., Navarro-Sampedro, L., Olmedo, M., Rodriguez-Romero, J., Ruger-Herreros, C., Tagua, V. G., & Corrochano, L. M. (2012) A relationship between carotenoid accumulation and the distribution of species of the fungus *Neurospora* in Spain. *PLoS.ONE*. 7: e33658.
- Ma, A. G., Ge, S., Zhang, M., Shi, X. X., Schouten, E. G., Kok, F. J., Sun, Y. Y., & Han, X. X. (2011) Antioxidant micronutrients improve intrinsic and UV-induced apoptosis of human lymphocytes particularly in elderly people. *J Nutr.Health Aging*. 15: 912-917.
- Ma, G., Zhang, L., Kato, M., Yamawaki, K., Kiriwa, Y., Yahata, M., Ikoma, Y., & Matsumoto, H. (2012) Effect of blue and red LED light irradiation on beta-cryptoxanthin accumulation in the flavedo of citrus fruits. *J Agric.Food Chem.* 60: 197-201.
- Maeda, K., Wedge, C. J., Storey, J. G., Henbest, K. B., Liddell, P. A., Kodis, G., Gust, D., Hore, P. J., & Timmel, C. R. (2011) Spin-selective recombination kinetics of a model chemical magnetoreceptor. *Chem Commun.(Camb.)*. 47: 6563-6565.
- Maguregui, M., Knuutinen, U., Trebolazabala, J., Morillas, H., Castro, K., Martinez-Arkarazo, I., & Madariaga, J. M. (2012) Use of *in situ* and confocal Raman spectroscopy to study the nature and distribution of carotenoids in brown patinas from a deteriorated wall painting in Marcus Lucretius House (Pompeii). *Anal.Bioanal.Chem.* 402: 1529-1539.
- Maiuri, M., Polli, D., Brida, D., Luer, L., LaFountain, A. M., Fuciman, M., Cogdell, R. J., Frank, H. A., & Cerullo, G. (2012) Solvent-dependent activation of intermediate excited states in the energy relaxation pathways of spheroidene. *Phys.Chem Chem Phys.* 14: 6312-6319.
- Mallik, A. K., Qiu, H., Sawada, T., Takafuji, M., & Ihara, H. (2012) Molecular-shape selective high-performance liquid chromatography: stabilization effect of polymer main chain by alternating copolymerization. *J Chromatogr.A*. 1232:183-9.
- Marcon, F., Siniscalchi, E., Crebelli, R., Saieva, C., Sera, F., Fortini, P., Simonelli, V., & Palli, D. (2012) Diet-related telomere shortening and chromosome stability. *Mutagenesis*. 27: 49-57.
- Margalit, D. N., Kasperzyk, J. L., Martin, N. E., Sesso, H. D., Gaziano, J. M., Ma, J., Stampfer, M. J., & Mucci, L. A. (2012) Beta-carotene antioxidant use during radiation therapy and prostate cancer outcome

in the Physicians' Health Study. *Int J Radiat.Oncol.Biol.Phys.* 83: 28-32.

Marova, I., Carnecka, M., Halienova, A., Certik, M., Dvorakova, T., & Haronikova, A. (2012) Use of several waste substrates for carotenoid-rich yeast biomass production. *J Environ.Manage.* 95 Suppl:S338-42.

Martinez-Tomas, R., Larque, E., Gonzalez-Silvera, D., Sanchez-Campillo, M., Burgos, M. I., Wellner, A., Parra, S., Bialek, L., Alminger, M., & Perez-Llamas, F. (2012) Effect of the consumption of a fruit and vegetable soup with high *in vitro* carotenoid bioaccessibility on serum carotenoid concentrations and markers of oxidative stress in young men. *Eur.J Nutr.* 51: 231-239.

Masaki, M., Aritake, K., Tanaka, H., Shoyama, Y., Huang, Z. L., & Urade, Y. (2012) Crocin promotes non-rapid eye movement sleep in mice. *Mol.Nutr.Food Res.* 56: 304-308.

Mathew, M. C., Ervin, A. M., Tao, J., & Davis, R. M. (2012) Antioxidant vitamin supplementation for preventing and slowing the progression of age-related cataract. *Cochrane.Database.Syst.Rev.* 6: CD004567.

Mattei, R., Polotow, T. G., Vardaris, C. V., Guerra, B. A., Leite, J. R., Otton, R., & Barros, M. P. (2011) Astaxanthin limits fish oil-related oxidative insult in the anterior forebrain of Wistar rats: putative anxiolytic effects? *Pharmacol Biochem.Behav.* 99: 349-355.

McLernon, P. C., Wood, L. G., Murphy, V. E., Hodyl, N. A., & Clifton, V. L. (2012) Circulating antioxidant profile of pregnant women with asthma. *Clin Nutr.* 31: 99-107.

Mduma, I., Msuya, J., Mwanri, A. W., & Yang, R. Y. (2012) Carotenoids retention and *in vitro* iron bioavailability of traditional cowpea leaf dishes of rural Tanzania. *Int J Food Sci.Nutr.* 63: 267-272.

Mech-Nowak, A., Swiderski, A., Kruczak, M., Luczak, I., & Kostecka-Gugala, A. (2012) Content of carotenoids in roots of seventeen cultivars of *Daucus carota* L. *Acta Biochim.Pol.* 59: 139-141.

Mishra, Y., Jankapaa, H. J., Kiss, A. Z., Funk, C., Schroder, W. P., & Jansson, S. (2012) Arabidopsis plants grown in the field and climate chambers significantly differ in leaf morphology and photosystem components. *BMC.Plant Biol.* 12:6.: 6.

Mitrowska, K., Vincent, U., & von Holst, C. (2012) Separation and quantification of 15 carotenoids by reversed phase high performance liquid chromatography coupled to diode array detection with isosbestic wavelength approach. *J Chromatogr.A.* 1233: 44-53.

Mohammed, A. E., Smit, I., Pawelzik, E., Keutgen, A. J., & Horneburg, B. (2012) Organically grown tomato (*Lycopersicon esculentum* Mill.): bioactive compounds in the fruit and infection with *Phytophthora infestans*. *J Sci.Food Agric.* 92: 1424-1431.

Montalvo-Hernandez, B., Rito-Palomares, M., & Benavides, J. (2012) Recovery of crocins from saffron stigmas (*Crocus sativus*) in aqueous two-phase systems. *J Chromatogr.A.* 1236: 7-15.

Moskalenko, A. A. & Makhneva, Z. K. (2012) Light-harvesting complexes from purple sulfur bacteria *Allochromatium minutissimum* assembled without carotenoids. *J Photochem.Photobiol.B.* 108:1-7.

Muller, W. E., Wang, X., Binder, M., Von Lintig, J., Wiens, M., & Schroder, H. C. (2012) Differential expression of the demosponge (*Suberites domuncula*) carotenoid oxygenases in response to light: protection mechanism against the self-produced toxic protein (Suberitine). *Mar.Drugs.* 10: 177-199.

Murata, H., Yamaguchi, D., Nagai, A., & Shimada, N. (2011) Reduction of deoxynivalenol contaminating corn silage by short-term ultraviolet irradiation: a pilot study. *J Vet.Med.Sci.* 73: 1059-1060.

- Murphy, M. M., Barraj, L. M., Herman, D., Bi, X., Cheatham, R., & Randolph, R. K. (2012) Phytonutrient intake by adults in the United States in relation to fruit and vegetable consumption. *J Acad.Nutr.Diet.* 112: 222-229.
- Mustafa, A., Trevino, L. M., & Turner, C. (2012) Pressurized hot ethanol extraction of carotenoids from carrot by-products. *Molecules.* 17: 1809-1818.
- Mysiwa-Kurdziel, B., Jemiola-Rzeminska, M., Turek, E., Strzalka, K., & Malec, P. (2012) Variations in xanthophyll composition in etiolated seedlings of *Arabidopsis thaliana* correlate with protochlorophyllide accumulation. *Acta Biochim.Pol.* 59: 57-60.
- Nagatoshi, M., Terasaka, K., Owaki, M., Sota, M., Inukai, T., Nagatsu, A., & Mizukami, H. (2012) UGT75L6 and UGT94E5 mediate sequential glucosylation of crocetin to crocin in *Gardenia jasminoides*. *FEBS Lett.* 586: 1055-1061.
- Nicklett, E. J., Semba, R. D., Xue, Q. L., Tian, J., Sun, K., Cappola, A. R., Simonsick, E. M., Ferrucci, L., & Fried, L. P. (2012) Fruit and vegetable intake, physical activity, and mortality in older community-dwelling women. *J Am.Geriatr.Soc.* 60: 862-868.
- Niclis, C., Diaz, M. P., Eynard, A. R., Roman, M. D., & La Vecchia, C. (2012) Dietary habits and prostate cancer prevention: a review of observational studies by focusing on South America. *Nutr.Cancer.* 64: 23-33.
- Nik, A. M., Langmaid, S., & Wright, A. J. (2012) Nonionic surfactant and interfacial structure impact crystallinity and stability of beta-carotene loaded lipid nanodispersions. *J Agric.Food Chem.* 60: 4126-4135.
- Nik, A. M., Langmaid, S., & Wright, A. J. (2012) Digestibility and beta-carotene release from lipid nanodispersions depend on dispersed phase crystallinity and interfacial properties. *Food Funct.* 3: 234-245.
- Novakova, E. & Moran, N. A. (2012) Diversification of genes for carotenoid biosynthesis in aphids following an ancient transfer from a fungus. *Mol.Biol.Evol.* 29: 313-323.
- Nuss, E. T., Arscott, S. A., Bresnahan, K., Pixley, K. V., Rocheford, T., Hotz, C., Siamusantu, W., Chileshe, J., & Tanumihardjo, S. A. (2012) Comparative intake of white- versus orange-colored maize by Zambian children in the context of promotion of biofortified maize. *Food Nutr.Bull.* 33: 63-71.
- Nyuar, K. B., Ghebremeskel, K., & Crawford, M. A. (2012) Sudanese women's and neonates' vitamin A status. *Nutr.Health.* 21: 45-55.
- Olea, J. L., Aragon, J. A., Zapata, M. E., & Tur, J. A. (2012) [Characteristics of patients with wet age-related macular degeneration and low intake of lutein and zeaxanthin]. *Arch.Soc.Esp.Oftalmol.* 87: 112-118.
- Ono, K. & Yamada, M. (2012) Vitamin A and Alzheimer's disease. *Geriatr.Gerontol.Int.* 12: 180-188.
- Oude Griep, L. M., Verschuren, W. M., Kromhout, D., Ocke, M. C., & Geleijnse, J. M. (2011) Colors of fruit and vegetables and 10-year incidence of stroke. *Stroke.* 42: 3190-3195.
- Ozawa, Y., Sasaki, M., Takahashi, N., Kamoshita, M., Miyake, S., & Tsubota, K. (2012) Neuroprotective effects of lutein in the retina. *Curr.Pharm.Des.* 18: 51-56.
- Ozrenk, K., Javidipour, I., Yarilgac, T., Balta, F., & Gundogdu, M. (2012) Fatty acids, tocopherols, selenium and total carotene of pistachios (*P. vera* L.) from Diyarbakir (Southeastern Turkey) and walnuts

- (*J. regia* L.) from Erzincan (Eastern Turkey). *Food Sci.Technol Int.* 18: 55-62.
- Pabalan, N., Jarjanazi, H., Sung, L., Li, H., & Ozcelik, H. (2012) Menopausal status modifies breast cancer risk associated with the myeloperoxidase (MPO) G463A polymorphism in Caucasian women: a meta-analysis. *PLoS.ONE.* 7: e32389.
- Palozza, P., Simone, R., Catalano, A., Parrone, N., Monego, G., & Ranelletti, F. O. (2011) Lycopene regulation of cholesterol synthesis and efflux in human macrophages. *J Nutr.Biochem.* 22: 971-978.
- Palozza, P., Catalano, A., Simone, R., & Cittadini, A. (2012) Lycopene as a guardian of redox signalling. *Acta Biochim.Pol.* 59: 21-25.
- Pan, M. H., Lai, C. S., Tsai, M. L., Wu, J. C., & Ho, C. T. (2012) Molecular mechanisms for anti-aging by natural dietary compounds. *Mol.Nutr.Food Res.* 56: 88-115.
- Papaioannou, E. H. & Karabelas, A. J. (2012) Lycopene recovery from tomato peel under mild conditions assisted by enzymatic pre-treatment and non-ionic surfactants. *Acta Biochim.Pol.* 59: 71-74.
- Papaioannou, E. H. & Liakopoulou-Kyriakides, M. (2012) Agro-food wastes utilization by *Blakeslea trispora* for carotenoids production. *Acta Biochim.Pol.* 59: 151-153.
- Park, J., Kim, S., & Moon, B. (2011) Changes in carotenoids, ascorbic acids, and quality characteristics by the pickling of paprika (*Capsicum annuum* L.) cultivated in Korea. *J Food Sci.* 76: C1075-C1080.
- Patil, R. P., Pai, S. R., Pawar, N. V., Shimpale, V. B., Patil, R. M., & Nimbalkar, M. S. (2012) Chemical characterization, mineral analysis, and antioxidant potential of two underutilized berries (*Carissa carandas* and *Eleagnus conferta*) from the Western Ghats of India. *Crit Rev.Food Sci.Nutr.* 52: 312-320.
- Paxton, R. J., Garcia-Prieto, C., Berglund, M., Hernandez, M., Hajek, R. A., Handy, B., Brown, J., & Jones, L. A. (2012) A randomized parallel-group dietary study for stages II-IV ovarian cancer survivors. *Gynecol.Oncol.* 124: 410-416.
- Payyavula, R. S., Navarre, D. A., Kuhl, J. C., Pantoja, A., & Pillai, S. S. (2012) Differential effects of environment on potato phenylpropanoid and carotenoid expression. *BMC.Plant Biol.* 12: 39.
- Pierson, J. T., Dietzgen, R. G., Shaw, P. N., Roberts-Thomson, S. J., Monteith, G. R., & Gidley, M. J. (2012) Major Australian tropical fruits biodiversity: bioactive compounds and their bioactivities. *Mol.Nutr.Food Res.* 56: 357-387.
- Pilbrow, J., Garama, D., & Carne, A. (2012) Carotenoid-binding proteins; accessories to carotenoid function. *Acta Biochim.Pol.* 59: 163-165.
- Pires-Cavalcante, K. M., de Alencar, D. B., de Sousa, M. B., Sampaio, A. H., & Saker-Sampaio, S. (2011) Seasonal changes of alpha-tocopherol in green marine algae (*Caulerpa* genus). *J Food Sci.* 76: C775-C781.
- Polaino, S., Gonzalez-Delgado, J. A., Arteaga, P., Herrador, M. M., Barrero, A. F., & Cerda-Olmedo, E. (2012) Apocarotenoids in the sexual interaction of *Phycomyces blakesleeanus*. *Org.Biomol.Chem.* 10: 3002-3009.
- Popplewell, L. J., Abu-Dayya, A., Khana, T., Flinterman, M., Abdul, K. N., Raju, L., Opstad, C. L., Sliwka, H. R., Partali, V., Dickson, G., & Pungente, M. D. (2012) Novel cationic carotenoid lipids as delivery vectors of antisense oligonucleotides for exon skipping in Duchenne muscular dystrophy. *Molecules.* 17: 1138-1148.

- Poulaert, M., Borel, P., Caporiccio, B., Gunata, Z., & Dhuique-Mayer, C. (2012) Grapefruit juices impair the bioaccessibility of beta-carotene from orange-fleshed sweet potato but not its intestinal uptake by Caco-2 cells. *J Agric.Food Chem.* 60: 685-691.
- Prada, F., Ayala-Diaz, I. M., Delgado, W., Ruiz-Romero, R., & Romero, H. M. (2011) Effect of fruit ripening on content and chemical composition of oil from three oil palm cultivars (*Elaeis guineensis* Jacq.) grown in Colombia. *J Agric.Food Chem.* 59: 10136-10142.
- Pungente, M. D., Jubeli, E., Opstad, C. L., Al Kawaz, M., Barakat, N., Ibrahim, T., Abdul, K. N., Raju, L., Jones, R., Leopold, P. L., Sliwka, H. R., & Partali, V. (2012) Synthesis and preliminary investigations of the siRNA delivery potential of novel, single-chain rigid cationic carotenoid lipids. *Molecules.* 17: 3484-3500.
- Raila, J., Enjalbert, F., Mothes, R., Hurtienne, A., & Schweigert, F. J. (2012) Validation of a new point-of-care assay for determination of beta-carotene concentration in bovine whole blood and plasma. *Vet.Clin Pathol.* 41: 119-122.
- Ramel, F., Birtic, S., Ginies, C., Soubigou-Taconnat, L., Triantaphylides, C., & Havaux, M. (2012) Carotenoid oxidation products are stress signals that mediate gene responses to singlet oxygen in plants. *Proc.Natl.Acad.Sci.U.S.A.* 109: 5535-5540.
- Ramel, F., Birtic, S., Cuine, S., Triantaphylides, C., Ravanat, J. L., & Havaux, M. (2012) Chemical quenching of singlet oxygen by carotenoids in plants. *Plant Physiol.* 158: 1267-1278.
- Renzi, L. M., Hammond, B. R., Jr., Dengler, M., & Roberts, R. (2012) The relation between serum lipids and lutein and zeaxanthin in the serum and retina: results from cross-sectional, case-control and case study designs. *Lipids Health Dis.* 11: 33.
- Riccioni, G. (2012) Marine carotenoids and oxidative stress. *Mar.Drugs.* 10: 116-118.
- Richelle, M., Lambelet, P., Rytz, A., Tavazzi, I., Mermoud, A. F., Juhel, C., Borel, P., & Bortlik, K. (2012) The proportion of lycopene isomers in human plasma is modulated by lycopene isomer profile in the meal but not by lycopene preparation. *Br.J Nutr.* 107: 1482-1488.
- Robinson, J. G., Rahilly-Tierney, C., Lawler, E., & Gaziano, J. M. (2012) Benefits associated with achieving optimal risk factor levels for the primary prevention of cardiovascular disease in older men. *J Clin Lipidol.* 6: 58-65.
- Rodic, Z., Simonovska, B., Albreht, A., & Vovk, I. (2012) Determination of lutein by high-performance thin-layer chromatography using densitometry and screening of major dietary carotenoids in food supplements. *J Chromatogr.A.* 1231: 59-65.
- Rossoni Junior, J. V., Araujo, G. R., Padua, B. C., Magalhaes, C. L., Chaves, M. M., Pedrosa, M. L., Silva, M. E., & Costa, D. C. (2012) Annatto extract and beta-carotene enhances antioxidant status and regulate gene expression in neutrophils of diabetic rats. *Free Radic.Res.* 46: 329-338.
- Ryu, S. K., King, T. J., Fujioka, K., Pattison, J., Pashkow, F. J., & Tsimikas, S. (2012) Effect of an oral astaxanthin prodrug (CDX-085) on lipoprotein levels and progression of atherosclerosis in LDLR(-/-) and ApoE(-/-) mice. *Atherosclerosis.* 222: 99-105.
- Saawarn, N., Shashikanth, M. C., Saawarn, S., Jirge, V., Chaitanya, N. C., & Pinakapani, R. (2011) Lycopene in the management of oral lichen planus: a placebo-controlled study. *Indian J Dent.Res.* 22: 639-643.
- Sabour-Pickett, S., Nolan, J. M., Loughman, J., & Beatty, S. (2012) A review of the evidence germane to

the putative protective role of the macular carotenoids for age-related macular degeneration. Mol.Nutr.Food Res. 56: 270-286.

Sahin, M., Sahin, E., & Gumuslu, S. (2012) Effects of lycopene and apigenin on human umbilical vein endothelial cells *in vitro* under angiogenic stimulation. Acta Histochem. 114: 94-100.

Salem, E. A., Salem, N. A., Maarouf, A. M., Serefoglu, E. C., & Hellstrom, W. J. (2012) Selenium and lycopene attenuate cisplatin-induced testicular toxicity associated with oxidative stress in Wistar rats. Urology. 79: 1184-1186.

Sancho, R. A., de Lima, F. A., Costa, G. G., Mariutti, L. R., & Bragagnolo, N. (2011) Effect of annatto seed and coriander leaves as natural antioxidants in fish meatballs during frozen storage. J Food Sci. 76: C838-C845.

Sasaki, T., Razak, N. W., Kato, N., & Mukai, Y. (2012) Characteristics of halorhodopsin-bacterioruberin complex from *Natronomonas pharaonis* membrane in the solubilized system. Biochemistry. 51: 2785-2794.

Satomi, Y. (2012) Fucoxanthin induces GADD45A expression and G1 arrest with SAPK/JNK activation in LNCap human prostate cancer cells. Anticancer Res. 32: 807-813.

Scaife, M. A., Ma, C. A., & Armenta, R. E. (2012) Efficient extraction of canthaxanthin from *Escherichia coli* by a 2-step process with organic solvents. Biore sour.Tech nol. 111: 276-281.

Scarmo, S., Henebery, K., Peracchio, H., Cartmel, B., Lin, H., Ermakov, I. V., Gellermann, W., Bernstein, P. S., Duffy, V. B., & Mayne, S. T. (2012) Skin carotenoid status measured by resonance Raman spectroscopy as a biomarker of fruit and vegetable intake in preschool children. Eur.J Clin Nutr. 66: 555-560.

Schweiggert, R. M., Steingass, C. B., Esquivel, P., & Carle, R. (2012) Chemical and morphological characterization of Costa Rican papaya (*Carica papaya* L.) hybrids and lines with particular focus on their genuine carotenoid profiles. J Agric.Food Chem. 60: 2577-2585.

Scoma, A., Giannelli, L., Faraloni, C., & Torzillo, G. (2012) Outdoor H(2) production in a 50-L tubular photobioreactor by means of a sulfur-deprived culture of the microalga *Chlamydomonas reinhardtii*. J Biotechnol. 157: 620-627.

Sebastiano, C., Vincenzo, F., Tommaso, C., Giuseppe, S., Marco, R., Ivana, C., Giorgio, R., Massimo, M., & Giuseppe, M. (2012) Dietary patterns and prostatic diseases. Front Biosci.(Elite.Ed). 4:195-204.: 195-204.

Serpeloni, J. M., Barcelos, G. R., Friedmann Angeli, J. P., Mercadante, A. Z., Lourdes Pires, B. M., & Antunes, L. M. (2012) Dietary carotenoid lutein protects against DNA damage and alterations of the redox status induced by cisplatin in human derived HepG2 cells. Toxicol.In Vitro. 26: 288-294.

Sharma, K. D., Bindal, G., Rathour, R., & Rana, J. C. (2012) beta-Carotene and mineral content of different *Chenopodium* species and the effect of cooking on micronutrient retention. Int J Food Sci.Nutr. 63: 290-295.

Sharoni, Y., Linnewiel-Hermoni, K., Khanin, M., Salman, H., Veprik, A., Danilenko, M., & Levy, J. (2012) Carotenoids and apocarotenoids in cellular signaling related to cancer: a review. Mol.Nutr.Food Res. 56: 259-269.

Sheehan, N. L., van Heeswijk, R. P., Foster, B. C., Akhtar, H., Singhal, N., Seguin, I., DelBalso, L., Bourbeau, M., Chauhan, B. M., Boulassel, M. R., Burger, D. M., Lalonde, R. G., & Cameron, D. W.

- (2012) The effect of beta-carotene supplementation on the pharmacokinetics of nelfinavir and its active metabolite M8 in HIV-1-infected patients. *Molecules.* 17: 688-702.
- Sheikhzadeh, N., Panchah, I. K., Asadpour, R., Tayefi-Nasrabadi, H., & Mahmoudi, H. (2012) Effects of *Haematococcus pluvialis* in maternal diet on reproductive performance and egg quality in rainbow trout (*Oncorhynchus mykiss*). *Anim Reprod.Sci.* 130: 119-123.
- Sheikhzadeh, N., Tayefi-Nasrabadi, H., Oushani, A. K., & Enferadi, M. H. (2012) Effects of *Haematococcus pluvialis* supplementation on antioxidant system and metabolism in rainbow trout (*Oncorhynchus mykiss*). *Fish.Physiol Biochem.* 38: 413-419.
- Skibsted, L. H. (2012) Carotenoids in antioxidant networks. Colorants or radical scavengers. *J Agric.Food Chem.* 60: 2409-2417.
- Sliwka, A., Goralska, J., Czech, U., Gruca, A., Polus, A., Zapala, B., & Dembinska-Kiec, A. (2012) Modulation of the human preadipocyte mitochondrial activity by beta-carotene. *Acta Biochim.Pol.* 59: 39-41.
- Sliwka, H. R. & Partali, V. (2012) Superlative carotenoids. *Acta Biochim.Pol.* 59: 17-20.
- Sliwka, H. R. & Partali, V. (2012) Key to xenobiotic carotenoids. *Molecules.* 17: 2877-2928.
- Soroka, I. M., Narushin, V. G., Turiyansky, Y. D., & Tyurenkov, A. A. (2012) Spectroscopy analysis for simultaneous determination of lycopene and beta-carotene in fungal biomass of *Blakeslea trispora*. *Acta Biochim.Pol.* 59: 65-69.
- Stahl, W. (2012) Carotenoids in nutrition and health-developments and future trends. *Mol.Nutr.Food Res.* 56: 203.
- Stahl, W. & Sies, H. (2012) Photoprotection by dietary carotenoids: concept, mechanisms, evidence and future development. *Mol.Nutr.Food Res.* 56: 287-295.
- Stinco, C. M., Fernandez-Vazquez, R., Escudero-Gilete, M. L., Heredia, F. J., Melendez-Martinez, A. J., & Vicario, I. M. (2012) Effect of orange juice's processing on the color, particle size, and bioaccessibility of carotenoids. *J Agric.Food Chem.* 60: 1447-1455.
- Subczynski, W. K., Wisniewska-Becker, A., & Widomska, J. (2012) Can macular xanthophylls replace cholesterol in formation of the liquid-ordered phase in lipid-bilayer membranes? *Acta Biochim.Pol.* 59: 109-114.
- Sutherland, J. L., Thompson, C. F., & Sakaluk, S. K. (2012) No effect of carotenoid supplementation on phytohemagglutinin response or body condition of nestling house wrens. *Physiol Biochem.Zool.* 85: 21-28.
- Svelander, C. A., Lopez-Sanchez, P., Pudney, P. D., Schumm, S., & Alminger, M. A. (2011) High pressure homogenization increases the *in vitro* bioaccessibility of alpha- and beta-carotene in carrot emulsions but not of lycopene in tomato emulsions. *J Food Sci.* 76: H215-H225.
- Takaichi, S., Murakami, A., Mochimaru, M., & Yokoyama, A. (2012) alpha-Carotene and its derivatives have a sole chirality in phototrophic organisms? *Acta Biochim.Pol.* 59: 159-161.
- Tanaka, T., Shnimizu, M., & Moriwaki, H. (2012) Cancer chemoprevention by carotenoids. *Molecules.* 17: 3202-3242.
- Tang, G., Hu, Y., Yin, S. A., Wang, Y., Dallal, G. E., Grusak, M. A., & Russell, R. M. (2012) beta-

Carotene in Golden Rice is as good as beta-carotene in oil at providing vitamin A to children. Am.J Clin Nutr. 96: 658-664.

Thies, F., Masson, L. F., Rudd, A., Vaughan, N., Tsang, C., Brittenden, J., Simpson, W. G., Duthie, S., Horgan, G. W., & Duthie, G. (2012) Effect of a tomato-rich diet on markers of cardiovascular disease risk in moderately overweight, disease-free, middle-aged adults: a randomized controlled trial. Am.J Clin Nutr. 95: 1013-1022.

Thomas, J. B., Duewer, D. L., Mugenya, I. O., Phinney, K. W., Sander, L. C., Sharpless, K. E., Sniegoski, L. T., Tai, S. S., Welch, M. J., & Yen, J. H. (2012) Preparation and value assignment of standard reference material 968e fat-soluble vitamins, carotenoids, and cholesterol in human serum. Anal.Bioanal.Chem. 402: 749-762.

Tominaga, K., Hongo, N., Karato, M., & Yamashita, E. (2012) Cosmetic benefits of astaxanthin on humans subjects. Acta Biochim.Pol. 59: 43-47.

Toomey, M. B. & McGraw, K. J. (2012) Mate choice for a male carotenoid-based ornament is linked to female dietary carotenoid intake and accumulation. BMC.Evol.Biol. 12:3. doi: 10.1186/1471-2148-12-3.: 3-12.

Uragami, C., Yamashita, E., Gall, A., Robert, B., & Hashimoto, H. (2012) Application of resonance Raman microscopy to *in vivo* carotenoid. Acta Biochim.Pol. 59: 53-56.

Valero, M. A., Vidal, A., Burgos, R., Calvo, F. L., Martinez, C., Luengo, L. M., & Cuerda, C. (2011) [Meta-analysis on the role of lycopene in type 2 diabetes mellitus]. Nutr.Hosp. 26: 1236-1241.

Vallverdu-Queralt, A., Arranz, S., Casals-Ribes, I., & Lamuela-Raventos, R. M. (2012) Stability of the phenolic and carotenoid profile of gazpachos during storage. J Agric.Food Chem. 60: 1981-1988.

Van Meulebroek, L., Vanhaecke, L., De Swaef, T., Steppe, K., & De Brabander, H. (2012) U-HPLC-MS/MS to quantify liposoluble antioxidants in red-ripe tomatoes, grown under different salt stress levels. J Agric.Food Chem. 60: 566-573.

Vishwanathan, R. & Johnson, E. J. (2012) Eye disease. In: Present Knowledge in Nutrition (Erdman, J. W., Macdonald, I. A., & Zeisel, S. H., eds.), pp. 939-981. Wiley-Blackwell, Ames, Iowa.

Vrca, V. B., Mayer, L., Skreb, F., Rahelic, D., & Marusic, S. (2012) Antioxidant supplementation and serum lipids in patients with Graves' disease: effect on LDL-cholesterol. Acta Pharm. 62: 115-122.

Wada, Y., Matsubara, A., Uchikata, T., Iwasaki, Y., Morimoto, S., Kan, K., Okura, T., Fukusaki, E., & Bamba, T. (2011) Metabolic profiling of beta-cryptoxanthin and its fatty acid esters by supercritical fluid chromatography coupled with triple quadrupole mass spectrometry. J Sep.Sci. 34: 3546-3552.

Wakahama, T., Okuyama, H., Maoka, T., & Takaichi, S. (2012) Unique carotenoid lactoside, P457, in *Symbiodinium* sp. of dinoflagellate. Acta Biochim.Pol. 59: 155-157.

Walker, L. A., Wang, T., Xin, H., & Dolde, D. (2012) Supplementation of laying-hen feed with palm tocos and algae astaxanthin for egg yolk nutrient enrichment. J Agric.Food Chem. 60: 1989-1999.

Wang, C., Schlamadinger, D. E., Desai, V., & Tauber, M. J. (2011) Triplet excitons of carotenoids formed by singlet fission in a membrane. Chemphyschem. 12: 2891-2894.

Wang, J. F., Liu, X. J., Liu, R. S., Li, H. M., & Tang, Y. J. (2012) Optimization of the mated fermentation process for the production of lycopene by *Blakeslea trispora* NRRL 2895 (+) and NRRL 2896 (-). Bioprocess.Biosyst.Eng. 35: 553-564.

- Weber, D. & Grune, T. (2012) The contribution of beta-carotene to vitamin A supply of humans. Mol.Nutr.Food Res. 56: 251-258.
- Wei, S., Hannoufa, A., Soroka, J., Xu, N., Li, X., Zebarjadi, A., & Gruber, M. (2011) Enhanced beta-ionone emission in *Arabidopsis* over-expressing AtCCD1 reduces feeding damage *in vivo* by the crucifer flea beetle. Environ.Entomol. 40: 1622-1630.
- Westphal, M. F., Morey, S. R., Uyeda, J. C., & Morgan, T. J. (2011) Molecular phylogeny of the subfamily *Amphistichinae* (Teleostei: Embiotocidae) reveals parallel divergent evolution of red pigmentation in two rapidly evolving lineages of sand-dwelling surfperch. J Fish.Biol. 79: 313-330.
- Whent, M., Huang, H., Xie, Z., Lutterodt, H., Yu, L., Fuerst, E. P., Morris, C. F., Yu, L. L., & Luthria, D. (2012) Phytochemical composition, anti-inflammatory, and antiproliferative activity of whole wheat flour. J Agric.Food Chem. 60: 2129-2135.
- Whitehead, R. D., Re, D., Xiao, D., Ozakinci, G., & Perrett, D. I. (2012) You are what you eat: within-subject increases in fruit and vegetable consumption confer beneficial skin-color changes. PLoS.ONE. 7: e32988.
- Whitehead, R. D., Coetze, V., Ozakinci, G., & Perrett, D. I. (2012) Cross-cultural effects of fruit and vegetable consumption on skin color. Am.J Public Health. 102: 212-213.
- Whitehead, R. D., Ozakinci, G., Stephen, I. D., & Perrett, D. I. (2012) Appealing to vanity: could potential appearance improvement motivate fruit and vegetable consumption? Am.J Public Health. 102: 207-211.
- Wisniewska-Becker, A., Nawrocki, G., Duda, M., & Subczynski, W. K. (2012) Structural aspects of the antioxidant activity of lutein in a model of photoreceptor membranes. Acta Biochim.Pol. 59: 119-124.
- Xue, F., Li, C., & Pan, S. (2012) Subacute toxicity assessment of carotenoids extracted from citrus peel (Nanfengmiju, *Citrus reticulata* Blanco) in rats. Regul.Toxicol.Pharmacol. 62: 16-22.
- Yamano, Y., Chary, M. V., & Wada, A. (2012) Stereoselective total synthesis of the acetylenic carotenoids alloxanthin and triophaxanthin. Org.Biomol.Chem. 10: 4103-4108.
- Yan, G. L., Wen, K. R., & Duan, C. Q. (2012) Enhancement of beta-carotene production by over-expression of HMG-CoA reductase coupled with addition of ergosterol biosynthesis inhibitors in recombinant *Saccharomyces cerevisiae*. Curr.Microbiol. 64: 159-163.
- Yan, G. L., Liang, H. Y., Duan, C. Q., & Han, B. Z. (2012) Enhanced production of beta-carotene by recombinant industrial wine yeast using grape juice as substrate. Curr.Microbiol. 64: 152-158.
- Yang, C. M., Lu, I. H., Chen, H. Y., & Hu, M. L. (2012) Lycopene inhibits the proliferation of androgen-dependent human prostate tumor cells through activation of PPARgamma-LXRalpha-ABCA1 pathway. J Nutr.Biochem. 23: 8-17.
- Yang, C. M., Huang, S. M., Liu, C. L., & Hu, M. L. (2012) Apo-8'-lycopenal induces expression of HO-1 and NQO-1 via the ERK/p38-Nrf2-ARE pathway in human HepG2 cells. J Agric.Food Chem. 60: 1576-1585.
- Yang, C. M., Hu, T. Y., & Hu, M. L. (2012) Antimetastatic effects and mechanisms of apo-8'-lycopenal, an enzymatic metabolite of lycopene, against human hepatocarcinoma SK-Hep-1 cells. Nutr.Cancer. 64: 274-285.
- Yang, F., Wang, M. R., Ma, Y. G., Ma, W. M., & Yang, W. J. (2011) Prawn lipocalin: characterization of a color shift induced by gene knockdown and ligand binding assay. J Exp.Zool.A Ecol.Genet.Physiol. 315:

562-571.

Yang, M., Chung, S. J., Chung, C. E., Kim, D. O., Song, W. O., Koo, S. I., & Chun, O. K. (2011) Estimation of total antioxidant capacity from diet and supplements in US adults. Br.J Nutr. 106: 254-263.

Yang, R., Yang, L., Shen, X., Cheng, W., Zhao, B., Ali, K. H., Qian, Z., & Ji, H. (2012) Suppression of NF-kappaB pathway by crocetin contributes to attenuation of lipopolysaccharide-induced acute lung injury in mice. Eur.J Pharmacol. 674: 391-396.

Yonar, M. E. (2012) The effect of lycopene on oxytetracycline-induced oxidative stress and immunosuppression in rainbow trout (*Oncorhynchus mykiss*, W.). Fish.Shellfish.Immunol. 32: 994-1001.

Yoshizawa, M., Nakamura, R., Yoshimatsu, O., Abe, K., Sakai, S., Nakagawa, K., Fujii, R., Nango, M., & Hashimoto, H. (2012) Femtosecond stimulated Raman spectroscopy of the dark S1 excited state of carotenoid in photosynthetic light harvesting complex. Acta Biochim.Pol. 59: 49-52.

Yu, B., Wang, J., Suter, P. M., Russell, R. M., Grusak, M. A., Wang, Y., Wang, Z., Yin, S., & Tang, G. (2012) Spirulina is an effective dietary source of zeaxanthin to humans. Br.J Nutr. 108: 611-619.

Yu, J., Johnson, E. J., Shang, F., Lim, A., Zhou, H., Cui, L., Xu, J., Snellingen, T., Liu, X., Wang, N., & Liu, N. (2012) Measurement of macular pigment optical density in a healthy Chinese population sample. Invest Ophthalmol.Vis.Sci. 53: 2106-2111.

Yu, K., Xu, Q., Da, X., Guo, F., Ding, Y., & Deng, X. (2012) Transcriptome changes during fruit development and ripening of sweet orange (*Citrus sinensis*). BMC.Genomics. 13:10.: 10.

Yu, L. X., Dzikovski, B. G., & Freed, J. H. (2012) A protocol for detecting and scavenging gas-phase free radicals in mainstream cigarette smoke. J Vis.Exp. e3406.

Zand, A., Agocs, A., Deli, J., & Nagy, V. (2012) Synthesis of carotenoid-cysteine conjugates. Acta Biochim.Pol. 59: 149-150.

Zhang, Y. & Zhong, Q. (2012) Binding between bixin and whey protein at pH 7.4 studied by spectroscopy and isothermal titration calorimetry. J Agric.Food Chem. 60: 1880-1886.

Zhou, Y., Han, Y., Li, Z., Fu, Y., Fu, Z., Xu, S., Li, J., Yan, J., & Yang, X. (2012) ZmcrtRB3 encodes a carotenoid hydroxylase that affects the accumulation of alpha-carotene in maize kernel. J Integr.Plant Biol. 54: 260-269.

Zhu, D. & Damodaran, S. (2012) Short communication: Annatto in Cheddar cheese-derived whey protein concentrate is primarily associated with milk fat globule membrane. J Dairy Sci. 95: 614-617.

Zhu, J., Wang, C. G., & Xu, Y. G. (2011) Lycopene attenuates endothelial dysfunction in streptozotocin-induced diabetic rats by reducing oxidative stress. Pharm.Biol. 49: 1144-1149.

Zhu, L., Wu, X., Li, O., Qian, C., & Gao, H. (2012) Cloning and characterization of genes involved in nostoxanthin biosynthesis of *Sphingomonas elodea* ATCC 31461. PLoS.ONE. 7: e35099.

Zilic, S., Serpen, A., Akillioglu, G., Gokmen, V., & Vancetovic, J. (2012) Phenolic compounds, carotenoids, anthocyanins, and antioxidant capacity of colored maize (*Zea mays* L.) kernels. J Agric.Food Chem. 60: 1224-1231.