

## DAFTAR PUSTAKA

- Acton, Q. A. 2013. *Peroxides—Advances in Research and Application: 2013 Edition*. ScholarlyEditions. Atlanta.
- Adwas, A. A., Elsayed, A. S. I., Azab, A. E. and Quwaydir, F. A. 2019. Oxidative stress and antioxidant mechanisms in human body. *Journal of Biotechnology* 6 (1): 43-47. doi: 10.15406/jabb.2019.06.00173
- Aebi, H. 1984. Catalase *in vitro*. *Methods in Enzymology* 105: 121-126.
- Agromedia. 2008. *Buku Pintar Tanaman Obat: 431 Jenis Tanaman Penggempur Aneka Penyakit*. PT. Agromedia Pustaka. Jakarta: p. 103.
- Ahmad, S. I. (ed). 2016. *Reactive Oxygen Species in Biology and Human Health*. CRC Press. Boca Raton: pp. ix-xi, 4.
- Al-Brakati, A. Y., Kassab, R. B., Lokman, M. S., Elmahallawy, E. K., Amin, H. K., and Moneim, A. E. A. 2019. Role of thymoquinone and ebselen in the prevention of sodium arsenite-induced nephrotoxicity in female rats. *Human and Experimental Toxicology* 38 (4), doi: 10.1177/0960327118818246.
- Aldahmash, B. A., El-Nagar, D. M., and Ibrahim, K. E. 2016. Reno-protective effects of propolis on gentamicin-induced acute renal toxicity in Swiss albino mice. *Nefrologia* 36 (6): 643–652.
- Ali, S. A. El-mohsen and Abdelaziz, D. H. A. The protective effect of date seeds on nephrotoxicity induced by carbon tetrachloride in rats. 2014. *International Journal of Pharmaceutical Sciences Review and Research*, 26 (2): 62–68.
- Alsuhaibani, A. M. A. 2018. Effect of *Nigella sativa* against cisplatin induced nephrotoxicity in rats. *Italian Journal of Food Safety* 7 (2): 7242, doi: 10.4081/ijfs.2018.7242.

- Akhtar, M. S. and Swamy, M. K. 2018. *Anticancer Plants: Clinical Trials and Nanotechnology, Volume 3*. Springer. New York: p. 109- 111.
- Ammerman, N. C., Beier-Sexton, M., and Azad, A. F. 2008. Growth and Maintenance of Vero Cells. *Current Protocol in Microbiology: Appendix-4E*. doi: 10.1002/9780471729259.mca04es11.
- Armstrong, D. 2012. *Free Radicals in Diagnostic Medicine: A Systems Approach to Laboratory Technology, Clinical Correlations, and Antioxidant Therapy*. Springer Science & Business Media. Berlin: p. 200.
- Arora, R. (ed). 2008. *Herbal Radiomodulators: Applications in Medicine, Homeland Defence And Space*. CABI International. Oxfordshire: p. 56.
- ATCC. 2019. *Vero Cells*. Diakses di: <https://www.atcc.org/products/all/CCL-81.aspx>, 2 September 2, 2019 pukul 20:30.
- Aytac, Z., Gulmezoglu, N., Saglam, T., Kulan, E. G., Selengi, U., and Hosgun, H. L. 2017. Changes in N, K, and fatty acid composition of black cumin seeds affected by nitrogen doses under supplemental potassium application. *Journal of Chemistry*. doi: 10.1155/2017/3162062.
- Bharat, K. 2013. *Metabolic Assay Based Validation of Cell Viability to Inflammatory Stimuli and Anti-Cancer Drugs in Normal and Tumor Brain Glia* (THESIS). doi: 10.13140/RG.2.1.2364.2640.
- Burtis, C. A., Ashwood, E. R., and Bruns, D. E. 2012. *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics*. Elsevier. Amsterdam: p. 526.
- Burton, G. J. 2011. Oxidative Stress. *Best Practice & Research Clinical Obstetrics & Gynaecology* 25 (3): 287-299.
- Cascella, M., Palma, G., Barbieri, A., Bimonte, S., Amruthraj, N. J., Muzio, M. R., Vecchio, V. del, Rea, D., Falco, M., Luciano, A., Arra, C., and Cuomo, A. 2017. Role of *Nigella sativa* and its constituent thymoquinone on chemotherapy-

induced nephrotoxicity: evidences from experimental animal studies. *Nutrients* 9 (6): 625, doi: 10.3390/nu9060625.

Castell, J. V. and Gmez-Lechn, M. J. 1996. *In Vitro Methods in Pharmaceutical Research*. Elsevier. Amsterdam: p. 43.

Chen, S., Marston, A., and Stuppner, H. 2014. *Handbook of Chemical and Biological Plant Analytical Methods*. John Wiley & Sons. Hoboken.

Choi, I., Fakhrullin, R. F., and Lvov, Y. 2014. *Cell Surface Engineering: Fabrication of Functional Nanoshells*. Royal Society of Chemistry. London: p. 100.

Cordova, A. 2010. *Catalytic Asymmetric Conjugate Reactions*. John Wiley & Sons. Hoboken: p. 169.

Costa, L. G. and Aschner, M. 2014. *Manganese in Health and Disease*. Royal Society of Chemistry. London: pp. 80-81.

Cristina, F. and Elena, A. (eds). 2018. *Reactive Oxygen Species (ROS) in Living Cells*. Intech Open. London: p. 111.

Davies, M. J. 2016. Protein oxidation and peroxidation. *Biochemistry Journal* 1 (473): 805–825, doi: 10.1042/BJ20151227.

Dean, J. R. 2010. *Extraction Techniques in Analytical Sciences*. John Wiley & Sons. Hoboken: pp. 128-129.

Dou, Q. P. 2019. *Tea in Health and Disease*. MDPI. Basel: p. 50.

Driskell, J. A. and Wolinsky, I. 2016. *Nutritional Assessment of Athletes*. CRC Press. Boca Raton: p. 321.

Duca, G. 2012. *Homogeneous Catalysis with Metal Complexes: Fundamentals and Applications*. Springer Science & Business Media. Berlin: p. 212.

Duran, N., Duran, G. G., Ay, E., Kaya, D. A., Kaya, M. G. A., and Mert, A. *In vitro cytotoxic activity of Nigella Sativa L. on human malignant melanoma cell lines*.

2016. The Sixth International Conference on Advanced Materials and Systems. Bucharest.
- Egbuna, C., Ifemeje, J. C., Udedi, S. C., and Kumar, S. 2018. *Phytochemistry Volume 1: Fundamentals, Modern Techniques, and Applications*. CRC Press. Boca Raton.
- Egbuna, C., Kumar, S., Ifemeje, J. C., Ezzat, S. M., and Kaliyaperumal, S. 2019. *Phytochemicals as Lead Compounds for New Drug Discovery*. Elsevier. Amsterdam: p. 180.
- El-haskoury, R., Al-Waili, N., Kamoun, Z., Makni, M., Al-Waili, H., and Lyouss, B. 2018. Antioxidant activity and protective effect of carob honey in CCl<sub>4</sub>-induced kidney and liver injury. *Archives of Medical Research* 49 (5): 306-313.
- Elsherbiny N.M., and ElSherbiny M. 2014. Thymoquinone attenuates Doxorubicin-induced nephrotoxicity in rats: Role of Nrf2 and NOX4. *Chemico-Biological Interaction* 223: 102–108, doi: 10.1016/j.cbi.2014.09.015.
- Engin, A. B. and Engine, A. (eds). 2013. *Endothelium: Molecular Aspects of Metabolic Disorders*. CRC Press. Boca Raton: p. 366.
- Floege, J., Johnson, R. J., and Feehally, J. 2010. *Comprehensive Clinical Nephrology 4th Edition*. Elsevier Saunders. St. Louis: p. 939.
- Forouzanfar, F., Bazzaz, B. S. F., and Hosseinzadeh, H. 2014. Black cumin (*Nigella sativa*) and its constituent (thymoquinone): a review on antimicrobial effects. *Iran Journal of Basic Medical Science* 17(12): 929–938.
- Galal, H. M. and el-Rady, N. M. A. 2019. Aqueous garlic extract suppresses experimental gentamicin induced renal pathophysiology mediated by oxidative stress, inflammation and Kim-1. *Pathophysiology*. doi: 10.1016/j.pathophys.2019.07.002.

- Galanter, M. 2006. *The Consequences of Alcoholism: Medical, Neuropsychiatric, Economic, Cross-Cultural*. Springer Science & Business Media. Berlin.
- Galelli, M. E., Gómez, M. I., Castro, G. D., and Castro, J. A. 2016. Carbon tetrachloride-induced free radical mediated protein oxidation *in vitro* and *in vivo*. *Redox Report* 3 (1): 23-29 (republished online).
- Ganie, S. A., Haq, E., Hamid, A., Qurishi, Y., Mahmood, Z., Zargar, B. A, Masood, A., and Zargar, M. A. 2011. Carbon tetrachloride induced kidney and lung tissue damages and antioxidant activities of the aqueous rhizome extract of *Podophyllum hexandrum*. *BMC Complementary and Alternative Medicine* 11 (17), doi:10.1186/1472-6882-11-17.
- Gharby, S., Harhara, H., Guillaume, D., Roudani, A., Boulbaroud, S., Ibrahimie, M., Ahmad, M., Sultana, S., Hadda, T. B., Chafchaoui-Moussaoui, I., and Charroufa, Z. 2015. Chemical investigation of *Nigella sativa* L. seed oil produced in Morocco. *Journal of the Saudi Society of Agricultural Sciences* 14 (2): 172-177.
- Goyal, M. R. and Chauhan, D. N. (eds). 2019. *Plant and Marine- Based Phytochemicals for Human Health: Attributes, Potential, and Use*. Apple Academic Press, Inc. Oakville: pp. 154, 156.
- Gupta, R. 2012. *Plant Taxonomy: Past, Present, and Future*. The Energy and Resources Institute (TERI). New Delhi: pp. 234-247.
- Gupta, R. C., Srivastava, A., and Lall, R. 2019. *Nutraceuticals in Veterinary Medicine*. Springer. New York: pp. 92-93.
- Hannun, Y. A. and Boustany, Rose-Mary. 1998. *Apoptosis in Neurobiology*. CRC Press. Boca Raton: p. 133.
- Harborne, J. B. 2012. *Phytochemical Methods: A Guide to Modern Techniques of Plant Analysis*. Springer Science & Business Media. Berlin: pp., 89, 110, 182, 183.

- Hayat, M. Q. 2013. Phytochemical analysis of *Nigella sativa* and its antibacterial activity against clinical isolates identified by ribotyping. *International Journal of Agriculture and Biology* 15(6):1511–1156.
- Heinrich, M., Barnes, J., Gibbons, S., and Williamson, E. M. 2012. *Fundamentals of Pharmacognosy and Phytotherapy*. Elsevier Health Sciences. New York: p. 108.
- Henry, J. 2012. *Advances in Food and Nutrition Research, Volume 67*. Academic Press. Oxford: p.165.
- Himmelfarb, J. and Sayegh, M. H. 2010. *Chronic Kidney Disease, Dialysis, and Transplantation: A Companion to Brenner and Rector's The Kidney 3<sup>rd</sup> Edition*. Elsevier Health Sciences. New York: p. 185.
- Hovgaard, L., Frokjaer, S., and van de Weert, M. 2012. *Pharmaceutical Formulation Development of Peptides and Proteins, Second Edition*. CRC Press. Boca Raton: p. 100.
- Hollinger, J. O. 2011. *An Introduction to Biomaterials*. CRC Press. Boca Raton: pp. 143-144.
- Hosseini S., Khajavi Rad A., Hadjzadeh M.A.R., Mohamadian Roshan N., Havakhah S., and Shafiee S. 2016. The protective effect of *Nigella sativa* against cisplatin-induced nephrotoxicity in rats. *Avicenna Journal of Phytomedicine* 6: 44–54, doi: 10.22038/AJP.2016.4046.
- Hussain, T., Gupta, R. K., Sweetey, K., Eswaran, B., Vijayakumar, M., and Rao, C. V. 2012. Nephroprotective activity of *Solanum xanthocarpum* fruit extract against gentamicin-induced nephrotoxicity and renal dysfunction in experimental rodents. *Asian Pacific Journal of Tropical Medicine*: 686-691.
- Ibrahim, Z. S., Nassan, M. A., and Soliman, M. M. 2016. Ameliorative effects of pomegranate on carbon tetrachloride hepatotoxicity in rats: a molecular and histopathological study. *Molecular Medicine Reports* 13 (4): 3653-3660.

- Ighodaro, O. M. and Akinloye, O. A. 2018. *Sapium ellipticum* (Hochst) Pax leaf extract: antioxidant potential in CCl<sub>4</sub>-induced oxidative stress model. *Bulletin of Faculty of Pharmacy, Cairo University* 56 (1): 54-59.
- Ighodaro, O. M. and Akinloye, O. A. 2018. First line defence antioxidants-superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPX): their fundamental role in the entire antioxidant defence grid. *Alexandria Journal of Medicine* 54 (4): 287-293.
- Islam, R., Hasan, N., Siddiqui, S., Rashid, M. M., Mahmud, S., Rahman, M., and Rahman, A. 2012. The black seed *Nigella sativa* Linnaeus: a study of the antioxidant activity of the essential oil and extracts. *Journal of Nature Science and Sustainable Technology* 7: 103-111.
- Katerji, M., Filippova, M., and Duerksen-Hughes, P. 2019. Approaches and methods to measure oxidative stress in clinical samples: research applications in the cancer field. *Oxidative Medicine and Cellular Longevity*. doi: 10.1155/2019/1279250.
- Khalil, I., Ghani, M., Khan, M. R., and Akbar, F. 2019. Evaluation of biological activities and in vivo amelioration of CCl<sub>4</sub> induced toxicity in lung and kidney with *Abutilon pannosum* (G. Forst.) Schltdl. in rat. *Journal of Ethnopharmacology* (In Press, Article ID: 112395).
- Khan, M. A. and Afzal, M. 2016. Chemical composition of *Nigella sativa* Linn: part 2 recent advances. *Inflammopharmacology* 24: 67–79. doi: 10.1007/s10787-016-0262-7.
- Kooti, W., Hasanzadeh-Noohi, Z., Sharafi-Ahvazi, N., Asadi-Samani, M., and Ashtary-Larky, D. 2016. Phytochemistry, pharmacology, and therapeutic uses of black seed (*Nigella sativa*). *Chinese Journal of Natural Medicines* 14(10): 732-745.

- Lan, H. Y. and Nikolic-Paterson, D. J. 2018. *Advances in Mechanisms of Renal Fibrosis*. Frontiers Media SA: 37-42.
- Li, X. 2012. Improved pyrogallol autoxidation method: a reliable and cheap superoxide scavenging assay suitable for all antioxidants. *Journal of Agricultural and Food Chemistry* 60: 6418-6424, doi: 10.1021/jf204970r.
- Litwack, G. 2017. *Human Biochemistry*. Academic Press. London: p. 616.
- Liu, X., Lu, J., Liao, Y., Liu, S., Chen, Y., He, R., Men, L., Lu, C., Chen, Z., Li, S., Xiong, G., and Yang, S. 2019. Dihydroartemisinin attenuates lipopolysaccharide-induced acute kidney injury by inhibiting inflammation and oxidative stress. *Biomedicine and Pharmacotherapy* 117, doi: 10.1016/j.biopha.2019.109070.
- Lokman, H. M., Monjur-Al-Hossain, A. S. M., Kumar, S. K., Arif, H., and Anisur, R. M. 2013. Phytochemical screening and the evaluation of the antioxidant, total phenolic content, and analgesic properties of the plant *Pandanus foetidus* (Family: Pandanaceae). *International Research Journal of Pharmacy* 4 (2): 170-172.
- Lottspeich, F. and Engels, J. W. 2018. *Bioanalytics: Analytical Methods and Concepts in Biochemistry and Molecular Biology*. John Wiley & Sons. Hoboken: p. 26.
- Lotze, M. T. and Thomson, A. W. 2011. *Measuring Immunity: Basic Science and Clinical Practice*. Elsevier. Amsterdam: p. 344.
- Lowry, O. H., Rosebrough, N. J., Farr, A. L., and Randall, R. J. 1951. Protein measurement with the Folin phenol reagent. *Journal of Biological Chemistry* 193: 265-275.
- Ma, C., Liu, C., Ahmed, A. F., Niu, Y., and Kang, W. Optimum extraction technology for the seed oil of *Nigella sativa* L. 2019. *Journal of Food Quality* 2592731. doi: 10.1155/2019/2592731.



- Ma, Jie-Qiong, Ding, J. Xiao, Zheng-Hua, and Liu, Chan-Min. 2014. Ursolic acid ameliorates carbon tetrachloride-induced oxidative DNA damage and inflammation in mouse kidney by inhibiting the STAT3 and NF- $\kappa$ B activities. *International Immunopharmacology* 21 (2): 389-395.
- Mahmoodzadeh, Y., Mazani, M., and Rezagholizadeh, L. 2017. Hepatoprotective effect of methanolic *Tanacetum parthenium* extract on CCl<sub>4</sub>-induced liver damage in rats. *Toxicology Reports* 4: 455-462.
- Malik, S. 2019. *Essential Oil Research: Trends in Biosynthesis, Analytics, Industrial Applications and Biotechnological Production*. Springer. New York: pp. 7-9.
- Mather, B. D., Viswanathana, K., Miller, K. M., and Longa, T. E. 2006. Michael addition reactions in macromolecular design for emerging technologies. *Progress in Polymer Science* 31 (5): 487-531.
- Mbarek, L. A., Mouse, H. A., Elabbadi, N., Bensalah, M., Gamouh, A., Aboufatima, R., Benharref, A., Chait, A., Kamal, M., Dalal, A., and Ziad, A. 2007. Anti-tumor properties of blackseed (*Nigella sativa* L.) extracts. *Brazilian Journal of Medical and Biological Research* 40: 839-847
- Meftah, S. 2011. Increase of lipofuscin formation via CCl<sub>4</sub>-induced oxidative damage in brain, kidney and liver of rats. *Clinical Biochemistry* 44 (13), Supplement: S364
- Mestry, S. N., Gawali, N. B., Pai, S. A., Gursahani, M. S., Dhodi, J. B., Munshi, R., and Juvekar, A. R. 2017. *Punica granatum* improves renal function in gentamicin-induced nephropathy in rats via attenuation of oxidative stress. *Journal of Ayurveda and Integrative Medicine*, doi: 10.1016/j.jaim.2017.09.006.
- Miguel, F., Augusto, A. C., and Gurgueira, S. A. 2009. Effect of acute vs chronic H<sub>2</sub>O<sub>2</sub>-induced oxidative stress on antioxidant enzyme activities. *Free Radical Research* 43 (4): 340-347

- Mitra, S. 2004. *Sample Preparation Techniques in Analytical Chemistry*. John Wiley & Sons. Hoboken: p. 145.
- Mohammed, N. K., Manap, M. Y. A., Tan, C. P., Muhialdin, B. J., Alhelli, A. M., and Hussin, A. S. M. 2016. The effects of different extraction methods on antioxidant properties, chemical composition, and thermal behavior of black seed (*Nigella sativa* L.) oil. *Evidence Based Complementary Alternative Medicine*. doi: 10.1155/2016/6273817.
- Mohan, V. R., Doss, A., and Tresina, P.S. 2019. *Ethnomedicinal Plants with Therapeutic Properties*. CRC Press. Boca Raton: pp. 197-198.
- Motaghd, M., Al-Hassan, F. M., and Hamid, S. S. 2013. Cellular responses with thymoquinone treatment in human breast cancer cell line MCF-7. *Pharmacognosy Research* 5(3): 200–206.
- Mukhopadhyay, D., Dasgupta, P., Roy, D. S., Palchoudhuri, S., Chatterjee, I., Ali, S., and Dastidar, S. G. 2016. Sensitive *in vitro* spectrophotometric hydrogen peroxide scavenging assay using 1,10-phenanthroline. *Free Radicals and Antioxidants* 6 (1): 124-132.
- Najib, A. 2018. *Ekstraksi Senyawa Bahan Alam*. Deepublish. Yogyakarta: p. 39.
- Noeman, S. A., Hamooda, H. E., and Baalash, A. A. 2011. Biochemical Study of Oxidative Stress Markers in the Liver, Kidney and Heart of High Fat Diet Induced Obesity in Rats. *Diabetology & Metabolic Syndrome* 3, doi:10.1186/1758-5996-3-17.
- Opie, L.H. 2014. Chapter 2- Cardiac Metabolism in Health and Disease. *Cellular and Molecular Pathobiology of Cardiovascular Disease*: 23-36.
- Otles, S. 2016. *Handbook of Food Analysis Instruments*. CRC Press. Boca Raton: p. 97.

- Peter, K. V. 2004. *Handbook of Herbs and Spices, Volume 2*. Woodhead Publishing Ltd. Cambridgeshire: pp.210, 211.
- Peter, K. V. 2012. *Handbook of Herbs and Spices*. Elsevier. Amsterdam: p. 3.
- Radulović, N. S., Randjelović, P. J., Stojanović, N. M., Ilić, I. R., Miltojević, A. B., Stojković, M. B., and Ilić, M. 2015. Effect of two esters of N-methylantranilic acid from Rutaceae species on impaired kidney morphology and function in rats caused by CCl<sub>4</sub>. *Life Sciences* 135: 110-117.
- Ramzan, I., 2015. *Phytotherapies: Efficacy, Safety, and Regulation*. John Wiley & Sons. Hoboken: p. 160.
- Rather, A. A. and Jain, K. 2018. Preliminary phytochemical screening and *in vitro* antioxidant activity of *Nigella sativa* and *Allium cepa* oil. *Pharmaceutical and Biosciences Journal*, doi: 10.20510/ukjpb/6/i1/173527.
- Reznick, A. Z., Packer, L., Sen, C. K., Holloszy, J. O., and Jackson, M. J. 2012. *Oxidative Stress in Skeletal Muscle*. Birkhäuser. Berlin: p. 107.
- Rjiba-Touati, K., Ayed-Boussema, I., Belarbia, A., Azzebi, A., Achour, A., and Bacha, H. 2013. Protective effect of recombinant human erythropoietin against cisplatin cytotoxicity and genotoxicity in cultured Vero cells. *Experimental and Toxicologic Pathology* 65: 181–187.
- Roesler, R. 2011. Effect of extracts from araticum (*Annona crassiflora*) on CCl<sub>4</sub>-induced liver damage in rats. *Food Science and Technology* 31 (1): 93-100.
- Rohman, A. 2018. *Validasi Penjaminan Mutu Metode Analisis Kimia*. UGM Press. Yogyakarta: pp. 14- 15.
- Roopan, S. M. and Madhumitha, G. 2018. *Bioorganic Phase in Natural Food: An Overview*. Springer. New York: pp. 44-54.
- Ros, J. 2017. *Protein Carbonylation: Principles, Analysis, and Biological Implications*. John Wiley & Sons. Hoboken.

- Russell, E. G. and Cotter, T. G. 2015. Chapter Six New Insight into the Role of Reactive Oxygen Species (ROS) in Cellular Signal-Transduction Processes. *International Review of Cell and Molecular Biology* 319.
- Safhi, M. M. 2018. Nephroprotective effect of Zingerone against CCl<sub>4</sub>-induced renal toxicity in Swiss albino mice: molecular mechanism. *Oxidative Medicine & Cell Longevity*, doi: 10.1155/2018/2474831.
- Sahak, M. K. A., Kabir, N., Abbas, G., Draman, S., Hashim, N. H., and Adli, D. S. H. 2016. The role of *Nigella sativa* and its active constituents in learning and memory (review). *Evidence-Based Complementary and Alternative Medicine*, doi: 10.1155/2016/6075679.
- Senthilraja, P. and Kandasamy, K. 2015. In vitro cytotoxicity MTT assay in Vero, HepG2 and MCF -7 cell lines study of Marine Yeast. *Journal of Applied Pharmaceutical Science* 5(3): 80- 84.
- Sies, H. 2018. On the history of oxidative stress: Concept and some aspects of current development. *Current Opinion in Toxicology* 7:122–126.
- Sjöström, E. and Alén, R. (eds). 1998. *Analytical Methods in Wood Chemistry, Pulping, and Papermaking*. Springer Science & Business Media. Berlin: p. 130.
- Soto-Hernandez, M., Palma-Tenango, M. and Garcia-Mateos, M. del R. 2017. *Phenolic Compounds - Biological Activity*. InTech. London: pp.1-24.
- Stace, C. A. 1991. *Plant Taxonomy and Biosystematics*. Cambridge University Press, Cambridgeshire: pp. 89 & 99.
- Suckow, M. A., Weisbroth, S. H., and Franklin, C. L. 2005. *The Laboratory Rat*. Elsevier. Amsterdam.
- Suleria, H. A. R., Goyal, M. R., and Butt., M. S. 2019. *Phytochemicals from Medicinal Plants: Scope, Applications, and Potential Health Claims*. CRC Press. Boca Raton.

- Sülsen, V. A. and Martino, V. S. 2018. *Sesquiterpene Lactones: Advances in their Chemistry and Biological Aspects*. Springer. New York: p. 309-315.
- Sundaram, A., Keah, L. S., Sirajudeen, K. N. S., and Singh, H. J. 2012. Upregulation of catalase and downregulation of glutathione peroxidase activity in the kidney precede the development of hypertension in pre-hypertensive SHR. *Hypertension Research* 36: 213–218.
- Surai, P. F. 2016. Antioxidant systems in poultry biology: superoxide dismutase. *Journal of Animal Research and Nutrition* 1 (18): 1-17.
- Tarr, M. and Samson, F. 2013. *Oxygen Free Radicals in Tissue Damage*. Springer Science & Business Media. Berlin: pp. 182-184.
- Tesarova, H., Svobodova, B., Kokoska, L., Marsik, P., Pribylovab, M., Landab, P., and Vadlejch, J. 2011. Determination of oxygen radical absorbance capacity of black cumin (*Nigella sativa*) seed quinone compounds. *Natural Product Communications* 6 (2): 213 – 216.
- Tirkey, N., Pilkhwal, S., Kuhad, A., and Chopra, K. 2005. Hesperidin, a citrus bioflavonoid, decreases the oxidative stress produced by carbon tetrachloride in rat liver and kidney. *BioMed Central Pharmacology* 5 (2), doi: 10.1186/1471-2210-5-2.
- Tisserand, R. and Young, R. 2014. *Essential Oil Safety: A Guide for Health Care Professionals 2nd edition*. Church Livingstone Elsevier. Edindburgh: p. 218.
- Tiwari, B. K., Brunton, N. P., and Brennan, C. 2013. *Handbook of Plant Food Phytochemicals: Sources, Stability and Extraction*. John Wiley & Sons. Hoboken: pp. 1901-1931.
- Toth, P. P. and Raghavan, A. 2012. *Glucolipotoxicity and the Heart, An Issue of Heart Failure Clinics*. Elsevier. Amsterdam: p. 553.

- Ueno, T. and Watanabe, Y. 2013. *Coordination Chemistry in Protein Cages: Principles, Design, and Applications*. John Wiley & Sons. Hoboken: p. 231.
- Ustunol, Z. 2014. *Applied Food Protein Chemistry*. John Wiley & Sons. Hoboken.
- Vazquez-Medina, J. P. 2018. Chapter 3 Redox Signaling and the Onset of the Inflammatory Cascade. *Immunity and Inflammation in Health and Disease Emerging Roles of Nutraceuticals and Functional Foods in Immune Support*: 37-42.
- Vermerris, W. and Nicholson, R. 2007. *Phenolic Compound Biochemistry*. Springer Science & Business Media. Berlin: p. 183.
- Voit, E. O. 2012. *A First Course in Systems Biology*. Garland Science. Los Angeles: pp. 189-195.
- Wilcox, C. S., Ber T., Himmelfarb, J., Mitch, W. E., Murphy, B., Salant, D., and Yu, A. S. L. 2008. *Therapy in Nephrology and Hypertension: A Companion to Brenner & Rector's The Kidney 3<sup>rd</sup> edition*. Saunders. Philadelphia: pp. 731-733.
- Wong, D. W.S. 1995. *Food Enzymes: Structure and Mechanism*. Springer Science & Business Media. Berlin: p. 346.
- Xiao, J. 2018. *Muscle Atrophy*. Springer. New York: p. 288.
- Yessuf, A. M. 2015. Phytochemical extraction and screening of bio active compounds from black cumin (*Nigella sativa*) seeds extract. *American Journal of Life Sciences* 3(5): 358-364. doi: 10.11648/j.ajls.
- Yousef, M. I., Khalil, D. K. A. M., and Abdou, H. M. 2018. Neuro- and nephroprotective effect of grape seed proanthocyanidin extract against carboplatin and thalidomide through modulation of inflammation, tumor suppressor protein p53, neurotransmitters, oxidative stress and histology. *Toxicology Reports* 5: 568–578.



Yoshioka, H., Usuda, H., Fukuishi, N., Nonogaki, T., and Onosaka, S. 2016. Carbon tetrachloride-induced nephrotoxicity in mice is prevented by pretreatment with zinc sulfate. *Biological and Pharmaceutical Bulletin* 39 (6): 1042–1046.