

## DAFTAR PUSTAKA

- Agoes G. Teknologi Bahan Alam. Bandung: ITB Press. 2007
- Ahmadjian V. The Lichens. New York & London : Academic Press. 1993
- Backorova M, Jendzelovsky R, Kello M, Lichen Secondary Metabolites are Responsible For Induction Apoptosis In HT-29 dan A2780 Human Cancer Cell Line. Toxicol In Vitro 2012; 26:462-468.
- Brander GC, Pugh RJ, Bywater WL. Veterinary Applied Pharmacology and Therapeutics. 5th ed : Bailliere Tindall ELBS. 436,467-473. 1991
- Branislav RR, Marijana MK, Tatjana PS. Antioxidant, Antimicrobial and Anticancer activity of the lichens *Cladonia furcata*, *Lecanora atra* and *Lecanora muralis*. Complementary and Alternative Medicine 11:97. 2011
- Brooks GF, Butel JS, Morse SA. Jawetz, Melnick, & Adelberg's Medical Microbiology, 21st ed, : Prentice Hall International Inc, 145 –176. 1998
- Candan M, Yilmaz M, Tay T, Erdem M, Türk AÖ. Antimicrobial Activity of Extracts of the Lichen *Parmelia sulcata* and Its Salazinic Acid Constituent. Z. Naturforsch. C. 2007; 62(7/8): 619-621.
- Control and Prevention (CDC). <https://www.cdc.gov/drugresistance/index.html> diakses 16 Januari 2017. 2013
- Chen, I-N, C-C. Antioxidant and Antimicrobial Activity of Zingiberaceae Plants in Taiwan. Plant Food Hum.Nutr. 2008; 63. 15-20.
- Crawford S. Ethnolichenology of *Bryoria fremontii* : wisdom of elders, population ecology, and nutritional chemistry. M.Sc. thesis University of Victoria Canada. 2007.
- Dachriyanus. Analisis Struktur Senyawa Organik Secara Spektroskopi. Padang: Andalas University Press. 2004.
- Darmadi. Infeksi Nosokomia I: Problematika Dan Pengendaliannya. Jakarta: Penerbit Salemba Medika. 2008
- Departemen Kesehatan Republik Indonesia. Parameter Standar Umum Ekstrak Tumbuhan Obat. Direktorat Jenderal Pengawasan Obat dan Makanan: Direktorat Pengawasan Obat Tradisional. 2000

- Dévéhat FL, Tomasi S, Elix JA, Bernard A, Rouaud I, Uriac P, Boustie J. Stictic Acid Derivatives from the Lichen *Usnea articulata* and Their Antioxidant Activities. *J. Nat. Prod.* 2007; 70(7): 1218-1220.
- Dobson FS. *Lichens An Illustrated The Guide to British and Irish Species.* Singapore: Stamford Press. 1992
- Esimone CO, Ofokansi KC, Adikwu MU, Ibezim EC, Abonyi DO, Odaibo GN, Olaleye DO. In Vitro Evaluation of the Antiviral Activity of Extracts from the Lichen *Parmelia perlata* (L.) Ach. Against Three RNA viruses. *J. Infect. Dev. Count.* 2007; 1(3): 315-320.
- Esimone CO, Grunwald T, Nworu CS, Kuate S, Proksch P, Uberla K. Broad Spectrum Antiviral Fractions from the Lichen *Ramalina farinacea*(L.) Ach. *Chemotherapy.* 2009; 55(2): 119-126.
- Franklin TJ, Snow GA. *Biochemistry and Molecular Biology of Antimicrobial Drug Action*, 6th Edition, England : Springer Science and Business Media, Inc. 2005
- Frengki. *Isolasi, Elusidasi Struktur Dan Uji Bioaktivitas Kandungan Kimia Fraksi Etil Asetat Kulit Batang Tanaman Calophyllum Macrophyllum Scheff :* (Tesis) Program Studi Magister Ilmu Kefarmasian Depok : Universitas Indonesia. 2010
- Galun M, Shomer IA. Secondary Metabolic Products. In Galun M (ed) *CRC Handbook of Lichenology Vol III.* CRC : Boca Raton. 1988.
- GBIF. <http://www.gbif.org/species/339068/> diakses 17 Januari 2017. 2017
- Gülçin I, Oktay M, Küfrevioğlu OI, Aslan A. Determination of Antioxidant Activity of Lichen *Cetraria islandica* (L) Ach. *J. Ethnopharmacol.* 2002; 79(3): 325-329.
- Gupta VK, Darokar MP, Saikia D, Fatima APA, Khanuja SPS. Antimycobacterial Activity of Lichens. *Pharm.Biol.* 2007; 45(3): 200-204.
- Harmita. *Buku Ajar Analisis Fisikokimia.* Depok: Departemen Farmasi FMIPA UI, 205-211. 2006
- Hesse M, Meier H, Zeeh B. *Spektroskopische Methoden in der Organischen Chemie*, 4.ü bearbeitete Auflage. New York: Georg Thieme Verlag Stuttgart. 1991
- Huneck S. The significance of lichens and their metabolites. *Naturwissenschaften.* 1999; 86: 559-570.

- Huneck S, Yoshimura I. Identification of lichen substances. Verlag Berlin Heidelberg New York : Springer. 1996
- Ingólfssdóttir K. Usnic Acid (a Literature Review). *Phytochemistry*. 2002; 61: 729-736
- Ingólfssdóttir K, Gudmundsdóttir GF, Ogmundsdóttir HM, Paulus K, Haraldsdóttir S, Kristinsson H, Bauer R. Effects of Tenuiorin and Methyl Orsellinate from the Lichen *Peltigera leucophlebia* on 5-/15-lipoxygenases and Proliferation of Malignant Cell Lines In Vitro. *Phytomedicine*. 2002; 9(7): 654-658.
- Ingólfssdóttir K, Lee SK, Bhat KPL, Lee K, Chai HB, Kristinsson H, Song LL, Gills J, Gudmundsdóttir JTh, Greenwood EM, Jang MS, Pezzuto JM. Evaluation of Selected Lichens from Iceland for Cancer Chemopreventive and Cytotoxic Activity. *Pharm. Biol.* 2000; 38(4): 313-317.
- Jayapraksha GK, Rao LJ. Phenolic Constituents from the Lichen *Parmotrema stipitatum* (Nyl.) Hale and Their Antioxidant Activity. *Z. Naturforsch. C*. 2000; 55(11/12): 1018-1022.
- Kristmundsdóttir T, Aradóttir RAE, Ingólfssdóttir K, Ogmundsdóttir RM. Solubilization of the Lichen Metabolite (+)-Usnic Acid for Testing in Tissue Culture. *J. Pharm. Pharmacol.* 2002; 54(11): 1447-1452.
- Kinoshita K, Togawa T, Hiraishi A, Nakajima Y, Koyama K, Narui T, Wang L, Takahashi K. Antioxidant Activity of Red Pigments from the Lichens *Lethariella sernanderi*, *L. cashmeriana*, and *L. sinensis*. *J. Nat. Med.* 2010; 64(1): 85-88.
- Luo H, Yamamoto Y, Kim JA, Jung JS, Koh YJ, Hur JS. Lecanoric Acid, a Secondary Lichen Substance with Anti-oxidant Properties from *Umbilicaria antarctica* in Maritime Antarctica (King George Island). *Polar. Biol.* 2009; 32(7): 1033-104.
- Manojlovic NT, Vasiljevic P, Juskovic M, Najman S, Jankovic S, Andjelkovic AM. HPLC Analysis and Cytotoxic Potential of Extracts from the Lichen *Thamnolia vermicularis* var *subuliformis*. *J. Med. Plant. Res.* 2010; 4(9): 817-823.
- Muggia L, Schmitt I, Grube M. Lichen as Treasure Chest Of Natural products. *SIM News*. 2009
- Muller K. Pharmaceutically relevant metabolite from lichen. *Appl. Microbiol Biotechnol.* 2011; 56: 9-16.

- Muslim ME, dkk. Laporan Akhir Penelitian Program Kreativitas Mahasiswa: Pembuatan Sediaan Krim dari *Cladonia rappii* sebagai Anti MRSA untuk Pengobatan Ulkus Diabetikum serta Pengujian in vivo pada Mencit. 2016
- Nash TH. Lichen Biology. Cambridge : Cambridge University Press. 1996
- Nash TH. Lichen Biology 2nd edn. Cambridge : Cambridge University Press. 2008
- Negi HR. Lichens: A Valuable Bioresource for Enviromental Monitoring and Sustainable Development. General article: Resonance. 2003
- Okuyama E, Umeyama K, Yamazaki M, Kinoshita Y, Yamamoto Y. Usnic Acid and Diffractic Acid as Analgesic and Antipyretic Components of *Usnea diffracta*. Plant. Med. 1995; 61(2): 113-115.
- Pratiwi ST. Mikrobiologi Farmasi. Yogyakarta: Penerbit Erlangga. Halaman 176. 2008
- Radji M. Buku Ajar Mikrobiologi Panduan Mahasiswa Farmasi dan Kedokteran, 107, 118, 201-207, 295. Jakarta : Buku Kedokteran EGC. 2011
- Ranković B, Misić M, Sukdolak S. Antimicrobial Activity of Extracts of the Lichens *Cladonia furcata*, *Parmelia caperata*, *Parmelia pertusa*, *Hypogymnia physodes* and *Umbilicaria polyphylla*. Br. J. Biomed. Sci. 2007; 64(4): 143-148.
- Ranković, B (Editor) . Lichen Secondary Metabolite Bioactive Properties and Pharmaceutical Potential. Serbia : Springer. 2015
- Russo A, Piovano M, Lombardo L, Garbarino JV, Cardile. Lichen Metabolites Prevent UV Light and Nitric Oxide Mediated Plasmid DNA Damage and Induce Apoptosis in Human Melanoma Cells. Life. Sci. 2008; 83(13-14): 468-474.
- Sarker SD, Latif Z, Gray AI. Natural products isolation. In: Sarker SD, Latif Z, & Gray AI, editors. Natural Products Isolation. 2nd ed. Totowa (New Jersey). Humana Press Inc. hal. 6-10, 18. 2006
- Seidel V. Initial and bulk extraction. In: Sarker SD, Latif Z, & Gray AI, editors. Natural Products Isolation. 2nd ed. Totowa (New Jersey) : Humana Press Inc. hal. 31-5. 2006.
- Setiabudy R. Farmakologi dan Terapi Jakarta : Balai Penerbit FK UI. 2009



- Solhaug KA, Lind M, Nybakken L. Possible Functional roles Of Corticol depsides and Medullary depsidones in the Foliose Hypogymnia physodes. *Flora*. 2009
- Stocker–Worgotter E. Metabolic Diversity Of Lichen-Forming Ascomycetous Fungi : Culturing Polyketide and Shikimate Metabolite Production and PKS genes. *Nat Prod Rep*. 2008; 25:188-200.
- Sudigdoadi S. Mekanisme Timbulnya Resistensi Antibiotik Pada Infeksi Bakteri : Bagian Mikrobiologi Fakultas Kedokteran Universitas Padjadjaran
- Suleyman H, Odabasoglu F, Aslan A, Cakir A, Karagoz Y, Gocer F, Halici M, Bayir Y. Anti-inflammatory and Antiulcerogenic Effects of the Aqueous Extract of *Lobaria pulmonaria* (L.) Hoffm. *Phytomedicine*. 2003; 10(6-7): 552-557.
- Stahl E. Apparatus and general techniques in TLC. Dalam : Stahl, E. (ed). *Thin layer chromatography a laboratory handbook*. Terj. dari *Dunnschicht chromatographie*, oleh Ashworth, M.R.F. Berlin: Springer-Verlag, 61-77. 1969
- Tanas S, Odabasoglu F, Halici Z, Cakir A, Aygun H, Aslan A, Suleyman H. Evaluation of Anti-inflammatory and Antioxidant Activities of *Peltigera rufescens* Lichen Species in Acute and Chronic Inflammation Models. *J. Nat. Med*. 2010; 64(1): 42-49.
- Touchstone JC, Dobbins MF. *Practice of thin layer chromatography*. Canada: John Wiley & Sons, 2-12. 1983
- Turk AÖ, Yilmaz, Kivanc M, Turk H. The Antimicrobial Activity of Extracts of the Lichen *Cetraria aculeata* and Its Protolichesterinic Acid Constituent. *Z. Naturforsch. C*. 2003; 58(11/12): 850-854.
- Tokiwano T, Satoh H, Obara T, Hirota H, Yoshizawa Y, Yamamoto Y. A Lichen Substance as an Antiproliferative Compound Against HL-60 Human Leukemia Cells: 16-OAcetyl-leucotylic Acid Isolated from *Myelochroa aurulenta* (Note). *Biosci. Biotechnol. Biochem*. 2009; 73(11): 2525-2527.
- Vijayakumar CS, Viswanathan S, Reddy MK, Parvathavarthini S, Kundu SB, Sukumar E. Anti-inflammatory Activity of (+) Usnic Acid. *Fitoterapia*. 2000; 71(5): 564-566.
- Waksmundzka-Hajnos, Sherma MJ, Kowalska T. Overview of the field of TLC in phytochemistry and the structure of the book. Dalam: Waksmundzka-Hajnos, M., J. Sherma & T. Kowalska (eds). 2008. *Thin layer chromatography in phytochemistry*. Boca Raton: CRC, 1-6. 2008

WHO. Top 10 Causes of Death. [www.who.int/mediacentre/factsheets/fs310/en/](http://www.who.int/mediacentre/factsheets/fs310/en/)  
diakses 16 Januari 2017. 2011

