

DAFTAR PUSTAKA

1. Nash TH. Lichen Biology. Cambridge University Press; 1996.
2. Negi HR. Lichens: A valuable bioresource for environmental monitoring and sustainable development. Resonance. 2003;8(1):51–8.
3. Suwarso W. Koleksi Lichenes di Herbarium Bogoriense. In: Prosiding Seminar Sehari. LIPI Pusat Konservasi Tumbuhan - Kebun Raya Bogor; 1995.
4. Ismed F, Lohezic-Le Devehat F, Delalande O, Sinbandhit S, Bakhtiar A, Boustie J. Lobarin from the Sumatran lichen, *Stereocaulon halei*. Fitoterapia. 2012;83(8):1693–8.
5. Kokubun T, Shiu WKP, Gibbons S. Inhibitory activities of lichen-derived compounds against methicillin- and multidrug-resistant *Staphylococcus aureus*. Planta Med. 2007;73(2):176–9.
6. Bhattacharai HD, Kim T, Oh H, Yim JH. A new pseudodepsidone from the Antarctic lichen *Stereocaulon alpinum* and its antioxidant, antibacterial activity. J Antibiot (Tokyo). 2013;66(9):559–61.
7. Gianini AS, Marques MR, Carvalho NCP, Honda NK. Activities of 2 , 4-Dihydroxy-6- n -pentylbenzoic Acid Derivatives. Z Naturforsch. 2008;63:2–7.
8. Rankovi BR, Kosani MM, Stanojkovi TP. Antioxidant , antimicrobial and anticancer activity of the lichens *Cladonia furcata* , *Lecanora atra* and *Lecanora muralis*. BMC Complement Altern Med. 2011;11(97).
9. WHO. Top 10 Causes of Death [Internet]. 2018. Available from: <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>
10. Martinez JL. Antibiotiks and Antibiotik Resistance Genes in Natural Environments. Science (80-). 2008;321(5887).
11. Kontrol and Prevention (CDC) [Internet]. 2019. Available from: <https://www.cdc.gov/drugresistance/about.html>
12. International Mycological Association. *Cladoniaceae* [Internet]. 2016 [cited 2019 Jan 8]. Available from: <http://www.mycobank.org/BioloMICS.aspx?TableKey=14682616000000067&Rec=92744&Fields>All>
13. Ahmadjian V. The Lichens. New York & London: Academic Press; 1993.
14. Thomson JW. The Lichen Genus *Cladonia* in North America. Canada: University of Toronto Press; 1967.
15. Dobson FS. Lichens An Illustrated The Guide to British and Irish Species. Singapore: Stanford Press; 1992.
16. Nash TH. Lichen Biology. 2nd editio. Cambridge: Cambridge University Press; 2008.
17. Solhaug K, Lind M, Nybakken L. Possible Functional Roles of Corticol Depsidones and Medullary Depsidones in the Foliose Hypogymnia Physode. Flora. 2009;
18. Stocker-Worgotter E. Metabolic Diversity of Lichen-Forming Ascomycetous Fungi: Culturing, Polyketide adn Shikimate-metabolite Production and PKS

- Genes. Nat Prod Rep. 2008;(1).
19. Backorova M, Jendzelovsky R, Kello M, Backor M, Mikes J, Fedorocko P. Lichen Secondary Metabolites are Responsible for Induction Apoptosis in HT-29 and A2780 Human Cancer Cell Line. Toxicol Vitr. 2012;26(3).
 20. Turk AO, Yilmaz M, Kivanc M, Turk H. The Antimicrobial Activity of Extracts of the Lichen Cetraria aculeata and Its Protolichesterinic Acid Constituent. Z Naturforsch C J Biosci. 2003;
 21. Prabhu SS, Sudha S. Evaluation of the Antibacterial Properties of some Lichen Species Against Human Pathogens. Int J Adv Res Biol Sci. 2015;2(4).
 22. Huneck S, Yoshimura I. Identification of Lichen Substances. Berlin: Springer; 1996.
 23. Miši M, Ranković B. Antimicrobial activity of extracts of the lichens *Cladonia furcata*, *Parmelia caperata*, *Parmelia pertusa*, *Hypogymnia physodes* and *Umbilicaria polyphylla*. Biologia (Bratisl). 2009;64(1).
 24. Jha BN, Shrestha M, Pandey DP, Bhattacharai T, Bhattacharai HD, Paudel B. Investigation of antioxidant, antimicrobial and toxicity activities of lichens from high altitude regions of Nepal. BMC Complement Altern Med. 2017;17(1):1–8.
 25. Russo A, Piovano M, Lombardo L, Garbarino J, Cardile V. Lichen Metabolites Prevent UV Light and Nitric Oxide-Mediated Plasmid DNA Damage and Induce Apoptosis in Human Melanoma Cells. Life Sci. 2008;83.
 26. Ingolfsdottir K, Lee SK, Bhat KP, Lee K, Chai H-B, Kristinsson H, et al. Evaluation of Selected Lichens from Iceland for Cancer Chemopreventive and Cytotoxic Activity. Pharm Biol. 2000;38(4).
 27. Alexandrino CAF, Honda NK, Matos M de FC, Portugal LC, Souza PRB de, Perdomo RT, et al. Antitumor effect of depsidones from lichens on tumor cell lines and experimental murine melanoma. Brazilian J Pharmacogn. 2019;29(4):449–56.
 28. Kosanić M, Ranković B, Stanojković T, Rančić A, Manojlović N. *Cladonia* lichens and their major metabolites as possible natural antioxidant, antimicrobial and anticancer agents. LWT - Food Sci Technol. 2014;59(1):518–25.
 29. Ranković B, Rankovic D, Maric D. Antioxidant and Antimicrobial Activity of Some Lichen Species 1. 2010;79(6):809–10.
 30. P. Dzomba, E T, C M. Phytochemicals, antioxidant and antibacterial properties of a lichen species *Cladonia digitata*. African J Biotechnol. 2012;11(31):7995–9.
 31. Tanas S, Odabasoglu F, Halici Z, Cakir A, Aygun H, Aslan A, et al. Evaluation of Anti-Inflammatory and Antioxidant Activities of *Peltigera rufescens* Lichen Species in Acute and Chronic Inflammation Models. J Nat Med. 2009;
 32. Bugni TS, Andjelic CD, Pole AR, Rai P, Ireland CM, Barrows LR. Fitoterapia Biologically active components of a Papua New Guinea analgesic and anti-inflammatory lichen preparation. Fitoterapia. 2009;80(5):270–3.
 33. Okuyama E, Umeyama K, Yamazaki M, Kinoshita Y, Yamamoto Y. Usnic Acid and Diffractaic Acid as Analgesic and Antipyretic Components of *Usnea diffracta*. Planta Med. 1995;61(2).
 34. Pandey A, Composite ALA, Group P. Lichens : A Resource Chest of Herbal

- Antimicrobial Compounds. 2017;9(2):137–46.
- 35. Muller K. Pharmaceutically Relevant Metabolites from Lichens. *Appl Microbiol Biotechnol*. 2001;56.
 - 36. Sarker SD, Latif Z, Gray AI. Natural Products Isolation. second edi. Totowa, New Jersey: Humana Press; 2006.
 - 37. Agoes G. Teknologi Bahan Alam. Bandung: ITB Press; 2007.
 - 38. Departemen Kesehatan Republik Indonesia. Parameter Standar Umum Ekstrak Tumbuhan Obat. Jakarta: Direktorat Jenderal Pengawasan Obat dan Makanan; 2000.
 - 39. Touchstone JC, Dobbins MF. Practice of Thin Layer Chromatography. Canada: John Wiley & Son; 1983.
 - 40. Waksmundzka-Hajnos M, Kowalska T, Sherma J. Thin Layer Chromatography in Phytochemistry. Boca Raton: CRC; 2008.
 - 41. Stahl E. Thin-Layer Chromatography A Laboratory Handbook. Berlin: Springer; 1969.
 - 42. WHO. World Health Statistic 2015. Geneva; 2015.
 - 43. Brooks GF, Carroll KC, Butel JS, Morse SA, Mietzner TA. Mikrobiologi Kedokteran Jawetz, Melnick & Adelberg. edisi 25. Jakarta: EGC; 2010.
 - 44. Pelczar JM, Chan ECS. Dasar-Dasar Mikrobiologi. Jakarta: Universitas Indonesia Press; 2006.
 - 45. Kau AL, Martin SM, Lyon W, Hayes E, Caparon MG, Hultgren SJ. Enterococcus faecalis tropism for the kidneys in the urinary tract of C57BL/6J mice. *Infect Immun*. 2005;73(4):2461–8.
 - 46. Kayser FH, Bienz KH, Eckert J, Zinkernagel RM. Medical Biology. Germany: Georg Thieme Verlag; 2005.
 - 47. Radji M. Buku Ajar Mikrobiologi Panduan Mahasiswa Farmasi dan Kedokteran. Jakarta: EGC; 2011.
 - 48. Setiabudy R. Farmakologi dan Terapi. Jakarta: Balai Penerbit FK UI; 2009.
 - 49. Pratiwi ST. Mikrobiologi Farmasi. Yogyakarta: Erlangga; 2008.
 - 50. O'Neill J. Antimicrobial Resistance: Tackling a Crisis for the Health and Wealth of Nations. *Rev Antimicrob Resist*. 2014;
 - 51. Brander GC, Pugh RJ, Bywater WL. Veterinary Applied Pharmacology and Therapeutics. 5th editio. Bailiere Tindall ELBS; 1991.
 - 52. Jawetz EJ, Aderberg E. Mikrobiologi Kedokteran. edisi 16. Surabaya: Salemba Medika; 2001.
 - 53. Sudigdoadi S. Mekanisme Timbulnya Resistensi Antibiotik pada Infeksi Bakteri. In Jakarta: Bagian Mikrobiologi Fakultas Kedokteran Universitas Padjadjaran; 1990.
 - 54. Yulia H. Pola Resistensi Antibiotik. 2009.
 - 55. Botz L. BIOASSAYS | Bioautography. Reference Module in Chemistry, Molecular Sciences and Chemical Engineering. Elsevier Inc.; 2013. 1–8 p.
 - 56. Hudzicki J. Kirby-Bauer Disk Diffusion Susceptibility Test Protocol Author Information. *Am Soc Microbiol*. 2012;(December 2009).
 - 57. Balouiri M, Sadiki M, Ibnsouda SK. Methods for in vitro evaluating antimicrobial activity: A review. *J Pharm Anal*. 2016;6(2):71–9.

58. Choma IM, Grzelak EM. Bioautography detection in thin-layer chromatography. *J Chromatogr A*. 2011;1218(19):2684–91.
59. Pubchem. Chloramphenicol. 2020.
60. Pubchem. Ampicillin. 2020.
61. Valgas C, De Souza SM, Smânia EFA, Smânia A. Screening methods to determine antibacterial activity of natural products. *Brazilian J Microbiol*. 2007;38(2):369–80.
62. Davis WW, Stout TR. Disc plate method of microbiological antibiotic assay. II. Novel procedure offering improved accuracy. *Appl Microbiol*. 1971;22(4):666–70.
63. Neeraj V, Bc B, Parizadeh H, Bo S. Bactericidal Activity of Some Lichen Secondary Compounds of *Cladonia ochrochlora*, *Parmotrema nilgherrensis* & *Parmotrema sanctii-angelii*. *Int J Drug Dev Res*. 2011;3(3):222–32.
64. Rafika B, Monia AA. Antibacterial Activity of the Chloroform , Acetone , Metanol and queous Extracts of Algerian Lichens. *Jordan J Pharm Sci*. 2018;11(2):55–67.
65. Stamenkovic S. Contribution to the Knowledge of the Chemical Composition and Biological Activity of the Lichens *Cladonia foliacea* Huds . (Wild .) and *Hypogymnia physodes* (L .). *Oxid Commun*. 2015;38:2015–32.
66. Yilmaz M, Turk AO, Tay T, Kivanc M. The Antimicrobial Activity of Extracts of the Lichen *Cladonia foliacea* and Its (D) -Usnic Acid , Atranorin , and Fumarprotocetraric Acid Constituents. *Z Naturforsch*. 2004;59.

