

DAFTAR PUSTAKA

- Achmad, S.A., Bahan Alam untuk Mendukung Pengembangan Bioindustri. Makalah pada Seminar Nasional Kimia Bahan Alam Unair dan Ikahimki pada 4 September 2004. Surabaya, 2004.
- Amin, M.. Senyawa Turunan Flavan-3-ol dari Kulit Akar *Artocarpus nitida* Trec, (Thesis), IT. Bandung, 1997.
- Anaya, A.L., Mata, R., Sims, J.J., Coloma, A.G., Ortega, R.C., Guadano, A., Bautista, B.E.A., Midland, S.L., Rios, G. dan Pompa, A.G. 2003. Allelochemical Potential of *Callicarpa acuminata*. *J Chem Ecol.*, Vol. 29, No. 12. Pp: 2761-2775.
- Anh Nguyen, Yen Phan, Preliminary phytochemical analysis of different solvent extracts of *Derris elliptica* (Roxb.) Benth leaves. *International Journal of Innovative and Applied Research*, Vol 2, Issue (12), 74 – 76, 2014.
- Anjaneyulu, A.S.R., Lakshminarayana, V. dan Row, L.R. 1977. Isolation Maslinic Acid From *Callicarpa arborea* Roxb. *Letters to The Editor*, Vol. 46, No.19, pp 667-668.
- Ayatollahi, S. A., Shojaii, A., Kobarfard, F., Nori, M., Fathi, M., Choudhari, M. I., Terpens from aerial parts of *Euphorbia splendida*. *JMPR*, 3 (9), 660-665, 2009.
- Baia, T., Yanga, Y., , Yao, Y. L., Sunc, P., Liana, L. H., Wua, Y. L., , Nana, J. X., Betulin alleviated ethanol-induced alcoholic liver injury via SIRT1/AMPK signaling pathway. *Pharmacological Research*, 105, 1–12, 2016.

Berridge MV, Herst PM, Tan AS. Tetrazolium Dyes as Tools in Cell Biology: New Insights Into Their Cellular Reduction. *Biotechnology Annual Review, Elsevier*, 11, 127-152, 2005.

Bhangu-Uhlmann, A., The Mevalonate Pathway: A monitoring approach in plants by systems biology tools (Disertasi), Dipl. Biol., Technische Universität München, born, 1979.

Bohlmann J, Meyer-Gauen, G., Croteau, R., Plant terpenoid synthases: molecular biology and phylogenetic analysis, *Proc. Natl. Acad. Sci.*, 95(8), 4126-4133, 1998.

Bokhtear, S.U. 2011 Medicinal Plants of Bangladesh. <http://www.mpbd.info/plants/callicarpa-tomentosa.php>. 22 Mater 2012. 11.50 AM.

Breitmaier, E., Terpenes: Importance, General Structure, and Biosynthesis, WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim, ISBN: 3-527-31786-4, 2006.

Breitmaier, E. 2002. Structure Elucidation by NMR in Organic Chemistry: Practical Guide, John Wiley & Son, LTD. Chichester. Hal: 11-67.

Bretmajer, E. 2006. Terpen: Flavors, Fragrances, Pharmaca, Pheromones), Wiley-VCH Verlag GmbH & Co. Weinheim. Hal: 1-9.

Cantrell, C.L., Klun, J.A., Bryson, C.T., Kobaysi, M. dan Duke, S.O. Isolation and Identification of Mosquito Bite Deterrent Terpenoids from Leaves of American (*Callicarpa americana*) and Japanese (*Callicarpa japonica*) Beautyberry. *J. Agrig. Food Chem.*, 53 (15), 5948-5953, 2005.

Cerey, F. A., Organic Chemistry, McGraw-Hill Companies, Inc., 4th ed., 208-654, 2000.

- Chaturvedula, V. S. P., Prakash, I., Isolation of Stigmasterol and β -Sitosterol from the dichloromethane extract of *Rubus suavissimus*. *International Current Pharmaceutical Journal*, 1 (9): 239-242, 2012
- Chen, J. J., Huang, S. Y., Duh, C. Y., Chen, I. S., Wang, T. C., Fang, H. Y., Article: A New Cytotoxic Amide from the Stem Wood of *Hibiscus tiliaceus*. *Planta Medica*, 72 (10), 935-938, 2006.
- Chen, J.J., Hu, H-M., Peng, C-F., Chen, I-S., Chu, S-D. *Seco*-Abietane Diterpenoids, A Phenyletanoid Derivative, and Antitubercular Constituents from *Callicarpa pilosissima*. *J. Nat. Prod.*, 72 (2), 223-228, 2009.
- Chen, R.S., Lai, J.S., Wu, T-S., Studies on Constituents on *Callicarpa Formosa* ROLFE. *J. Chin. Soc.*, 33, 329-334, 1986.
- Deeb, K. S. E., Haidari, R. A. A., Mossa, J. S., Ateya, A. M., Phytochemical and Pharmacological Studies of *Maytenus Forsskaoliana*. *Saudi Pharmaceutical Journal*, 11 (4), 184-191, 2003.
- Donadio, S. and Sosio, M., Antibiotics: Targets, Mechanisms and Resistance: Inhibitors of Cell-Wall Synthesis, Wiley-VCH Verlag GmbH & Co. KGaA Chap 6, (pages 133-146), 2014.
- Fabris, M., Matthijs, M., Carbonelle, S., Moses, Pollier, T. J., Dasseville, R., Baart, G. J. E., Vyverman, W., Goossens, A., Tracking the sterol biosynthesis pathway of the diatom *Phaeodactylum tricornutum*. *New Phytol.*, 204 (3), 521-535, 2014.
- Falodun, A., Engel, N., Kragl, U., Nebe, B., Langer, P., Novel anticancer alkene lactone from *Persea Americana*. *Pharm Biol.*, 51 (6), 700-706, 2013.
- Ferreira, E. L. F., Mascarenhas, T. S., Oliveira, J. P. C., Phytochemical investigation and antioxidant activity of extracts of *Lecythis pisonis* Camb. *Journal of Medicinal Plants Research*, 8 (8), 353-360, 2014.

Ferrai, M., Fornasiero, M. C., Isetta, A. M., MTT Colorimetric Assay for Testing Macrophage Cytotoxic Activity in Vitro. *J. Immunol. Methods.*, 131, 165-172, 1990.

Freiesleben, S.H. and Jäger, A.K., Correlation between Plant Secondary Metabolites and Their Antifungal Mechanisms ? A Review, *Med Aromat Plants* 3: 154, 2014.

Gerlier, D., Thomasset, N., Use of MTT Colorimetric Assay to Measure Cell Activation. *J. Immunol. Methods.*, 94 (1-2), 57-63, 1986.

Ghimire, G. P., Thuan, N. H., Koirala, N., Sohng, J. K., Advances in Biochemistry and Microbial Production of Squalene and Its Derivatives. *J. Microbiol. Biotechnol.*, 26 (3), 441-451, 2016.

Grotewold, E. (2006). *The Science of Flavonoids*. Springer. Ohio. Hal: 1-46 , 71-96. Vogt, T. (2010). *Phenylpropanoid Biosynthesis*. *Molekular Plant*. Volume 3. pp (220).

García, V. M. N., Herrera, J. L., Bribiesca, Ma. G. R., Fitz, P. A., Ríos, M. Y., *Article: Antibacterial Activity of Aristolochia brevipes against Multidrug-Resistant Mycobacterium tuberculosis*. *Molecules*, 16 (9), 7357-7364, 2011.

Guadarrama, A., Berenice, Navarro, Víctor, León-Rivera, L., Ismael and Rios, María Yolanda, M., Yolanda, Active compounds against tinea pedis dermatophytes from *Ageratina pichinchensis* var. *Bustamenta*. *Nat. Prod. Res.*, 23 (16), 1559-1565, 2009.

Hansons, J.R. 2005. *Natural Products: The Secondary Metabolites*. Royal Society of Chemistry.

- Harborn, J.B., Metode Fitokimia: Penuntun Cara Modern Menganalisis Tumbuhan,(Padmawinata,K., Soediro,I, Terjemahan), Penerbit ITB Bandung, 1996.
- Hasratman. 2007. Penentuan Aktifitas Antioksidan. <http://Julhasratman.blogspot.com>. 2007/09/Makalah Literatur Seminar Literatur-jld-3,html. 22 Maret 2012, 10.35 AM.
- Henry, L. K., Gutensohn, M., Thomasc, M. S. T., Noelc, J. P., Dudarevaa, N., Orthologs of the archaeal isopentenyl phosphate kinase regulate terpenoid production in plants. *PNAS.*, 112 (32), 10050–10055, 2015.
- Ivanescu, B., Miron, A., Corciova, A., Review Article, Sesquiterpene Lactones from *Artemisia Genus*: Biological Activities and Methods of Analysis, *Journal of Analytical Methods in Chemistry*, Article ID 247685, 21 halaman, 2015.
- Jamir, N.S. and Rao, R.S. 1990. Fifty New or Interesting Medicinal Plants Used by Zealangs from Nagaland, India. *Ethnobotani*, 2 (1 & 2), 11-18, 2007.
- Jone, W., Kinghorn, A.D. 2008. Biologically Active Natural Products of the Genus *Callicarpa*. *Curr Bioact Compd.*, 4(1), 15-32, 2008.
- Jones, W. P. Lobo, T. E., Mi, Q., Chai, H. B., Soejarto, D. D., Cordell, G. A., Swanson, S. M., A. D., Cytotoxic Constituents from the Fruiting Branches of *Callicarpa Americana* Collected in Southern Florida. *J. Nat. Prod.*, 70 (3), 372-373, 2007.
- Koo, K.A., Sung, S.H., Park, J.H., Kim, S.H., Li, K.Y., Kim, Y.C. In Vitro Neuroprotective Activities of Phenyletanoid Glycosides from *Callicarpa dichotoma*. *Plant Med.*, 71 (8), 778-780, 2005.

Koo, K.H., Kim, S.H., Oh, T.H. dan Kim, Y.C. Acteoside and its Aglycones Protect Primary Cultures of Rat Cortical cells from Glutamate-Induced Excitotoxicity. *Life Sciences*, 79 (7), 709-716, 2006.

Kuljarachanan, T., Devahastin, S., Chiewchan, N. Evolution of Antioxidant Compounds in Lime Residues During Drying. *Food Chemistry*. 113, 944-949, 2009.

Lambert, J.B., Shurvell, H.F., Lichtner, D.A., Cooks, R.G. 1998. Organic Structural Spectroscopy. Prentice-Hall, Inc. New Jersey. Hal: 202-394.

Lee, K.Y., Jeong, E.J., Lee, H.S. dan Kim, Y.C. Acteoside of *Callicarpa dichotoma* Attenuates Scopolamine-Induced Memory Impairments. *Biol. Pharm. Bull.*, 29(1) 71-74, 2006.

Lin, C-Z., Zhu, C-C., Zhao, Z-X., Li, X-H., Xiong, T-Q., Xia, Y.Y and Ning, Y. Two New Abietane Diterpenoids from The Caulis and Leaves of *Callicarpa kochiana*. *Fitoterapia*, 83 (3), 1-5, 2011.

Liu, H.Y., He, H-P. Gau, S., Chen, C-Y., Shen, Y-M. and Hao, X-J. Two New Diterpenoid from *Callicarpa pedunculata*. *Helvetica Chimica Acta*, 89 (5), 1017-1022, 2006.

Lu, Y. dan Hua, Y. Abietane Diterpen from *Callicarpa pedunculata*. *Natural Product Research and Development*, 23 (1), 66-68, 2011.

Manjang Y. Workshop Peningkatan Sumber Daya Manusia dan Penelitian Potensi Keanekaragaman Hayat, Universitas Andalas 2006.

Mazid, M., Khan, T. A., Mohammad, F., Role of secondary metabolites in defense mechanisms of plants. *Biology and Medicine*, 3 (2) Special Issue: 232-249, 2011.

Mesquita, M. L. D., Paula, J. E. D., Pessoa, C., Moraes, M. O. D., Lotufo, L. V. C., Grougnet, R., Michel, S., Fran, Tillequin, O., Espindola, L. S., ,

Cytotoxic activity of Brazilian Cerrado plants Used in Traditional Medicine Against Cancer Cell Lines. *J. Ethnopharmacol.*, 123 (3), 439-445, 2009.

Mosmann, T., Rapid colorimetric assay for cellular growth and survival: application to proliferation and cytotoxicity assays. *J. Immunol. Methods*, 65 (1-2), 55-63, 1983.

Musa, W., Hersanti, Zainuddin, A., Tjokronegoro, R., The Poriferasta Compound-5,22E,25-Trien-3-O β from *Clerodendrum paniculatum* Leaf as Inducer Agent of Systemic Resistance on Red Chilli Plant *Capsicum annum L* from *Cucumber Mosaic Virus* (CMV). *Indo. J. Chem.*, 9 (3), 479-486, 2009.

Nes, W. D., Biosynthesis of Cholesterol and Other Sterols. *Chem. Rev.*, 111 (10), 6423–6451, 2011.

Nes, W. D., Zhou, W., Terpenoids: Higher, *ENCYCLOPEDIA OF LIFE SCIENCES*, Nature Publishing Group, www.els.net 13, 2001.

Nour, M. S., El-Shokry, M. H., Shehata, I. H., Aziz AM, A. E., Evaluation of rezasurin microtiter assay and high resolution melting curve analysis for detection of rifampicin and isoniazid resistance of *Mycobacterium tuberculosis* clinical isolates. *Clin. Lab.*, 59(7-8), 763-771, 2013.

Patel, S., Gheewala\$, N., Suthar, A., Shah, A, In-Vitro Cytotoxicity Activity of Solanum Nigrum Extract, Against *Hela* Cell Line And *Vero* Cell Line. *International Journal of Pharmacy and Pharmaceutical Sciences*, 1 (1), 38-46, 2009.

Palomino, J., C., Martin, A., Camacho, M., Guerra, H., Swings, J., Portaels, F., Resazurin Microtiter Assay Plate: Simple and Inexpensive Method for Detection of Drug Resistance in *Mycobacterium tuberculosis*. *Antimicrob Agents Chemother.*, 46(8), 2720–2722, 2002.

- Pereira, F.D.O., Mendes, J.M., Lima, I.O., Mota, K.S.D.L., Oliveira, W.A.D., Lima, E.D.O., *Pharmaceutical Biology: Antifungal activity of geraniol and citronellol, two Monoterpenes alcohols, against Trichophyton rubrum involves inhibition of ergosterol Biosynthesis*, 53 (2), 2015.
- Ragasa, C. Y., Alea, G. V., Rideout, J. A., *An Antifungal Sesquiterpene Lactone from Pseudoelephantopus spicatus*, OL, 2 (2), 1999.
- Riss, T. L., Moravec, R. A., Niles, A. L., Benink, H. A., Worzella, T. J., Lisa Minor, L., *Cell Viability Assays, Assay Guidance Manual* [Internet]. (Sittampalam GS, Coussens NP, Nelson H, et al., editors), 1-23, 2015.
- Rollins, D.M. and Joseph, S.W., *Basic Mechanisms of Antibiotic Action and Resistance: Five Basic Mechanisms of Antibiotic Action against Bacterial Cells*, University of Maryland, 2000.
- Rzeski, W., Stepulak, A., Szymański, M., Juszcak, M., Grabarska, A., A, Sifringer, (M), Kaczor J. K., Kandefer-Szerszeń, M. K., Betulin elicits anti-cancer effects in tumour primary cultures and cell lines in vitro. *Basic & Clinical Pharmacology & Toxicology*, 105(6), 425-432, 2009.
- Salvador, J. A. R., Silvestre, S. M., and Rui M. A. Pinto, R. M. A., Bismuth(III) Reagents in Steroid and Terpene Chemistry. *Molecules*, 16, 2884-2913, 2011.
- Santoni, Anton. *Elucidasi Struktur Flavonoid, Triterpenoid dari Kulit Batang Surian (Toona sinensis) Serta Uji Aktivitas*. Disertasi FMIPA UNAND, 2009.
- Saravanan, B. C., Sreekumar, C., Bansal, G. C., Raya, D., Rao, J. R., Mishra, A. K., A rapid MTT colorimetric assay to assess the proliferative index of two Indian strains of *Theileria annulata*. *Vet. Parasitol.*, 113, 211–216, 2003.

- Saroglou, Karioti, A., Rancic, A., Dimas, K., Koukoulitsa, C., Zervou, M., H. Sesquiterpene Lactones from *Anthemis melanolepis* and Their Antibacterial and Cytotoxic Activities. Prediction of Their Pharmacokinetic Profile. *J. Nat. Prod.*, 73 (2), 242–246, 2010.
- Schreiner, M., Mewis, I., Huyskensl, S. K., Jansen, M. A. K., Zrenner, R., Winkler, R. J. B., Brien, N. O., Krumbein, A., Original Articles, UV-B-Induced Secondary Plant Metabolites - Potential Benefits for Plant and Human Health. *Critical Reviews in Plant Sciences*, 31 (3), 229-240, 2012.
- Sharma, A.K., Negi, K.S., Bandari, J.C., Shukla, H.Y., Pareek, S.K. Influence of NPK and Spasings on The Growth and Yield of Herbage of *Callicarpa macrophylla* Vahl Priyango. ENVIS Buletin vol 12(1), 2000.
- Sharma, P. P., , Roy, R. K. B, Anurag, Gupta, D., Pentacyclic Triterpinoids from *Betula utilis* and *Hyptis suaveolens*. *IJPTR*, 2 (2), 1558-1532, 2010.
- Singh, A.K., Agpawal, P.K. 1994. 17-isoprophylidane, a Diterpenoid from *Callicarpa macrophylla*. *Phytochemistry volume 37,2, pp 587-588*.
- Suryavanshi, V. R., Resazurin microtitre assay (REMA) for Antibacterial and Antifungal Activity of Herbs of Three Antidiarrhoeal Formulations: Bilagyl and Berbenterone Tablets and Berbenterone Suspension, Department of Pharmaceutical Analysis, Bombay College of Pharmacy, Kalina, Mumbai, <http://pharmacognosy-phytochemistry-natural-products.pharmaceuticalconferences.com/speaker-pdfs/2015/vipul-suryavanshi-bombay-college-of-pharmacy-india.pdf/2-4-2016>.
- Sylvester, P. W., Optimization of The Tetrazolium Dye (Mtt) Colorimetric Assay for Cellular Growth and Viability, Drug Design And Discovery (Editor: Seetharama D. Satyanarayanajois) Volume 716 Of The Series Methods In Molecular Biology Pp 157-168, Doi 10.1007/978-1-61779-012-6, 2011.

Soekamto, N.H. 2010. Menentukan Struktur Molekul Senyawa Melalui Analisis Data Spektroskopi. FMIPA Universitas Hasanuddin.

Umachandur, Ganga Rao, B. T., Kalyani A, Devarakonda, R., Evaluation of the Anti-Bacterial and Anti-Fungal Activity of *Callicarpa arborea* Leaves, *RJPBCS*, 6 (1), Page No. 1500, 2015.

Umubyeyi, A. N., Martin, A., Zissis, G., Struelens, M., Karita, E., Portaels, F., Evaluation of the resazurin microtiter assay for rapid detection of ofloxacin resistance in M. Tuberculosis. *Int J Tuberc Lung Dis.*, 10(7), 808–811, 2006.

Vranová, E., Coman, D., Gruitsem, W., Network Analysis of the MVA and MEP Pathways for Isoprenoid Synthesis. *Annu Rev Plant Biol.*, 64, 665-700, 2013.

Wentzinger, L. F., Bach, T. J., Hartmann, M-A, Inhibition of Squalene Synthase and Squalene Epoxidase in Tobacco Cells Triggers an Up-Regulation of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase. *Plant Physiol.*, 130(1), 334–346, 2002.

Williamson, K. J., *Macroscale and Microscale Organic Experiments* Lexington, Massachusetts: D. C, 2nd ed., p. 40, 1994.

Wixon, R.L., Gehrke, C.W. 2010. *Chromatography A Science Discovery*. John Wiley & Sons. New Jersey.

Xie, E.L., Zhou, G.P., Ji, T.F., Wu, J. dan Yuan, G.P. 2009. A Novel Phenylpropanoid Glycoside from *Callicarpa Kwangtungensis* Chun. *Chinese Chemical Letters* 20. 827-829 Departemen Kesehatan Republik Indonesia. 1989. *Materia Medika Indonesia*. Jakarta. Jilid VI

Xu, J., Harrison, L-J., Vital, J.J., Goh, S-H. Four New Clerodane Diterpenoid from *Callicarpa pentandar*. *J. Nat. Prod.*, 63 (8), 1062-1065, 2000.

Yamasaki, T., Mashoka, C., Nohara, T., dan Ono, M. A New Phenylethanoid Glycoside From The Fruits of *Callicarpa japonica* Thunb. var. *luxurans* Rehd. *J. Nat. Med.*, 61 (3), 318-322, 2007.

Zhang, Y. Seeram, N.P., Lee, R., Feng, L., Heber, D. Isolation and identification of Strawberry Phenolics with Antioxidant and Human Cancer Cell Antiproliferative Properties. *J. Agric. Food Chem.*, 56(3), 670-675, 2008.

Zhao, S., Park, C. H., Li, X., Kim, Y. B., Yang, J., Sung, G. B., Park, N. I. I., Kim, S., Park, S. U., Article: Accumulation of Rutin and Betulinic Acid and Expression of Phenylpropanoid and Triterpenoid Biosynthetic Genes in Mulberry (*Morus alba* L.). *J. Agric. Food Chem.*, 63 (38), 8622–8630, 2015.

Zhuang, X., Chappell, J., Engineering Novel Terpene Production Platforms in the Yeast *Saccharomyces Cerevisiae* (Disertasi)., University of Kentucky, 2013.

