DAFTAR PUSTAKA

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

Abubakar, A. R. dan M. Haque. 2020. Preparation of medicinal plants: basic extraction and fractionation procedures for experimental purposes. Journal of Pharmacy & BioAllied Sciences. 12 (1): 1-10

Afonso, C., A. P. Correia, M. V. Freitas, T. Mouga, T. Baptista. 2021. In vitro evaluation of the antibacterial and antioxidant activities of extracts of *Gracilaria gracilis* with a view into its potential use as an additive in fish feed. Applied Sciences. 11 (6642).

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

Aidos, L. A. Cafiso, V. Serra, M. Vasconi, D. Bertotto, C. Bazzocchi, G. Radaelli, A. Di Giancamillo. 2020. how different stocking densities affect growth and stress status of *Acipenser baerii* early stage larvae. Animals. 10 (1289).

Akinmoladun, A. C., O. E. Falaiye, O. B. Ojo, A. Adeoti, Z. A. Amoo, M. T. Olaleye. 2022. Effect of extraction technique, solvent polarity, and plant matrix on the antioxidant properties of *Chrysophyllum albidum* G. Don (african star apple). Bulletin of The National Research Centre. 46 (40)

Artemisia, R., E. P. Setyowati, R.Martien, A. K. Nugroho. 2019. The properties of brown marine algae *Sargassum turbinariodes* and *Sargassum ilicifolium* collected from Yogyakarta, Indonesia. Indonesian Journal of Pharmacy. 30 (1): 43-51

Awan, F., Y. Dong, N. Wang, J. Liu, K. Ma, Y. Liu. 2018. The fight invincibility: environmental stress response mechanisms and *Aeromonas hydrophila*. Microbial Pathogenesis. 116: 135-145.

Beaz-Hidalgo, R. dan M. J. Figueras. 2013. *Aeromonas* spp. whole genomes and virulence factors implicated in fish disease. Journal of Fish Diseases. 36: 371-388

Bhat, R. A. H., S. Rehman, R. S. Tandel, P. Dash, A. Bhandari, P. A. Ganie, T. K. Shah, K. Pant, D. J. Yousuf, I. A. Bhat, S. Chandra, S. K. Mallik, D. Sarma. 2021. Immunomodulatory and antimicrobial potential of ethanolic extract of Himalayan *Myrica esculanta* on *Oncorhynchus mykiss:*

molecular modelling with *Aeromonas hydrophila* functional proteins. Aquaculture. 533: 736213

Bhushan, S., V. Veeragurunathan, B. K. Bhagiya, S. G. Krishnan, A. Ghosh, V. A. Mantri. Biology, farming and applications of economically important red seaweed *Gracilaria edulis* (S. G. Gmelin) P. C. Silva: a concise review. Journal of Applied Phycology. 35: 983-996

Bonanno, G. dan M. Orlando-Bonaca. 2018. Chemical elements in Mediterranean macroalgae. A review. Ecotoxicology and Environmental Safety. 148: 44-71.

Carpena, M. P. Garcia-Perez, P. Garcia-Oliveira, F. Chamorro, P. Otero, C. Lourenço-Lopes, H. Cao, J. Simal-Gandara, M. A. Prieto. 2022. Biological properties and potential of compounds extracted from red seaweeds. Pyhtochemistry Reviews. <https://link.springer.com/article/10.1007/s11101-022-09826-z>. Diakses 9 Oktober 2022.

Chakansin, C., J. Yostaworakul, C. Warin, K. Kulthong, S. Boonrungsiman. 2022. Resazurin rapid screening for antibacterial activities of organic and inorganic nanoparticles: potential, limitations and precautions. Analytical Biochemistry. 637 (114449)

Chaves, J. O., M. C. de Souza. L. C. da Silva, D. Lachos-Perez, P. C. Torres-Mayanga, A. P. D. F. Machado, T. Forster-Carneiro, M. Vázquez-Espinosa, A. V. Gonzáles-de-Peredo, G. F. Barbero, M. A. Rostagno. 2020. Extraction of flavonoids from natural sources using modern techniques. Frontiers in Chemistry. 8 (507887)

Chen, F., J. Sun, Z. Han, X. Yang, J. Xian, A. Lv, X. Hu, H. Shi. 2019. Isolation, identification and characteristics of *Aeromonas veronii* from diseased crucian carp (*Carassius auratus gibelio*). Frontiers in Microbiology. 10 (2742)

Dang, H. dan C. R. Lovell. 2016. Microbial surface colonization and biofilm development in marine environments. Microbiology and Molecular Biology Reviews. 80: 91-138

Du, H., M. Pang, Y. Dong, Y. Wu, N. Wang, J. Liu, F. Awan, C. Lu, Y. Liu. 2016. Identification and characterization of an *Aeromonas hydrophila* oligopeptidase gene pepF negatively related to biofilm formation. Frontiers in Microbiology. 7 (1497).

El Shafay, S. M., S. S. Ali, M. M. El-Sheekh. 2015. Antimicrobial activity of some seaweeds species from Red Sea, against multidrug resistant bacteria. Egyptian Journal of Aquatic Research. 42: 65-74

Fan, M., S. Yuan, L. Li, J. Zheng, D. Zao, C. Wang, H. Wang, X. Liu, J. Liu. 2023. Application of terpenoid compounds in food and pharmaceutical products. Fermentation. 9 (2)

Fernández-Bravo, A. dan M. J. Figueras. 2020. An update on the genus aeromonas: taxonomy, epidemiology, and pathogenicity. Microorganisms. 8 (129).

Fhionnlaoich, N. M., S. Ibsen, L. A. Serrano, A. Taylor, R. Qi, S. Guldin. 2018. A toolkit to quantify target compounds in thin-layer-chromatography experiments. Journal of Chemical Education. 95: 2191-2196

Francavilla, M., M. Franchi, M. Monteleone, C. Caroppo. 2013. The red seaweed *Gracilaria gracilis* as a multi products source. Marine Drugs. 11 (10)

Ghasemi, M., T. Turnbull, S. Sebastian, I. Kempson. 2021. The MTT assay: utility, limitations, pitfalls, and interpretation in bulk and single-cell analysis. International Journal of Molecular Sciences. 22 (12827).

Giri, S. S., S. G. Kim, K. J. Woo, W. J. Jung, S. B. Lee, Y. M. Lee, S. J. Jo, M. H. Hwang, J. Park, J. H. Kim, Sukumaran V., S. C. Park, 2023. Effects of *Bougainvillea glabra* leaf on growth, skin mucosal immune responses, and disease resistance in common carp *Cyprinus carpio.* Fish and Shellfish Immunology. 132 (108524)

Gomez-Zavaglia, A., M. A. P. Lage, C. Jimenez-Lopez, J. C. Mejuto, J. Simal-Gandara. 2019. The potential of seaweeds as a source of functional ingredients of prebiotic and antioxidant value. Antioxidants. 8 (406)

Grzelak, E. M., C. Hwang, G. Cai, J. W. Nam, M. P. Choules, W. Gao, D. C. Lankin, J. B. McAlpine, S. G. Mulugeta, J. G. Napolitano, J. W. Suh, S. H. Yang, J. Cheng, H. Lee, J. Y. Kim, S. H. Cho, G. F. Pauli, S. G. Franzblau, B. U. Jaki. 2016. Bioautography with TLC-MS/NMR for rapid discovery of anti-tuberculosis lead compounds from natural sources. ACS Infectious Diseases. 2: 294-301

Hall, C. W. dan T. F. Mah. 2017. Molecular mechanisms of biofilm-based antibiotic resistance and tolerance in pathogenic bacteria. FEMS Microbiology Reviews. 41: 276-301.

Hannan, M. A., A. A. M. Sohag, R. Dash, M. N. Haque, M. Mohibbullah, D. F. Oktaviani, M. Tahmeed Hossain, H. J. Choi, I. S. Moon. 2020. Phytosterols of marine algae: insights into the potential health benefits and molecular pharmacology. Phytomedicine. 69 (153201)

Irianti, M. I., B. Elya, R. Rahmasari, N. Puspitasari, F. H. Maharani, M. Raekiansyah. 2022. *Averrhoa carambola* leaf from Depok, West Java, Indonesia: phytochemistry characterization and prospective anti-

candidiasis activity. Journal of Applied Pharmaceutical Science. 12 (1): 199-207

Jha, B., C. R. K. Reddy, M. C. Thakur, M. U. Rao. 2009. Seaweeds of India: The Diversity and Distribution of Seaweeds of the Gujarat Coast. London; Springer.

Joseph, S. 2009. Encyclopedia of Chromatography, Third Edition. London; CRC Press

Kasanah, N., M. Ulfah, O. Imania, A. N. Hanifah, M. I. D. Marjan. 2022. Rhodophyta as potential sources of photoprotectants, antiphotoaging compounds, and hydrogels for cosmeceutical application. Molecules. 27 (22)

Kasanah, N., Setyadi, Triyanto, T. Ismi. 2018. Rumput Laut Indonesia: Keanekaragaman Rumput Laut di Gunungkidul Yogyakarta. UGM Press, Yogyakarta.

Kasanah, N., Triyanto, D. S. Seto, W. Amalia, A. Isnansetyo. 2015. Antibacterial compounds from red seaweeds (Rhodophyta). Indonesian Journal of Chemistry. 15 (2): 201-209.

Khameneh, B., M. Iranshahy, V. Soheili, B. S. F. Bazzaz. 2019. Review on plant antimicrobials: a mechanistic viewpoint. Antimicrobial Resistance & Infection Control. 8 (118)

Khan, F., D. T. N. Pham, N. Tabassum, S. F. Oloketuyi, Y. M. Kim. 2020. Treatment strategies targeting persister cell formation in bacterial pathogens. Critical Reviews in Microbiology. 46 (6): 665-688.

Koala, M., A. Ramde-Tiendrebeogo, N. Ouedraogo, A. Ilboudo, B. Kaboré, F. B. Kini, S. Ouedraogo. 2021. HPTLC phytochemical screening and hydrophilic antioxidant activities of *Apium graveolens* L., *Cleome gynandra* L., and *Hibiscus sabdariffa* L. used for diabetes management. American Journal of Analytical Chemistry. 12: 15-28

Krüzselyi, D., R. Nagy, P. G. Ott, A. M. Móricz. 2016. Rapid, bioassay-guided process for the detection and identification of antibacterial neem oil compounds. Journal of Chromatographic Science. 54 (7): 1084-1089

Kumar, P., J. H. Lee, H. Beyenal, J. Lee. 2020. Fatty acids as antibiofilm and antivirulence agents. Trends in Microbiology. 28 (9): 753-768

Latka, A. dan Z. Drulis-Kawa. 2020. Advantages and limitations of microtiter biofilm assays in the model of antibiofilm actvity of *Klebsiella* phage KP34 and its depolymerase. Scientific Reports. 10 (20338)

Leandro, A., L. Pereira, A. M. M. Gonçalves. 2020. Diverse applications of marine macroalgae. Marine Drugs. 18 (17)

Lomartire, S. dan A. M. M. Gonçalves. 2022. An overview of potential seaweed-derived bioactive compounds for pharmaceutical applications. Marine Drugs. 20 (141)

Long, L., H. Y. Chiang, P. Y. Qian. 2020. A potent anti-biofilm agent inhibits and eradicates mono-and multi-species biofilms. bioRxiv (Preprint). < https://europepmc.org/article/ppr/ppr129735>. Diakses 4 April 2023

Maftuch, I. Kurniawati, A. Adam, I. Zamzami. 2016. Antibacterial effect of *Gracilaria verrucosa* bioactive on fish pathogenic bacteria. Egyptian Journal of Aquatic Research. 42: 405-410

Mahizan, N. A., S. K. Yang, C. L. Moo, A. A. L. Song, C. M. Chong, C. W. Chong, A. Abushelaibi, S. W. H. E. Lim, K. S. Lai. 2019. Terpene derivatives as a potential agent against antimicrobial resistance (AMR) pathogens. Molecules. 24 (14)

Mai-Prochnow, A., M. Clauson, J. Hong, A. B. Murphy. 2016. Gram positive and Gram negative bacteria differ in their sensitivity to cold plasma. Nature. Scientific Reports. 6 (38610)

Masyita, A., R. M. Sari, A. D. Astuti, B. Yasir, N. R. Rumata, T. B. Emran, F. Nainu, J. Simal-Gandara. 2022. Terpenes and terpenoids as main bioactive compounds of essential oils, their roles in human health and potential application as natural food preservatives. Food Chemistry: X. 13 (100217)

Matos, G. S., S. G. Pereira, Z. A. Genisheva, A. M. Gomes, J. A. Teixeira, C. M. R. Rocha. 2021. Advances in extraction methods to recover added-value compounds from seaweeds: sustainability and functionality. Foods. 10 (3).

Mazumder, A., H. Choudhury, A. Dey, D. Sarma. 2021. Isolation and characterization of two virulent aeromonads associated with haemorrhagic septicaemia and tail-rot disease in farmed climbing perch *Anabas testudineus.* Nature. 11 (5826).

Mendoza-González, A. C., L. E. Mateo-Cid, D. Y. Garzía-López, J. A. Acosta-Calderón. 2014. Diversity and distribution of articulated coralline algae (Rhodophyta, Corallinales) of the Atlantic coast of Mexico. Phytotaxa. 190 (1): 45-63

Metti, Y. 2022. Based on morphology and molecular data, *Palisada rigida* comb. Nov. and *Laurencia decussata* comb. et stat. nov. (Rhodophyta, Rhodomelaceae) are proposed. Algae. 37 (1): 15-32

Miguel, T. B. A. R., E. C. Schmidt, Z. L. Bouzon, F. E. P. Nascimento, M. D. Cunha, S. F. Pireda, K. S. Nascimento, C. S. Nagano, S. Saker-Sampaio,

B. S. Cavada, E. C. Miguel, A. H. Sampaio. 2014. Morphology, ultrastructure and immunocytochemistry of *Hypnea cervicornis* and *Hypnea musciformis*-(Hypneaceae, Rhodophyta) from the coastal water of Ceará, Brazil. Journal of Microscopy and Ultrastructure. 2 (2): 104-116

Mishra, R., A. K. Panda, S. D. Mandal, M. Shakeel, S. S. Bisht, J. Khan. 2020. Natural anti-biofilm agents: strategies to control biofilm-forming pathogens. Frontiers in Microbiology. 11(566325)

Muhammad, M. H., A. L. Idris, X. Fan, Y. Guo, Y. Yu, X. Jin, J. Qiu, X. Guan, T. Huang. 2020. Beyond risk: bacterial biofilms and their regulating approaches. Frontiers in Microbiology. 11 (928).

Ngamkhae, N., O. Monthakantirat, Y. Chulikhit, C. Boonyarat, J. Maneenet, C. Khamphukdee, P. Kwankhao, S. Pitiporn, S. Daodee. 2022. Optimization of extraction method for Kleeb Bua Daeng formula and comparison between ultrasound-assisted and microwave-assissted extraction. Journal of Applied Research on Medicinal and Aromatic Plants. 28 (100369)

Nowak, G., M. Urbanska, J. Nawrot, M. K. Bernard, R. Dawid-Pac. 2013. Color and chemical reactions of selected sesquiterpene lactones and ecdysones from Asteraceae on TLC plates. Journal of Planar Chromatography. 26

Odeyemi, O. A., dan A. Ahmad. Population dynamics, antibiotics resistance and biofilm formation of Aeromonas and Vibrio species isolated from aquatic sources in Northern Malaysia. Microbial Pathogensis. 103: 178-185.

Paradas, W. C., L. T. Salgado, R. C. Pereira, C. Hellio, G. C. Atella, D. D. L. Moreira, A. P. B. do Carmo, A. R. Soares, G. M. Amado-Filho. 2016. A novel antifouling defense strategy from red seaweed: exocytosis and deposition of fatty acid derivatives at the cell wall surface. Plant and Cell Physiology. 57 (5): 1008-1019

Pereira, C., J. Duarte, P. Costa, M. Braz, A. Almeida. 2022. Bacteriophages in the control of *Aeromonas* sp. in aquaculture systems: an integrative view. Antibiotics. 11(2): 163

Pérez, M. J., E. Falqué, H. Domínguez. 2016. Antimicrobial action of compounds from marine seaweed. Marine Drugs. 14 (3)

Pessoa, R. B. G., W. F. de Oliveira, D. S. C. Marques, M. T. D. S. Correia, E. V. M. M. de Carvalho, L. C. B. B. Coelho. 2019. The genus Aeromonas: A general approach. Microbial Pathogenesis. 130: 81-94.

Philippus, A. C., G. A. Zatelli, T. Wanke, M. G. A. Barros, S. A. Kami, C. Lhullier, L. Armstrong, L. P. Sandjo, M. Falkenberg. 2018. Molecular networking prospection and characterization of terpenoids and C_{15}-

acetogenins in Brazilian seaweed extracts. RSC Advances. 8: 29654-29661.

Qin, T., K. Chen, B. Xi, L. Pan, J. Xie, L. Lu, L. Liu. 2023. In vitro antibiofilm activity of resveratrol against *Aeromonas hydrophila.* Antibiotics. 12 (4)

Rajarathinam, G. dan S. V. L. Dronamraju. 2018. In vitro and in silico antimicrobial activity of sterol and flavonoid isolated from *Trianthema decandra* L. Microbial Pathogenesis. 121: 77-86

Rajendran, I., K. Chakraborty, K. K. Vijayan, P. Vijayagopal. 2013. Bioactive sterols form the brown alga *Anthophycus longifolius* (Turner) Kützing, 1984 (=*Sargassum longifolium).* Indian Journal of Fisheries. 60 (1): 83-86

Roy, R., M. Tiwari, G. Donelli, V. Tiwari. 2018. Strategies for combating bacterial biofilms: a focus on anti-biofilm agents and their mechanisms of action. Virulence. 9 (1): 522-554

Salem, D. M. S. A., M. M. Ismail, H. R. Z.Tadros. 2020. Evaluation of the antibiofilm activity of three seaweed species and their biosynthesized iron oxide nanoparticles (Fe3O4-NPs). Egyptian Journal of Aquatic Research. 46: 333-339.

Sarker, S. D., Z. Latif, A. I. Gray. 2006. Natural Products Isolation Second Edition. New Jersey; Humana Press Inc.

Sciuto, S., L. Colli, A. Fabris, P. Pastorino, N. Stoppani, G. Esposito, M. Prearo, G. Esposito, P. Ajmone-Marsan, P. L. Acutis, S. Colussi. 2022. What can genetics do for the control of infectious diseases in aquaculture? Animals. 12 (2176).

Shaaban, M., G. S. E. Abou-El-Wafa, C. Golz, H. Laatsch. 2021. New haloterpenes from the marine red alga *Laurencia papillosa:* structure elucidation and biological activity. Marine Drugs. 19 (35)

Shannon, E. dan N. Abu-Ghannam. 2016. Antibacterial derivatives of marine algae: an overview of pharmacological mechanisms and applications. Marine Drugs. 14 (4)

Singh, K., A. Mishra, D. Sharma, K. Singh. 2019. Antiviral and Antimicrobial Potentiality of Nano Drugs *In:* S. S. Mohapatra, S. Ranjan, N. Dasgupta, R. K. Mishra, S. Thomas (Eds.) Application of Targeted Nano Drugs and Delivery Systems. Elsevier, p: 343-356.

Sun, B., H. Luo, H. Jiang, Z. Wang, A. Jia. 2021. Inhibition of quorum sensing and biofilm formation of esculetin on *Aeromonas hydrophila.* Frontiers in Microbiology. 12 (737626)

Talagrand-Reboul, E., E. Jumas-Bilak, B. Lamy. 2017. The social life of *Aeromonas* through biofilm and quorum sensing systems. Frontiers in Microbiology. 8 (37)

Teh, C. H., W. A. Nazni, A. H. Nurulhusna, A. Norazah, H. L. Lee. 2017. Determination of antibacterial activity and minimum inhibitory concentration of larval extract of fly via resazurin-based turbidometric assay. Bio Med Central Microbiology. 17 (36)

Tsuchiya, Y., S. Eda, C. Kiriyama, T. Asada, H. Morisaki. 2016. Analysis of dissolved organis nutrients in the interstitial water of natural biofilms. Environmental Microbiology. 72: 85-95

Venkatramanan, M., P. S. Ganesh, R. Senthil, J. Akshay, A. V. Ravi, K. Langeswaran, J. Vadivelu, S. Nagarajan, K. Rajendran, E. M. Shankar. 2020. Inhibition of quorum sensing and biofilm formation in *Chromobacterium violaceum* by fruit extracts of *Passiflora edulis*. ACS Omega. 5: 25605-25616

Vestby, L. K., T. Grønseth, R. Simm, L. L. Nesse. 2020. Bacterial biofilm and its role in the pathogenesis of disease. Antibiotics. 9 (59)

Wenderska, I. B., M. Chong, J. McNulty, G. D. Wright, L. L. Burrows. 2011. Palmitoyl-DL-Carnitine is a multitarget inhibiotor of *Pseudomonas aeruginosa* biofilm development. ChemBioChem. 12: 2759-2766

Yi, Z., H. JinYuan, M. Jun, F. Yan, G. XiaoJie, J. Yuanxi. 2013. Bioactivity and constituents of several common seaweeds. Chinese Science Bulletin. 58 (19): 2282-2289

Zammuto, V., M. G. Rizzo, A. Spanò, G. Genovese, M. Morabito, D. Spagnuolo, F. Capparucci, C. Gervasi, A. Smeriglio, D. Trombetta, S. Guglielmino, M. S. Nicolò, C. Gugliandolo. 2022. In vitro evaluation of antibiofilm activity of crude extracts from macroalgae against pathogens relevant in aquaculture. Aquaculture. 549

Zdanowicz, M., Z. J. Mudryk, P. Perliński. 2020. Abundance and antibiotic resistance of *Aeromonas* isolated from water of three carp ponds. Veterinary Research Communications. 44: 9-18

Zhang, G., T. C. Meredith, D. Kahne. 2013. On the essentially of lipopolysaccharide to Gram-negative bacteria. Current Opinion in Microbiology. 16(6): 779-785

Zhu, F., Z. Yang, Y. Zhang, K. Hu, W. Fang. 2017. Transcriptome differences between enrofloxacin-resistant and enrofloxacin-susceptible strains of *Aeromonas hydrophila.* PLoS ONE. 12 (7)