

## DAFTAR PUSTAKA

- Abdel-Wahab, N. M., Harwoko, H., Muller, W. E. G., Hamacher, A., Kassack, M. U., Fouad, M. A., Kamel, M. S., Lin, W., Ebrahim, W., Liu, Z. & Proksch, P. 2019, ‘Cyclic heptapeptides from the soil-derived fungus *Clonostachys rosea*’, *Bioorganic & Medicinal Chemistry*, Vol. 27, pp. 3954-3959.
- Adefuye, A.O. & Ndip, R.N. 2013, ‘Phytochemical analysis and antibacterial evaluation of the ethyl acetate extract of the stem bark of *Bridelia micrantha*’, *Pharmacognosy Magazine*, vol. 9, pp. 45-50.
- Adeleke, B.S. & Babalola, O.O. 2021, ‘Pharmacological Potential of Fungal Endophytes Associated with Medicinal Plants: A Review’, *J.Fungi*, Vol. 7, No. 147.
- Alen, Y., Fitria, L.A. & Yori, A. 2017, ‘Analisis kromatografi lapis tipis (KLT) dan aktivitas antihiperurisemia ekstrak rebung *Schizostacahyum bradycladum* Kurz (Kurz) pada mencit putih jantan’, *Jurnal Sains Farmasi & Klinis*, Vol. 3, No. 2, pp. 146-152.
- Anwar, F., Latif, S., Przybylski, R., Sultana, B., & Ashraf, M. 2007, ‘Chemical Composition and Antioxidant Activity of Seeds of Different Cultivars of Mungbean’, *Journal of Food Science*, Vol. 72, No. 7, pp.503-510, DOI: 10.1111/j.1750-3841.2007.00462.x.
- Arora, J. & Ramawat, K.G. 2017, ‘An Introduction to Endophytes’, in D.K. Maheshwari (ed.), *Endophytes: Biology and Biotechnology*, 1st edn, Springer International Publishing, pp. 1-23, DOI:10.1007/978-3-319-66541-2\_1.
- Aulia, S. S., Iyan, S. & Muchtaridi 2016, ‘Penetapan Kadar Simvastatin Menggunakan Kromatografi Cair Kinerja Tinggi (KCKT): Review’, *Farmaka*, Vol. 14, No. 12, pp. 70-78.
- Azhari, A. 2014, ‘Aktivitas Sitotoksik Senyawa Metabolit Sekunder Kapang Endofit *Evodia suaveolens* Dengan Metode BSLT (*Brine Shrimp Lethality Test*)’, *Scientiae Educatia*, Vol. 3, No. 2, pp. 47-54.
- Bode, H.B., Bethe, B., Hof, R., & Zeeck, A. 2002, ‘Big Effects from Small Changes: Possible Ways to Explore Nature’s Chemical Diversity’, *ChemBioChem*, Vol.3, pp. 619-627.
- Buchan, A., Newell, S. Y., Moreta, J. I. L. & Moran, M. A. 2002, ‘Analysis of Internal Transcribed Spacer (ITS) Regions of rRNA Genes in Fungal Communities in Southeastern U.S. Salt Marsh’, *Micro Ecol*, Vol. 43, No. 3, pp. 329-340.
- Chen, H., Yao, Q., Xiaoyi, H., Linna, X., Wenyi, Z., Xiaoman, L., Haihua, Z., Dongfeng, Y., Yonghong, Z. & Zongsuo, L. 2021, ‘Endophytic fungus *Mucor circinelloides* DF20 promote tanshinone biosynthesis and accumulation in *Salvia miltiorrhiza* root’, *Plant Science*, Vol. 37, pp. 1-10.

- Chepkirui, C. & Stadler, M. 2017, 'The Genus *Diaporthe*: A Rich Source Of Diverse And Bioactive Metabolites', *Mycol Progress*, Vol. 16, pp. 477-494.
- Chowdhury, N. S., Farhana, F. & Md. Hossain, S. 2020, 'Isolation, Identification, and Pharmacological Activities of Endophytic Fungi from *Aponogeton undulatus Roxb*', *Pharmacology & Pharmacy*, Vol. 11, pp. 350-361.
- Dewapriya, P., Yong-Xin, L., S. W. A. Himaya & Se-Kwon, K. 2014, 'Isolation and characterization of marine-derived *Mucor* sp. for the fermentative production of tyrosol', *Process Biochemistry*, Vol. 49, pp. 1402-1408.
- Direktorat Jendral Pengawasan Obat dan Makanan Republik Indonesia 1986, *Sediaan Galenik*, Departemen Kesehatan Republik Indonesia, Jakarta.
- El-Elimat, T., Raja, H. A., Graf, T. N., Faeth, S. H., Cech, N. B. & Oberlies, H. 2014, 'Flavonolignans from *Aspergillus iizukae*, a Fungal Endophyte of Milk Thistle (*Silybum marianum*)', *J. Nat. Prod.*, Vol. 77, pp. 193-199.
- Fan, B., Parrot, D., Blumel, M., Labes, A., & Tasdemir, D. 2019, 'Influence of OSMAC-Based Cultivation in Metabolome and Anticancer Activity of Fungi Associated with the Brown Alga *Fucus vesiculosus*', *Mar. Drugs*, Vol. 17, No. 67, DOI:10.3390/md17010067.
- Frank, M., Ozkaya, F. C., Muller, W. E. G., Hamacher, A., Kassack, M. U., Lin, W., Liu, Z., & Proksch, P. 2019, 'Cryptic Secondary Metabolites from the Sponge-Associated Fungus *Aspergillus ochraceus*', *Mar. Drugs*, Vol. 17, No. 22, DOI:10.3390/md17020099.
- Ginting, R. C. B., Sukarno, N., Widayastuti, U., Darusman, L. K. & Kanaya, S. 2013, 'Diversity of endophytic fungi from red ginger (*Zingiber officinale* Rosc.) plant and their inhibitory effect to *Fusarium oxysporum* plant pathogenic fungi', *HAYATI Journal of Biosciences*, Vol. 20. No. 3, pp. 127-137.
- Hameed, A., Syed, A. H., Junhuan, Y., Muhammad, U. I., Qing, L., Hafiz, A. R. S. & Yuanda, S. 2017, 'Antioxidants Potential of the Filamentous Fungi (*Mucor circinelloides*)', *Nutrients*, Vol. 9, No. 1101, pp. 1-20.
- Harwoko, H., Rudolf, H., Georgios, D., Elena, A., Marian, F., Zhen, L. & Peter, P. 2019, 'Biotransformation of Host Plant Flavonoids by the Fungal Endophyte *Epicoccum nigrum*', *ChemistrySelect*, Vol. 4, pp. 13054-13057.
- Hasnaeni, Wisdawati & Suriati, U. 2019, 'Pengaruh Metode Ekstraksi Terhadap Rendemen Dan Kadar Fenolik Ekstrak Tanaman Kayu Beta-Beta (*Lunasia amara Blanco*)', *Jurnal Farmasi Galenika*, Vol. 5, No. 2, pp. 175-182.
- Hemphill, C. F. P., Parichat, S., Matthias, U. K., Raha, S. O., Wenhan, L., Georgios, D. & Peter, P. 2017, 'OSMAC approach leads to new fusarielin metabolites from *Fusarium tricinctum*', *The Journal of Antibiotics*, Vol. 70, No. 6, pp. 726-732.
- Irianti, T., Hari, P., Kuswandi, Sindu, N., Damiana, N. K., Yosi, B. M. & Sofa, F. 2019, 'Uji Penangkapan Radikal 2,2-Difenil-1-Pikrilhidrazil oleh Ekstrak Etanol Bunga Kecombrang (*Nicolaia speciosa* (Bl.) Horan) dan Buah Talok

- (*Muntingia calabura L.*)’, *Jurnal Tumbuhan Obat Indonesia*, Vol. 12, No. 1, pp. 41-53.
- Jelita, S.F., Gita, W.S., Michelle, F., Ade, Z. & Sandra, M. 2020, ‘Uji toksisitas infusa *Acalypha siamensis* dengan metode brine shrimp lethality test (BSLT)’, *Farmaka*, vol. 18, no. 1, pp. 14-22.
- Khalil, H.P.S. A., Hossain, M. S., Rosamah, E., Azli, N.A., Saddon, N., Davoudpoura, Y., Islam, M. N., & Dungani, R. 2015, ‘The role of soil properties and it’s interaction towards quality plant fiber: A review’, *Renewable and Sustainable Energy Reviews*, Vol. 43, pp.1006–1015.
- Khare, E., Mishra, J., & Arora N.K. 2018, ‘Multifaceted Interactions between Endophytes and Plant: Developments and Prospects’, *Front. Microbiol*, Vol. 9, No. 2732, DOI: 10.3389/fmicb.2018.02732.
- Kjaerbolling, I., Mortensen, U.H., Vesth, T., & Andersen, M.R. 2019, ‘Strategies to Establish the Link Between Biosynthetic Gene Clusters and Secondary Metabolites’, *Fungal Genetics and Biology*, 130, pp. 107-121.
- Kusari, S., Hertweck, C., & Spiteller, M. 2012, ‘Chemical Ecology of Endophytic Fungi: Origins of Secondary Metabolites’, *Chemistry & Biology*, 19, pp. 792-798.
- Lu, Y. & Yu, J. 2019, ‘A Well-Established Method for the Rapid Assessment of Toxicity Using *Artemia* spp. Model’, in Saleh, H.E.D, *Assessment and Management of Radioactive and Electronic Wastes*, IntechOpen, DOI: <http://dx.doi.org/10.5772/intechopen.85730>.
- Lutfia, A., Munir, E., & Yurnaliza, Y. 2020, ‘Molecular identification of endophytic fungi from torch ginger (*Eatingera elatior*) antagonist to phytopathogenic fungi’, *Biodiversitas*, Vol. 21, No. 6, pp. 2681-2689.
- Majeed, A., Majeed, M., Thajuddin, N., Arumugam, S., Ali, S., Beede, K., Adams, S. J., & Gnanamani, M. 2019, ‘Bioconversion of curcumin into calebin-A by the endophytic fungus *Ovatospora brasiliensis* EPE-10 MTCC 25236 associated with *Curcuma caesia*’, *AMB Expr*, Vol. 9, No. 79.
- Mangayi, M.C. & Ateba, C.N. 2020, ‘Untapped Potentials of Endophytic Fungi: A Review of Novel Bioactive Compounds with Biological Applications’, *Microorganisms*, Vol. 8, No. 1934, DOI:10.3390/microorganisms8121934.
- Mei, J. F., Wang, P. P., Chen, X., J. C. C., Liu, T., Ying, G. Q., Yi, Y. 2020, *Mucor Circinelloides* MF-8 and Its Application to Increase Taxifolin Content in *Smilacis Glabrae* Rhizoma, China.
- Meyer, B. N., Ferrigni, N. R., Putnam, J. E., Jacobsen, L. B., Nichols, D. E. & McLaughlin, J. L. 1982, ‘Brine shrimp: A convenient general bioassay for active plant constituents’, *Planta Medica*, Vol. 45, pp. 31–34.
- Mukhriani 2014, ‘Ekstraksi, Pemisahan Senyawa, dan Identifikasi Senyawa Aktif’, *Jurnal Kesehatan*, Vol. 7, No. 2, pp. 361-367.

- Ningsih, H., Evan, P. R., Dwiwiyati, N. S., Miranda, F. S., Resti, F., Widya, L., Abdus, S. J., Ria, P. & Elika, J. 2021, *Pengantar Biologi*, Yayasan Kita Menulis, Medan.
- Nongalleima, Kh., Dey, A., Deb, L., Singh, C.B., Thongam, B., Devi, H.S., & Devi, S.I. 2013, ‘Endophytic Fungus Isolated From *Zingiber zerumbet* (L.) Sm. Inhibits Free Radicals and Cyclooxygenase Activity’, *Int. J. Pharm Tech Res*, Vol. 5, No. 2, pp. 301-207.
- Pan, R., Bai, X., Chen, J., Zhang, H., & Wang, H. 2019, ‘Exploring Structural Diversity of Microbe Secondary Metabolites Using OSMAC Strategy: A Literature Review’, *Front. Microbiol*, Vol. 10, No. 294, DOI: 10.3389/fmicb.2019.00294.
- Prasetyo, A., Sidharta, B.R., Hartini, Y.S., & Mursyanti, E. 2019, ‘Toxicity of Bioactive Compound from Endophytic Fungi Isolated from Red Ginger (*Zingiber officinale* var. *rubrum*) Utilizing Brine Shrimp Lethality Assay’, *Biogenesis*, Vol. 7, No. 1, pp. 30-37.
- Puspitasari, E., Rozirwan & M. Hendri 2018, ‘Uji Toksisitas dengan Menggunakan Metode Brine Shrimp Lethality Test (BSLT) Pada Ekstrak Mangrove (*Avicennia Marina*, *Rhizophora Mucronata*, *Sonneratia Alba* dan *Xylocarpus Granatum*) yang berasal dari Banyuasin, Sumatera Selatan’, *Jurnal Biologi Tropis*, Vol. 18, No. 1, pp. 91-103.
- Ran, X., Zhang, G., Li, S. & Wang, J. 2017, ‘Characterization and antitumor activity of camptothecin from endophytic fungus *Fusarium solani* isolated from *Camptotheca acuminate*’, *Afri Health Sci.*, Vol. 17, No. 2, pp. 566-574, <https://dx.doi.org/10.4314/ahs.v17i2.34>.
- Rana, K.L., Kour, D., Sheikh, I., Dhiman, A., Yadav, N., Yadav, A.N., Rastegari, A.A., Singh, K. & Saxena, A.K. 2019, ‘Endophytic Fungi: Biodiversity, Ecological Significance, and Potential Industrial Applications’, in Yadav, A.N et al. (eds), *Recent Advancement in White Biotechnology Through Fungi*, Fungal Biology, Springer Nature, Switzerland, [https://doi.org/10.1007/978-3-030-10480-1\\_1](https://doi.org/10.1007/978-3-030-10480-1_1).
- Rohman, A. 2009, *Kromatografi Untuk Analisis Obat*, Graha Ilmu, Yogyakarta.
- Rohman, A. 2020, *Analisis Farmasi dengan Kromatografi Cair*, Gadjah Mada University Press, Yogyakarta.
- Romano, S., Jackson, S.A., Patry, S., & Dobson, A.D.W. 2018, ‘Extending the “One Strain Many Compounds” (OSMAC) Principle to Marine Microorganisms’, *Mar. Drugs*, Vol. 16, No. 244, DOI:10.3390/md16070244.
- Rosa, B.V., Kuhn, K.R., Ugalde, G.A., Zabot, G.L. & Kuhn, R.C. 2019, ‘Antioxidant compounds extracted from Diaporthe schini using supercritical CO<sub>2</sub> plus cosolvent’, *Bioprocess and Biosystems Engineering*, 43, pp. 133-141, <https://doi.org/10.1007/s00449-019-02211-9>.

- Rowe, R. C., Sheskey, P. J. & Quinn, M. E. 2009, *Handbook of Pharmaceutical Excipients*, The Pharmaceutical Press, USA.
- Roy, S. 2016, ‘Polyphenol Content and Differential Expression of Flavonoid Biosynthetic Pathway Genes of *Fragaria* spp. with white fruit’, *Dissertation*, Department of Plant and Soil Sciences University of Kentucky, Lexington.
- Rubiyanto, D. 2017, *Metode Kromatografi: Prinsip Dasar, Praktikum dan Pendekatan Pembelajaran Kromatografi*, Deepublish, Yogyakarta.
- Satheesan, J. & Sabu, K.K. 2020, ‘Endophytic Fungi for a Sustainable Production of Major Plant Bioactive Compounds. In: Swamy M. (eds) Plant-derived Bioactives, Springer, Singapore, [https://doi.org/10.1007/978-981-15-1761-7\\_8](https://doi.org/10.1007/978-981-15-1761-7_8).
- Sikora, K. 2020, *Treatment of Cancer*, CRC Press, United States.
- Singh, C.B., Nongalleima, Kh., Brojendrosingh, S., Ningombam, S., Lokendrajit, N. & Singh, L.W. 2012, ‘Biological and chemical properties of *Zingiber zerumbet* Smith: a review’, *Phytochem Rev*, 11, pp. 113-125, DOI:10.1007/s11101-011-9222-4.
- Singh, A., Singh, D.K., Kharwar, R.N., White, J.F. & Gond, S.K. 2021, ‘Fungal Endophytes as Efficient Sources of Plant-Derived Bioactive Compounds and Their Prospective Applications in Natural Product Drug Discovery: Insights, Avenues, and Challenges’, *Microorganisms*, Vol. 9, No. 197, <https://doi.org/10.3390/microorganisms9010197>.
- Stefova, M., Trajce, S. & Svetlana, K. 2003, ‘HPLC Analysis of Flavonoids’, *Encyclopedia of Chromatography*, pp. 1-7.
- Stierle, A., Strobel, G. & Stierle, D. 1993, ‘Taxol and Taxane Production by *Taxomyces andreanae*, an Endophytic Fungus of Pacific Yew’, *Science*, 260, pp. 214-216.
- Syarifuddin, A. & Sulistyani, N. 2019, ‘Karakterisasi Fraksi Teraktif Senyawa Antibiotik Isolat KP 13 dengan Metode Densitometri dan KLT-Semprot’, *Jurnal Ilmiah Ibnu Sina*, Vol. 4, No. 1, pp. 156-166.
- Tambunan, I. J. 2021, ‘Modifikasi Metode Kromatografi Cair Kinerja Tinggi (Kckt) Pada Analisis Parasetamol, Propifenazon dan Kafein Dalam Sediaan Farmasi’, *Tesis*, Program Studi Magister Farmasi Universitas Sumatera Utara, Medan.
- Tao, L.V., Zhang, W. & Han, X. 2018, ‘Zerumbone suppresses the potential of growth and metastasis in hepatoma HepG2 cells via the MAPK signaling pathway’, *Oncology Letters*, 15, pp. 7603-7610, DOI: 10.3892/ol.2018.8335.
- Thammana, M. 2016, ‘A Review on High Performance Liquid Chromatography (HPLC)’, *Journal of Pharmaceutical Analysis*, Vol. 5, No. 2.
- Triastuti, A. 2020, ‘Jamur endofit sebagai sumber bahan obat alam’, *Jurnal Ilmiah Farmasi*, Vol. 16, No.1, pp. 52-73.

- USDA (U.S. Department of Agriculture, Agricultural Research Service). 2019, *Food Data Central: Mung beans, mature seeds, raw*, diakses 3 Juli 2021, <https://fdc.nal.usda.gov/fdc-app.html#/food-details/174256/nutrients>.
- USP 2007, *United States of Pharmacopeia National Formulary, USP 30/NF 25*, United States Pharmacopeial Convention, Twinbrook Parkway.
- Vellanki, S., Maria, I. N. M., Alexis, E. G., Laura, M., Carlos, P. A., Victoriano, G., Fransisco, E. N. & Soo, C. L. 2018, ‘*Mucor circinelloides*: Growth, Maintenance and Genetic Manipulation’, *Curr Protoc Microbiol*, Vol. 49, No. 1, pp. 1-27.
- Veneriaki, A., Dimou, M. & Katikanis, P. 2017, ‘Endophytic fungi residing in medicinal plants have the ability to produce the same or similar pharmacologically active secondary metabolites as their hosts’, *Hellenic Plant Protection Journal*, Vol. 10, No. 2, pp. 51-66, DOI:10.1515/hppj-2017-0006.
- Wang, X.Y., Ting-Ting, X., Li-Jingfei, S., Rong-Huan, C., Shuang, S., Xue-Qiong, Y., Ya-Bin, Y. & Zhong-Tao, D. 2021, ‘The chemical diversity, the attractant, anti-acetylcholinesterase, and antifungal activities of metabolites from biocontrol *Trichoderma harzianum* uncovered by OSMAC strategy’, *Bioorganic Chemistry*, Vol. 114, 105148, pp. 1-7.
- Wardhani, L. K. & Sulistyani, N. 2012, ‘Uji Aktivitas Antibakteri Ekstrak Etil Asetat Daun Binahong (*Anredera scandens* (L.) Moq.) terhadap *Shigella flexneri* beserta Profil Kromatografi Lapis Tipis’, *Jurnal Ilmiah Kefarmasian*, Vol. 2, No. 1, pp. 1-16.
- Watanabe, T. 2010, *Pictorial Atlas of Soil and Seed Fungi: Morphologies of Cultured Fungi and Key to Species, Third Edition*, CRC Press, Boca Raton.
- Wei, Q., Bai, J., Yan, D., Bao, X., Li, W., Liu, B., Zhang, D., Qi, X., Yu, D. & Hu, Y. 2021, ‘Genome mining combined metabolic shunting and OSMAC strategy of an endophytic fungus leads to the production of diverse natural products’, *Acta Pharmaceutica Sinica B*, Vol. 11, No. 2, pp. 572-587.
- White, J. F., Kingsley, K.L., Zhang, Q., Verma, R., Obi, N., Dvinskikh, S., Elmore, M. T., Verma, S. K., Gondb, S. K., & Kowalskic, K. P. 2019, ‘Review: Endophytic microbes and their potential applications in crop management’, *Pest Manag Sci*, Vol. 75, pp.2558-2565, DOI:10.1002/ps.5527.
- WHO (World Health Organization). 2021, *Cancer*, diakses 5 April 2021, <https://www.who.int/news-room/fact-sheets/detail/cancer>.
- Wongjirathiti, A., & Yottakot, S. 2017, ‘Utilisation of Local Crops as Alternative Media for Fungal Growth’, *Pertanika J. Trop. Agric. Sci.*, Vol. 40, No. 2, pp. 295 – 304.
- Wonorahardjo, S. 2016, *Metode-Metode Pemisahan Kimia: Sebuah Pengantar*, PT. Indeks, Jakarta.

Yadnya-Putra, A. A. G. R., Samirana, P. O. & Andhini, D. A. A. 2019, 'Isolasi dan Karakterisasi Senyawa Flavonoid Potensial Antioksidan dari Daun Binahong (*Anredera scandens* (L.) Moq.)', *Jurnal Farmasi Udayana*, Vol. 8, No. 2, pp. 85-94.

Yudiarti, T., Sumarsono & Widjayanto, D. W. 2010, 'Identification of Soil Fungi Isolated from Alfalfa (*Medicago sativa* L) to Find Specific Fungi Which Improved the Growth of Alfalfa', *Journal of the Indonesian Tropical Animal Agriculture*, Vol. 35, No. 3, pp. 197-200.

Zhang, Y., Shi, J., Gao, Z., Yangwu, R., Jiang, H., Che, J., & Liu, Y. 2015, 'Production of pinoresinol diglucoside, pinoresinol monoglucoside, and pinoresinol by *Phomopsis* sp. XP-8 using mung bean and its major components', *Appl Microbiol Biotechnol*, Vol. 99, pp.4629–4643, DOI:10.1007/s00253-015-6491-7.

