DAFTAR PUSTAKA

1. Dwilestari, Awaloei H, Posangi J, Bara R. Uji efek antibakteri jamur endofit pada daun mangrove *Sonneratia alba* terhadap bakteri uji *Staphylococcus aureus* dan *Eschericia coli*. J e-Biomedik. 2015;3(January): 394–8.

2. Parlindungan L. Rhizosfer dan bakteri pelarut fosfat. 2013;(September).

3. Atlas, R. M, Bartha R. Microbial Ecology, Fundamentals and applications. 4th edition. California: Benjamin/Cummings Publishing Company, Inc; 1998.

4. Walker TS, Bais HP, Grotewold E, Vivanco JM. Update on root exudation and rhizosphere biology root exudation and rhizosphere biology 1. 2003;132(May):44–51.

5. Rao NS. Soil microbiology, fourth edition of soil microorganism and plant growth. USA: Science Publisher, Inc; 2001.

6. Okami Y, Hotta K. Search and discovery of new antibiotics. Goodfellow, M., Williams ST and M, M, editor. New York: Academic Press Inc; 1988. 33-67.

7. Janaki t. Antimicrobial activity of mangrove actinomycetes from soil sample of *Bruguiera cylindrica*. 2016;5(12):1287–96.

8. Tandon C, Mathur P, Sen M. Andrographis paniculata nees (kalmegh): a review on its antibacterial activities and phytocompounds. European J Med Plants. 2015;8(1):1–10.

9. Departemen Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 8 Tahun 2015 Tentang Program Pengendalian Resistensi Antimikroba di Rumah Sakit. 2015;1–32.

10. Mariottini GL, Grice ID. Antimicrobials from cnidarians . A new perspective for anti-infective therapy ? 2016;1–19.

11. Giesen W, Wulffraat S, Zieren M, Scholten L. Mangrove guidebook for southeast asia. Rap publication & food and agriculture organization of the united nations regional office for asia and the pacific. Bangkok: FAO and Wetlands International; 2006.

12. Katili AS, Retnowati Y. Short Communication : Isolation of Actinomycetes from mangrove ecosystem in Torosiaje , Gorontalo , Indonesia. 2017;18(2):826–33.

13. Naikpatil S V, Rathod JL. Selective isolation and antimicrobial activity of rare actinomycetes from mangrove sediment of Karwar. J Ecobiotechnology. 2011;3(10):48–53.

14. Gao MZ, Yuan XY, Cheng MC, Xiao H Bin, Bao SX. A new diterpenoid from *Rhizophora apiculata*. J Asian Nat Prod Res. 2011;13(8):776–9.

15. *Rhizophora apiculata* Blume. In: ITIS Report [Internet].

16. Abdullah. Potensi bakau *Rhizophora apiculata* sebagai inhibitor tirosinade dan antioksidan. 2011;21–4.

17. Dewi ERO, Usman. Uji fitokimia dan uji antibakteri dari akar mangrove rhizopora apiculata terhadap bakteri *Escherichia coli* dan *Staphylococcus aureus*. 2016;(April):183–93.

18. Pimentel, M. R., Molina, G., Dionisio, A.P. M, M.R., Pastore G. Use of endophytes to obtain bioactive compounds and their application in biotransformation process. Biotechnol Res Int. 2011;Article ID:1–11.

19. Strobel G, Daisy B, Castillo U, Harper J. Natural products from endophytic microorganisms. J Nat Prod. 2004;67:257–68.

20. Sridhar KR. Mangrove fungi in India. Curr Sci. 2015;86(12):2004.

21. Strobel G, Daisy B. Bioprospecting for microbial endophytes and their natural products. Microbiol Mol Biol Rev. 2003;67(4):491–502.

22. Coombs, J. T. And Franco CMM. Isolation and identification of actinobacteria isolated from surface-sterilised wheat roots. Pplied Environ Microbiol. 2003;69:5603–8.

23. Igarashi Y, Trujillo ME, Martínez-Molina E, Yanase S MS. Antitumor anthraquinones from an endophytic actinomycete *Micromonospora lupini* sp. Nov. Bioorg Med Chem Lett. 117:3702–5.

24. Caruso M, Colombo AL CP. Studies on a strain of *Kitasatospora* sp. paclitaxol producer. Ann Microbiol. 2000;50:89–102.

25. Ezra D, Castillo UF, Strobel GA, Hess WM PH. Coronamycins, peptide antibiotics produced by a verticillate *Streptomyces* sp. (MSU-2110)

endophytic on Monstera sp. Microbiology. 2004;150:: 785-793.

26. Liu N, Zhang H, Zheng W, Huang Y WH. Bioactivity of endophytic actinomycetes from medicinal plants and secondary metabolites from strain D62. Wei Sheng Wu Xue Bao. 2007;47:823–7.

27. Priya M. Endophytic Actinomycetes from Indian medicinal plants as antagonists to some phytopathogenic fungi. 2012;1(4):1–5.

28. Faraknimella T, Bara R, Wowor P, Posangi J. Uji Efek Antibakteri Jamur Endofit Akar Tumbuhan Bakau (*Sonneratia Alba*) Terhadap Bakteri *Staphylococcus aureus* dan *Escherichiae coli*. J e-Biomedik. 2015;3:785–8.

29. Davies J DD. Origins and evolution of antibiotic resistance. Microbiol Mol Biol Rev. 2010;74(3):417–33.

30. Arisanti S., N.D. K, M S. Uji Antimikroba Isolat Kapang Tanah Wonorejo Surabaya, Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam Institut Teknologi Sepuluh November. Surabaya; 2002.

31. Pratiwi S. Mikrobiologi Farmasi, Airlangga Medical Series. Jakarta: Erlangga Medical Series; 2008. 188-191.

32. Kayser, Fritz H., Kurt A. Bienz, Johannes, E. RMZ. Medical Microbiology. New York: Thieme Stuttgar; 2005.

33. Saga T, Yamaguchi K. History of antimicrobial agents and resistant bacteria. Japan Med Assoc J. 2009;52(2):103–8.

34. Adams MR MM. Food Microbiology 3rd Edition. Cambridge: RSC Pub; 2008.

35. Sotto A, De Boever CM, Fabbro-Peray P, Gouby A, Sirot D JJ. Risk factors for antibiotic-resistant *Escherichia coli* isolated from hospitalized patients with urinary tract infections: a prospective study. J Clin Microbiol. 2001;39(2):438–44.

36. Babic M HM. *Candida albicans* and non-albicans species as etiological agent of vaginitis in pregnant and non-pregnant women. Institute for Clinical Microbiology. Bosn J Basic Med Sci. 2010;10(1):92–7.

37. Sharma PC, More SR, Raut SS RV. In vitro antifungal susceptibility pattern of oropharyngeal and oesophageal Candida 17 species in HIV infected patients. Internaional J Heal Sci Res. 2013;3(5):1–6.

38. B B, Setiabudy R. Obat jamur, dalam famakologi dan terapi FKUI, Ed ke-

5. Jakarta: Badan Penerbit FKUI; 2011.

39. Kurnijasanti R, Sahrial I, Rahmawati K. Efek sitotoksik in vitro dari ekstrak buah mahkota dewa (*Phaleria Macrocarpa*) terhadap kultur sel kanker mieloma. J Penelit Med Eksakta Vol. 2008;7(1):48–54.

40. Sarker SD, Latif Z & GA. Natural Products Isolation, 2nd Edition (Methods in Biotechnology, Vol. 20). Humana Press Inc; 2006. 6-10.

41. Agoes.G. Teknologi Bahan Alam. Bandung: ITB Press Bandung; 2007.

42. Mukhriani. Ekstraksi, pemisahan senyawa, dan identifikasi senyawa aktif. J Kesehat. 2014;VII(2):361–7.

43. Rachman D. Kimia Bahan Alam : prinsip-prinsip dasar isolasi dan identifikasi. 2010. 61-73.

44. Deinstrop E. Applied Thin-Layer Chromatography. 2 nd ed. Weinheim: Wiley-VCA; 2007. 1-2.

45. Mohamed H, Miloud B, Zohra F, García-Arenzana JM, Veloso A, Rodríguez-Couto S. Isolation and characterization of actinobacteria from algerian sahara soils with antimicrobial activities. Int J Mol Cell Med. 2017;6(2):109–20.

46. Himedia. Actinomycete Isolation Agar. In: Technical Data. 2015. Hal. 1–2.

47. Aryal S. Isolation of actinomycetes from soil sample. In: Microbiology Notes.2018.

48. Himedia. Actinomyces broth. In: Tecnical Data. 2015. Hal. 1–2.

49. T.Ridwan. Isolasi jamur endofit ekstrak etil asetat dari teruntun *Aegiceras corniculatum* L. Blangko dan uji aktivitas antimikroba. In: Skripsi. 2014.

50. Ravikumar S, Inbaneson SJ, Uthiraselvam M, Priya SR, Ramu A, Banerjee MB. Diversity of endophytic actinomycetes from karangkadu mangrove ecosystem and its antibacterial potential against bacterial pathogens available online through diversity of endophytic actinomycetes from Karangkadu mangrove ecosystem and its antibacterial. J Pharm Res. 2010;4(1)(January 2011):294–6.

51. Rachdiati H, Aini N, Zakariya B, Dash GK. Isolation and screening of antibiotic producing actinomycetes from Soilsin Manong,Perak,Malaysia. Sch Res Libr. 2016;8(15):226–9.

52. Kumar PS, Duraipandiyan V, Ignacimuthu S. Isolation , screening and partial purification of antimicrobial antibiotics from soil *Streptomyces* sp. SCA7. Kaohsiung J Med Sci. 2014;30(9):435–46.

53. Padma B J, K S, P A, Shiny R A. Isolation , characterization and evaluation of antioxidant activities of secondary metabolites producing actinomycetes of terrestrial origin. Int J Res Med Sci. 2018;6(3):1017–28.

54. Herlina R, R Y, Usmar, N D, Subehan, R B, et al. Actinomycetes of *Orthosipon stamineus* rhizosphere as producer of antibacterial compound against multidrug resistant bacteria. Mater Sci Eng. 2017;1–6.

55. Naseer N, Fatima A, Sajid I. Molecular characterization and secondary metabolite profiling of the actinomycetes strains active against various mdr bacterial pathogens. Punjab Univ J Zool. 2018;33(2):149–60.

56. Handayani D, Putra R, Ismed F. Isolasi dan karakterisasi senyawa antibakteri dari fraksi etil asetat bakteri *Bacillus* sp.3 (A1) yang bersimbiosis dengan spon laut *Haliclona fascigera*. J Sains Farm Klin. 2017;4(1):24.

57. Litaay M, Sari K, Gobel RB, Haedar N. Potensi abalon tropis *Haliotis asinina* L . sebagai sumber inokulum jamur simbion penghasil antimikroba. Spermonde. 2017;3(1):42–6.

58. Handayani D, Afero E, Rustini. Isolasi senyawa kimia utama dan uji aktivitas antibakteri dari fraksi etil asetat spon laut *Petrosia nigrans*. 2009;14(1).

59. Handayani D, Rivai H, Hutabarat M, Rasyid R. Antibacterial activity of endophytic fungi isolated from mangrove plant *Sonneratia griffithii* Kurz. J Appl Pharm Sci. 2017;7(May):209–12.

60. Hanani E, Hanif A. Analisis Fitokimia. Jakarta: EGC; 2016.

61. Mathew BB, Jatawa SK, Tiwari A. Mathew, B. B., Jatawa, S. K., & Tiwari, A. (2012). Phytochemical Analysis of *Citrus Limonum* Pulp and Peel. Int J Pharm Pharm Sci. 2014;4(January 2012):4–7.

62. Morsy NM. Phytochemical analysis of biologically active constituents of medicinal plants. 2014;13(January):6–21.

63. Kumar RS, Venkateshwar C, Samuel G, Rao SG. Phytochemical screening of some compounds from plant leaf extracts of *Holoptelea integrifolia* (Planch) and Celestrus emarginata (Grah) used by gondu tribes at Adilabad District ,. Int J Eng Sci Invent. 2013;2(8):65–70.

64. Departemen Kesehatan. Materia Medika Indonesia. Jakarta: Departemen Kesehatan RI; 1979.

65. Elita A, Saryono S, Christine J. Penentuan waktu optimum produksi antimikroba dan uji fitokimia ekstrak kasar fermentasi bakteri endofit *Pseudomonas* sp. dari umbi tanaman dahlia (*Dahlia variabilis*). 2013;3(2):58.

66. Rahmawati N, Handayani D, Mulyanti N. Skrining aktivitas sitotoksik ekstrak dan fraksi beberapa jenis spon laut asal Pulau Mandeh Sumatera Barat. J Appl Pharm Sci. 2008;58–63.

67. Janaki .T Nayak B.K and Ganesan.T. Different pre-treatment methods in selective isolation of actinomycetes from mangrove sediments of Ariyankuppam, Back water Estuary, Puducherry. Int. J Adv Res Biol. 2014;1(6):154–63.

68. Ben-david A, Davidson CE. Estimation method for serial dilution experiments. J Microbiol Methods. 2014;1–8.

69. Lee JY, Hwang BK. Diversity of antifungal actinomycetes in various vegetative soils of Korea. 2002;417:407–17.

70. Dhanasekaran and Jiang. Basic and biotechnical applications. Ave4eva Movimix Records; 2016.

71. Bull AT, Stach JEM, Ward AC, Goodfellow M. Marine Actinobacteria : perspectives , challenges , future directions. 2005;65–6.

72. Jakubiec-Krzesniak K, Rajnisz-Mateusiak A, Guspiel A, Ziemska J, Solecka J. Secondary metabolites of actinomycetes and their antibacterial, antifungal and antiviral properties. Polish J Microbiol. 2018;67(3):259–72.

73. Madigan M., Martinko JM, Parker J. Brock Biology of Microorganisms. 10 ed. USA: Pearson Education; 2003.

74. Song Q, Huang Y, Yang H. Optimization of fermentation conditions for antibiotic production by actinomycetes yj1 strain against sclerotinia sclerotiorum. J Agric Sci. 2012;4(7):95–102.

75. Mulyadi, Sulistyani N. Aktivitas cairan kultur 12 isolat actinomycetes terhadap bakteri resisten. Kesmas. 2013;7(2):89–96.

76. Nofiani R. Urgensi dan mekanisme biosintesis metabolit sekunder mikroba laut. J Natur Indones. 2008;10(2):120–5.

77. Lechevalier HA, Lechevalier MP. Biology of Actinomycetes. Annu: Rev Microbiol; 1980. 71-100.

78. Davis W., Stout T. Disc plate method of microbiological antibiotic assay. appiled microbiol. 1971;22(4):659–65.

79. Retnowati Y, Sembiring L, Moeljopawiro S, Djohan TS, Soetarto ES. Isolasi dan uji aktivitas antibakteri actinomycetes dari rhizosfer bakau di hutan bakau Torosiaje Gorontalo 1. 2014;1–10.

80. Sastrohamidjojo H. Kromatografi. Yogyakarta: Liberty; 2002. 35-36.

81. Dalimunthe CI, Sembiring YRV, Andriyanto M, Siregar T, Darwis HS, Barus DA. Identifikasi dan uji metabolit sekunder bangun-bangun (*Coleus amboinicus*) terhadap penyakit jamur akar putih (*Rigidoporus microporus*) di laboratorium. J Penelit Karet. 2016;34(2):189–200.

82. Alen Y, Agresa FL, Yuliandra Y. Analisis kromatografi lapis tipis (KLT) dan aktivitas antihiperurisemia ekstrak rebung *Schizostachyum brachycladum* Kurz pada mencit putih jantan. J Sains Farm Klin. 2017;3(May):146–52.

83. Harborne J. Metode fitokimia: penuntun cara modern menganalisa tumbuhan. II. Bandung: Institut Teknologi Bndung; 2006.

84. Darlian L, Imran G, Fachruddin. Skrining bioaktivitas ekstrak kulit akar bakau merah (*Rhizophora apiculata* Bl.) terhadap daya hambat pertumbuhan koloni bakteri *Streptococcus* sp. J Prog Kim Sains. 2011;1(2):73–82.

85. Dickinson BCH. December 18, 1968. In: Mycological Papers. Ireland; 1968.

86. Ling onnmay. Screening of mangrove endophytic fungi for bioactive compounds. Thesis. 2013.

87. Houbraken JAM., Frisvad JC, Samson RA. Taxonomy of *Penicillium citrinum* and related species. An Int J Mycol. 2010;44(1):117–33.

88. Khan Z, Ahmad S, Al-ghimlas F, Al-mutairi S, Joseph L, Chandy R, et al. *Purpureocillium lilacinum* as a cause of cavitary pulmonary disease : a new clinical presentation and observations on atypical morphologic characteristics of the isolate. J Clin Microbiol. 2012;1800–4.

89. Luangsa-ard J, Houbraken J, Doorn T Van, Hong S, Borman AM, Hywel-

jones NL, et al. *Purpureocillium*, a new genus for the medically important paecilomyces lilacinus. Fed Eur Microbiol Sacietis. 2011;141–9.

90. Jayakrishnan T, Benjamin S. *Purpureocillium lilacinum* Strain BP13 produces flavoglaucin. Electron J Biol. 2017;(September).

91. Rau CH, Yudistira A, Simbala HEI. Isolasi, identifikasi secara molekuler menggunakan gen 16s rrna, dan uji aktivitas antibakteri bakteri simbion endofit yang diisolasi dari alga *Halimeda opuntia*. J Ilm Farm. 2018;7(2):53–61.

92. Basu S, Bose C, Ojha N, Das N, Das J, Pal M. Evolution of bacterial and fungal growth media. Biomed Inf. 2015;11(4):2–4.