DAFTAR PUSTAKA

Abdulrahman, I., M. T. Jamal, A. Pugazhendi, J. Dhavamani, and S. Satheesh. 2022. Antibiofilm activity of secondary metabolites from bacterial endophytes of red sea soft corals. International Biodeterioration & Biodegradation. 173.

Aboul-Maaty, N. and A. Oraby. 2019. Extraction of high-quality genomic DNA from different plant orders applying a modified CTAB-based method. Bulletin of the National Research Centre. 43(25).

Abou-ElWafa, G. S. E., M. Shaaban, K. A. Shaaban, M. E. E. El-Naagar, and H. Laatsch. 2009. Three new unsaturated fatty acids from the marine green algae *Ulva fasciata* Delile. Zeitschrift für Naturforschung B. 64(10):1199-1207.

Abu-Ghannam, N. and G. Rajauria. 2013. Antimicrobial activity of compounds isolated from algae. *In*: H. Dominguez. *Algae for Foods and Nutraceuticals*. 287-306. Woodhead Publishing. Dublin.

Agatonovic-Kustrin, S., E. Kustrin, V. Gegecchkori, and D. W. Morton. 2019. High performance thin layer chromatography hyphenated with microchemical and biochemical derivatizations in bioactivity profiling if marine species. Marine Drugs. 17(148).

Agatonovic-Kustrin, S. and D W. Morton. 2017. High-performance thin layer chromatography-direct bioutography as a method of choice for alpha-amylase and antioxidant activity evaluation in marine algae. Journal of Chromatography A. 1530(2017):197-203.

Algae Base. 2016. *Palisada papillosa* (C. Agardh) K. W. Nam 2007. National University of IrelanGalway.https://www.algaebase.org/search/species/detail/?species_id=T6294d9450161b25c. Diakses 6 Juni 2023.

Ale, M. T., K. Barret, G. N. D. Addico, N. Rhein-Knudsen. A. A. deGraft-Johnson, and A. S. Meyer. 2016. DNA-Based identification and chemical characteristics of *Hypnea musciformis* from coastal sites in Ghana. Diversity. 8(14).

Arsianty, A., Y. A. N. Aziza, K. D. Kurniasari, B. K. D. Mandasari, R. Masita, F. R. Zulfa, M. K. Dewi, C. R. Z. Zagloel, N. N. Aziza, and R. Putrianingsih. 2018. Phytochemical test and cytotoxic activity of macroalgae *Euchema cottoni* against cervical hela cells. Pharmacognosy Journal. 10(5): 1012-7.

Arunkumar, M., F. LewisOscar, N. Thajuddin, A. Pugazhendhi, and C. Nithya. 2020. In vitro and in vivo biofilm forming *Vibrio* spp.: a significant threat in aquaculture. Process Biochemistry. 94. 213-223.

Ashrafudoulla, Md., M. F. R. Mizan, S. H. Park, and S. D. Ha. 2020. Current and future perspectives for controlling *Vibrio* biofilms in the seafood industry: a

comprehensive review. Critical Reviews in Food Science and Nutrition. 61(11): 1827-1851.

Asma, S. T., K. Imre, A. Morar, V.Herman, U. Acaroz, H. Mukhtar, D. Arslan-Acaroz, S. R. A. Shah, and R. Gerlach. 2022. An overview of biofilm formation combating strategies and mechanisms of action of antibiofilm agents. Life. 20(1110).

Barsanti, L. and P. Gualtieri. 2023. Algae:Anatomy, Biochemistry, and Biotechnology. 3 rd ed. CRC Press Taylor & Francis Group, Oxon.

Bedoux, G., K. Hardouin, A. S. Burlot, & N. Bourgougnon. 2014. Bioactive components from seaweeds: cosmetic applications and future development. Advances in Botanical Research. 71: 345-378.

Bilal, M. and Iqbal H. 2020. Marine seaweed polysaccharides-based engineered cues for the modern biomedical sector. Marine Drugs. 18(7).

Boonsri, N., T. Rudtanatip, B. Withyachumnarnkul, and K. Wongprasert. 2017. Protein extract from red seaweed *Gracilaria fishery* prevents acute hepatopancreatic necrosis disease (AHPND) infection in shrimp. Journal of Applied Phycology. 29: 1597-1608.

Breijyeh, Z., B. Jubeh, and R. Karaman. 2020. Resistance of Gram negative bacteria to current antibacterial agents and approaches to resolve it. Molecules. 25(1340).

Dahanayake, J. M., P. K. Perera, P. Galappatty, H. D. S. M. Perera, and L. D. A. M. Arawwawala. 2019. Comparative phytocemucal analysis and antioxidant activities of tamalakyadi decoction with its modified dosage forms. Hindawi: Evidence-Bsed Complementary and Alternative Medicine. 2019. 1-9.

Cassano, V., J. Diaz-Larrea, A. Senties, M. C. Oliveira, M. C. Gil-Rodriguez, and M. T. Fujii. 2009. Evidence for the conspecificity of *Palisada papillosa* with *P. perforate* (Ceramiales, Rhodophyta) from the western and eastern Atlantic Ocean on the basis of morphological and molecular analyses. Phycologia. 48(2): 86-100.

Castaneda, P., A. McLaren, G. Tavaziva. 2017. Biofilm antimicrobial susceptibility increases with antimicrobial exposure time. Clinical Orthopaedics and Related Research. 474: 1659-1664.

Cheng, A., S. Cheng, Y. Chen, J. Chen. 2009. Effects of temperature change of the innate cellular and humoral immune responses on orange-spotted grouper *Epinephelus coioides* and its susceptibility to *Vibrio alginolyticus.* Fish and Shellfish Immunology. 26(5): 768-772.

Choma, I. M. and E. M. Grzelak. 2011. Bioautography detection in thin-layer chromatography. 2011. Journal of Chromatography A. 1218(2011): 2684-2691.

Cmikova, N., L. Galovicova, M. Miskeje, P. Borotova, M. Kluz, and M. Kacaniova. 2022. Determination of antioxidant, antimicrobial activity, heavy metals and element content of seaweed extract. Plants. 11. 1493.

Coffey, B. M. and G. G. Anderson. 2014. Biofilm Formation in the 96-Well Microtiter Plate. In: Filloux A., JL. Ramos (eds) Pseudomonas Methods and Protocols. Methods in Molecular Biology (Methods and Protocols) 1149. 631-641.

De Almeida, C. L. F., D. S. Falcão, D. M. Lima, R. Gedson, D. A. Montenegro, N. S. Lira, and L. M. Batista. 2011. Bioactivities from marine algae of the genus Gracilaria. International Journal of Molecular Sciences. 12(7): 4550-4573.

Deng, Y., L. Hu., and H. Chen. 2020. Prevalence, virulence genes, dan antimicrobial resistance of Vibrio species isolated from diseased marine fish in South China. Scientific Reports. 10.

Deng, Y., Y. Liu, J. Li, X. Wang, S. He, X. Yan, Y. Shi, W. Zhang, and L. Ding. 2022. Marine natural products and their synthetic analogs as promising antibiofilm agents for antibiotics discovery and development. European Journal of Medicinal Chemistry. 239.

Dewanjee, S., M. Gangopashyay, N., Bhattacharya, R. Khanra, and T. K. Dua. 2015. Bioautography and its scope in the field of natural product chemistry. Journal of Pharmaceutical Analysis. 5(2): 75-84.

Dubber, D. and T. Harder. 2008. Extracts of *Ceramium rubrum*, *Mastocarpus stellatus*, and *Laminaria digitata* inhibit growth of amrine and fish pathogenic bacteria at ecological realistic concentration. Aquaculture. 274(2-4): 196-200.

El-Ashram, I. Al Nasr, and X. Suo. 2016. Nucleic acid protocols: extraction and optimization. Biotechnology Reports. 12: 33-39.

Fouz, B., A. Llorens, E. Valiente, and C. Amaro. 2010. A comparative epizootiologic study of the two fish-pathogenic serovars of *Vibrio vulfinicus* biotype 2. Journal of Fish Disease. 33(5):383-390).

Gibbons, S. 2005. An Introduction to planar chromatography. *In*: S.J. Sarker, Z. Latif, and A.I. Gray (Eds) *Natural Product Isolation*. Humana Press. New Jersey.

Heesterbeek, D. A. C., N. I. Martin, A. Velthuizen, M. Duijst, M. Ruyken, R. Wubbolts, S. H. M. Rooijakkers, and B. W. Bardoel. 2018. Complement dependent outer membrane petubation sensitizes Gram negative bacteria to Gram positife specific antibiotics. Scientific Reports. 9(3074).

Heikrujam J., R. Kishor, and P. B. Mazumder. 2020. The chemistry behind plant DNA siolation protocols. *In*: O. Boldura, C. Balta, and N. S Awwad. *Biochemical Analysis Tools*. IntechOpen. United Kingdom

Houssen, W. E. and M. Jaspars. 2006. Isolation of marine natural products. *In*: S.J. Sarker, Z. Latif, and A.I. Gray (Eds) *Natural Product Isolation*. Humana Press. New Jersey.

Huang, W., Y. Wang, W. Tian, X. Cui, P. Tu, J. Li, S. Shi, and X. Liu. 2022. Biosysntesis investigations of terpenoid, alkaloid, and flavonoid antimicrobial agents derived from medicinal plants. Antibiotics. 11.

Imtiyaz, F. D., S. Ngernson, Kristina, P. Yatip, Nurhayati, P. Unggul, S. Preedanon, A. Klaysuban, T. Sangtiean, J. Sakayaroj, A. Budiharjo, S. Suetrong, C. Soowannayan. Reduced vibriosis mortality in shrimp fed culture fluids from endophytic fungi correlated with *Vibrio* biofilm inhibition. Aquaculture. 566.

Ina-Salwany, M. Y., N. Al-Saari, A. Mohamad, F. A. Mursidi, A. Mohd-Aris, M. N. A. Amal, H. Kasai, S. Mino, T. Sawabe, and M. Zamri-Saad. 2018. Vibriosis in fish: a review on disease development and prevention. Journal of Aquatic Animal Health. 31(1): 3-22.

Kancherla, N., A. Dhakshinamoothi, K. Chitra, and R. B. Komaram. 2019. Preminary analysis of photoconstituents and evaluation of anthelminthic property of *Cyratia auriculata* (in vitro). Medica-a Journal of Clinical Medicine. 14(4): 350-356.

Karnjana, K., C. Soowannayan, and K. Wongprasert. 2019. Ethanolic extract of red seaweed *Gracilaria fisheri* and furanone eradicate *Vibrio harveyi* and *Vibrio parahaemolyticus* biofilms and ameliorate the bacterial infection in shrimp. Fish and Shellfish Immunology. 88. 91-101.

Karnjana, K., S. Nobsathian, C. Soowannaya, W. Zhao, Y. J. Tang, and K. Wongprasert. 2020. Purification and evaluation of *N*-benzyl cinnamamide from red seaweed *Gracilaria fisheri* as an inhibitor of *Vibrio harveyi* AI-2 quorum sensing. Marine Drugs.18(80).

Kasanah, N., M. Ulfah, and D. C. Rowley. 2022. Natural products as antivibrio agents: insight into the chemistry and biological activity. Royal Society of Chemistry. 12: 34531-34547.

Kasanah, N., W. Amelia, A. Mukminin, Triyanto, and A. Isnansetyo. 2019. Antibacterial activity of Indonesian red algae *Gracilaria edulis* against bacterial fish pathogens and characterization of active fraction. Natural Product Research. 33(22): 3303-3307.

Kasanah, N. Setyadi, and T. Ismi. 2018. Rumput Laut Indonesia: Keanekaragaman Rumput Laut di Gunung Kidul Yogyakarta. UGM Press, Yogyakarta.

Kasanah, N., Triyanto, D. S. Seto, W. Amelia, and A. Isnansetyo. 2015. Antibacterial compunds from red seaweeds (Rhodophyta). 15(2): 201-209.

Kiadaliri, M., F. Firouzbakhsh, and H. Deldar. 2020. Effects of feeding with red algae (*Laurencia caspica*) hydroalcoholic extract on antioxidant defence, immune responses, and immune gene expression of kidney in rainbow trout

(*Oncorhynchus mukiss*) infected by *Aeromonas hydrophila*. Aquaculture. 526: 1-8.

Kogame, K., S. Uwai, R. J. Anderson, H. G. Choi, and J. J. Bolton. 2017. DNA barcoding of South African geniculate coralline red algae (Corallinales, Rhodophyta). South African Journal of Botany. 108: 337-341.

Kowalska-Krochmal, B. and R. Dudek-Wicher. 2021. The minimum inhibitory concentration of antibiotics: methods, interpretation, clinical relevance. Pathogens. 10(165).

Kumar, M. S., G. Kaur, and A. K. Sandhu. 2014. Genomic DNA isolation from fungi, algae, plant, bacteria, and human blood using CTAB. International Journal of Science and Research. 3(9): 617-618.

Lee, H. W., S. Kharel, and S. C. J. Loo. 2022. Lipid coated hybrid nanoparticels for enhanced bacterial biofilm penetration and antibiofilm efficacy. ACS Omega. 7: 35814-35824.

Letchumanan, V., P. Pusparajah, L. T. H. Tan, W. F. Yin, L. H. Lee, & K. G. Chan. 2015. Occurrence and antibiotic resistance of *Vibrio parahaemolyticus* from shellfish in Selangor, Malaysia. Frontiers in Microbiology. 6: 1417-1424

Li, Q., J. Liang, W. Zhang, L. Zhang, Z. Hu, Y. Zhang, and Y. Xu. 2019. Butenolide, a marine-derivated broad-spectrum antibiofilm agent against both gram positive abd gram negative pathogenic bacteria. Marine Biotechnology. 21. 88-98.

Ma, K., Q. Bao, Y. Wu., S. Chen, S. Zhao, H. Wu, and J. Fan. 2020. Evaluation of microalgae as immunostimulants and recombinant vaccines for diseases prevention and control in aquaculture. Frontiers in Bioengineering and Biotechnology. 16(8).

Machanayake, T., A. Salleh, M. N. A. Amal, I. S. Md Yasin, M. Zamri-Saad. 2023. Pathology and pathogenesis of *Vibrio* infection in fish: a review. Aquaculture Reports. 28(2023).

Mahizan, N. A., S. Yang, C. Moo, A. A. Sng, C. Chong, C. Chong, A. Abushelaibi, S. E. Lim, and K. Lai. 2019. Terpene derivatives as a potential agent against antimicrobial resistance (AMR) pathogens. Molecules. 24.

Menteri Kelautan dan Perikanan Republik Indonesia. 2019. Peraturan Menteri Kelautan dan Perikann Republik Indonesia Nomor 1/PERMEN-KP/2019 Tentang Obat Ikan. Jakarta.

Mishra, R., A. K. Panda, S. D. Mandal, M. Shakeel, S. S. Bisht, and J. Khan. 2020. Natural anti-biofilm agents: strategies to control biofilm-forming pathogens. Frontiers in Microbiology. 11.

Mohamad, N., M. N. A. Amal., I. S. M. Yasin, M. Z. Saad, N. S. Nasruddin, N. Al-saari, S. Mino, and T. Sawabe. 2019. Vibriosis in cultured marine fishes; a review.Aquaculture. 512.

Nichols, L. 2023. Organis Chemistry Lab Teqniques. LibreTexts. California.

O'Toole, G. A. 2011. Microtiter dish biofilm formation assay. Journal of Visualized Experiments. 47. 1-3.

Palaniyappan, S., A. Sridhar, Z. A. Kari, G. Tellez-Isaias, and T. Ramasamy. 2023. Evaluation of phytochemical screening, pigment content, in vitro antioxidant, antibacterial potential and GC-MS metabolite profiling of green seaweed *Caulerpa racemose*. Marine Drugs. 21(278).

Patyubi, S., Cruz, M. D. L, J. R. Tormo, J. Martin, I. Gonzalez, V. Gonzalez-Menendez, O. Geniloud, F. Reyes, F. Vicente, C. Madrid, and C. Balsalobre. 2017. A high throughput screening platform of microbial natural products for the discovery of molecules with antibiofilm properties against *Salmonella*. Frontiers in Microbiology. 8(326). 1-13.

Perez, M. J., A. Falque, and H. Dominguez. 2016. Antimicrobial action of compound from marine seaweed. Marine Drugs. 14: 1-38.

Qiao, Y., R. Jia, Y. Luo, and L. Feng. 2021. The inhibitory effect of *Ulva fasciata* on culturability, motility, and biofilm formation of *Vibrio parahaemolyticus* ATCC17802. International Microbiology. 24: 301-310.

Rima, M., J. Trognon, L. Latapie, A. Chbani, C. Roques, and F. El Garah. 2022. Seaweed extract: a promising source of antibiofilm agents with distinct mechanism of action against *Pseudomonas aeruginosa*. Marine Drugs. 20(92).

Saunders, G. W. 2005. Applying DNA barcoding to red macroalgae: a preliminary appraisal holds promise for future applications. 360.1879-1888.

Seidel, V. 2006. Initial and bulk extraction. *In*: S.J. Sarker, Z. Latif, and A.I. Gray (Eds) *Natural Product Isolation*. 27-46. Humana Press. New Jersey.

Shaaban, M., G. S. E. Abou-El-Wafa, C. Golz, and H. Laatsch. 2021. New haloterpenes from the marine red alga *Laurencia papillosa*: structure elucidation and biological activity. Marine Drugs. 19(1).

Shannon, E. and N. Abu-Ghannam. 2016. Antibacterial derivates of marine algae: an overview of pharmacological mechanism and applications. Marine Drugs. 14(81).

Sharma, D., L. Misba, and A U. Khan. 2019. Antibiotics versus biofilm: an emerging battleground in microbial communities. Antimicrobial Resistance and Infection Control. 8(76). 1-10.

Shrestha, L., H. L. Fan, H. R. Tao, and J. D. Huang. 2022. Recent strategies to combat biofilms using antimicrobial agents and therapeutic approaches. Pathogens. 11(292).

Siebenhaller, S., J. Kirchhoff, F. Kirschhofer, G. Benner-Wei, C. Muhle-Goll, B. Luy, F. Haitz, T. Hahn, S. Zibek, C. Syldatk, and K. Ochsenreither. 2018. Integrated procedd for the enzymatic production of fatty acid sugar esters completely based on lignocellulosic substates. Frontiers in Chemistry. 6(421).

Silva, A., S. A. Silva, M. Carpena, P. Garcia-Oliveira, P. Gullon, M. F. Barroso, M. A. Prieto, and j. Simal-Gandara. 2020. Macroalgae as a souece of valuable antimicrobial compounds: extraction and application. Antibiotics. 9(642).

Stephen, J., M. Lekshmi, P. Ammini, S. H. Kumar, and M. F. Varela. 2022. Membrane efflux pumps of pathogenis *Vibrio* species: role in antimicrobial resistance and virulence. Microorganism. 10(382).

Susilowati. 2021. Potensi Rumput Laut Merah (Rhodophyta) dari Pantai di Gunungkidul sebagai Anti *Vibrio alginolyticus.* Fakultas Pertanian. Universitas Gadjah Mada. Skripsi.

Syad, A. N., K. N. Shunmugiah, and P. D. Kasi. 2012. Assessment of anticholiesteranase activity of *Gelidiella acerosa*: implication for its therapeutic potential against alzheimer's disease. Evidence-Based Complementary and Alternative Medicine. 1-8.

Teng, T., L. Liang, K. Chen,T B. Xi, J. Xie, & P. Xu. 2017. Isolation, identification and phenotypic and molecular characterization of pathogenic *Vibrio vulnificus* isolated from *Litopenaeus vannamei*. PLoS One. 12(10).

Unni, A. and P. Pillai. 2022. HPTLC based chemical fingerprint profiling of sterols and antioxidant activity of ulva, sargassum, and gracilaria from Thirumullavaram, Kerala. International Journal of Novel Research and Development. 7(9): 1566-1572.

Vairappan, C. S., T. Ishii, T. K. Lee, M. Suzuki, & Z. Zhaoqi. 2010. Antibacterial activities of a new brominated diterpene from Borneon Laurencia spp. Marine Drugs. 8(6): 1743-1749

Valente, C. S. and A. H. L Wan. 2021. Vibrio and major commercially important vibriosis diseases in decapod crustaceans. Journal of Inventebrate Pathology. 181.

Viju, N., S. M. J. Punitha, and A. Santhessh. 2020. Antibiofilm activity of symbiotic *Bacillus* species associated with marine gastropods. Annals of Microbiology. 70(11).

Wang, M., Y. Zhang, R. Wang, Z. Wang, B. Yang, and H. Kuang. 2021. An envolving technology that integrates classical methods with continuous technological developments: thin-layer chromatography bioautography. Molecules. 26.4647.

Wu, A. J., S. Fotso, F. Li, S. Qin, G. Kelter, H. H. Fiebig, and H. Laatsch. 2006. *N*-Carboxamido-staurosporine and Selina-4(14),7(11)-diene8,9-diol, New Metabolites from a Marine *Streptomyces* sp.. The Journal of Antibiotics. 59(6): 331-337.

Xu, Q., X. Hu, and Y. Wang. 2021. Alternatives to conventional antibiotic therapy: potential therapeutic strategies of combating antimicrobial-resistance and biofilm. Molecular Biotechnology: 63: 1103-1124.

Yang, Y., M. Zhang, A. I. Alalawy, F. M. Almutairi, M. A. Al-Duais, J. Wang, and E. Salama. 2021. Identification and characterization of marine species seaweed for biocompounds production. Enviromental Technology & Innovation. 24(1011848)

Yang, Y., W. Li., Y. Li., J. Zhang, W. Dang, and W. Zhang. 2023. Exogenous c-di-GMP inhibited the biofilm formation of *Vibrio splendidus*. Microbial Pathogenesis. 175(2023).

Yu, Y., H. Li, Y. Wang, Z. Zhang, M. Liao, X. Rong, B. Li, C. Wang, J. Ge, X. Zhang. 2022. Antibiotic resistance, virulence and genetic characteristics of *Vibrio alginolyticus* isolates from aquatic environment in coastal mariculture areas in China. Marine Pollution Bulletin. 185(2022).

Zamutto, V., M. G. Rizzo, A. Spano, G. Genovese, M. Morabito, D. Spagnuolo, F. Cpparucci, C. Gervasi, A. Smeriglio, D. Trombetta, S. Guglielmino, S. Nicolo, and C. Gugliandolo. 2022. In vitro evaluation of antibiofilm activity of crude extract from macroalgae against pathogens relevant in aquaculture. Aquaculture. 549.

Zuccarello, G. C. and N. A. Paul. 2019. A beginner's guide to molecular identification of seaweed. Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology. 14(1): 43-53.