## REFERENCES

- Ahmad, P., Jaleel, C.A., Salem, M.A., Nabi, G. and Sharma, S. 2010. Roles of enzymatic and non-enzymatic antioxidants in plants during abiotic stress. Critical Reviews in Biotechnology 30: 161-175.
- Alberts, B., Bray, D., Hopkin, K., Johnson, A., Lewis, J., Raff, M., Roberts, K. and Walter, P. 2010. Essential Cell Biology (5<sup>th</sup> ed). Garland Science, New York.
- Ambuko, J., Zanol, G.C., Sekozawa, Y., Sugaya, S. and Gemma, H. 2013. Reactive oxygen species (ROS) scavenging in hot air preconditioning mediated alleviation of chilling injury in banana fruits. Journal of Agricultural Science 5: 319-331.
- Anjum, N.A., Ahamad, I., Mohmood, I., Pacheco, M., Duarte, A., Pereira, E., Umar, S., Ahamad, A., Khan, N.A., Iqbal, M. and Prasad, M.N.V. 2012. Modulation of glutathione and its related enzymes in plants responses to toxic metals and metalloids - a review. Environmental and Experimental Botany 75: 307-324.
- Apai, W. 2010. Effects of fruit dipping in hydrochloric acid then rinsing in water on fruit decay and browning of longan fruit. Crop Protection 29: 1184-1189.
- Benzie, I.F.F. and Strain J.J. 1999. Ferric reducing/antioxidant power assay: direct measure of total antioxidant capacity of biological fluids and modified version for simultaneous measurement of total antioxidant power an ascorbic acid concentration. Methods in Enzymology 299: 15-27.
- Bhattacharjee, S. 2013. Heat and chilling induced disruption of redox homeostasis and its regulation by hydrogen peroxide in germinating rice seeds (*Oryza sativa* L., Cultivar Ratna). Physiology and Molecular Biology of Plants 19: 199-207.
- Brugidou, C., Rocher, A., Giraud, E., Lelong, B., Marin, B. and Raimbault, M. 1991. A new high performance liquid chromatographic technique for separation and

determination of adenylic and nicotinamide nucleotides in *Lactobacillus plantarum*. Biotechnology Techniques 5: 475-578.

- Cai, Y., Cao, S., Yang, Z. and Zheng, Y. 2011. MeJA regulates enzymes involved in ascorbic acid and glutathione metabolism and improves chilling tolerance in loquat fruit. Postharvest Biology and Technology 59: 324-326.
- Chanrittisen, T. and Chomsri, N. 2010. Exploring feasibility for production of longan fruitwine as a small scale enterprise in Thailand. Asian Journal of Food and Agro-industry 3: 242-247.
- Chen, M., Lin, H., Zhang, S., Lin, Y., Chen, Y. and Lin, Y. 2015. Effects of adenosine triphosphate (ATP) treatment on postharvest physiology, quality and storage behavior of longan fruit. Food and Bioprocess Technology 8: 971-982.
- Chen, Y., Lin, H., Jiang, Y., Zhang, S., Lin, Y. and Wang, Z. 2014. *Phomopsis longanae* Chi-induced pericarp browning and disease development of harvested longan fruit in association with energy status. Postharvest Biology and Technology 93: 24-28.
- Chen, Z., Zhu, C. and Han, Z. 2011. Effects of aqueous chlorine dioxide treatment on nutritional components and shelf-life of mulberry fruit (*Morus alba* L.). Journal of Bioscience and Bioengineering 111: 675-681.
- Chen, Z., Zhu, C., Zhang, Y., Niu, D. and Du, J. 2010. Effects of aqueous chlorine dioxide treatment on enzymatic browning and shelf-life of fresh-cut asparagus lettuce (*Lactuca sativa* L.). Postharvest Biology and Technology 58: 232-238.
- Cheng, G., Jiang, Y., Duan, X., Macnish, A., You, Y. and Li, Y. 2009. Effect of oxygen concentration on the biochemical and chemical changes of stored longan fruit. Journal of Food Quality 32: 2-17.
- Choi, J., Tanaka, K., Cao, Y., Qi, Y., Qiu, J., Liang, Y., Lee, S. Y. and Stacey, G. 2014. Identification of a plant receptor for extracellular ATP. Science 343: 290-294.

- Chomkitichai, W., Chumyam, A., Rachtanapun, P., Uthaibutra, J. and Saengnil, K. 2014a. Reduction of reactive oxygen species production and membrane damage during storage of 'Daw' longan fruit by chlorine dioxide. Scientia Horticulturae 170: 143-149.
- Chomkitichai, W., Faiyue, B., Rachtanapun, P., Uthaibutra, J. and Saengnil, K. 2014b. Enhancement of the antioxidant defense system of post-harvested 'Daw' longan fruit by chlorine dioxide fumigation. Scientia Horticulturae 178: 138-144.
- Chumyam, A., Kunthawun, D., Bussaban, B., Uthaibutra J. and Saengnil, K. 2015. Effects of ClO<sub>2</sub> fumigation on postharvest fungi and disease development of longan fruit. Acta Horticulturae 1088: 339-344.
- Ciou, J.Y., Lin, H.H., Chiang, P.Y., Wang, C.C. and Charles, A.L. 2011. The role of polyphenol oxidase and peroxidase in the browning of water caltrop pericarp during heat treatment. Food Chemistry 127: 523-527.
- Corpas, F.J. and Barroso, J.B. 2014. NADPH-generating dehydrogenases: their role in the mechanism of protection against nitro-oxidative stress induced by adverse environmental conditions. Frontiers in Environmental Science 2: 1-5.
- Dai, H., Jia, G. and Shan, C. 2015. Jasmonic acid-induced hydrogen peroxide activates MEK1/2 in upregulating the redox states of ascorbate and glutathione in wheat leaves. Acta Physiologiae Plantarum 37: 1-6.
- Demidchik, V., Shang, Z., Shin, R., Thompson, E., Rubio, L., Laohavisit, A., Mortimer, J.C., Chivasa, S., Slabas, A.R., Glover, B.J., Schachtman, D.P., Shabala, S.N. and Davies, J.M. 2009. Plant extracellular ATP signalling by plasma membrane NADPH oxidase and Ca<sup>2+</sup> channels. The Plant Journal 58: 903-913.
- Dietz, K.J. and Pfannschmidt, T. 2011. Novel regulators in photosynthetic redox control of plant metabolism and gene expression. Plant Physiology 155: 1477-1485.

- Du, J.H., Fu, Y.C. and Wang, N.Y. 2009. Effects of aqueous chlorine dioxide treatment on browning of fresh-cut lotus root. LWT-Food Science and Technology 42: 654-659.
- Duan, X., Liu, T., Zhang, D., Su, X., Lin, H. and Jiang, Y. 2011. Effect of pure oxygen atmosphere on antioxidant enzyme and antioxidant activity of harvested litchi fruit during storage. Food Research International 44: 1905-1911.
- Duan, X.W., Su, X.G., You, Y.L., Qu, H.X., Li, Y.B. and Jiang, Y.M. 2007. Effect of nitric oxide on pericarp browning of harvested longan fruit in relation to phenolic metabolism. Food Chemistry 104: 571-576.
- Fotopoulos, V., Ziogas, V., Tanou, G. and Molassiotis, A. 2010. Involvement of AsA/DHA and GSH/GSSG ratios in gene and protein expression and in the activation of defence mechanisms under abiotic stress conditions. In Anjum, N.A., Umar, S., and Chan, M.T. (Eds.), Ascorbate-Glutathione Pathway and Stress Tolerance in Plants. Springer Science. pp. 265-302.
- Foyer, C.H. and Noctor, G. 2011. Ascorbate and glutathione: the heart of the redox hub. Plant Physiology 155: 2-18.
- Fu, Y., Zhang, K., Wang, N. and Du, J. 2007. Effects of aqueous chlorine dioxide treatment on polyphenol oxidases from Golden Delicious apple. LWT-Food Science and Technology 40: 1362-1368.
- Geigenberger, P., Riewe, D. and Fernie, A.R. 2009. The central regulation of plant physiology by adenylates. Trends in Plant Science 15: 98-105.
- Gill, S.S. and Tuteja, N. 2010. Reactive oxygen species and antioxidant machinery in abiotic stress tolerance in crop plants. Plant Physiology and Biochemistry 48: 909-930.

- Gómez-López, V.M., Devlieghere, F., Ragaert, P. and Debevere, J. 2007. Shelf-life extension of minimally processed carrots by gaseous chlorine dioxide. International Journal of Food Microbiology 116: 221-227.
- Gómez-López, V.M., Ragaert, P., Jeyachchandran, V., Debevere, J. and Devlieghere, F.
  2008. Shelf-life of minimally processed lettuce and cabbage treated with gaseous chlorine dioxide and cysteine. International Journal of Food Microbiology 121: 74-83.
- Gómez-López, V.M., Rajkovic, A., Ragaert, P. and Devlieghere, F. 2009. Chlorine dioxide for minimally processed produce preservation: A review. Trends in Food Science and Technology 20: 17-26.
- Handy, D.E. and Loscalzo, J. 2012. Redox regulation of mitochondrial function. Antioxidant and Redox Signaling 16: 1323-1367.
- Har, K.K. and Perera, C.O. 2013. Efficacy of sanitizers on three types of tropical fruits having different skin characteristics. Journal of Food Processing and Beverages 1: 1-4.
- Heldt, H.W. and Piechulla, B. 2011. Plant Biochemistry (4<sup>th</sup> ed). Elsevier, London. pp. 133-191.
- Hodges, D.M. and Forney, C.F. 2000. The effects of ethylene, depressed oxygen, and elevated carbon dioxide on antioxidant profiles of senescing spinach leaves. Journal of Experimental Botany 51: 645-655.

S

reserve

- Hodges, D.M., Delong, J.M., Forney, C.F. and Prange, R.K. 1999. Improving the thiobarbituric acid-reactive-substances assay for estimating lipid peroxidation in plant tissues containing anthocyanin and other interfering compounds. Planta 207: 604-611.
- Hodges, D.M., Lester, G.E., Munro, K.I.D. and Toivonen, P.M.A. 2004. Oxidative stress: importance for postharvest quality. HortScience 39: 924-929.

- Hopkins, W.G. and Huner, N.P.A. 2008. Introduction to Plant Physiology (4<sup>th</sup> ed). John Wiley and Sons, London.
- Hossain, M.A., Mostofa, M.G. and Fujita, M. 2013. Heat-shock positively modulates oxidative protection of salt and drought-stressed mustard (*Brassica campestris* L.) seedlings. Journal of Plant Science and Molecular Breeding 2013: 1-14.
- Hossain, Z., Nouri, M.Z. and Komatsu, S. 2012. Plant cell organelle proteomics in response to abiotic stress. Journal of Proteome Research 11: 37-48.
- Hou, F.Y., Huang, J., Yu, S.L. and Zhang, H.S. 2007. The 6-phosphogluconate dehydrogenase genes are responsive to abiotic stresses in rice. Journal of Integrative Plant Biology 49: 655-663.
- Huang, D., Ou, B. and Prior, R.L. 2005. The Chemistry behind antioxidant capacity assays. Journal of Agricultural and Food Chemistry 53: 1841-1856.
- Huang, G.J., Chen, H.J., Chang, Y.S., Lu, T.L. and Lin, Y.H. 2008. Sweet potato storage root thioredoxin h2 with both dehydroascorbate reductase and monodehydroascorbate reductase activities. Botanical Studies 49: 1-7.
- Imahori, Y., Takemura, M. and Bai, J. 2008. Chilling-induced oxidative stress and antioxidant responses in mume (*Prunus mume*) fruit during low temperature storage. Postharvest Biology and Technology 49: 54-60.
- Jiang, Y.M. and Li, Y.B. 2001. Effects of chitosan coating on postharvest life and quality of longan fruit. Food Chemistry 73: 139-143.
- Jiang, Y.M., Zhang, Z., Joyce, D.C. and Ketsa, S. 2002. Postharvest biology and handling of longan fruit (*Dimocarpus longan* Lour.). Postharvest Biology Technology 26: 241-252.
- Jin, P., Zhu, H., Wang, J., Chen, J.J., Wang, X. and Zheng, Y. 2013. Effect of methyl jasmonate on energy metabolism in peach fruit during chilling stress. Journal of the Science of Food and Agriculture 93: 1827-1832.

- Jin, P., Zhu, H., Wang, L., Shan, T. and Zheng, Y. 2014. Oxalic acid alleviates chilling injury in peach fruit by regulating energy metabolism and fatty acid contents. Food Chemistry 161: 87-93.
- Juszczuk, I.M. and Ostaszewska, M. 2011. Respiratory activity, energy and redox status in sulphur-deficient bean plants. Environmental and Experimental Botany 74: 245-254.
- Juszczuk, I.M. and Rychter, A.M. 2003. Alternative oxidase in higher plants. Acta Biochemica Polonica 50: 1257-1271.
- Kampfenkel, K., van Montagu, M. and Inze, D. 1995. Extraction and determination of ascorbate and dehydroascorbate from plant tissue. Analytical Biochemistry 225: 165-167.
- Khunpon, B., Uthaibutra, J., Faiyue, B. and Saengnil, K. 2011. Reduction of enzymatic browning of harvested 'Daw' longan exocarp by sodium chlorite. ScienceAsia 37: 234-239.
- Kocsy, G., Tari, I., Vanková, R., Zechmann, B., Gulyás, Z., Poór, P. and Galiba, G.
  2013. Redox control of plant growth and development. Plant Science 211: 77-91.
- Kumari, A., Sheokand, S. and Swaraj, K. 2010. Nitric oxide induced alleviation of toxic effects of short term and long term Cd stress on growth, oxidative metabolism and Cd accumulation in Chickpea. Brazilian Journal of Plant Physiology 22: 271-284.
- Li, P., Zheng, X., Liu, Y. and Zhu, Y. 2014. Pre-storage application of oxalic acid alleviates chilling injury in mango fruit by modulating proline metabolism and energy status under chilling stress. Food Chemistry 142: 72-78.
- Liu, H., Jiang, Y.M., Luo, Y. and Jiang, W. 2006. A simple and rapid determination of ATP, ADP and AMP concentrations in pericarp tissue of litchi fruit by high

performance liquid chromatography. Food Technology Biotechnology 44: 531-534.

- Liu, J., Wang, X., Hu, Y., Hu, W. and Bi, Y. 2013. Glucose-6-phosphate dehydrogenase plays a pivotal role in tolerance to drought stress in soybean roots. Plant Cell Reports 32: 415-429.
- Lowry, O.H., Rosebrough, N.J., Far, A.L. and Randall, R.J. 1951. Protein measurement with the folin phenol reagent. Journal of Biological Chemistry 193: 265-275.
- Mahovic, M.J., Bartz, J.A., Berry, A.D. and Sargent, S.A. 2006. Postharvest treatment of tomato fruit with chlorine dioxide gas: dose affects fruit quality. Proceedings of the Florida State Horticultural Society 119: 340-342.
- Mahovic, M.J., Tenney, J.D. and Bartz, J.A. 2007. Applications of chlorine dioxide gas for control of bacterial soft rot in tomatoes. Plant Disease Journal 91: 1316-1320.
- Manai, J., Gouia, H. and Corpas, F.J. 2014. Redox and nitric oxide homeostasis are affected in tomato (*Solanum lycopersicum*) roots under salinity-induced oxidative stress. Journal of Plant Physiology 171: 1028-1035.
- Mandal, C., Ghosh, N., Dey, N. and Adak, M.K. 2014. Effects of putrescine on oxidative stress induced by hydrogen peroxide in *Salvinia natans* L. Journal of Plant Interactions 9: 550-558.
- Mishra, N.S., Tuteja, R. and Tuteja, N. 2006. Signaling through MAP kinase networks in plants. Archives of Biochemistry and Biophysics 452: 55-68.
- Mittler, R. 2002. Oxidative stress, antioxidant and stress tolerance. Trends in Plant Science 7: 405-410.
- Mori, T., Terai, H., Yamauchi, N. and Suzuki, Y. 2009. Effects of postharvest ethanol vapor treatment on the ascorbate-glutathione cycle in broccoli florets. Postharvest Biology and Technology 52: 134-136.

- Mostofa, M.G., Hossain, M.A., Fujita, M. and Tran, L.S.P. 2015. Physiological and biochemical mechanisms associated with trehalose-induced copper-stress tolerance in rice. Scientific Reports 5, 1-16.
- Mun'im, A., Negishi, O. and Ozawa, T. 2003. Antioxidant compounds from Crotalaria sessiliflora. Bioscience Biotechnology and Biochemistry 67: 410-414.
- Noctor, G. and Foyer, C.H. 1998. Ascorbate and glutathione: Keeping active oxygen under control. Annual Review of Plant Physiology and Plant Molecular Biology 49: 249-279.
- Noctor, G., Paepe, R.D. and Foyer, C.H. 2007. Mitochondrial redox biology and homeostasis in plants. Trends in Plant Science 12: 125-134.
- Ostaszewska, M., Juszczuk, I.M., Kołodziejek, I. and Rychter, A.M. 2014. Long-term sulphur starvation of *Arabidopsis thaliana* modifies mitochondrial ultrastructure and activity and changes tissue energy and redox status. Journal of Plant Physiology 171: 549-558.
- Paliyath, G., Murr, D.P., Handa, A.K. and Lurie, S. 2008. Postharvest Biology and Technology of Fruits, Vegetables, and Flowers. Wiley-Blackwell Publishing, Iowa.
- Popov, V.N., Eprintsev, A.T., Fedorin, D.N. and Igamberdiev, A.U. 2010. Succinate dehydrogenase in *Arabidopsis thaliana* is regulated by light via phytochrome A. FEBS Letters 584: 199-202.
- Popov, V.N., Purvis, A.C., Skulachev, V.P. and Wagner, A.M. 2001. Stress-induced changes in ubiquinone concentration and alternative oxidase in plant mitochondria. Bioscience Reports 21: 369-379.

1 6

reserv

e d

Potters, G., Horemans, N. and Jansen, M.A. 2010. The cellular redox state in plant stress biology - a charging concept. Plant Physiology and Biochemistry 48: 292-300.

- Pu, F. and Ren, X. 2014. Ascorbate levels and activities of enzymes related to the glutathione-ascorbate cycle in fruits of Chinese persimmon cultivars. Horticulture, Environment, and Biotechnology 55: 315-321.
- Purvis, A.C. 2004. Regulation of oxidative stress in horticultural crops. HortScience 39: 930-932.
- Queiroz, C., Lopes, M.L.M., Fialho, E. and Valente-Mesquita, V.L. 2008. Polyphenol oxidase characteristics and mechanisms of browning control. Food Reviews International 24: 361-375.
- Ramakrishna, B. and Rao, S.S.R. 2013. Preliminary studies on the involvement of glutathione metabolism and redox status against zinc toxicity in radish seedlings by 28-Homobrassinolide. Environmental and Experimental Botany 96: 52-58.
- Redinbaugh, M.G. and Campbell, W.H. 1998. Nitrate regulation of the oxidative pentose phosphate pathway in maize (*Zea mays* L.) root plastids: induction of 6-phosphogluconate dehydrogenase activity, protein and transcript levels. Plant Science 134: 129-140.
- Reichler, S.A., Torres, J., Rivera, A.L., Cintolesi, V.A., Clark, G. and Roux, S.J. 2009. Intersection of two signalling pathways: extracellular nucleotides regulate pollen germination and pollen tube growth via nitric oxide. Journal of Experimental Botany 60: 2129-2138.
- Rhoads, D.M. and Subbaiah, C.C. 2007. Mitochondrial retrograde regulation in plants. Mitochondrion 7: 177-194.
- Sacher, J.A. 1973. Senescence and postharvest physiology. Annual Review of Plant Physiology 24: 197-224.
- Saengnil, K., Chumyam, A., Faiyue, B. and Uthaibutra, J. 2014. Use of chlorine dioxide fumigation to alleviate enzymatic browning of harvested 'Daw' longan pericarp

during storage under ambient conditions. Postharvest Biology and Technology 91: 49-56.

- Santo, S.D., Stampfl, H., Krasensky, J., Kempa, S., Gibon, Y., Petutschnig, E., Rozhon, W., Heuck, A., Clausen, T. and Jonak, C. 2012. Stress-induced GSK3 regulates the redox stress response by phosphorylating glucose-6-phosphate dehydrogenase in *Arabidopsis*. The Plant Cell 24: 3380-3392.
- Saquet, A.A., Streif, J. and Banerth, F. 2003. Energy metabolism and membrane lipid alterations in relation to brown heart development in 'Conference' pears during delayed controlled atmosphere storage. Postharvest Biology and Technology 30: 123-132.
- Schertl, P. and Braun, H.P. 2014. Respiratory electron transfer pathways in plant mitochondria. Frontiers in Plant Science 5: 1-11.
- Shan, C., Liu, H., Zhao, L. and Wang, X. 2014. Effects of exogenous hydrogen sulfide on the redox states of ascorbate and glutathione in maize leaves under salt stress. Biologia Plantarum 58: 169-173.
- Shang, Z., Laohavisit, A. and Davies, J.M. 2009. Extracellular ATP activates an *Arabidopsis* plasma membrane Ca<sup>2+</sup>-permeable conductance. Plant Signaling and Behavior 4: 989-991.
- Sharma, P., Jha, A.B., Dubey, R.S. and Pessarakli, M. 2012. Reactive oxygen species, oxidative damage, and antioxidative defense mechanism in plants under stressful conditions. Journal of Botany 2012: 1-26.
- Signorelli, S., Corpas, F.J., Borsani, O., Barroso, J.B. and Monza, J. 2013. Water stress induces a differential and spatially distributed nitro-oxidative stress response in roots and leaves of *Lotus japonicus*. Plant Science 201: 137-146.

- Singh, S.P. and Singh, Z. 2013. Postharvest cold storage-induced oxidative stress in Japanese plums (*Prunus salicina* Lindl. cv. Amber Jewel) in relation to harvest maturity. Australian Journal of Crop Science 7: 391-340.
- Song, L., Liu, H., You, Y., Wang, Y. and Jiang, Y. 2008. Effect of exogenous adenosine triphosphate supply on the senescence-related physiology of cut carnation flowers. HortScience 43: 271-273.
- Soole, K.L. and Menz, R.I. 2013. ATP in plant mitochondria: substrates, inhibitors, and uncouplers. Encyclopedia of Biological Chemistry 2013: 141-144.
- Stein L.R. and Imai, S. 2012. The dynamic regulation of NAD metabolism in mitochondria. Trends in Endocrinology and Metabolism 23: 420-428.
- Su, X., Jiang, Y., Duan, X., Liu, H., Li, Y., Lin, W. and Zheng, Y. 2005. Effects of pure oxygen on the rate of skin browning and energy status in longan fruit. Food Technology and Biotechnology 43: 359-365.
- Sun, J., Zhang, X., Deng, S., Zhang, C., Wang, M., Ding, M., Zhao, R., Shen, X., Zhou, X., Lu, C. and Chen, S. 2012. Extracellular ATP signaling is mediated by H<sub>2</sub>O<sub>2</sub> and cytosolic Ca<sup>2+</sup> in the salt response of *Populus euphratica* cells. PLOS ONE 7: 1-15.
- Sweetlove, L.J., Fait, A., Nunes-Nesi, A., Williams, T., and Fernie, A.R. 2007. The mitochondrion: an integration point of cellular metabolism and signalling. Critical Reviews in Plant Sciences 26: 17-43.
- Taiz, L. and Zeiger, E. 2010. Plant Physiology (5<sup>th</sup> ed). Sinauer Associates, Sunderland. pp. 305-338.

S

reserved

Tanaka, K., Choi, J., Cao, Y. and Stacey, G. 2014. Extracellular ATP acts as a damageassociated molecular pattern (DAMP) signal in plants. Frontiers in Plant Science 5: 1-9.

- Tanaka, K., Gilroy, S., Jones, A.M. and Stacey, G. 2010. Extracellular ATP signaling in plants. Trends in Cell Biology 20: 601-608.
- Tarvo, V. 2010. Modeling chlorine dioxide bleaching of chemical pulp. Ph.D. Thesis in Chemical Engineering. School of Science and Technology, Aalto University.
- Tewari, R.K., Kumar, P., Kim, S., Hahn, E.J. and Paek, K.Y. 2009. Nitric oxide retards xanthine oxidase-mediated superoxide anion generation in *Phalaenopsis* flower: an implication of NO in the senescence and oxidative stress regulation. Plant Cell Reports 28: 267-279.
- Thavong, P., Archbold, D.D., Pankasemsuk, T. and Koslanund, R. 2010. Postharvest use of hexanal vapor and heat treatment on longan fruit decay and consumer acceptance. Thammasat International Journal of Science and Technology 15: 54-63.
- Thomas, H. 2013. Senescence, ageing and death of the whole plant. New Phytologist 197: 696-711.
- Toivonen, P.M.A. 2004. Postharvest storage procedures and oxidative stress. HortScience 39: 938-942.
- Tomás-Callejas, A., López-Gálvez, F., Sbodio, A., Artés, F., Artés-Hernández, F. and Suslow, T.V. 2012. Chlorine dioxide and chlorine effectiveness to prevent *Escherichia coli* O157:H7 and *Salmonella* cross-contamination on fresh-cut Red Chard. Food Control 23: 325-332.
- Trinetta, V., Morgan, M.T. and Linton, R.H. 2010. Use of high-concentration short-time chlorine dioxide gas treatments for the inactivation of *Salmonella enterica* spp. inoculated onto Roma tomatoes. Food Microbiology 27: 1009-1015.

t s

reserv

Trinetta, V., Linton, R.H. and Morgan, M.T. 2013. The application of highconcentration short-time chlorine dioxide treatment for selected specialty crops including Roma tomatoes (*Lycopersicon esculentum*), cantaloupes (*Cucumis*  *melo* ssp. *melo* var. *cantaloupensis*) and strawberries (*Fragaria* × *ananassa*). Food Microbiology 34: 296-302.

- Valderrama, R., Corpas, F.J., Carreras, A., Gómez-Rodríguez, M.V., Chaki, M., Pedrajas, J.R., Fernández-Ocaña, A., Del Río, L.A. and Barroso, J.B. 2006. The dehydrogenase-mediated recycling of NADPH is a key antioxidant system against salt-induced oxidative stress in olive plants. Plant, Cell and Environment 29: 1449-1159.
- van Dongen, J.T., Gupta, K.J., Ramírez-Aguilar, S.J., Araújo, W.L., Nunes-Nesi, A. and Fernie, A.R. 2011. Regulation of respiration in plants: a role for alternative metabolic pathways. Journal of Plant Physiology 168: 1434-1443.

281846

- Vanlerberghe, G.C. 2013. Alternative oxidase: a mitochondrial respiratory pathway to maintain metabolic and signaling homeostasis during abiotic and biotic stress in plants. International Journal of Molecular Sciences 14: 6805-6847.
- Vedel, F., Lalanne, E., Sabar, M., Chétrie, P. and Paepe, R.D. 1999. The mitochondrial respiratory chain and ATP synthase complexes: composition, structure and mutational studies. Plant Physiology and Biochemistry 37: 629-643.
- Velikova, V., Yordanov, I. and Edreva, A. 2000. Oxidation stress and some antioxidant systems in acid rain-treated bean plant: protective role of exogenous polyamines. Plant Science 151: 59-66.
- Wagner, A.M. and Wagner, M.J. 1995. Measurements of ubiquinone reduction levels in plant cells. Plant Physiology 108: 277-283.
- Wang, H., Qian, Z., Ma, S., Zhou, Y., Patrick, J.W., Duan, X., Jiang, Y. and Qu, H. 2013. Energy status of ripening and postharvest senescent fruit of litchi (*Litchi chinensis* Sonn.). BMC Plant Biology 13: 1-16.
- Wang, J., You, Y., Chen, W., Xu, Q., Wang, J., Liu, Y., Song, L. and Wu, J. 2015a. Optimal hypobaric treatment delays ripening of honey peach fruit via increasing

endogenous energy status and enhancing antioxidant defense systems during storage. Postharvest Biology and Technology 101: 1-9.

- Wang, Y., Luo, Z., Khan, Z.U., Mao, L. and Ying, T. 2015b. Effect of nitric oxide on energy metabolism in postharvest banana fruit in response to chilling stress. Postharvest Biology and Technology 108: 21-27.
- World Health Organization. 2002. Concise International Chemical Assessment Document 37: Chlorine dioxide (gas). Wissenschaftliche Verlagsgesellschaft. Geneva. Switzerland. pp. 1-26.
- Wright, K.P. and Kader, A.A. 1997. Effect of slicing and controlled-atmosphere storage on the ascorbate content and quality of strawberries and persimmons. Postharvest Biology Technology 10: 39-48.
- Wu, B., Li, X., Hu, H., Lui, A. and Chen, W. 2011. Effect of chlorine dioxide on the control of postharvest diseases and quality of lychee fruit. African Journal of Biotechnology 10: 6030-6039.
- Wu, S.J. and Wu, J.Y. 2008. Extracellular ATP-induced NO production and its dependence on membrane Ca<sup>2+</sup> flux in *Salvia miltiorrhiza* hairy roots. Journal of Experimental Botany 59: 4007-4016.
- Yang, E., Lu, W.J., Qu, H.X., Lin, H.D., Wu, E.W., Yang, S.Y., Chen, Y.L. and Jiang, Y.M. 2009. Altered energy status in pericarp browning of litchi fruit during storage. Pakistan Journal of Botany 41: 2271-2279.

S

reserved

- Yang, Y., Fu, Z., Su, Y., Zhang, X., Li, G., Guo, J., Que Y. and Xu, L. 2014. A cytosolic glucose-6-phosphate dehydrogenase gene, *ScG6PDH*, plays a positive role in response to various abiotic stresses in sugarcane. Scientific Reports 4: 1-10.
- Yao, F., Huang, Z., Li, D., Wang, H., Xu, X., Jiang, Y. and Qu, H. 2014. Phenolic components, antioxidant enzyme activities and anatomic structure of longan

fruit pericarp following treatment with adenylate triphosphate. Scientia Horticulturae 180: 6-13.

- Yi, C., Jiang, Y., Shi, J., Qu, H., Xue, S., Duan, X., Shi, J. and Prasad, N.K. 2010. ATPregulation of antioxidant properties and phenolics in litchi fruit during browning and pathogen infection process. Food Chemistry 118: 42-47.
- Yi, C., Qu, H.X., Jiang, Y.M., Shi, J., Duan, X.W., Joyce, D.C. and Li, Y.B. 2008. ATP-induced changes in energy status and membrane integrity of harvested litchi fruit and its relation to pathogen resistance. Phytopathology 156: 365-371.
- Ying, W. 2008. NAD<sup>+</sup>/NADH and NADP<sup>+</sup>/NADPH in cellular functions and cell death: regulation and biological consequences. Antioxidants and Redox Signaling 10: 179-206.
- Zagorchev, L., Seal, C.E., Kranner, I. and Odjakova, M. 2013. A central role for thiols in plant tolerance to abiotic stress. International Journal of Molecular Sciences 14: 7405-7432.
- Zhang, L., Liu, J., Wang, X. and Bi, Y. 2013. Glucose-6-phosphate dehydrogenase acts as a regulator of cell redox balance in rice suspension cells under salt stress. Plant Growth Regulation 69: 139-148.
- Zhou, Q., Zhang, C., Cheng, S., Wei, B., Liu, X. and Ji, S. 2014. Changes in energy metabolism accompanying pitting in blueberries stored at low temperature. Food Chemistry 164: 493-501.

S

Zhu, Z. and Tian, S. 2012. Resistant responses of tomato fruit treated with exogenous methyl jasmonate to *Botrytis cinerea* infection. Scientia Horticulturae 142: 38-43.

reserv

## LIST OF PUBLICATIONS

- Chumyam A., Shank L., Uthaibutra J. and Saengnil K. 2016. Effects of chlorine dioxide on mitochondrial energy levels and redox status of 'Daw' longan pericarp during storage. Postharvest Biology and Technology 116: 26-35.
- Chumyam A., Jungklang J., Uthaibutra J. and Saengnil K. 2016. Exogenously applied adenosine triphosphate treatment enhanced antioxidant capacity and delayed senescence of harvested 'Daw' longan fruit. Proceeding in 2016 International Forum - Agriculture, Biology, and Life Science 185-193.
- Chumyam A., Shank L., Uthaibutra J. and Saengnil K. 20xx. Effects of chlorine dioxide fumigation on redox balancing potential of antioxidative ascorbateglutathione cycle in 'Daw' longan fruit during storage. (submitted to Scientia Horticulturae)



l rights reserved