



DAFTAR PUSTAKA

- Abdelmonaem, M., Hatem, B., Imen, G. and Jeannette, B.H. 2010. Classification of EC 3.1.1.3 bacterial true lipases using phylogenetic analysis. *Afr. J. Biotechnol.* 9(48): 8243–8247.
- Adetunji, A.I. and Olaniran, A.O. 2018. Optimization of culture conditions for enhanced lipase production by an indigenous *Bacillus aryabhattachai* SE3-PB using response surface methodology. *Biotechnology & Biotechnological Equipment*: 1–14.
- Adham, N.Z. and Ahmed, E.M. 2009. Extracellular lipase of *Aspergillus niger* NRRL3; production, partial purification and properties. *Indian J. Microbiol.* 49(1): 77–83.
- Arbefeville, S., Harris, A. and Ferrieri, P. 2017. Comparison of sequencing the D2 region of the large subunit ribosomal RNA gene (MicroSEQ®) versus the internal transcribed spacer (ITS) regions using two public databases for identification of common and uncommon clinically relevant fungal species. *J. Microbiol. Methods* 140: 40–46.
- Armas, J.C., Mendoza, J.C.D. and Hernández, J.L.M. 2008. *Mucor griseoencyanus* Lipase: Production, Characterization and Study of Some Catalytic Properties of the Immobilised Enzyme. *Food Technology and Biotechnology* 46(2): 195–201.
- Arya, A., Kumar, A. and Jha, J. 2018. *Understanding Enzymes*. New Delhi, India: Drawing Pin Publishing.
- Ayinla, Z.A., Ademakinwa, A.N. and Agboola, F.K. 2017. Studies on the Optimization of Lipase Production by *Rhizopus* sp. ZAC3 Isolated from the Contaminated Soil of a Palm Oil Processing Shed. *J App Biol Biotech* 5(02): 030–037.
- Begerow, D., Nilsson, H., Unterseher, M. and Maier, W. 2010. Current state and perspectives of fungal DNA barcoding and rapid identification procedures. *Appl. Microbiol. Biotechnol.* 87(1): 99–108.
- Berchtold, A. 2019. Sequence Analysis and Transition Models. In *Encyclopedia of Animal Behavior*. Elsevier, 506–517.
- Bernardes, O.L., Bevilaqua, J.V., Leal, M.C.M.R., Freire, D.M.G. and Langone, M.A.P. 2007. Biodiesel fuel production by the transesterification reaction of soybean oil using immobilized lipase. *Appl. Biochem. Biotechnol.* 07 (137–140): 105–114.



- Berto, P., Belingheri, L. and Dehorter, B. 1997. Production and purification of a novel extracellular lipase from *Alternaria brassicicola*. *Biotechnology Letters* 19(6): 533–536.
- Borriß, R., Rueckert, C., Blom, J., Bezuidt, O., Reva, O. and Klenk, H-P. 2011. Whole Genome Sequence Comparisons in Taxonomy. In *Methods in Microbiology*. Elsevier, 409–436.
- Boyce, S. and Tipton, K.F. 2001. Enzyme Classification and Nomenclature, pp.1-12. In John Wiley & Sons, Ltd (ed.) *Encyclopedia of Life Sciences*, Chichester: John Wiley & Sons, Ltd.
- Brasileiro, B.T.R.V., Coimbra, M.R.M., Morais, Jr M.A. de and Oliveira, N.T. de. 2004. Genetic variability within *Fusarium solani* specie as revealed by PCR-fingerprinting based on pcr markers. *Brazilian Journal of Microbiology* 35(3): 205–210.
- Canela, H.M.S., Takami, L.A. and Ferreira, M.E.S. 2017. SYBR safeTM efficiently replaces ethidium bromide in *Aspergillus fumigatus* gene disruption. *Genet. Mol. Res.* 16(1): 1–5.
- Christopher, L.P., Kumar, H. and Zambare, V.P. 2014. Enzymatic biodiesel: Challenges and opportunities. *Applied Energy* 119: 497–520.
- Chu, D. and Barnes, D.J. 2016. The lag-phase during diauxic growth is a trade-off between fast adaptation and high growth rate. *Sci. Rep.* 6(1): 1-15.
- Cihançırı, N. and Akyıl, M.H. 2018. Detection of Lipase Production from Newly Isolated *Trichoderma citrinoviride*. *HJBC* 2(46): 229–235.
- Das, J. and Busse, H-G. 1990. Light-driven diurnal zonation in the filamentous fungus *Fusarium solani*. *Int. J. Dev. Biol.* 34: 4.
- Das, S., Dash, H.R., Mangwani, N., Chakraborty, J. and Kumari, S. 2014. Understanding molecular identification and polyphasic taxonomic approaches for genetic relatedness and phylogenetic relationships of microorganisms. *J. Microbiol. Methods* 103: 80–100.
- Dewi, E.R.S., Legowo, A.M. and Izzati, M. 2017a. The Use of Non Dairy Creamer Wastewater as the Growth Medium of *Saccharomyces cerevisiae* for Single-Cell Protein Production. *Adv. Sci. Lett.* 23(3): 2438–2440.
- Dewi, E.R.S.D., Legowo, A.M., Izzati, M. and Purwanto, P. 2017b. Study of Wastewater Management and Local Community Perception of Non-Dairy Creamer Industry. *Soc. Sci.* 12(9): 1711–1716.



- Diaz, J.C.M., Rodríguez, J.A., Roussos, S., Cordova, J., Abousalham, A., Carriere, F. and Baratti, J. 2006. Lipase from the thermotolerant fungus *Rhizopus homothallicus* is more thermostable when produced using solid state fermentation than liquid fermentation procedures. *Enzyme Microb. Technol.* 39(5): 1042–1050.
- Dieffenbach, C.W., Lowe, T.M. and Dveksler, G.S. 1993. General concepts for PCR primer design. *Genome Research* 3(3): S30–S37.
- Doolittle, M.H. and Péterfy, M. 2010. Mechanisms of lipase maturation. *Clin. Lipidol.* 5(1): 117–130.
- El-Ghonemy, D.H., El-Gamal, M., Tantawy, A.E. and Ali, T.H. 2017. Extracellular Alkaline Lipase from a Novel Fungus *Curvularia* sp. DHE 5: Optimization of Physicochemical Parameters, Partial Purification and Characterization. *Food Technol. Biotechnol.* 55(2): 206–217.
- Elkins, K.M. 2013. DNA Extraction. In *Forensic DNA Biology*. Elsevier, 39–52.
- Fajarningsih, N.D. 2016. Internal Transcribed Spacer (ITS) as Dna Barcoding to Identify Fungal Species: a Review. *Squalen Bull. Mar. Fish. Postharvest Biotechnol.* 11(2): 37–44.
- Falony, G., Armas, J.C., Mendoza, J.C.D. and Hernández, J.L.M. 2006. Production of Extracellular Lipase from *Aspergillus niger* by Solid-State Fermentation. *Food Technol. Biotechnol.* 44(2): 235–240.
- Farazmandfar, T., Rafiei, A., Hashemi-Sotehoh, M.B., Valadan, R., Alavi, M. and Moradian, F. 2013. A simplified protocol for producing Taq DNA polymerase in biology laboratory. *Res. Mol. Med.* 1(2): 23–26.
- Gallagher, S.R. 2011. Quantitation of DNA and RNA with Absorption and Fluorescence Spectroscopy. In Ausubel FM Brent R Kingston RE Moore DD Seidman JG Smith JA and Struhl K (eds) *Current Protocols in Molecular Biology*. Hoboken, NJ, USA: John Wiley & Sons, Inc., 1–14.
- Gautam, A.K. and Bhaduria, R. 2012. Characterization of *Aspergillus* species associated with commercially stored triphala powder. *African Journal of Biotechnology* 11(104): 16814–16823.
- Gohel, V., Singh, A., Vimal, M. and Ashwini, P. 2006. Bioprospecting and antifungal potential of chitinolytic microorganisms. *African Journal of Biotechnology* 5(2): 54–72.
- Gomez, K.A. and Gomez, A.A. 2015. *Prosedur Statistik untuk Penelitian Pertanian*. 2nd ed. Jakarta: UI press.



- Gopinath, S.C.B., Hilda, A. and Anbu, P. 2005. Extracellular enzymatic activity profiles in fungi isolated from oil-rich environments. *Mycoscience* 46(2): 119–126.
- Gumba, R.E., Saallah, S., Misson, M., Ongkudon, C.M. and Anton, A. 2016. Green biodiesel production: a review on feedstock, catalyst, monolithic reactor, and supercritical fluid technology. *Biofuel Res. J.* 3(3): 431–447.
- Gupta, R., Gupta, N. and Rathi, P. 2004. Bacterial lipases: an overview of production, purification and biochemical properties. *Appl. Microbiol. Biotechnol.* 64(6): 763–781.
- Gurung, N., Ray S., Bose, S. and Rai, V. 2013. A Broader View: Microbial Enzymes and Their Relevance in Industries, Medicine, and Beyond. *BioMed Res. Int.* 2013: 1–18.
- Harris, S.D. 2008. Branching of fungal hyphae: regulation, mechanisms and comparison with other branching systems. *Mycologia* 100(6): 823–832.
- Harris, T.K. and Keshwani, M.M. 2009. Measurement of Enzyme Activity. In *Methods in Enzymology*. Elsevier, 57–71.
- Hassan, M.H. and Kalam, M.A. 2013. An Overview of Biofuel as a Renewable Energy Source: Development and Challenges. *Procedia Eng.* 56: 39–53.
- Herkovits, T.T., Gadegbeku, B. and Jaitlet, H. 1970. On the Structural Stability and Solvent Denaturation of Proteins. *The Journal of Biological Chemistry* 245(10): 2588–2598.
- Huang, D., Zhou, H. and Lin, L. 2012. Biodiesel: an Alternative to Conventional Fuel. *Energy Procedia* 16: 1874–1885.
- Ibrahim, C.O., Hayashi, M. and Nagai, S. 1987. Purification and Some Properties of a Thermostable Lipase from *Humicola lanuginosa* No. 3. *Agricultural and Biological Chemistry* 51(1): 37–45.
- Ilmi, M., Hommes, A., Winkelmann, J.G.M., Hidayat, C. and Heeres, H.J. 2016. Kinetic studies on the transesterification of sunflower oil with 1-butanol catalyzed by *Rhizomucor miehei* lipase in a biphasic aqueous-organic system. *Biochem. Eng. J.* 114: 110–118.
- Ilmi, M., Hidayat, C., Hastuti, P., Heeres, H.J. and van der Maarel M.J.E.C. 2017. Utilisation of Jatropha press cake as substrate in biomass and lipase production from *Aspergillus niger* 65I6 and *Rhizomucor miehei* CBS 360.62. *Biocatal. Agric. Biotechnol.* 9: 103–107.
- Jaeger, K-E and Eggert, T. 2002. Lipases for biotechnology. *Curr. Opin. Biotechnol.* 13(4): 390–397.



- Kashmiri, M.A., Adnan, A. and Butt, B.W. 2006. Production, purification and partial characterization of lipase from *Trichoderma viride*. *Afr. J. Biotechnol.* 5(10): 878–882.
- Kishore, D., Kundu, S. and Kayastha, A.M. 2012. Thermal, Chemical and pH Induced Denaturation of a Multimeric β -Galactosidase Reveals Multiple Unfolding Pathways. *PLoS ONE* 7(11):1-9.
- Kotogán, A., Zambrano, C., Kecskeméti, A., Varga, M., Szekeres, A., Papp, T., Vágvölgyi, C. and Takó, M. 2018. An Organic Solvent-Tolerant Lipase with Both Hydrolytic and Synthetic Activities from the Oleaginous Fungus *Mortierella echinosphaera*. *Int. J. Mol. Sci.* 19(4): 1-16.
- Kumar, A.P., Kumar, K.J. and Narasimha, G. 2012. Isolation Of Lipase Producing Fungi From Groundnut Oil Mill Effluent Soil Site At Nandyal. *Int J Pharm Bio Sci.* 3(4): 275 - 280
- Kwon, D.Y. and Rhee, J.S. 1986. A simple and rapid colorimetric method for determination of free fatty acids for lipase assay. *J. Am. Oil Chem. Soc.* 63(1): 89–92.
- Lam, M.K., Lee, K.T. and Mohamed, A.R. 2010. Homogeneous, heterogeneous and enzymatic catalysis for transesterification of high free fatty acid oil (waste cooking oil) to biodiesel: A review. *Biotechnol. Adv.* 28(4): 500–518.
- Lanka, S., Pydipalli, M. and Latha, J.N.L. 2015. Optimization of Process Variables for Extracellular Lipase Production from *Emericella nidulans* NFCCI 3643 Isolated from Palm Oil Mill Effluent (POME) Dump Sites Using OFAT Method. *Research J. of Microbiology* 10(2): 38–53.
- Lee, L.P., Karbul, H.M., Citartan, M., Gopinath, S.C.B., Lakshmipriya, T. and Tang, T-H. 2015. Lipase-Secreting *Bacillus* Species in an Oil-Contaminated Habitat: Promising Strains to Alleviate Oil Pollution. *BioMed Res. Int.* 2015: 1–9.
- Lehninger, A.L., Nelson, D.L. and Cox, M.M. 2013. *Lehninger principles of biochemistry*, 6th ed. New York : W.H. Freeman.
- Leung, D.Y.C., Wu, X. and Leung, M.K.H. 2010. A review on biodiesel production using catalyzed transesterification. *Appl. Energy* 87(4): 1083–1095.
- Lew, R.R. 2005. Mass flow and pressure-driven hyphal extension in *Neurospora crassa*. *Microbiology* 151(8): 2685–2692.



- Lew, R.R. 2011. How does a hypha grow? The biophysics of pressurized growth in fungi. *Nat Rev Microbiol* 9(7): 509–518.
- Liu, T., Wang, Y., Luo, X., Li, J., Reed, S.A., Xiao, H., Young, T.S. and Schultz, P.G. 2016. Enhancing protein stability with extended disulfide bonds. *Proc. Natl. Acad. Sci.* 113(21): 5910–5915.
- Lotti, M., Pleiss, J., Valero, F. and Ferrer, P. 2015. Effects of methanol on lipases: Molecular, kinetic and process issues in the production of biodiesel. *Biotechnol. J.* 10(1): 22–30.
- Lowry, O.H., Rosenbrough, N.J., Farr, A.L., Randall, R.J. 1951. Protein measurement with the Folin phenol reagent. *J Biol Chem.* 193:265–276.
- Luckey, M., Ling, R., Dose, A. and Malloy, B. 1991. Role of a Disulfide Bond in the Thermal Stability of the LamB Protein Trimer in *Escherichia coli* Outer Membrane. *J. Biol. Chem.* 266(3): 1866–1871.
- Ma, F. and Hanna, M.A. 1999. Biodiesel production: a review. *Bioresour. Technol.* 70: 1–15.
- Mahadik, N.D., Puntambekar, U.S., Bastawde, K.B., Khire, J.M. and Gokhale, D.V. 2002. Production of acidic lipase by *Aspergillus niger* in solid state fermentation. *Process Biochemistry* 38(5): 715–721.
- Mahmoud, A.G.Y. and Zaher E.H.F. 2015. Why Nuclear Ribosomal Internal Transcribed Spacer (ITS) has been Selected as the DNA Barcode for Fungi? *Adv. Genet. Eng.* 04(02): 1–2.
- Mendes, D.B., Silva, F.F.D., Guarda, P.M., Almeida, A.F., de Oliveira, D.P., Morais, P.B. and Guarda, E.A. 2019. Lipolytic Enzymes with Hydrolytic and Esterification Activities Produced by Filamentous Fungi Isolated from Decomposition Leaves in an Aquatic Environment. *Enzyme Res.* 2019: 1–13.
- Ministry of Energy and Mineral Resources. 2017. *Handbook of Energy & Economic Statistics of Indonesia*. Jakarta.
- Molina, G, Contesini, F.J., de Melo, R.R., Sato, H.H. and Pastore, G.M. 2016. β -Glucosidase From *Aspergillus*. In *New and Future Developments in Microbial Biotechnology and Bioengineering*. Elsevier, 155–169.
- Moore, R.T. and McAlear, J.H. 1962. Fine Structure Of Mycota. 7. Observations On Septa Of Ascomycetes And Basidiomycetes. *American Journal of Botany* 49(1): 86–94.
- Moore-Landecker, E. 2002. Fungal Spores. In *Encyclopedia Of Life Sciences*. London: Nature Publishing Company, 1–9.



- Moreno-Pirajàn, J.C. and Giraldo, L. 2011. Study of immobilized *candida rugosa* lipase for biodiesel fuel production from palm oil by flow microcalorimetry. *Arab. J. Chem.* 4(1): 55–62.
- Nei, M. 2001. Genetic Distance. In *Encyclopedia of Genetics*. Academic Press, 828–832.
- Nwuche, C.O. and Ogbonna, J.C. 2011. Isolation of lipase producing fungi from palm oil Mill effluent (POME) dump sites at Nsukka. *Braz. Arch. Biol. Technol.* 54(1): 113–116.
- O'Brien, H.E., Parrent, J.L., Jackson, J.A., Moncalvo, J-M and Vilgalys, R. 2005. Fungal Community Analysis by Large-Scale Sequencing of Environmental Samples. *Applied and Environmental Microbiology* 71(9): 5544–5550.
- Olama, Z.A. and el-Sabaeny, A.H. 1993. Lipase production by *Aspergillus niger* under various growth conditions using solid state fermentation. *Microbiologia* 9(2): 134–141.
- Palmer, T. 1991. *Understanding Enzymes*. 3rd ed. London: Ellis Horwoor.
- Pera, L.M., Romero, C.M., Baigori, M.D. and Castro, G.R. 2006. Catalytic Properties of Lipase Extracts from *Aspergillus niger*. *Food Technol. Biotechnol.* 44(2): 247–252.
- Ponnarasy, G., Khan, M.M.R., Kalam, M.A. and Mahmud, M.S. 2014. Light Induced Esterification of Oleic Acid Catalyzed by *Pseudomonas Cepacia* Lipase. *Int. J. Environ. Sci. Dev.* 5(4): 344–346.
- Priatni, S., Kosasih, W., Budiwati, T.A. and Ratnaningrum, D. 2017. Production of peptone from boso fish (*Oxyeleotris marmorata*) for bacterial growth medium. *IOP Conf. Ser.: Earth Environ. Sci.* 60: 1–8.
- Putri, H.L.R., Hidayati, A., Widyaningsih, T.D., Wijayanti, N. and Maligan, J.M. 2016. Pengendalian Kualitas Non Dairy Creamer Pada Kondisi Proses Pengeringan Semprot Di Pt. Kievit Indonesia, Salatiga: Kajian Pustaka. *J. Pangan Dan Agroindustri* 4(1): 443–448.
- Raghukumar, S . 2017. *Fungi in Coastal and Oceanic Marine Ecosystems*. Cham: Springer International Publishing.
- Raja, H.A., Miller, A.N., Pearce, C.J. and Oberlies, N.H. 2017. Fungal Identification Using Molecular Tools: A Primer for the Natural Products Research Community. *J. Nat. Prod.* 80(3): 756–770.
- Rajan, A. and Nair, A.J. 2011. A comparative study on alkaline lipase production by a newly isolated *Aspergillus fumigatus* MTCC 9657 in submerged and



solid-state fermentation using economically and industrially feasible substrate. *Turk J Biol.* 569–574.

- Rajeswari, T., Palaniswamy, M., Rose, B.S., Shyni, P.M. and Padmapriya, B. 2011. Biosynthesis of Novel Alkaline Lipase Production from *Penicillium Chrysogenum* Suitable For Detergent Formulation. *Res. J. Pharm., Biol. Chem. Sci.* 2(3): 128–141.
- Ramadhas, A., Jayaraj, S. and Muraleedharan, C. 2005. Biodiesel production from high FFA rubber seed oil. *Fuel* 84(4): 335–340.
- Reece, J.B. and Campbell, N.A. 2011. *Campbell biology*. 9th ed., Boston : Benjamin Cummings / Pearson.
- Renge, V.C., Khedkar, S.V. and Nandurkar, N.R. 2012. Enzyme synthesis by fermentation method : a review. *Sci. Revs. Chem. Commun.* 2(4): 585-590.
- Rihani, A., Tichati, L. and Soumati, B. 2018. Isolation And Identification Of Lipase- Producing Fungi From Local Olive Oil Manufacture In East Of Algeria. *Chem. Chem. Eng. Biotechnol. Food Ind.* 19 (1): 013 – 022.
- Robinson, P.K. 2015. Enzymes: principles and biotechnological applications. *Essays in Biochemistry* 59: 1–41.
- Rodrigues, R.C., Volpato, G., Wada, K. and Ayub, M.A.Z. 2008. Enzymatic Synthesis of Biodiesel from Transesterification Reactions of Vegetable Oils and Short Chain Alcohols. *J Am Oil Chem Soc.* 85(10): 925–930.
- Rojo, F. 2008. Biofuels from microbes: a comprehensive view. *Microb. Biotechnol.* 1(3): 208–210.
- Romero, C.M., Pera, L.M., Loto, F., Vallejos, C., Castro, G. and Baigori, M.D. 2012. Purification of an organic solvent-tolerant lipase from *Aspergillus niger* MYA 135 and its application in ester synthesis. *Biocatal. Agric. Biotechnol.* 1(1): 25–31.
- Rosida, D.F., Mulyani, T. and Septalia, L.R. 2016. A Comparative Study of Non-Dairy Cream Based on the Type of Leguminosae Protein Source in Terms of Physico Chemical Properties and Organoleptic. *Agric. Agric. Sci. Procedia* 9: 431–439.
- Roy, M., Kumar, R., Ramteke, A. and Sit, N. 2018. Identification Of Lipase Producing Fungus Isolated From Dairy Waste Contaminated Soil And Optimization Of Culture Conditions For Lipase Production By The Isolated Fungus. *J. Microbiol. Biotechnol. Food Sci.* 8(1): 698–704.



- Rychlik, W., Spencer', W.J. and Rhoads, R.E. 1990. Optimization of the annealing temperature for DNA amplification in vitro. *Nucleic Acids Research* 18(21): 6409–6412.
- Sadati, R., Barghi, A. and Abbasi, L.R. 2015. Isolation and Screening of Lipolytic Fungi From Coastal Waters of the Southern Caspian Sea (North of Iran). *Jundishapur J. Microbiol.* 8(4): 1–7.
- Salihu, A. and Alam, Z. 2012. Production and applications of microbial lipases: A review. *Scientific Research and Essays* 7(30): 2667–2677.
- Sharma, G. and Pandey, R.R. 2010. Influence of culture media on growth, colony character and sporulation of fungi isolated from decaying vegetable wastes. *J. Yeast Fungal Res.* 1(8): 157–164.
- Sharma, R., Chisti, Y. and Banerjee, U.C. 2001. Production, purification, characterization, and applications of lipases. *Biotechnol. Adv.* 19(8): 627–662.
- Shreya, Sharma, A.K., Sharma, V. and Saxena, J. 2018. Isolation And Screening Of Lipolytic Soil Fungi. *Int. J. Pharm. Biol. Sci.* 8(2): 391–396.
- Silva, D.M., Batista, L.R., Rezende, E.F., Fungaro, M.H.P., Sartori, D. and Alves, E. 2011. Identification of fungi of the genus *Aspergillus* section nigri using polyphasic taxonomy. *Braz. J. Microbiol.* 42(2): 761–773.
- Silva, O.B.W., Mitidieri, S., Schrank, A. and Vainstein, M.H. 2005. Production and extraction of an extracellular lipase from the entomopathogenic fungus *Metarrhizium anisopliae*. *Process Biochemistry* 40(1): 321–326.
- Singh, A.K. and Mukhopadhyay, M. 2012. Overview of Fungal Lipase: A Review. *Appl. Biochem. Biotechnol.* 166(2): 486–520.
- Soleymani, S., Alizadeh, H., Mohammadian, H., Rabbani, E., Moazen, F., Sadeghi, H.M., Shariat, Z.S., Etemadifar, Z. and Rabbani, M. 2017. Efficient Media for High Lipase Production: One Variable at a Time Approach. *Avicenna J Med Biotech* 9(2): 82–86.
- Sooth, B.S. and Kauldhar, B.S. 2013. Influence of multiple bioprocess parameters on production of lipase from *Pseudomonas* sp. BWS-5. *Braz. arch. biol. technol.* 56(5): 711–721.
- Stephenson, S.L. 2010. *The Kingdom fungi: the biology of mushrooms, molds, and lichens*. Portland : Timber Press.
- Suyanto, E., Soetarto, E.S. and Cahyanto, M.N. 2015. Lipase production from lipolytic fungi in coconut oil cake. *Bioeskperimen* 1(1): 12–17.



- Talha, N.S. and Sulaiman, S. 2016. Overview Of Catalysts In Biodiesel Production. *J. Eng. Appl. Sci.* 11(1): 439–448.
- Teare, J.M., Islam, R., Flanagan, R., Gallagher, S., Davies, M.G. and Grabau, C. 1997. Measurement of Nucleic Acid Concentrations Using the DyNA QuantTM and the GeneQuantTM. *BioTechniques* 22(6): 1170–1174.
- Tegelaar, M. and Wösten, H.A.B. 2017. Functional distinction of hyphal compartments. *Sci Rep* 7(1): 6039.
- Tharakan, P. 2015. *Summary of Indonesia's Energy Sector Assessment*. Manila: Asian Development Bank.
- Wang, X., Xia, K., Yang, X. and Tang, C. 2019. Growth strategy of microbes on mixed carbon sources. *Nat. Commun.* 10(1): 1-7.
- Webster, J. and Weber, R. 2007. *Introduction to Fungi*. New York : Cambridge University Press.
- Wingfield, P. 1998. Protein Precipitation Using Ammonium Sulfate. In Coligan JE Dunn BM Speicher DW and Wingfield PT (eds) *Current Protocols in Protein Science*. Hoboken, NJ, USA: John Wiley & Sons, Inc., 1–10.
- Yilmaz, M., Ozic, C. and Gok, I. 2012. Principles of Nucleic Acid Separation by Agarose Gel Electrophoresis. In *Gel-Electrophoresis and Its Applications*. INTECH Open Access Publisher
- Yin, X., Hu, D., Li, J-F., He, Y., Zhu, T-D. and Wu, M-C. 2015. Contribution of Disulfide Bridges to the Thermostability of a Type A Feruloyl Esterase from *Aspergillus usamii*. *PLOS ONE*. 10(5): 1-16.
- Yuwono, T. 2008. *Biologi Molekuler*. Jakarta: Erlangga.
- Zhao, S. and Shamoun, S.F. 2006. Effects of culture media, temperature, pH, and light on growth, sporulation, germination, and bioherbicidal efficacy of *Phoma exigua*, a potential biological control agent for salal (*Gaultheria shallon*). *Biocontrol Science and Technology* 16(10): 1043–1055.