

DAFTAR PUSTAKA

- Agoes, A. 2010. *Tanaman Obat Indonesia*. Jilid 2. Salemba Medika. Jakarta.
- Aguilar, T. A. F., B. C. H. Navarro, dan J. A. M. Perez. 2016. Endogenous Antioxidants: A Review of their Role in Oxidative Stress. Dalam *A Master Regulator of Oxidative Stress: The Transcription Factor Nrf2*. Editor J. A. M. Gonzalez, A. M. Gonzalez, dan E. O. M. Santillan. Intech Open. Croatia.
- Ahmad, R. S., M. B. Hussain, M. T. Sultan, M. S. Arshad, M. Waheed, M. A. Shariati, S. Plygun, dan M. H. Hashempur. 2020. Biochemistry, Safety, Pharmacological Activities, and Clinical Applications of Turmeric: A Mechanistic Review. Dalam *Evidence-Based Complementary and Alternative Medicine*. Editor G. Calapai. Hindawi. London.
- Anwar, H., G. Hussain, dan I. Mustafa. 2018. Antioxidants from Natural Sources. Dalam *Antioxidants in Foods and Its Application*. Editor E. Shalaby dan G. M. Azzam. Intech Open. London.
- Arjito, I. P. D. 2009. Analisis Protein Jaringan Otak Sapi dengan Metode Isolasi, Purifikasi dan Visualisasi. *Jurnal GaneÇ Swara* 3(2): 55-58.
- Aslanturk, O. S. 2018. *In Vitro* Cytotoxicity and Cell Viability Assays: Principles, Advantages, and Disadvantages. Dalam *Genotoxicity: A Predictable Risk to Our Actual World*. Editor M. L. Larramendy dan S. Soloneski. Intech Open. Croatia.
- Astuti, W. 2008. Suhu Optimum Protease dari Jahe Merah (*Zingiber officinale* Rosc). *Jurnal Kimia Mulawarman* 5(2): 1693-5616.
- Atma, Y. 2018. *Prinsip Analisis Komponen Pangan: Makro & Mikro Nutrien*. Cetakan Pertama. Deepublish. Yogyakarta.
- Awwaly, K. U. A. 2017. *Protein Pangan Hasil Ternak dan Aplikasinya*. UB Press. Malang.
- Azadmanesh, J. dan G. E. O. Borgstahl. 2019. Superoxide Dismutase, Mitochondrial Dysfunction, and Neurodegenerative Disease. Dalam *Handbook of Mitochondrial Dysfunction*. Editor S. I. Ahmad. Edition First. CRC Press. Ohio.

- Baharvand, H. B. dan N. Aghdami. 2015. *Stem-Cell Nanoengineering*. Wiley Blackwell. New Jersey.
- Belongia, M. T. dan P. N. Ireland. 2015. A Working Solution to The Question of Nominal GDP Targeting. *Macroeconomic Dynamics* 19(3): 508-534.
- Bintang, W. 2010. *Biokimia: Teknik Penelitian*. Edisi Pertama. Erlangga. Jakarta.
- Boonmee, A., C. Srisomsap, A. Karnchanatat, dan P. Sangvanich. 2011. An Antioxidant Protein in *Curcuma comosa* Roxb. Rhizomes. *Food Chemistry* 124(2): 476-480.
- Bouayed, J. dan T. Bohn. 2010. Exogenous Antioxidants-Double-Edge Swords in Cellular Redox State. *Oxidative Medicine and Cellular Longevity* 3(4): 228-237.
- Candas, D. dan J. J. Li. 2014. MnSOD in Oxidative Stress Response-Potential Regulation via Mitochondrial Protein Influx. *Antioxidants & Redox Signaling* 20(10): 1599-1617.
- Chamchoy, K., D. Pakotiprapha, P. Pumirat, U. Leartsakulpanich, dan U. Boonyuen. 2019. Application of WST-8 based colorimetric NAD(P)H detection for quantitative dehydrogenase assays. *BMC Biochemistry* 20(4): 1-14.
- Choi, H., S. J. W. Kim, Y. N. Cha, dan C. Kim. 2006. A Quantitative Nitroblue Tetrazolium Assay for Determining Intracellular Superoxide Anion Production in Phagocytic Cells. *Journal of Immunoassay and Immunochemistry* 27(1): 31-44.
- Coligan, J., B. Dunn, H. Ploengh, D. Speicher, dan P. Wingfield. 2007. *Current Protocols in Protein Sciences*. Volume 1. John Wiley & Sons. New York.
- Cue, J. T. M. 2009. Theory and Use of Hydrophobic Interaction Chromatography in Protein Purification Applications. Dalam *Methods in Enzymology: Guide to Protein Purification*. Editor R. R. Burgess dan M. P. Deutscher. Second Edition Volume 463. Academic Press. United States of America.

- Damanis, F. V. M., D. S. Wewengkang, dan I. Antasionasti. 2020. Uji Aktivitas Antioksidan Ekstrak Etanol Ascidian *Hedmia Momus* dengan Metode DPPH (*1,1-difenil-2-picrylhydrazyl*). *Pharmakon* 9(3): 464-469.
- Erlindawati, Safrida, dan Mukhlis. 2018. *Potensi Antioksidan sebagai Antidiabetes*. Siah Kuala University Press. Banda Aceh.
- Fannuchi, M. V. 2014. Development of Antioxidant and Xenobiotic Metabolizing Enzyme System. Dalam *The Lung: Development, Aging and the Environment*. Editor R. Harding dan K. E. Pinkerton. Second Edition. Academic Press. United States of America.
- Farrell, S. O. dan L. E. Ranallo. 2000. *Experiments in Biochemistry: A Hands-On Approach*. Second Edition. Thomson Brooks/Cole. USA.
- Febriyanti, M., B. W. Sanjaya, Supriyatna, A. Diantini, dan A. Subarnas. 2013. Aktivitas Antioksidan Ekstrak Etanol dan Fraksi Ekstrak Etanol Daun dan Fraksi Ekstrak Etanol Daun Ekor Kucing (*Acalypha hispida* Burm. f.) dengan Metode Penghambatan Reduksi *Water Soluble Tetrazolium Salt* (WST-1). *Fitofarmaka* 3(2): 1-6.
- Fridovich, I. 2004. Superoxide Dismutase. Dalam *Encyclopedia of Biological Chemistry*. Editor W. J. Lennarz dan M. D. Lane. Academic Press. United States of America.
- Gharavi, N., S. Haggarty, dan A. O. S. E. Kadi. 2007. Chemoprotective and Carcinogenic Effects of tert-Butylhydroquinone and Its Metabolites. *Current Drug Metabolism* 8(1): 1-7.
- Gracia, J. M. 2014. *Post-Genomic Cardiology*. Second Edition. Academic Press. United States of America.
- Haddad, M. dan R. Noviyanti. 2001. Temu Ireng (*Curcuma aeruginosa* Roxb). Dalam *Tumbuhan Obat Indonesia: Penggunaan dan Khasiatnya*. Editor Supriadi. Edisi 1. Pustaka Populer Obor. Jakarta.
- Haddad, N. I. A. dan Q. Yuan. 2005. Purification and Some Properties of Cu, Zn, Superoxide Dismutase from *Radix lithospermi* Seed, Kind of Chinese Traditional Medicine. *Journal of Chromatography* 818(2): 123-131.

- Hadisaputri, Y. E. dan R. Abdulah. 2020. *Sel Kultur Edisi Uji Perkembangbiakan*. Deepublish. Sleman.
- Hariana, A. 2013. *232 Tumbuhan Obat dan Khasiatnya*. Cetakan 1 (Edisi Revisi). Penebar Swadaya. Jakarta.
- Haryanto, S. 2012. *Ensiklopedi Tanaman Obat Indonesia*. Cetakan Pertama. Palmall. Yogyakarta.
- Hussain, T., B. Tan, Y. Yin, F. Blachier, M. C. B. Tossou, dan N. Rahu. 2016. Oxidative Stress and Inflammation: What Polyphenols Can Do for Us? Dalam *Oxidative Medicine and Cellular Longevity*. Editor V. Rupasinghe. Hindawi. London.
- Ifemeje, J. C., S. C. Udedi, A. U. Okechukwu, A. C. Nwaka, C. B. Lukong, I. N. Anene, C. Egbuna, dan I. C. Ezeude. 2015. Determination of Total Protein, Superoxide Dismutase, Catalase Activity and Lipid Peroxidation in Soil Macro-fauna (Earthworm) from Onitsha Municipal Open Waste Dump. *Journal of Scientific Research & Reports* 6(5): 394-403.
- Indrayati, A., D. Purwaningsih, dan R. Bimantara. Aktivitas Ekstrak Kasar Enzim Fibrinolitik Bakteri *Bacillus cereus* yang Diisolasi dari Air Hutan Mangrove Maroon Edupark Semarang secara *In Vitro*. *Jurnal Farmasi Indonesia* 19(1): 110-112.
- Irianti, T. T., Kuswandi, S. Nuranto, dan Purwanto. 2021. *Antioksidan dan Kesehatan*. Gajah Mada University Press. Yogyakarta.
- Islam, M. N., A. Rauf, F. I. Fahad, T. B. Emran, S. Mitra, A. Olatunde, M. A. Shariati, M. Rebezov, K. R. R. Rengsam, dan M. S. Mubarak. 2021. Superoxide dismutase: an updated review on its health benefits and industrial applications. *Critical Reviews in Food Science and Nutrition* 62(1): 1-9.
- Itoh, D. N, Yoshimoto, dan S. Yamamoto. 2019. Retention Mechanism of Proteins in Hydroxyapatite Chromatography-Multimodal Interaction Based Protein Separations: A Model Study. *Current Protein and Peptide Science* 20(1): 75-81.
- Jeane, M., I. A. R. A. Asih, dan N. W. Bogoriani. 2018. Asupan Glikosida Flavonoid Terong Belanda (*Solanum betaceum* Cav.) Terhadap Aktivitas Superoksida Dismutase dan Kadar Malondialdehid Tikus Wistar yang Diberi Aktivitas Fisik Maksimal. *Jurnal Media Sains* 2(1): 32-36.

- Kanematsu, S., M. Okayasu, dan S. Ueno. 2013. Atypical cytosol-localized Fe-superoxide dismutase in the moss *Pogonatum inflexum*. *Bulletin of Minamikyushu University* 43(A): 23-31.
- Kementerian Kesehatan Republik Indonesia. 2015. *Pedoman Budidaya, Panen dan Pascapanen Tanaman Obat*. KEMENKES RI. Jakarta.
- Kementerian Kesehatan Republik Indonesia. 2020. *Farmakope Indonesia*. Edisi VI. KEMENKES RI. Jakarta.
- Keputusan Menteri Kesehatan Republik Indonesia No. HK.01.07/MENKES/187/2017 *Formularium Ramuan Obat Tradisional Indonesia*. 10 April 2017. Jakarta.
- Khan, H. U. 2012. The Role of Ion Exchange Chromatography in Purification and Characterization of Molecules. Dalam *Ion Exchange Technologies*. Editor A. Kilisilioglu. Intech Open. Croatia.
- Krishna, G. 2012. *Livestock Nutrition: Analytical Techniques*. New India Publishing Agency. New Delhi.
- Lewandowska, J. K., M. Kasperczak, B. Bogut, R. Heider, W. T. Laber, W. Laber, dan M. P. Borowicz. 2020. The Impact of Health Resort Treatment on the Nonenzymatic Endogenous Antioxidant System. Dalam *Oxidative Medicine and Cellular Longevity*. Editor M. Curcio. Hindawi. London.
- Lewis, T. dan W. L. Stone. 2022. *Biochemistry, Proteins Enzymes*. StatPearls Publishing. Las Vegas.
- Li, H. Y., Y. Zhao, Y. Cao, W. N. Wang, dan D. Q. Zhao. 2010. Purification and Characterization of Superoxide Dismutase from *Panax ginseng*. *Biomedical Chromatography* 24(11): 1203-1207.
- Lianah. 2019. *Biodiversitas Zingiberaceae: Mijen Kota Semarang*. Deepublish. Yogyakarta.
- Lin, M. W., M. T. Lin, dan C. T. Lin. 2002. Copper/Zinc-Superoxide Dismutase from Lemon cDNA and Enzyme Stability. *Journal of Agricultural and Food Chemistry* 50(25): 7264-7270.
- Liu, X. dan C. Kokare. 2017. Microbial Enzymes of Use in Industry. Dalam *Biotechnology of Microbial Enzymes: Production*,

Biocatalysis, and Industrial Applications. Editor G. Brahmachari. Academic Press. United States of America.

- Lourenco, S. C., M. M. Martins, dan V. D. Alves. 2019. Antioxidants of natural plant origins: From sources to food industry applications. *Molecules* 24(22): 14-16.
- Lowry, O. H., N. J. Rosebrough, A. L. Farr, dan R. J. Randall. 1951. Protein Measurement with The Folin Phenol Reagent. *Journal of Biological Chemistry* 193(1): 265-275.
- Lubos, E., J. Loscalzo, dan D. E. Handy. 2011. Glutathione Peroxidase-1 in Health and Disease: From Molecular Mechanisms to Therapeutic Opportunities. *Antioxidants & Redox Signaling* 15(7): 1957-1997.
- Martin, N. C., A. A. Pirie, L. V. Ford, C. L. Callaghan, K. McTurk, D. Lucy, dan D. G. Scrimger. 2006. The Use of Phosphate Buffered Saline for The Recovery of Cells and Spermatozoa from Swabs. *Science & Justice* 46(3): 179-184.
- Martoharsono, S. 1985. *Biokimia*. Jilid 1. Gadjah Mada University Press. Yogyakarta.
- Masruroh, H., U. D. Masruroh, F. S. Nugraheni, dan V. Paramita. 2018. Analisa Kadar Lemak Dalam Susu Perah Sapi Menggunakan Gaya Sentrifugasi. *METANA* 14(1): 25-30.
- Mathew, S. dan T. E. Abraham. 2006. Studies on the antioxidant activities of cinnamon (*Cinnamomum verum*) bark extracts, through various in vitro models. *Food Chemistry* 94(4): 520-528.
- Metzler, D. E. 2003. *Biochemistry: The Chemical Reactions of Living Cells*. Academic Press. Buringlinton.
- Miller, A. F. 2012. Superoxide dismutases: Ancient enzymes and new insights. *FEBS Lett* 586(1): 585-595.
- Mondola, P., S. Damiano, A. Sasso, dan M. Santillo. 2016. The Cu, Zn Superoxide Dismutase: Not Only a Dismutase Enzyme. *Frontiers in Physiology* 7(594): 1-8.
- Moon-ai, W., P. Niyomploy, dan A. Karnchanatat. 2011. Purification and Characterization of Superoxide Dismutase from the Rhizome of *Curcuma aeruginosa* Roxb. *The 12 th Graduate Research Conference, Khan Koen University*: 659-665.

- Moon-ai, W., P. Niyomploy, R. Boonsombat, P. Sangvanich, dan A. Karnchanatat. 2012. A Superoxide Dismutase Purified from the Rhizome of *Curcuma aeruginosa* Roxb. as Inhibitor of Nitric Oxide Production in the Macrophage-like RAW 264.7 Cell Line. *Applied Biochemistry and Biotechnology* 166(8): 2138-2155.
- Moussa, Z., Z. M. A. Judeh, dan S. A. Ahmed. 2019. Nonenzymatic Exogenous and Endogenous Antioxidants. Dalam *Free Radical Medicine and Biology*. Editor K. Das, S. Das, M. S. Biradar, V. Bobbarala, dan S. S. Tata. Volume 10. Intech Open. London.
- Mulgund, A., S. Doshi, A. Agarwal. 2015. The Role of Oxidative Stress in Endometriosis. Dalam *Handbook of Fertility: Nutrition, Diet, Lifestyle, and Reproductive Health*. Editor R. R. Watson. Academic Press. United States of America.
- Muller, L. dan V. Bohm. 2011. Antioxidant Activity of β -Carotene Compounds in Different *in Vitro* Assays. *Molecules* 16(2): 1055-1069.
- Munadia dan V. Aulianshah. 2021. Perbandingan Aktivitas Antioksidan Jus dan Infused Water Apel Hijau (*Malus sylvestris* Mill.). *Jurnal JIFS : Jurnal Ilmiah Farmasi Simplisia* 1(1): 8-11.
- Niamah, K. 2021. Pengaruh Pemberian Ekstrak Metanol Temu Ireng (*Curcuma aeruginosa* Roxb.) terhadap Gambaran Histopatologi Lambung Tikus Putih (*Rattus novergicus*) Strain Wistar yang Diinduksi Indometasin. *Skripsi*. Universitas Islam Negeri Maulana Malik Ibrahim. Malang.
- Nimse, S. B. dan D. Pal. 2015. Free Radicals, Natural Antioxidants, and Their Reaction Mechanisms. *RSC Advances* 5 (35): 27986-28006.
- Niyomploy, P., R. Boonsombat, Karnchanatat, dan P. Sangvanich. 2014. A Superoxide Dismutase Purified from the Roots from *Stemona tuberosa*. *Preparative Biochemistry & Biotechnology* 44(7): 663-679.
- Noble, J. E. dan M. J. A. Bainley. 2009. Quantitation of Protein. Dalam *Methods in Enzymology: Guide to Protein Purification*. Editor B. R. Richard dan M. P. Deutscher. Volume 463. Academic Press. United States of America.

- Nurhayati, S., T. Kisnanto, dan M. Syaifudin. 2011. Superoksida Dismutase (SOD) : Apa dan Bagaimana Peranannya dalam Radioterapi. *Buletin Alara* 13(2): 67-74.
- O'Fagain, C., P. M. Cummins, dan B. F. O'Connor. 2018. Gel-Filtration Chromatography. Dalam *Protein Chromatography: Methods and Protocols*. Editor D. Walls dan S. T. Loughran. Second Edition. Springer. New York.
- Patandung, R. 2019. Potensi Enzim Superoksida Dismutase Dari Buah Tomat (*Solanum lycopersicum*) Untuk Memperbaiki Kerusakan Kolagen Pada Sel Fibroblas 3T3 yang Dipaparkan Sinar Ultraviolet A. *Tesis*. Universitas Setia Budi. Surakarta.
- Pehlivian, F. E. 2016. Vitamin C: An Antioxidant Agent. Dalam *Vitamin C*. Editor A. H. Hamza. Intech Open. Croatia.
- Perez, J. C. dan C. Prakash. 2020. Recent advances in mass spectrometric and other analytical techniques for the identification of drug metabolites. Dalam *Identification and Quantification of Drugs, Metabolites, Drug Metabolizing Enzymes, and Transporters: Concept, Methods, and Translational Sciences*. Editor S. Ma dan S. K. Chowdhury. Second Edition. Elsevier B.V. Netherlands.
- Peskin, A. V. dan C. C. Winterbourn. 2000. A microtiter plate assay for superoxide dismutase using a water-soluble tetrazolium salt (WST-1). *Clinica Chimica Acta* 293(1): 157-166.
- Prastanto, H., A. F. Falaah, dan D. R. Maspanger. 2014. Pemekatan Lateks Kebun secara Cepat dengan Proses Sentrifugasi Putaran Rendah. *Jurnal Penelitian Karet* 32(2): 181-188.
- Pratiwi, M. E. 2019. Potensi Enzim Superoksida Dismutase dari Biji Jagung (*Zea mays* L.) untuk Perbaikan Kerusakan Kolagen pada Sel Fibroblast 3T3 yang Dipaparkan Sinar Ultraviolet A. *Tesis*. Universitas Setia Budi. Surakarta.
- Puspitasari, O. dan Wuryanti. 2010. Isolasi Enzim L-Asparaginase dari Rimpang Temulawak (*Curcuma xanthorrhiza* Roxb.) dan Uji Potensi terhadap Kultur Sel Leukemia Tipe K562. *Jurnal Kimia Sains dan Aplikasi* 13(2): 61-65.
- Qwele, K., A. Hugo, S. O. Oyedemi, B. Moyo, P. J. Masika, dan V. Muchenje. 2013. Chemical composition, fatty acid content and

antioxidant potential of meat from goats supplemented with Moringa (*Moringa oleifera*) leaves, sunflower cake and grass hay. *Meat Science* 93(3): 455-462.

- Rafat, A., K. Philp, dan S. Muniandy. 2014. Antioxidant Properties of Indigenous Raw and Fermented Salad Plants. *International Journal of Food Properties* 14(3): 599-608.
- Rahman, H., T. G. Kartawinata, dan E. Julianti. 2012. Uji Aktivitas Enzim Superoksida Dismutase dalam Ekstrak Mesokarp Buah Merah (*Pandanus conoideus* Lamarck) Menggunakan Densitometri Citra Elektroforegram. *Acta Pharmaceutica Indonesia* 37(2): 43-47.
- Rahmasari, D., Wijanarka, S. Pujiyanto, N. Rahmani, dan Yopi. 2016. Pemurnian Parsial dan Karakterisasi Amilase dari Bakteri Laut *Arthrobacter arilaitensis* LBF-003. *Jurnal Biologi Indonesia* 12(1): 129-136.
- Rakhmawati, A. dan E. Yulianti. 2012. Eksplorasi Bakteri Termofilik Pasca Erupsi Merapi sebagai Penghasil Enzim Ekstraseluler. *Jurnal Penelitian Saintek* 17(1): 1-12.
- Ramadhan, P. 2015. *Mengenal Antioksidan*. Graha Ilmu. Yogyakarta.
- Ramasamy, S. dan K. Pakshirajan. 2022. Product evaluation: cytotoxicity assays. Dalam *Biomedical Product and Materials Evaluation: Standards and Ethics*. Editor P. V. Mohanan. Elsevier. United Kingdom.
- Righetti, P. G. dan E. Boschetti. 2013. *Low-Abundance Proteome Discovery*. Elsevier Academic Press. California.
- Romualdo, A., Wuryanti, dan Suprihati. 2010. Uji Aktivitas Isolat L-Asparaginase Dari Rimpang Temulawak (*Curcuma xanthorrhiza* Roxb) Terhadap Sel Hela. *Jurnal Kimia Sains dan Aplikasi* 13(2): 41-45
- Rowe, R. C., P. J. Sheskey, dan S. C. Owen. 2006. *Handbook of Pharmaceutical Excipients*. Fifth Edition. Pharmaceutical Press. USA.
- Roychowdhury, R., M. H. Khan, dan S. Choudhury. 2019. Physiological and Molecular Responses for Metalloid Stress in Rice-A Comprehensive Overview. Dalam *Advances in Rice*

- Research for Abiotic Stress Tolerance*. Editor M. Hasanuzzaman, M. Fujita, K. Nahar, dan J. K. Biswas. Woodhead Publishing. India.
- Santoso, H. B. 2008. *Ragam & Khasiat Tanaman Obat*. Cetakan Pertama. Agro Media Pustaka. Jakarta.
- Santoso, H. B. 2019. *Seri Mukjizat Rimpang: Rimpang Temu Hitam*. Pohon Cahaya Semesta. Yogyakarta.
- Saptarini, D. 2019. Penapisan Bakteri Penghasil Superoksida Dismutase (SOD) dari Air Hutan Mangrove Maron Edupark Semarang. *Skripsi*. Universitas Setia Budi. Surakarta.
- Sari, A. P. dan U. Supratman. 2022. Phytochemistry and Biological Activities of *Curcuma aeruginosa* (Roxb.). *Indonesian Journal of Chemistry* 22(2): 576-598.
- Sarip, M., T. T. Nugroho, dan H. Y. Teruna. 2014. Isolasi, Uji Aktivitas, dan Aktivitas Spesifik Enzim Selulase *Penicillium sp.* LBKURCC27 Semimurni Melalui Pengendapan $(\text{NH}_4)_2\text{SO}_4$. *Jurnal Online Mahasiswa (JOM)* 1(1): 1-6.
- Sembiring, T., I. Dayana, dan M. Rianna. 2019. *Alat Penguji Material*. Guepedia Publisher. Bogor.
- Setyoko, H. dan B. Utami. 2016. Isolasi dan Karakterisasi Enzim Selulase Cairan Rumen Sapi untuk Hidrolisis Biomassa. *Proceeding Biology Education Conference* 13(1): 863-867.
- Shafeeq, S. dan T. Mahboob. 2021. 2,4-Dichlorophenoxyacetic acid induced hepatic and renal toxicological perturbations in rat model: Attenuation by selenium supplementation. *Toxicology and Industrial Health* 37(3): 152-163.
- Sharma, I. dan P. Ahmad. 2014. Catalase. Dalam *Oxidative Damage to Plants: Antioxidant Networks and Signaling*. Editor P. Ahmad. Academic Press. United States of America.
- Sharma, S., S. Bahuguna, N. Kaur, dan N. Chaudhary. 2014. Biochemical Aspects of Superoxide Dismutase Isolated from *Amaranthus spinosus*: A Therapeutically Important Plant. *International Journal of Genetic Engineering and Biotechnology* 5(1): 35-42.

- Shen, C. H. 2019. *Diagnostic Molecular Biology*. Academic Press. London.
- Sikka, S. C. 2004. Role of Oxidative Stress and Antioxidants in Andrology and Assisted Reproductive Technology. *Journal of Andrology* 25(1): 5-18.
- Simpson, M. G. 2006. *Plant Systematics*. Elsevier Academic Press. California.
- Sinbad, O. O., A. A. Folorunsho, O. L. Olabisi, O. A. Ayoola, dan E. J. Temitope. 2019. Vitamins as Antioxidants. *Journal of Food Science and Nutrition Research* 2(3): 214-235.
- Stahl, W. dan H. Sies. 2003. Antioxidant Activity of Carotenoids. *Molecular Aspects of Medicine* 24(6): 345-351.
- Steenis, C. G. G. J. 2013. *Flora: Untuk Sekolah di Indonesia*. Balai Pustaka. Jakarta Timur.
- Sugahara, S., K. Fukuhara, Y. Tokunaga, S. Tsutsumi, Y. Ueda, M. Ono, K. Kurogi, Y. Sakakibara, M. Suiko, M. C. Liu, dan S. Yasuda. 2018. Radical scavenging effects of 1-naphthol, 2-naphthol, and their sulfate-conjugates. *The Journal of Toxicological Science*. 43(3): 213-221.
- Sultan, S. M., M. R. R. de Planque, P. Ashburn, dan H. M. H. Chong. 2017. Effect of Phosphate Buffered Saline Solutions on Top-Down Fabricated ZnO Nanowire Field Effect Transistor. Dalam *Journal of Nanomaterials*. Editor S. Singh. Hindawi. London.
- Sutrisno, A. 2017. *Teknologi Enzim*. UB Press. Malang.
- Tamari, Y., H. Nawata, E. Inoue, A. Yoshimura, H. Yoshii, G. Kashino, M. Seki, T. Enomoto, M. Watanabe, dan K. Tano. 2012. Protective roles of ascorbic acid in oxidative stress induced by depletion of superoxide dismutase in vertebrate cells. *Free Radical Research* 47(1): 1-7.
- Tistama, R. dan W. Minati. 2017. Protein Lateks *Hevea Brasiliensis* sebagai Fungisida untuk Pengendalian Penyakit Tanaman. *Indonesian Journal of Natural Rubber Research* 35(1): 39-48.
- Traber, M. G. dan J. Atkinson. 2007. Vitamin E, Antioxidant and Nothing More. *Free Radical Biology & Medicine* 43(1): 4-15.

- Traber, M. G. dan J. F. Stevens. 2011. Vitamin C and E: beneficial effects from a mechanistic perspective. *Free Radical Biology & Medicine* 51(5): 1000-1013.
- Treiber, N., P. Maity, K. Singh, F. Ferchiu, M. Wlaschek, dan K. Scharffetter-Kochanek. 2012. The Role of Manganese Superoxide Dismutase in Skin Aging. *Dermato-Endocrinology* 4(3): 232-235.
- Triana, R. 2013. Pemurnian dan Karakterisasi Enzim Glukosa Oksidase dari Isolat Lokal *Aspergillus niger* (IPBCC.08.510). *Skripsi*. Institut Pertanian Bogor. Bogor.
- Urh, M., D. Simpson, dan K. Zhao. 2009. Affinity Chromatography: General Methods. Dalam *Methods in Enzymology: Guide to Protein Purification*. Editor R. R. Burgess dan M. P. Deutscher. Second Edition Volume 463. Academic Press. London.
- Wahyuningsih, K. A. 2011. Astaxanthin Memberikan Efek Proteksi Terhadap Photoaging. *Damianus Journal of Medicine* 10(3): 149-160.
- Walker J. M. 2002. *The Protein Protocols*. Secoud Edition. Humana Press. New Jersey.
- Walker, J. 2005. Protein structure, purification, characterization and function analysis. Dalam *Principles and Techniques of Biochemistry and Molecular Biology*. Editor K. Wilson dan J. Walker. Sixth Edition. Cambridge University Press. Cambridge.
- Westphal, A. H. dan W. J. H. van Berkel. 2021. Techniques for Enzyme Purification. Dalam *Biocatalysis for Practitioners: Techniques, Reactions and Application*. Editor G. de Gonzalo dan I. Lavandera. First Edition. Wiley-VCH. German.
- Weydert, C. J. dan J. J. Cullen. 2010. Measurement of Superoxide Dismutase, Catalase, and Glutathione Peroxidase in Cultured Cells and Tissue. *Nature Protocols* 5(1): 51-66.
- Widiastuti dan F. Aini. 2008. Penetapan Kada Besi (Fe) pada Bayam Hijau, Bayam Raja, dan Bayam Duri di Pasar MojoSongo. *Caraka Tani* 23(1): 25-29.

- Widowati, W., R. Safitri, R. Rumumpuk, M. Siahaan. 2005. Penapisan Aktivitas Superoksida Dismutase pada Berbagai Tanaman. *Jurnal Kedokteran Maranatha*. 5(1): 33-48.
- Widyastuti, Y., M. B. S. Adi, H. Widodo, T. Widayat, D. Subositi, N. Supriyati, S. Haryanti, A. Damayanti. 2011. *100 Top Tanaman Obat Indonesia*. Cetakan Pertama. Balai Besar Litbang Tanaman Obat dan Obat Tradisional. Tawangmangu.
- Wijaya, H. dan L. Junaidi. 2011. Antioksidan: Mekanisme Kerja dan Fungsinya dalam Tubuh Manusia. *Journal of Agro-Based Industry* 28(2): 44-55.
- Wingfield, P. T. 2016. Protein Precipitation Using Ammonium Sulfate. *Current Protocols in Protein Science* 34(1): A-3F.
- Young, A. J. dan G. L. Lowe. 2011. Carotenoids-Antioxidant Properties. *Antioxidant* 7(2): 10-13.
- Younus, H. 2018. Therapeutic potentials of superoxide dismutase. *International Journal of Health Sciences* 12(3): 88-93.
- Yuslianti, E. R. 2018. *Pengantar Radikal Bebas dan Antioksidan*. Edisi Pertama. Cetakan Pertama. Deepublish. Yogyakarta.