

DAFTAR PUSTAKA

- Aristyawan, A.D., Noor, E, S., Suciati. (2017). Potensi Antibakteri dari Ekstrak Etanol Spons *Agelas cavernosa*. *Tesis*. Surabaya: Universitas Airlangga.
- Artasasta MA, Yanwirasti Y, Taher M, Djamaan A, Ariantari NP, Edrada-Ebel RA, Handayani D. (2021). Apoptotic Activity of New Oxisterigmatocystin Derivatives from the Marine-Derived Fungus *Aspergillus nomius* NC06. *Marine Drugs*.; 19(11):631.
- Azis Saifudin, Ph.D. A. (2017). Senyawa Alam Metabolit Sekunder: Teori, Konsep, dan Teknik Pemurnian. Yogyakarta: Deepublish.
- Balouiri, M., Sadiki, M. and Ibsouda, S. K. (2016) 'Methods for in vitro evaluating antimicrobial activity: A review', *Journal of pharmaceutical analysis*. Elsevier, 6(2), pp. 71–79.
- Balansa, W. (2019). A new sesquiterpenoid aminoquinone from an Indonesian marine sponge. *Marine Drugs*, 17(3), 1–7.
- Bergquist, P. R., & de Cook, S. C. (2002). Order Verongida Bergquist, 1978. *Systema Porifera*, 2(1), 1081–1081.
- Bringmann, G., Lang, G., Steffens, S., Günther, E., & Schaumann, K. (2003). Evariquinone, isoemericellin, and stromemycin from a sponge derived strain of the fungus *Emericella varicolor*. *Phytochemistry*, 63(4), 437–443.
- Ćetković, H., & Lukić-Bilela, L. (2003). HMGB2 Protein from the Marine Sponge: *Suberites domuncula*. *Food Technology and Biotechnology*, 41(4), 361–365.
- Chelossi, E., Milanese, M., Milano, A., Pronzato, R., & Riccardi, G. (2004). Characterisation and antimicrobial activity of epibiotic bacteria from *Petrosia ficiformis* (Porifera, Demospongiae). *Journal of Experimental Marine Biology and Ecology*, 309(1), 21–33.
- Choma, I. M., & Grzelak, E. M. (2011). Bioautography detection in thin-layer chromatography. *Journal of Chromatography A*, 1218(19), 2684–2691.
- Custodio, M. R., Prokic, I., Steffen, R., Koziol, C., Borojevic, R., Brümmer, F., Nickel, M., & Müller, W. E. G. (1998). Primmorphs generated from dissociated cells of the sponge *Suberites domuncula*: A model system for studies of cell proliferation and cell death. *Mechanisms of Ageing and Development*, 105(1–2), 45–59.
- Dabelić, S., Kifer, D., Jakšić, D., Kopjar, N., & Klarić, M. Š. (2021). Sterigmatocystin, 5-Methoxysterigmatocystin, and Their Combinations are Cytotoxic and Genotoxic to A549 and HepG2 Cells and Provoke Phosphorylation of Chk2, but not FANCD2 Checkpoint Proteins. *Toxins*, 13(7), 464.

- Darmono, E. K. E. A. (2008). Sensitivitas metode bioautografi kontak dan agar overlay dalam penentuan senyawa antikapang. In *Jurnal ilmu kefarmasian indonesia*, 6(2), 75-79).
- Davison, J. R., Lohith, K. M., Wang, X., Bobyk, K., Mandadapu, S. R., Lee, S. L., Cencic, R., Nelson, J., Simpkins, S., Frank, K. M., Pelletier, J., Myers, C. L., Piotrowski, J., Smith, H. E., & Bewley, C. A. (2017). A new natural product analog of blasticidin S reveals cellular uptake facilitated by the NorA multidrug transporter. *Antimicrobial Agents and Chemotherapy*, 61(6), 1–17.
- Ebada, S. S., Edrada, R. A., Lin, W., & Proksch, P. (2008). Methods for isolation, purification and structural elucidation of bioactive secondary metabolites from marine invertebrates. *Nature Protocols*, 3(12), 1820–1831.
- Gandjar, I. G. & Rohman, A. (2013). *Analisis Obat Secara Spektrofotometri dan Kromatografi*. Pustaka Pelajar.
- Gandjar, I. G., & Rohman, A. (2018). *Spektroskopi Molekuler untuk Analisis Farmasi*. UGM PRESS.
- Gao, W.; Jiang, L.; Ge, L.; Chen, M.; Geng, C.; Yang, G.; Li, Q.; Ji, F.; Yan, Q.; Zou, Y.; et al. Sterigmatocystin-Induced Oxidative DNA Damage in Human Liver-Derived Cell Line through Lysosomal Damage. *Toxicol. In Vitro* 2015, 29, 1–7.
- Gazave, E., Lapébie, P., Ereskovsky, A. V., Vacelet, J., Renard, E., Cárdenas, P., & Borchiellini, C. (2012). No longer Demospongiae: Homoscleromorpha formal nomination as a fourth class of Porifera. *Hydrobiologia*, 687(1), 3–10.
- Gözcelioğlu, B., Soest, R. Van, Alvarez, B., & Konuklugil, B. (2015). New species of sponges (Porifera, Demospongiae) from the Turkish coast. *Turkish Journal of Zoology*, 39(4), 555–559.
- Gritter, R. J., Bobbit, J. M., & Schwarting, A. E. (1991). Pengantar kromatografi. *Edisi Kedua, Penerbit ITB, Bandung*, 1, 14-18.
- Gruber-Dorninger, C., Novak, B., Nagl, V., & Berthiller, F. (2017). Emerging mycotoxins: Beyond traditionally determined food contaminants. *Journal of agricultural and food chemistry*, 65(33), 7052-7070.
- Hagiwara, K., Garcia, H. J. E., Harper, M. K., Carroll, A., Motti, C. A., Awaya, J., Nguyen, H. Y., & Wright, A. D. (2015). Puupehenol, a potent antioxidant antimicrobial meroterpenoid from a Hawaiian deep-water *Dactylospongia* sp. sponge. *Journal of Natural Products*, 78(2), 325–329.
- Handayani, D., Rendowati, A., Aminah, I., Ariantari, N. P., & Proksch, P. (2020). Bioactive compounds from marine sponge derived fungus *aspergillus unguis* WR8. *Rasayan Journal of Chemistry*, 13(4), 2633–2638.
- Handayani, D., Artasasta, M. A., Safirna, N., Ayuni, D. F., Tallei, T. E., & hertianI, T. (2020). Fungal isolates from marine sponge *Chelonaplysilla* sp.:

Diversity, antimicrobial and cytotoxic activities. *Biodiversitas Journal of Biological Diversity*, 21(5).

- Handayani, D., Artasasta, M. A., Mutia, D., Atikah, N., & Tallei, T. E. (2021). Antimicrobial and cytotoxic activities screening of fungal secondary metabolites isolated from marine sponge *Callyspongia* sp. *Aquaculture, Aquarium, Conservation & Legislation*, 14(1), 249-258.
- Hu, X., Li, X., Meng, L., & Wang, B. (2020). Antioxidant bisabolane-type sesquiterpenoids from algal-derived fungus *Aspergillus sydowii* EN-434. *Journal of Oceanology and Limnology*, 38(5), 1532–1536.
- HMDB. <https://hmdb.ca/metabolites/HMDB0030588>. diakses pada tanggal 15 oktober 2021.
- HSDB. <https://pubchem.ncbi.nlm.nih.gov/source/hsdb/3540>. diakses pada tanggal 15 oktober 2021.
- Julianto, T. S. (2019). Fitokimia Tinjauan Metabolit Sekunder dan Skrining Fitokimia. *Yogyakarta: Universitas Islam Indonesia*.
- Kelly, M., & Bell, L. (2016). *Splendid Spon Of Palau Version (I)*. Niwa Coral Real Research Foundation.
- Kjer, J., Debbab, A., Aly, A. H., & Proksch, P. (2010). Methods for isolation of marine-derived endophytic fungi and their bioactive secondary products. *Nature Protocols*, 5(3), 479–490.
- Kojima, S., & Nikaido, H. (2013). Permeation rates of penicillins indicate that *Escherichia coli* porins function principally as nonspecific channels. *Proceedings of the National Academy of Sciences of the United States of America*, 110(28), 2629–2634.
- Lee, Y. K., Lee, J. H., & Lee, H. K. (2001). Microbial Symbiosis in Marine Sponges. *Journal of Microbiology*, 39(4), 254–264.
- Li W, Luo D, Huang J, Wang L, Zhang F, X. T. (2017). Antibacterial constituents from antarctic fungus , *aspergillus sydowii* sp-1. *Natural Product Research*, 5, 1–7.
- Liu S, Wang H, Su M, Hwang GJ, Hong J, J. J. (2017). New metabolites from the sponge-derived fungus *aspergillus sydowii* j05b-7f-4. *Natural Product Research*, 6419(2), 1–6.
- Livermore, D. M. (2008). *Defining an extended-spectrum b -lactamase*. 14, 3–10.
- Maldonado, M., Cortadellas, N., Trillas, M. I., Ecology, A., Estudios, C. De, Blanes, A. De, & Cala, A. (2005). *Maldonado M 2005 yeast-sponge symbiosis.pdf*. October, 94–106.
- Marjoni R. (2016) Dasar- dasar fitokimia, Trans Info Media Jakarta.
- Mokhlesi, A., Stuhldreier, F., Wex, K. W., Berscheid, A., Hartmann, R., Rehberg, N., Surechatchaiyan, P., Chaidir, C., Kassack, M. U., Kalscheuer, R.,

- Brötz-Oesterhelt, H., Wesselborg, S., Stork, B., Daletos, G., & Proksch, P. (2017). Cyclic Cystine-Bridged Peptides from the Marine Sponge *Clathria basilana* Induce Apoptosis in Tumor Cells and Depolarize the Bacterial Cytoplasmic Membrane. *Journal of Natural Products*, 80(11), 2941–2952.
- Mueller, W. E. G. (1982). Cell Membranes in Sponges. In *International Review of Cytology*, 77.
- Müller, W. E. G., Wendt, K., Geppert, C., Wiens, M., Reiber, A., & Schröder, H. C. (2006). Novel photoreception system in sponges? Unique transmission properties of the stalk spicules from the hexactinellid *Hyalonema sieboldi*. *Biosensors and Bioelectronics*, 21(7), 1149–1155.
- Nofiani, R., Weisberg, A. J., Tsunoda, T., Panjaitan, R. G. P., Brilliantoro, R., Chang, J. H., Philmus, B., & Mahmud, T. (2020). Antibacterial Potential of Secondary Metabolites from Indonesian Marine Bacterial Symbionts. *International Journal of Microbiology*.
- Ola, A. R. B., Lapailaka, T., Wogo, H. E., Henuk, J. B. D., Simamora, A., Mukkun, L., ... & Pham, C. D. (2021). Bioactive Secondary Metabolites from the Mangrove Endophytic Fungi *Nigrospora oryzae*. *Indonesian Journal of Chemistry*.
- Pachler, K. G., Steyn, P. S., Vlegaar, R., & Wessels, P. L. (1976). Carbon-13 nuclear magnetic resonance assignments and biosynthesis of aflatoxin B 1 and sterigmatocystin. *Journal of the Chemical Society, Perkin Transactions 1*, (11), 1182–1189.
- Proksch, P., Edrada-Ebel, R., & Ebel, R. (2003). Drugs from the Sea - Opportunities and Obstacles. *Marine Drugs*, 1(1), 5–17.
- Rodríguez, J., Quiñoá, E., Riguera, R., Peters, B. M., Abrell, L. M., & Crews, P. (1992). The structures and stereochemistry of cytotoxic sesquiterpene quinones from *dactylospongia elegans*. *Tetrahedron*, 48(32), 6667–6680.
- Romano, G., Costantini, M., Sansone, C., Lauritano, C., Ruocco, N., & Ianora, A. (2017). Marine microorganisms as a promising and sustainable source of bioactive molecules. *Marine Environmental Research*, 128, 58–69.
- Rozas, E. E., Albano, R. M., Lôbo-Hajdu, G., Müller, W. E. G., Schröder, H. C., & Custódio, M. R. (2011). Isolation and cultivation of fungal strains from in vitro cell cultures of two marine sponges (Porifera: Halichondrida and Haplosclerida). *Brazilian Journal of Microbiology*, 42(4), 1560–1568.
- Sandrawati, N., Hati, S. P., Yunita, F., Putra, A. E., Ismed, F., Tallei, T. E., Hertiani, T., & Handayani, D. (2020). Antimicrobial and cytotoxic activities of marine sponge-derived fungal extracts isolated from *Dactylospongia* sp. *Journal of Applied Pharmaceutical Science*, 10(4), 28–33.
- Suhartati, T. (2017). Dasar-dasar spektrofotometri UV-Vis dan spektrometri massa untuk penentuan struktur senyawa organik.

- Shore, A. C., Deasy, E. C., Slickers, P., Brennan, G., O'Connell, B., Monecke, S., Ehricht, R., & Coleman, D. C. (2011). Detection of staphylococcal cassette chromosome mec type XI carrying highly divergent mecA, mecI, mecR1, blaZ, and ccr genes in human clinical isolates of clonal complex 130 methicillin-resistant *Staphylococcus aureus*. *Antimicrobial Agents and Chemotherapy*, 55(8), 3765–3773.
- Soler-Hurtado, M. M., Sandoval-Sierra, J. V., Machordom, A., & Diéguez-Uribeondo, J. (2016). *Aspergillus sydowii* and Other Potential Fungal Pathogens in Gorgonian Octocorals of the Ecuadorian Pacific. *PLoS ONE*, 11(11), 1–12.
- Song, X., Luo, M., Huang, H., and Lu, L., 2017, Secondary metabolites of the marine fungus *Aspergillus versicolor* SCSIO 05772, *Chem. Nat. Compd.*, 53 (2), 354–355
- Song, F., Ren, B., Chen, C., Yu, K., Liu, X., Zhang, Y., ... & Zhang, L. (2014). Three new sterigmatocystin analogues from marine-derived fungus *Aspergillus versicolor* MF359. *Applied microbiology and biotechnology*, 98(8), 3753-3758.
- Steindler, L., Huchon, D., Avni, A., & Ilan, M. (2005). 16S rRNA phylogeny of sponge-associated cyanobacteria. *Applied and Environmental Microbiology*, 71(7), 4127–4131.
- Subramani, R., Kumar, R., Prasad, P., & Aalbersberg, W. (2013). Cytotoxic and antibacterial substances against multi-drug resistant pathogens from marine sponge symbiont: Citrinin, a secondary metabolite of *Penicillium* sp. *Asian Pacific Journal of Tropical Biomedicine*, 3(4), 291–296.
- Thakur, N. L., & Müller, W. E. G. (2004). Biotechnological potential of marine sponges. *Current Science*, 86(11), 1506–1512.
- Thomas, T. R. A., Kavlekar, D. P., & LokaBharathi, P. A. (2010). Marine drugs from sponge-microbe association - A review. *Marine Drugs*, 8(4), 1417–1468.
- Valgas, C., De Souza, S. M., Smânia, E. F. A., & Smânia, A. (2007). Screening methods to determine antibacterial activity of natural products. *Brazilian Journal of Microbiology*, 38(2), 369–380.
- Vargiu, A. V., & Nikaido, H. (2012). Multidrug binding properties of the AcrB efflux pump characterized by molecular dynamics simulations. *Proceedings of the National Academy of Sciences of the United States of America*, 109(50), 20637–20642.
- Veršilovskis, A., Bartkevičs, V., & Miķelsons, V. (2008). Sterigmatocystin presence in typical Latvian grains. *Food Chemistry*, 109(1), 243–248.
- Wang, G. (2006). Diversity and biotechnological potential of the sponge-associated microbial consortia. *Journal of Industrial Microbiology and Biotechnology*, 33(7), 545–551.

- Wang J, Lin X, Qin C, Liao S, Wan J, Z. T. (2014). Antimicrobial and antiviral sesquiterpenoids from sponge-associated fungus, *aspergillus sydowii* zds1-f6. *The Journal Of Antibiotic (Tokyo)*, 67(8), 581–583.
- Wiese, J., Ohlendorf, B., Blümel, M., Schmaljohann, R., & Imhoff, J. F. (2011). Phylogenetic identification of fungi isolated from the Marine Sponge *Tethya aurantium* and identification of their secondary metabolites. *Marine Drugs*, 9(4), 561–585.
- Wilkinson, C. (1987). Significance of microbial symbionts in sponge evolution and ecology. *Symbiosis (Philadelphia, PA)*, 4(1), 135–145.
- Wu, B., Wiese, J., Wenzel-Storjohann, A., Malien, S., Schmaljohann, R., & Imhoff, J. F. (2016). Engyodontochones, Antibiotic Polyketides from the Marine Fungus *Engyodontium album* Strain LF069. *Chemistry - A European Journal*, 22(22), 7452–7462.
- Weckesser, S., Engel, K., Simon-Haarhaus, B., Wittmer, A., Pelz, K., Schempp, C.M., 2007. Screening of plant extracts for antimicrobial activity against bacteria and yeasts with dermatological relevance. *Phytomedicine* 14, 508–516.
- WHO. Media Centre. News Release. WHO publishes list of bacteria for which new antibiotics are urgently needed. 2017.
- Yuniarty, t., & Rosanty, A. (2018). Pemanfaatan Sari Pati Buah Sukun (*Artocarpus altilis*) Sebagai Alternatif Media.
- Young, J. C. (2013). True Melting Point Determination. *Chemical Educator*, 18(2), 208.
- Zhang, D., Yang, X., Jung, S. K., Hong, D. C., & Byeng, W. S. (2008). Chlorohydroaspyrones A and B, antibacterial aspyrone derivatives from the marine-derived fungus *Exophiala* sp. *Journal of Natural Products*, 71(8), 1458–1460.
- Zheng, L., Chen, H., Han, X., Lin, W., & Yan, X. (2005). Antimicrobial screening and active compound isolation from marine bacterium NJ6-3-1 associated with the sponge *Hymeniacidon perleve*. *World Journal of Microbiology and Biotechnology*, 21(2), 201–206.