

DAFTAR PUSTAKA

- Abdel-Shafy, H. I., & Mansour, M. S. M. (2016). A review on polycyclic aromatic hydrocarbons: Source, environmental impact, effect on human health and remediation. *Egyptian Journal of Petroleum*, 25(1), 107–123. doi:10.1016/j.ejpe.2015.03.011.
- Adi, A.A.A.M. (2014). *Buku Ajar Patologi Veteriner Sistemik: Sistem Pernapasan*. Denpasar. Swasta Nulus.
- Agrawal, Sandeep & Kaur, Amar & Taneja, Kanchan. (2018). A Comprehensive Review of Benzo Alpha Pyrene (B[A]P) Toxicology. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 9 (4):1049-1058.
- Agustriono, F.A., Hasanah, A.N. (2016). Pemanfaatan Limbah Sebagai Bahan Baku Sintesis Karboksimetil Selulosa : Review. *Farmaka*, 14(3): 87-94.
- Akhlaghi, M., dan Bandy, B. (2009). Mechanisms of Flavonoid Protection Against Myocardial Ischemia-Reperfusion Injury. *Journal of Molecular and Cellular*, 49: 309-317.
- Almatroodi, S. A., Alrumaihi, F., Alsahli, M. A., Alhomrani, M. F., Khan, A., & Rahmani, A. H. (2020). Curcumin, an Active Constituent of Turmeric Spice: Implication in the Prevention of Lung Injury Induced by Benzo(a) Pyrene (BaP) in Rats. *Molecules*, 25(3): 724. doi:10.3390/molecules25030724
- Alomirah, H., Al-Zenki, S., Al-Hooti, S., Zaghloul, S., Sawaya, W., Ahmed, N., & Kannan, K. (2011). Concentrations and dietary exposure to polycyclic aromatic hydrocarbons (PAHs) from grilled and smoked foods. *Food Control*, 22(12), 2028–2035. doi:10.1016/j.foodcont.2011.05.024
- Arifin, A. 2013. *Prosedur Operasional Baku Budidaya Bangunbangun (Plectranthus amboinicus)*. (Skripsi). Bogor. IPB.
- Arobi, I. (2010). Pengaruh Ekstrak Jahe Merah (*Zingiber Officinale* Rosc) Terhadap Perubahan Pelebaran Alveolus Paru-Paru Tikus (*Rattus norvegicus*) Yang Terpapar *Allethrin*. (Skripsi). Malang. Universitas Islam Negeri Maulana Malik Ibrahim
- Arumugam, G., Swamy, M., & Sinniah, U. (2016). *Plectranthus amboinicus* (Lour.) Spreng: Botanical, Phytochemical, Pharmacological and Nutritional Significance. *Molecules*, 21(4): 369. doi:10.3390/molecules21040369.

- Asimwe, S., Borg-Karlson, A., Azeem, M., Mugisha, M., Namutebi, A., & Gakunga, N.J. (2014). Chemical composition and Toxicological evaluation of the aqueous leaf extracts of *Plectranthus amboinicus* Lour. Spreng. *International Journal of Pharmaceutical Science Invention*, 3(2): 19-27.
- Asokumar, S., Naveenkumar, C., Raghunandhakumar, S., Kamaraj, S., Anandakumar, P., Jagan, S., Devaki, T. (2012). Antiproliferative and Antioxidant Potential of Beta-Ionone Against Benzo(a)pyrene-Induced Lung Carcinogenesis in Swiss Albino Mice. *Mol Cell Biochem*, 363 : 335-345. doi; 1007/s1 1010-011-1186-6.
- Aspinal, V., dan Capello, M.(2015). *Introduction to Veterinary Anatomy and Physiology Textbook 3rd Edition*. Elsevier:UK.
- Balckquiere, M.J., Hylkema, M.N., Postma, D.S., Gerllings, M., Timens, W & Melgert, B.N. (2010). Airway Inflammation and Remodeling in Two Mouse Models of Asthma : Comparison of Males and Females. *Int Arch Allergy Immunol*, 153 : 173-181. doi <https://doi.org/10.1159/000312635>.
- Barnwal, P., Vafa, A., Afzal, S., Shahid, A., Hasan, S., Alpashree, & Sultana, S. (2017). Benzo (a) pyrene menginduksi toksisitas paru-paru dan peradangan pada tikus: pencegahan dengan carvacrol. *Toksikologi Manusia & Eksperimental*, 37 (7): 752-761. doi: 10.1177 / 0960327117735572 .
- Bire, I. R., Winaya, I, B, O., & Adi, A, A, A, M. (2018). Histopathological Changes Of Mice Liver and Lung Post Induction With Carcinogenic Substances Benzo(a)pyrene. *Indonesia Medicus Veterinus*, 7(6) : 634-642 DOI: 10.19087/imv.2018.7.6.634.
- Bodduluru, L.,N., Kasala, E.,R., Chandana C., B., Karnam, K., C., Dahiya, v.,Ellutla, M. (2015). Antiproliferative and antioxidant potential of hesperetin against benzo(a)pyrene-induced lung. *Chemico-Biological Interactions*, 242:345-352.<http://dx.doi.org/10.1016/j.cbi.2015.10.020>.
- Bustan. 2007. *Epidemiologi Penyakit Tidak Menular*. Rineka Cipta. Jakarta.
- Chaveli-López B. (2014). Oral toxicity produced by chemotherapy: A systematic review. *Journal of clinical and experimental dentistry*, 6(1): e81–e90. <https://doi.org/10.4317/jced.51337>.
- Damanik R, Wahlqvist ML, dan Wattanapenpaiboon. (2006). Lactagogue Effect of Torbangun, a Batakese Traditional Cuisine. *APJCNN*, 15(2) : 127-286.
- Damanik, R. (2009). Torbangun (*Coleus amboinicus* Lour): A Batakese Traditional Cuisine Perceived as Lactagogue by Batakese Lactating Women in Simalungun, North Sumatera, Indonesia. *Journal of Human Lactation*, 25(1): 64–72. doi:10.1177/0890334408326086.

- Devi, N.K. dan Periyanyagam, K. (2010). In vitro anti inflammatory activity of *Plectranthus amboinicus* (Lour) Spreng by HRBC membrane stabilization. *International Journal of Pharmaceutical Studies and Research*, 1(1): 26-29.
- Dhatwalia,S.K., Kumar, M., Bhardwaj, P., Dhawan,D.,K. (2019). White tea - A cost effective alternative to EGCG in fight against benzo(a) pyrene (BaP) induced lung toxicity in SD rats. *Food and Chemical Toxicology*, <https://doi.org/10.1016/j.fct.2019.05.059>.
- Emre, M.H., Aktay, G., Polat, A., Vardt, N. (200). Effects of Benzo(a)pyrene and Ethanol on Oxidative Stress of Brain, Lung Tissues and Lung Morphology in Rats. *Chinese Journal of Physiology*, 50(3) : 143-148.
- Gurgel, A. P., Silva, A. D., Grangeiro, J. G., Oliveira, A. R. S.,Lima, D. C., Silva, C. M. P., dan Souza, I. A. (2009). In vivo study of the anti-inflammatory and antitumor activities of leaves from *Plectranthus amboinicus* (Lour.) Spreng (Lamiaceae). *Journal of Ethnopharmacology*, 125(2): 361-363. Doi: 10.1016/j.jep.2009.07.006.
- Guyton dan Hall. (1996). *Fisiologi Manusia dan Mekanisme Penyakit*, Edisi 9. Jakarta: EGC.
- Hasibuan, P., dan Sumaiyah, S. (2019). The Anti-Proliferative and Pro-Apoptotic Properties of Ethanol *Plectranthus amboinicus* (Lour.) Spreng. Leaves Ethanolic Extract Nanoparticles on T47D Cell Lines. *Asian Pacific Journal of Cancer Prevention*, 20(3):897-901. doi: 10.31557/APJCP.2019.20.3.897.
- Hasibuan, P., Rosidah, Ilyas, S., Nasution, M.P. (2013). Antioxidant and Cytotoxic Activities of *Plectranthus amboinicus* (Lour). Spreng, Extract. *International Journal of Pharmacy Teaching and Practices*, 4(3) : 755-758.
- Honda, T., Ota, H., Yamazaki, Y., Yoshizawa, A., Fujimoto, K., Sone, S. (2003). Proliferation of type II pneumocytes in the lung biopsy specimens reflecting alveolar damage. *Respir Med* 97(1): 80-85. doi:10.1053/rmed.2002.1408
- Hullatti, K.K dan P. Bhattacharjee. (2011). Pharmacognostical Evaluation of Different Parts of *Coleus amboinicus* Lour. *Lamiaceae Pharmacognosy Journal*, 3: 24-28. DOI: 10.5530/pj.
- International Agency For Research On Cancer (IARC). 2010. *Monographs on the Evaluation of Carcinogenic Risk to Humans*, Vol.92. Lyon.
- Iwansyah, A.C.,Damanik, M.R.M., Kustiyah, L.,Hanafi, M. (2017). Potensi Fraksi Etil Asetat Daun Torbangun (*Coleus amboinicus* L.) Dalam Meningkatkan Produksi Susu, Bobot Badan Induk, dan Anak Tikus. *Jurnal Gizi Pangan*, 12(1): 61-68.<https://doi.org/10.25182/jgp.2017.12.1>
- Jee, S.-C., Kim, M., Kim, K. S., Kim, H.S., & Sung, J.S. (2020). Protective Effects of Myricetin on Benzo[a]pyrene-Induced

- 8-Hydroxy-2'-Deoxyguanosine and BPDE-DNA Adduct. *Antioxidants*, 9(5): 446. doi:10.3390/antiox9050446.
- Jothy, S. L., Zakaria, Z., Chen, Y., Lau, Y. L., Latha, L. Y., & Sasidharan, S. (2011). Acute Oral Toxicity of Methanolic Seed Extract of *Cassia fistula* in Mice. *Molecules*, 16(6), 5268–5282. doi:10.3390/molecules16065268
- Kaban, V. E., & Yusmarlisa, S. (2018). Uji Aktivitas Kandungan Antioksidan Pada Daun Bangun-Bangun (*Plectranthus amboinicus*) Secara Spektrofotometri Ultraviolet-Visible. *Jurnal farmasimed (JFM)*, 1(1), 16-20.
- Kasala, E. R., Bodduluru, L. N., Barua, C. C., & Gogoi, R. (2016). Antioxidant and antitumor efficacy of Luteolin, a dietary flavone on benzo(a)pyrene-induced experimental lung carcinogenesis. *Biomedicine & Pharmacotherapy*, 82:568–577. doi:10.1016/j.biopha.2016.05.042
- Kasala, E. R., Bodduluru, L. N., Barua, C. C., Sriram, C. S., & Gogoi, R. (2015). Benzo(a)pyrene induced lung cancer: Role of dietary phytochemicals in chemoprevention. *Pharmacological Reports*, 67(5): 996–1009. doi:10.1016/j.pharep.2015.03.004
- Kementrian Kesehatan Republik Indonesia. (2016). Peraturan Menteri Kesehatan Republik Indonesia Nomor 6 Tahun 2016 tentang Formularium Obat Herbal Asli Indonesia.
- Kopustinskiene, D. M., Jakstas, V., Savickas, A., & Bernatoniene, J. (2020). Flavonoids as Anticancer Agents. *Nutrients*, 12(2), 457. doi:10.3390/nu12020457
- Lago, J., Toledo-Arruda, A., Mernak, M., Barrosa, K., Martins, M., Tibério, I., dan Prado, C. (2014). Structure-activity Association of Flavonoids in Lung Diseases. *Molecules*. 19(3):3570-3595. <https://doi.org/10.3390/molecules19033570>
- Lanzetti, M., Lopes, A. A., Ferreira, T. S., de Moura, R. S., Resende, A. C., Porto, L. C., & Valenca, S. S. (2011). Mate tea ameliorates emphysema in cigarette smoke-exposed mice. *Experimental Lung Research*, 37(4), 246-257.
- Lamson, D.W. dan Matthew, B.S.(2000). Antioxidants and cancer III: Quercetin. *Alternative Medicine Review*, 5(3):196-208
- Liu, Y., Wu, Y. M., Zhang, P.Y. (2015). Protective Effects of Curcumin and Quercetin During Benzo[a]pyrene Induced Lung Carcinogenesis in Mice. *European Review for Medical and Pharmacological Sciences*, 19(9): 1736-1743.

- Manurung, K., Sulastri, D., Zubir, N., & Ilyas, S. (2020). In silico Anticancer Activity and in vitro Antioxidant of Flavonoids in *Plectranthus amboinicus*. *Pharmacognosy Journal*, 12(6s): 1573–1577. doi:10.5530/pj.2020.12.215.
- Martorell, I., Nieto, A., Nadal, M., Perelló, G., Marcé, R. M., & Domingo, J. L. (2012). Human exposure to polycyclic aromatic hydrocarbons (PAHs) using data from a duplicate diet study in Catalonia, Spain. *Food and chemical toxicology*, 50(11), 4103-4108. <https://doi.org/10.1021/es800064p>
- Maulida, N., Dinda, F. Paramitha, Ekky A. Sukarno dan Arifin, A.Z. (2013). Klasifikasi Kanker Paru-Paru Menggunakan Pengolahan Citra. *Jurnal Teknik Pomits*, 2(1).
- Mescher, A. (2016). *Junquera's Basic Histology Text and Atlas* (14th.ed). Mc-Graw. Hill Companies.
- Moein, S. and Moein, M.S. (2010). Relationship between antioxidant properties and phenolics in *Zhumeria majdae*. *Journal of Medicinal Plants Research*, 4(7):517-521.
- Moserova, M., V. Kotrbova, D. Aimova, M. Sulc, E. Frei, and M. Stiborova. (2009). Analysis of Benzo[a]Pyrene Metabolites Formed by Rat Hepatic Microsomes Using High Pressure Liquid Chromatography. Optimization Of The Method. *Interdisciplinary Toxicol*, 2(4): 239–244. <https://doi.org/10.2478/v10102-009-0024-0>
- Muntiha, M., (2001). *Teknik Pembuatan Preparat Histopatologi dari Jaringan Hewan dengan Pewarnaan Hematoksilin dan Eosin*. Temu Teknis NonPeneliti. 156-163.
- Parwata, M.O.A. (2016). *Antioksidan*. Bali. Universitas Udayana
- Patel, R. (2011). Hepatoprotective effects of *Plectranthus amboinicus* (Lour) Spreng against carbon tetrachloride-induced hepatotoxicity. *Journal of Natural Pharmaceuticals*, 2(1):28-35. doi:10.4103/2229-5119.78495
- Preeja, G., Pillai, Suresh, Mishra, G., and M. Annapura. (2011). Evaluation of the acute and sub acute toxicity of the methanolic leaf extract of *Plectranthus amboinicus* (Lour) Spreng in balb c mice. *Euro. J. Exp. Bio*1(3):236-245
- Qamar, W., Khan, A. Q., Khan, R., Lateef, A., Tahir, M., Rehman, M. U., Sultana, S. (2011). Benzo(a)pyrene-induced pulmonary inflammation, edema, surfactant dysfunction, and injuries in rats: Alleviation by farnesol. *Experimental Lung Research*, 38(1): 19–27. doi:10.3109/01902148.2011.632064.
- Ramesh, A., Walker, S, A., & Hood, D.B. (2004). Bioavailability and Risk Assessment Of Orally Ingested Polycyclic Aromatic Hydrocarbons (Review). *Int. J. Toxicol.*, 23(5). <https://doi.org/10.1080/10915810490517063>.

- Robbins. (2007). *Buku Ajar Patologi Volume 2 Edisi 7*. Jakarta: EGC.
- Roselyn, A. P., Widiastuti, E. L., Susanto, G. N. (2017). Pengaruh Pemberian Taurin terhadap Gambaran Histopatologi Paru Mencit (*Mus musculus*) yang Diinduksi Karsinogen Benzo(a)Piren secara In Vivo. *Jurnal Natur Indonesia*, 17(1), 22. doi:10.31258/jnat.17.1.22-32
- Salem, M.,L., El-Ashmawy, N.,E., Abd El-Fattah, E.,E., dan Khedr, E.,G. (2021). Immunosuppressive Role of Benzo[a]pyrene in Induction of Lung Cancer in Mice. *Chemico - Biological Interactions*, 333. <https://doi.org/10.1016/j.cbi.2020.109330>.
- Sampaio, L. A., Pina, L. T. S., Serafini, M. R., dos Santos Tavares, D., & Guimarães, A. G. (2021). Antitumor effects of carvacrol and thymol: A systematic review. *Frontiers in pharmacology*, 12:1-32. <https://doi.org/10.3389/fphar.2021.702487>
- Sartika, N. A., Winaya, I. B. O., Adi, A. A. A. M., Putu, I., dan Putra, W. J. (2018). Perubahan Histopatologi Paru-paru Mencit Jantan Pasca paparan Asap Rokok Elektrik. *Indonesia Medicus Veterinus*,7(4): 402-412. doi:10.19087/imv.2018.7.4.402
- Scanlon V.C dan Sanders T.(2007). *Buku Ajar Anatomi Dan Fisiologi (Essentials of Anatomy and Physiology)* (Edisi III). Jakarta:EGC.
- Sherly, Liong,S., Nafie, N.L. (2014). Studi Analisis Kandungan Benzo(a)Piren Dalam Daging Olahan Dengan Metode Kromatografi Gas. Artikel Penelitian. Universitas Hasanuddin.
- Shiizaki, K., Kawanishi, M., & Yagi, T. (2017). Modulation of benzo[a]pyrene–DNA adduct formation by CYP1 inducer and inhibitor. *Genes and Environment*, 39(1). doi:10.1186/s41021-017-0076-x.
- Shiney, B.R., Ganesh, P., and Kumar, R.S. (2012). Phytochemical Screening of *Coleus aromaticus* and *Leucas aspera* and Their Antibacterial Activity Against Enteric Pathogens. *International Journal of Pharmaceutical and Biological Archives*, 3(1):162-166.
- Shukla, S., & Gupta, S. (2010). Apigenin: A Promising Molecule for Cancer Prevention. *Pharmaceutical Research*, 27(6), 962–978. doi:10.1007/s11095-010-0089-7
- Silitonga M, Situmorang E. 2013. The effect of ethanol extract *Coleus amboinicus* L on antibody titer of white rats (*Rattus norvegicus*) trough SRBC as antigen. *Prosiding The 2nd International Conference on Multidisciplinary Research (ICMR)* (hlm. 312-318), October 2-4, Banda Aceh: Indonesia.
- Silitonga, M, & Syapuri, N. (2019). The Effect of Bangunbangun (*Plectranthu amboinicus* L.Spreng) Supplement in Feed on the Quality of Broiler

- Chicken Meat. In *AISTSSE 2018: Proceeding of The 5th Annud International Seminar on Trends in Science and Science Education, AISTSSE 2018, 18-19 Oktober 2018, Medan, Indonesia* (p. 13). European Alliance for Innovation.
- Silitonga, M. 2015. Evaluasi Potensi Immunostimulan Ekstrak Etanol Daun Bangunbangun (*Plectranthus amboinicus* (Lour). Spreng) pada Tikus (*Rattus norvegicus* L.)(Disertasi). Program Studi Ilmu Biologi. USU.
- Silitonga, M., & Silitonga, P. M. (2017). Haematological profile of rats (*Rattus norvegicus*) induced BCG and provided leaf extract of *Plectranthus amboinicus* Lour Spreng. In *AIP Conference Proceedings*, 1868(1),doi:10.1063/1.4995200
- Silitonga, M., Gultom, E. S., & Nugrahalia, M. (2020). The Effect of *Plectranthus amboinicus* Lour Spreng Ethanolic Extract on Relative Organ, Body Weights Changes, and Hematology Profile in Wistar Rats Treated with 7, 12Dimethylbenz (a) anthracene. In *Journal of Physics: Conference Series*, 1462(1). IOP Publishing. doi:10.1088/1742-6596/1462/1/012001
- Silitonga, M., Ilyas, S., Hutahaeen, S., & Sipahutar, H. (2014). Levels of Apigenin and Immunostimulatory Activity of Leaf Extracts of Bangunbangun (*Plectranthus amboinicus* Lour). *International Journal of Biology*, 7(1). doi:10.5539/ijb.v7n1p46 .
- Silitonga, M., Sinaga, E., Silitonga, P.M. (2021). Pengaruh Ekstrak Etanol *Plectranthus amboinicus* Lour Spreng Terhadap Berat Badan Dan Berat Relatif Organ Tikus Yang Dinduksi Kanker Kulit Dengan DMBA. *Jurnal Biosains*, 7(2):59-65. DOI: <https://doi.org/10.24114/jbio.v7i3.23288>.
- Subramaniam, Shonia & Selvaduray, Kanga Rani & Radhakrishnan, Ammu. (2019). Bioactive Compounds: Natural Defense Against Cancer?. *Biomolecules*, 9. 758. doi: 10.3390/biom9120758.
- Susantiningih, T., Fiana, D. N., & Carolia, N. (2014). Pengaruh Pemberian Ekstrak Daun Sirsak (*Annona muricata* L.) terhadap Gambaran Histopatologi Jaringan Paru Tikus Putih Betina yang Diinduksi Karsinogen 7, 12 Dimethylbenz [α] anthracene (DMBA). *Jurnal Majority*, 3(3).
- Susanty, dan Bachmid, F. (2016). Perbandingan Metode Ekstraksi Maserasi Dan Refluks Terhadap Kadar Fenolik Dari Ekstrak Tongkol Jagung (*Zea mays* L.). *Jurnal Konversi*, 5(2): 87-93.doi:10.24853/konversi.5.2.87-92
- Suwardewa, T.G.A. (2010). *Peran Pemeriksaan Lesithin-Sfingomyelin untuk Maturitas Paru Janin*. Denpasar: FK UNUD/RSUP Sanglah.
- Togrul, H dan Arslan, N. (2003). Production Of Carboxymethyl Cellulose From Sugar Beet Pulp Cellulose And Rheological Behaviour Of Carboxymethyl

Cellulosa. *Carbohydrate Polymers Journal*, 54(1): 73-82.doi:10.1016/s0144-8617(03)00147-4

- Tolistiawaty, I., Widjaja, J., Sun, P.P. (2014). Gambaran Kesehatan pada Mencit (*Mus musculus*) di Instalasi Hewan Coba. *Jurnal Vektor Penyakit*, 8(1), 2014 : 27 - 32.
- Tong, X., dan Pelling, J. (2013). Targeting the PI3K/Akt/mTOR Axis By Apigenin For Cancer Prevention. *Anticancer Agen Med Chem*, 13(7): 971-978.doi:10.2174/18715206113139990119
- Walaszek, Z., Hanausek, M., Zoltaszek, R dan Siaga, T.J. (2004). Inhibitory effect of post-initiation dietary D-Glucarate on benzo[a]yrene induced inflammation during lung tumorigenesis in A/J mice. *Proc. Amer Assos Cancer*, 45. 132-141.
- WHO. 2020. Global Cancer Obsevatory. [Diakses 10 Maret 2020]. <https://gco.iarc.fr/today/data/factsheets/cancers/17-Non-melanoma-skin-cancer-fact-sheet.pdf>.
- Widodo E. (2006). Paparan Asap Rokok Kretek Pada Tikus Putih Sebagai Model Untuk Manusia: Perhatian Khusus pada Perubahan Histopatologi dan Ultrastruktur Saluran Napas. (*Disertasi*). Bogor: Institut Pertanian Bogor.
- Wilson, M.L.(2006). *Patofisiologi Konsep Klinis Proses-proses Penyakit*. Alih Bahasa: dr. Brahm U. Jakarta . EGC.
- Wölfle, U., Esser, P. R., Simon-Haarhaus, B., Martin, S. F., Lademann, J., & Schempp, C. M. (2011). UVB-induced DNA damage, generation of reactive oxygen species, and inflammation are effectively attenuated by the flavonoid luteolin in vitro and in vivo. *Free Radical Biology and Medicine*, 50(9), 1081–1093. doi:10.1016/j.freeradbiomed.2011.01.027.
- Zhao, C. Z., Fang, X.C., Wang, D., Tang, F., Wang, X.D. (2010). Involvement of Type II Pneumocytes in the Pathogenesis of Chronic Obstructive Pulmonary Disease. *Respiratory Medicine*, 104(10): 1391-1395.doi:10.1016/j.rmed.2010.06.018
- Zietz, M., Weckmüller, A., Schmidt, S., Rohn, S., Schreiner, M., Krumbein, A., & Kroh, L. W. (2010). Genotypic and Climatic Influence on the Antioxidant Activity of Flavonoids in Kale (*Brassica oleracea* var.sabellica). *Journal of Agricultural and Food Chemistry*, 58(4): 2123–2130. doi:10.1021/jf9033909