

DAFTAR PUSTAKA

1. Immanuel Suresh J, Judith A. Pharmaceutical applications of marine derived fungi isolated from Gulf of Mannar. In: Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology. Elsevier; 2021. p. 69–74.
2. Daletos G, Ebrahim W, Ancheeva E, El-Neketi M. Natural Products of the Rhizosphere and Its Microorganisms. In: Newman DJ, Cragg GM, Grothaus PG, editors. Chemical Biology of Natural Products. Boca Raton : CRC Press, [2017]; CRC Press; 2017. p. 285–331.
3. Bode HB, Bethe B, Höfs R, Zeeck A. Big effects from small changes: Possible ways to explore nature's chemical diversity. *ChemBioChem*. 2002;3(7):619–27.
4. Gao Y, Stuhldreier F, Schmitt L, Wesselborg S, Guo Z, Zou K, Mádi A, Kurtán T, Liu Z, Proksch P. Induction of New Lactam Derivatives From the Endophytic Fungus *Aplosporella javeedii* Through an OSMAC Approach. *Front Microbiol*. 2020;11(November).
5. Yu X, Gao Y, Frank M, Mádi A, Kurtán T, Müller WEG, Kalscheuer R, Guo Z, Zou K, Liu Z, Proksch P. Induction of ambuic acid derivatives by the endophytic fungus *Pestalotiopsis lespedezae* through an OSMAC approach. *Tetrahedron*. 2021 Jan;79:131876.
6. Hemphill CFP, Sureechatchaiyan P, Kassack MU, Orfali RS, Lin W, Daletos G, Proksch P. OSMAC approach leads to new fusarielin metabolites from *Fusarium tricinctum*. *J Antibiot (Tokyo)*. 2017;70(6):726–32.
7. Özkaya FC, Ebrahim W, El-Neketi M, Tansel Tanrikul T, Kalscheuer R, Müller WEG, Guo Z, Zou K, Liu Z, Proksch P. Induction of new metabolites from sponge-associated fungus *Aspergillus carneus* by OSMAC approach. *Fitoterapia*. 2018;131(August):9–14.
8. Sandrawati N, Hati SP, Yunita F, Putra AE, Ismed F, Tallei TE, Hertiani T, Handayani D. Antimicrobial and cytotoxic activities of marine sponge-derived fungal extracts isolated from *Dactylospongia* sp. *J Appl Pharm Sci*. 2020;10(4):28–33.
9. Nisa H, Kamili AN, Nawchoo IA, Shafi S, Shameem N, Bandh SA. Fungal endophytes as prolific source of phytochemicals and other bioactive natural products: A review. *Microb Pathog*. 2015;82:50–9.
10. Häder D-P. Biotechnological substances from fungi. In: Natural Bioactive Compounds. Elsevier; 2021. p. 267–73.
11. Pang KL, Overy DP, Jones EBG, Calado M da L, Burgaud G, Walker AK, Johnson JA, Kerr RG, Cha HJ, Bills GF. ‘Marine fungi’ and ‘marine-derived fungi’ in natural product chemistry research: Toward a new consensual definition. *Fungal Biol Rev*. 2016;30(4):163–75.

12. Saleem M. Bioactive natural products from marine-derived fungi: An update. Vol. 45, Studies in Natural Products Chemistry. Elsevier; 2015. 297–361 p.
13. Thom C. Cultural studies of species of *Penicillium*. 1910 [cited 2021 Feb 27]. p. 107.
14. Visagie CM, Houbraken J, Frisvad JC, Hong SB, Klaassen CHW, Perrone G, Seifert KA, Varga J, Yaguchi T, Samson RA. Identification and nomenclature of the genus *Penicillium*. Stud Mycol. 2014;78(1):343–71.
15. Fleming A. On the Antibacterial Action of Cultures of a *Penicillium*, with Special Reference to their Use in the Isolation of *B. influenzae*. Br J Exp Pathol. 1929 Jun;10(3):226–36.
16. Houbraken JAMP, Frisvad JC, Samson RA. Taxonomy of *Penicillium citrinum* and related species. Fungal Divers. 2010;44(January 2014):117–33.
17. Hetherington A, Raistrick H. Studies in the Biochemistry of Micro-organisms. Part XIV.—On the production and chemical constitution of a new yellow colouring mater, citrinin, produced from glucose by *Penicillium*. Philos Trans R Soc London Ser B, Contain Pap a Biol Character. 1931 Jan;220(468–473):269–95.
18. Malmstrøm J, Christensen C, Frisvad JC. Secondary metabolites characteristic of *Penicillium citrinum*, *Penicillium steckii* and related species. Phytochemistry. 2000;54(3):301–9.
19. Kuramoto M, Yamada K, Shikano M, Yazawa K, Arimoto H, Okamura T, Uemura D. Tanzawaic Acids A, B, C, and D: Inhibitors of Superoxide Anion Production from *Penicillium citrinum*. Cascales E, editor. Chem Lett. 1997 Sep 26;26(9):885–6.
20. Li Y, Sun B, Liu S, Jiang L, Liu X, Zhang H, Che Y. Bioactive asteric acid derivatives from the antarctic ascomycete fungus *Geomyces* sp. J Nat Prod. 2008;71(9):1643–6.
21. Kozlovsky AG, Zhelifonova VP, Antipova T V., Adanin VM, Ozerskaya SM, Kochkina GA, Schlegel B, Dahse HM, Gollmick FA, Gräfe U. Quinocitrinines A and B, new quinoline alkaloids from *Penicillium citrinum* thom 1910, a permafrost fungus. J Antibiot (Tokyo). 2003;56(5):488–91.
22. Kozlovsky AG, Zhelifonova VP, Antipova TV., Adanin VM, Ozerskaya SM, Kochkina GA, Schlegel B, Dahse HM, Gollmick FA, Gräfe U. Quinocitrinines A and B, New Quinoline Alkaloids from *Penicillium citrinum* Thom 1910, a Permafrost Fungus. J Antibiot (Tokyo). 2003;56(5):488–91.
23. Li X, Zhang L, Liu Y, Guo Z, Deng Z, Chen J, Tu X, Zou K. A new metabolite from the endophytic fungus *Penicillium citrinum*. Nat Prod Commun. 2013;8(5):587–8.

24. Ranji PKV, Wijeyaratne SC, Jayawardana KH, Gunaherath GMKB. Citriquinones A and B, New Benzoquinones from *Penicillium Citrinum*. Nat Prod Commun. 2013;8(10):1934578X1300801.
25. Lin X, Farooqi AA, Ismail M. Recent progress in fungus-derived bioactive agents for targeting of signaling machinery in cancer cells. Drug Des Devel Ther. 2015;9:1797–804.
26. Huang GL, Zhou XM, Bai M, Liu YX, Zhao YL, Luo YP, Niu YY, Zheng CJ, Chen GY. Dihydroisocoumarins from the mangrove-derived fungus *Penicillium citrinum*. Mar Drugs. 2016;14(10):6–13.
27. El-Neketi M, Ebrahim W, Lin W, Gedara S, Badria F, Saad HEA, Lai D, Proksch P. Alkaloids and polyketides from *Penicillium citrinum*, an endophyte isolated from the Moroccan plant ceratonia siliqua. J Nat Prod. 2013;76(6):1099–104.
28. Zhang H, Deng Z, Luo D, Guo Z, Peng Y, Zou K. Secondary Metabolites from the Endophytic Fungus *Penicillium citrinum*. Chem Nat Compd. 2016;52(2):304–5.
29. Wei X, Feng C, Li XH, Mao XX, Luo H Bin, Zhang DM, Rong L, Xie ZY, Yu X, Li J, Ye WC, Huang XJ, Zhang CX. Enantiomeric Polyketides from the Starfish-Derived Symbiotic Fungus *Penicillium* sp. GGF16-1-2. Chem Biodivers. 2019;16(6).
30. Marinho AMR, Marinho PSB, Santos LS, Filho ER, Ferreira ICP. Active polyketides isolated from *Penicillium herquei*. An Acad Bras Cienc. 2013;85(3):909–12.
31. Kuramata M, Fujioka S, Shimada A, Kawano T, Kimura Y. Citrinolactones A, B and C, and sclerotinin C, plant growth regulators from *Penicillium citrinum*. Biosci Biotechnol Biochem. 2007;71(2):499–503.
32. Lu ZY, Lin ZJ, Wang WL, Du L, Zhu TJ, Fang YC, Gu QQ, Zhu WM. Citrinin dimers from the halotolerant fungus *Penicillium citrinum* B-57. J Nat Prod. 2008;71(4):543–6.
33. Wakana D, Hosoe T, Itabashi T, Okada K, De Campos Takaki GM, Yaguchi T, Fukushima K, Kawai KI. New citrinin derivatives isolated from *Penicillium citrinum*. J Nat Med. 2006;60(4):279–84.
34. Chakravarti R, Sahai V. Compactin-a review. Appl Microbiol Biotechnol. 2004 Jun 1;64(5):618–24.
35. Kim WG, Song NK, Yoo ID. Quinolactacins A1 and A2, new acetylcholinesterase inhibitors from *Penicillium citrinum*. J Antibiot (Tokyo). 2001;54(10):831–5.
36. Daengrot C, Rukachaisirikul V, Tadpatch K, Phongpaichit S, Bowornwiriyapan K, Sakayaroj J, Shen X. Penicillanthone and penicillidic acids A-C from the soil-derived fungus *Penicillium aculeatum* PSU-RSPG105. RSC Adv. 2016;6(46):39700–9.

37. Evidente A, Punzo B, Andolfi A, Berestetskiy A, Motia A. Alternethanoxins A and B, polycyclic ethanones produced by *Alternaria sonchi*, potential mycoherbicides for *Sonchus arvensis* biocontrol. *J Agric Food Chem.* 2009;57(15):6656–60.
38. Sources EF, Abdallah HM, Gamal S, Mohamed A. Naturally Occurring Isocoumarins Derivatives from Endophytic Fungi: Sources, Isolation, Structural Characterization, Biosynthesis, and Biological Activities. *Mar Drugs.* 2020.
39. Smetanina OF, Yurchenko AN, Ivanets E V., Kirichuk NN, Khudyakova Y V., Yurchenko EA, Afiyatullov SS. Metabolites of the marine fungus *Penicillium citrinum* associated with a brown alga *Padina* sp. *Chem Nat Compd.* 2016;52(1):111–2.
40. Abe M, Imai T, Ishii N, Usui M, Okuda T, Oki T. Quinolactacide, a new quinolone insecticide from *Penicillium citrinum* Thom F 1539. *Biosci Biotechnol Biochem.* 2005;69(6):1202–5.
41. Nevalainen H, Kutto L, Te'o J. Methods for Isolation and Cultivation of Filamentous Fungi. In 2014. p. 3–16.
42. Kjer J, Debbab A, Aly AH, Proksch P. Methods for isolation of marine-derived endophytic fungi and their bioactive secondary products. *Nat Protoc.* 2010;5(3):479–90.
43. Romano S, Jackson SA, Patry S, Dobson ADW. Extending the “one strain many compounds” (OSMAC) principle to marine microorganisms. *Mar Drugs.* 2018;16(7):1–29.
44. Rutledge PJ, Challis GL. Discovery of microbial natural products by activation of silent biosynthetic gene clusters. *Nat Rev Microbiol.* 2015;13(8):509–23.
45. Bentley SD, Chater KF, Cerdeño-Tárraga A-M, Challis GL, Thomson NR, James KD, Harris DE, Quail MA, Kieser H, Harper D, Bateman A, Brown S, Chandra G, Chen CW, Collins M, Cronin A, Fraser A, Goble A, Hidalgo J, Hornsby T, Howarth S, Huang C-H, Kieser T, Larke L, Murphy L, Oliver K, O’Neil S, Rabbinowitsch E, Rajandream M-A, Rutherford K, Rutter S, Seeger K, Saunders D, Sharp S, Squares R, Squares S, Taylor K, Warren T, Wietzorek A, Woodward J, Barrell BG, Parkhill J, Hopwood DA. Complete genome sequence of the model actinomycete *Streptomyces coelicolor* A3(2). *Nature.* 2002 May;417(6885):141–7.
46. Bertrand S, Bohni N, Schnee S, Schumpp O, Gindro K, Wolfender JL. Metabolite induction via microorganism co-culture: A potential way to enhance chemical diversity for drug discovery. *Biotechnol Adv.* 2014;32(6):1180–204.
47. Firn RD, Jones CG. The evolution of secondary metabolism - a unifying model. *Mol Microbiol.* 2000 Sep;37(5):989–94.

48. Vansteelandt M, Kerzaon I, Blanchet E, Fossi Tankoua O, Robiou Du Pont T, Joubert Y, Monteau F, Le Bizec B, Frisvad JC, Pouchus YF, Grovel O. Patulin and secondary metabolite production by marine-derived *Penicillium* strains. *Fungal Biol.* 2012;116(9):954–61.
49. Hu Y, Zhang J, Liu D, Guo J, Liu T, Xin Z. Pencitrin and pencitriol, two new citrinin derivatives from an endophytic fungus *Penicillium citrinum* salicorn 46. *Phytochem Lett.* 2017;22(September):229–34.
50. Gu Y, Ding P, Liang Z, Song Y, Liu Y, Chen G, Li JL. Activated production of silent metabolites from marine-derived fungus *Penicillium citrinum*. *Fitoterapia.* 2018;127(February):207–11.
51. Dos Santos Dias AC, Couzinet-Mossion A, Ruiz N, Bellec M Le, Gentil E, Wielgosz-Collin G, Bertrand S. Sugar Induced Modification in Glycolipid Production in *Acremonium* sp. Revealed by LC-MS Lipidomic Approach. *Curr Biotechnol.* 2017 Jul 10;6(3).
52. Sujatha P, Bapi Raju KVVSN, Ramana T. Studies on a new marine streptomycete BT-408 producing polyketide antibiotic SBR-22 effective against methicillin resistant *Staphylococcus aureus*. *Microbiol Res.* 2005 Apr;160(2):119–26.
53. Saha M, Ghosh D, Ghosh D, Garai D, Jaisankar P, Sarkar KK, Dutta PK, Das S, Jha T, Mukherjee J. Studies on the production and purification of an antimicrobial compound and taxonomy of the producer isolated from the marine environment of the Sundarbans. *Appl Microbiol Biotechnol.* 2005 Feb 12;66(5):497–505.
54. Nigan VK, Verma R, Kumar A, Kundu S, Ghosh P. Influence of medium constituents on the biosynthesis of cephalosporin-C. *Electron J Biotechnol.* 2007 Apr 15;10(2):0–0.
55. Lauritano C, Andersen JH, Hansen E, Albrightsen M, Escalera L, Esposito F, Helland K, Hanssen KØ, Romano G, Ianora A. Bioactivity Screening of Microalgae for Antioxidant, Anti-Inflammatory, Anticancer, Anti-Diabetes, and Antibacterial Activities. *Front Mar Sci.* 2016 May 10;3.
56. Lauritano C, Martín J, De La Cruz M, Reyes F, Romano G, Ianora A. First identification of marine diatoms with anti-tuberculosis activity. *Sci Rep.* 2018;8(1):1–10.
57. Si Y, Tang M, Lin S, Chen G, Feng Q, Wang Y, Hua H, Bai J, Wang H, Pei Y. Cytotoxic cytochalasans from *Aspergillus flavipes* PJ03-11 by OSMAC method. *Tetrahedron Lett.* 2018 May;59(18):1767–71.
58. Wang W-J, Li D-Y, Li Y-C, Hua H-M, Ma E-L, Li Z-L. Caryophyllene Sesquiterpenes from the Marine-Derived Fungus *Ascotricha* sp. ZJ-M-5 by the One Strain–Many Compounds Strategy. *J Nat Prod.* 2014 Jun 27;77(6):1367–71.

59. Ochi K, Tanaka Y, Tojo S. Activating the expression of bacterial cryptic genes by rpoB mutations in RNA polymerase or by rare earth elements. *J Ind Microbiol Biotechnol*. 2014 Feb 15;41(2):403–14.
60. Liu W-C, Yang F, Zhang R, Shi X, Lu X-H, Luan Y-S, Xiu Z-L, Dong Y-S. Production of polyketides with anthelmintic activity by the fungus *Talaromyces wortmannii* using one strain-many compounds (OSMAC) method. *Phytochem Lett*. 2016 Dec;18:157–61.
61. Guo W, Zhang Z, Zhu T, Gu Q, Li D. Penicyclones A–E, Antibacterial Polyketides from the Deep-Sea-Derived Fungus *Penicillium* sp. F23-2. *J Nat Prod*. 2015 Nov 25;78(11):2699–703.
62. Myouga H, Yoshimizu M, Tajima K, Ezura Y. Purification of an Antiviral Substance Produced by *Alteromonas* sp. and Its Virucidal Activity against Fish Viruses. *Fish Pathol*. 1995;30(1):15–22.
63. Liu D-S, Rong X-G, Kang H-H, Ma L-Y, Hamann M, Liu W-Z. Raistrickiones A–E from a Highly Productive Strain of *Penicillium raistrickii* Generated through Thermo Change. *Mar Drugs*. 2018 Jun 18;16(6):213.
64. Burja AM, Abou-Mansour E, Banaigs B, Payri C, Burgess JG, Wright PC. Culture of the marine cyanobacterium, *Lyngbya majuscula* (Oscillatoriaceae), for bioprocess intensified production of cyclic and linear lipopeptides. *J Microbiol Methods*. 2002 Feb;48(2–3):207–19.
65. Guo W, Peng J, Zhu T, Gu Q, Keyzers RA, Li D. Sorbicillamines A–E, Nitrogen-Containing Sorbicillinoids from the Deep-Sea-Derived Fungus *Penicillium* sp. F23–2. *J Nat Prod*. 2013 Nov 22;76(11):2106–12.
66. Overy D, Correa H, Roullier C, Chi W-C, Pang K-L, Rateb M, Ebel R, Shang Z, Capon R, Bills G, Kerr R. Does Osmotic Stress Affect Natural Product Expression in Fungi? *Mar Drugs*. 2017 Aug 13;15(8):254.
67. Wang Y, Zheng J, Liu P, Wang W, Zhu W. Three New Compounds from *Aspergillus terreus* PT06-2 Grown in a High Salt Medium. *Mar Drugs*. 2011 Aug 12;9(8):1368–78.
68. Sarkar S, Roy D, Mukherjee J. Production of a potentially novel antimicrobial compound by a biofilm-forming marine *Streptomyces* sp. in a niche-mimic rotating disk bioreactor. *Bioprocess Biosyst Eng*. 2010;33(2):207–17.
69. Darabpour E, Roayaee Ardakani M, Motamedi H, Ronagh MT, Najafzadeh H. Purification and optimization of production conditions of a marine-derived antibiotic and ultra-structural study on the effect of this antibiotic against MRSA. *Eur Rev Med Pharmacol Sci*. 2012 Feb;16(2):157–65.
70. Nn A. A Review on the Extraction Methods Use in Medicinal Plants, Principle, Strength and Limitation. *Med Aromat Plants*. 2015;04(03):3–8.

71. Najib A. Ekstraksi Senyawa Bahan Alam. Yogyakarta: Deepublish; 2018.
72. Pratiwi ST. Mikrobiologi Farmasi. Jakarta: Erlangga; 2008.
73. Khameneh B, Iranshahy M, Soheili V, Sedigheh B, Bazzaz F. Antimicrob Resist Infect Control. 2019;8:1–28.
74. Mukherjee PK. LC–MS: A Rapid Technique for Understanding the Plant Metabolite Analysis. Qual Control Eval Herb Drugs. 2019;459–79.
75. Jain A, Jain R, Jain S. Basic Techniques in Biochemistry, Microbiology and Molecular Biology. New York, NY: Springer US; 2020. (Springer Protocols Handbooks).
76. Hudzicki J. Kirby-Bauer Disk Diffusion Susceptibility Test Protocol Author Information. Am Soc Microbiol. 2012;(December 2009):1–13.
77. Watson DG. Analisis Farmasi: Buku Ajar untuk Mahasiswa Farmasi dan Praktisi Kimia Farmasi. 2nd ed. Jakarta: EGC; 2007.
78. Kristanti AN, Aminah NS, Tanjung M, Kurniadi B. Buku Ajar Fitokimia. Surabaya: Airlangga University Press; 2006.
79. Shaikh JR, Patil M. Qualitative tests for preliminary phytochemical screening: An overview. Int J Chem Stud. 2020;8(2):603–8.
80. Wang H, Eze PM, Höfert SP, Janiak C, Hartmann R, Okoye FBC, Esimone CO, Orfali RS, Dai H, Liu Z, Proksch P. Substituted l-tryptophan-l-phenyllactic acid conjugates produced by an endophytic fungus: *Aspergillus aculeatus* using an OSMAC approach. RSC Adv. 2018;8(14):7863–72.
81. Plemenitaš A, Lenassi M, Konte T, Kejžar A, Zajc J, Gostinčar C, Gundecíman N. Adaptation to high salt concentrations in halotolerant/halophilic fungi: A molecular perspective. Front Microbiol. 2014;5(May):1–13.
82. Nussinov R, Tsai CJ, Jang H. Protein ensembles link genotype to phenotype. PLoS Comput Biol. 2019;15(6):1–21.
83. Rowe RC, Shekey PJ, Quinn ME. Handbook of Pharmaceutical Excipients Sixth Edition. USA: Pharmaceutical Press and American Pharmacist Association; 2009.
84. Davis WW, Stout TR. Disc plate method of microbiological antibiotic assay. I. Factors influencing variability and error. Appl Microbiol. 1971;22(4):659–65.
85. Chaffin WL. Candida albicans Cell Wall Proteins. Microbiol Mol Biol Rev. 2008;72(3):495–544.
86. Cushnie TPT, Cushnie B, Lamb AJ. Alkaloids: An overview of their antibacterial, antibiotic-enhancing and antivirulence activities. Int J Antimicrob Agents. 2014;44(5):377–86.

87. Mujeeb F, Bajpai P, Pathak N. Phytochemical evaluation, antimicrobial activity, and determination of bioactive components from leaves of aegle marmelos. *Biomed Res Int.* 2014;2014.
88. Nzogong RT, Ndjateu FST, Ekom SE, Fosso JAM, Awouafack MD, Tene M, Tane P, Morita H, Choudhary MI, Tamokou J de D. Antimicrobial and antioxidant activities of triterpenoid and phenolic derivatives from two Cameroonian Melastomataceae plants: *Dissotis senegambiensis* and *Amphiblemma monticola*. *BMC Complement Altern Med.* 2018;18(1):1–11.
89. Shahid MG, Nadeem M, Baig S, Cheema TA, Atta S, Ghafoor GZ. Screening and optimization of some inorganic salts for the production of ergot alkaloids from *Penicillium* species using surface culture fermentation process. *Pak J Pharm Sci.* 2016 Mar;29(2):407–14.
90. Siuzdack G. *Mass spectrometry for biotechnology*. California: Academic Press; 1996.

