

DAFTAR PUSTAKA

- Abbas AK, Lichtman. 2007. Cellular and molecular immunology. Edisi kelima. Philadelphia: Sounders.
- Abbas, A.K., Lichtman, A. and Pillai, S., 2019. *Basic Immunology: Functions and Disorders of the Immune System, 6e: Sae-E-Book*. Elsevier India.
- Abbas, A.K., Lichtman, A.H. and Pillai, S., 2014. *Cellular and molecular immunology E-book*. Elsevier Health Sciences.
- Adan, A., Alizada, G., Kiraz, Y., Baran, Y. and Nalbant, A., 2017. Flow cytometry: basic principles and applications. *Critical reviews in biotechnology*, 37(2), pp.163-176.
- Agnesa, O.S., Susilo, H. and Lestari, S.R.2017. Aktivitas imunostimulan ekstrak bawang putih tunggal pada mencit yang diinduksi *Escherichia coli*. *Malang Pharmaciana*, 7(1), pp.105-112.
- Ajizah, A, 2004, Sensitivitas *Salmonella typhimurium* Terhadap Ekstrak Daun *Psidium guajava* L, Bioscientiae, Vol.1. No,1:8-31.
- Aldi, Yufri., Rasyadi, Yahdian.,& Handayani, Dian., 2014.Immunomodulatory Activity of Meniran Extracts (*Phyllanthus niruri* Linn.) to Broiler ChickensJurnal Sains Farmasi & Klinis, 1(1), 20-26
- Aldi Y, Novelin F, Handayani D. Aktivitas Beberapa Subfraksi Herba Meniran (*Phyllanthus niruri* Linn.) terhadap Aktivitas dan Kapasitas Fagositosis Makrofag. *Sci J Farm dan Kesehat*. 2015;5(2):92.
- Apparecido,N.,Daniel.,Simone,M.,Sartoretto.,Gustavo,S.,Silvana,M.,Caparroz-Assef., Ciomar,A., Bersani-Amado.,Roberto,Kenji,N.,Cuman. 2009.Anti-inflammatory and antinociceptive activities of eugenol essential oil in experimental animal models.*Brazilian journal of pharmacognosy*19 (1B): 212-217.
- Ardianto, Tomi. 2008. Pengaruh Ekstrak Bunga Cengkeh (*Syzygium aromaticum* L.) terhadap Mortalitas Larva *Aedes aegypti* L..Fakultas Kedokteran Universitas Sebelas Maret.
- Artini, K.S., Veranita,W. 2021. Tanaman Herbal Untuk Meningkatkan Sistem Imun Tubuh. Fakultas Ilmu Kesehatan Universitas Duta Bangsa. Vol 10, No 1: 5-20
- Atlas, R.M. Phagocytosis In Microbiology Fundamentals and Application, New York: Macmillan Company; 1984.Hal. 476-88

- Bachiega, T. F., Orsatti, C. L., Pagliarone, A. C., Missima, F., Sousa, J. P. B., Bastos, J. K., & Sforcin, J. M. (2009). Th1/Th2 cytokine production by clove-treated mice. *Natural Product Research*, 23(16), 1552-1558.
- Bachiega, T. F., de Sousa, J. P. B., Bastos, J. K., & Sforcin, J. M. 2011. Clove and eugenol in noncytotoxic concentrations exert immunomodulatory/anti-inflammatory action on cytokine production by murine macrophages. *Journal of Pharmacy and Pharmacology*, 64(4), 610-616.
- Baratawidjaja KG. 2004. *Dasar imunologi* edisi 6. Jakarta, Balai Penerbit Fakultas Kedokteran Indonesia.
- Baratawidjaja, K.G. dan Rengganis, I., 2012. Imunologi Dasar, Edisi ke-10, Balai Penerbit Fakultas Kedokteran Universitas Indonesia, Jakarta. 29-32, 61-64, 69, 73, 583.
- Baratawidjaja KG, Rengganis I. *Imunologi Dasar Edisi 11*. Jakarta: Badan Penerbit FKUI; 2014.
- Batiha, G. E. S., Alkazmi, L. M., Wasef, L. G., Beshbishi, A. M., Nadwa, E. H., & Rashwan, E. K. 2020. *Syzygium aromaticum* L.(Myrtaceae): Traditional uses, bioactive chemical constituents, pharmacological and toxicological activities. *Biomolecules*, 10(2).
- Bhuiyan, Md, N.I., Bagum, J., Nandi,N.C.andAkter, F. 2010. Constituents of the essential oil from leaves and buds of clove (*Syzygium aromaticum*). *African Journal of Plant Science*.4(11): 451-454.
- Borisova, M.P., Kataev, A.A. and Sivozhelezov, V.S., 2019. Action of tannin on cellular membranes: Novel insights from concerted studies on lipid bilayers and native cells. *Biochimica et Biophysica Acta (BBA)-Biomembranes*, 1861(6), pp.1103-1111.
- Botkin, D.J., Galli, L., Sankarapani, V., Soler, M., Rivas, M. and Torres, A.G., 2012. Development of a multiplex PCR assay for detection of Shiga toxin-producing *Escherichia coli*, enterohemorrhagic *E. coli*, and enteropathogenic *E. coli* strains. *Frontiers in Cellular and Infection Microbiology*, 2, p.8.
- Cano LZ, Damaris E, Lopera H. Introduction to T and B lymphocytes. Dalam: Anaya JM, Shoenfeld Y, Villarraga AR, Levy RA, Cervera R, penyunting. 2013. Autoimmunity from bench to bedside. Colombia: El rosario university press:77-96.
- Chaplin DD. 2015 Overview of the Immune Response. *Allergy Clin Immunology*.125:826–8

- Cortes-Rojas, D.F., de Souza, C.R.F. and Oliveira, W.P., 2014. Clove (*Syzygium aromaticum*): a precious spice. *Asian Pacific journal of tropical biomedicine*, 4(2), pp.90-96.
- Christobed, A., Purnawati, R. D., & Susilaningsih, N. 2017. Pengaruh Pemberian Ekstrak Daun Sirih Merah (Piper Crocatum) Dosis Bertingkat Terhadap Proliferasi Limfosit Limpa Mencit Balb/C Yang Diinfeksi *Salmonella Typhimurium*. *DIPONEGORO MEDICAL JOURNAL (JURNAL KEDOKTERAN DIPONEGORO)*, 6(2), 337-346.
- Darwish, F., Kalenik, T., Senotrusova, T., Motkina, E., Razgonova, M. and Li, N., 2021, June. Identification of Bioactive Compounds in Clove (*Syzygium Aromaticum L.*). In *International Scientific Conference Fundamental and Applied Scientific Research in the Development of Agriculture in the Far East* (pp. 122-130). Springer, Cham.
- Daslina, D., Darwin, E., & Djamal, A. (2015). Pengaruh pemberian glutamin pada kemampuan fagositosis makrofag terhadap *Pseudomonas aeruginosa*. *Jurnal Kesehatan Andalas*, 4(3).
- Dehghani, F., Heshmatpour, A., Panjehshahin, M.R. and Khozani, T.T. 2012. Toxic effects of water/alcoholic extract of *Syzygium aromaticum* on sperm quality, sex hormones and reproductive tissues in male mouse. *IUFS J Biol* 71(2): 95 – 102
- Dibazar,S.P, Fateh, S. Daneshmandi, S., 2014. Clove (*Syzygium aromaticum*) ingredients affect lymphocyte subtypes expansion and cytokine profile responses: An invitro evaluation. *JFood Drug Anal.*;22(4):448–54. Available from:<http://dx.doi.org/10.1016/j.jfda.2014.04.005>
- Dibazar, S.P., Fateh, S. and Daneshmandi, S., 2015. Immunomodulatory effects of clove (*Syzygium aromaticum*) constituents on macrophages: in vitro evaluations of aqueous and ethanolic components. *Journal of immunotoxicology*, 12(2), pp.124-131.
- Dubreuil, J.D .2002. *Escherichia coli* STb enterotoxin, *Microbiology*,143; 1783-1795
- Famuyide, I. M., Aro, A. O., Fasina, F. O., Eloff, J. N., & McGaw, L. J. (2019). Antibacterial activity and mode of action of acetone crude leaf extracts of under-investigated *Syzygium* and *Eugenia* (Myrtaceae) species on multidrug resistant porcine diarrhoeagenic *Escherichia coli*. *BMC veterinary research*, 15(1), 1-14.
- Farhath S, Vijaya P, Vimal M. 2013. Immunomodulatory activity of geranal, geranal acetate, gingerol, and eugenol essential oils: evidence for humoral and cell-mediated responses. *Avicenna J phytomedicine*;3(3):224–30.

Farizal J. Pengaruh Pemberian Ekstrak Etanol Umbi Bidara Upas (*Miremia mammosa*) Terhadap Proliferasi Limfosit dan Produksi ROI Makrofag yang Diinfeksi *Sallmonella thipy*. Journal Dipnegoro University.

Fathy M, Fawzy MA, Hintzsche H, Nikaido T, Dandekar T, Othman EM. Eugenol exerts apoptotic effect and modulates the sensitivity of HeLa cells to cisplatin and radiation. *Molecules*. 2019;24(21).

Fatimatuzzahroh, Fatimatuzzahroh, Novi Khila Firani, and Heri Kristianto. "Efektifitas Ekstrak Bunga Cengkeh (*Syzygium aromaticum*) terhadap Jumlah Pembuluh Darah Kapiler pada Proses Penyembuhan Luka Insisi Fase Proliferasi." *Majalah Kesehatan FKUB* 2.2 (2016): 92-98.

Fuchs, A. and Del Carmen, G., 2018. *The distributional effects of tobacco taxation: the evidence of white and clove cigarettes in Indonesia*. The World Bank.

Fujimoto, R.Y., Pereira, D.M., Silva, J.C.S., de Oliveira, L.C.A., Inoue, L.A.K.A., Hamoy, M., de Mello, V.J., Torres, M.F. and Barbas, L.A.L., 2018. Clove oil induces anaesthesia and blunts muscle contraction power in three Amazon fish species. *Fish physiology and biochemistry*, 44(1), pp.245-256.

Gabriela, V.Ch., Walewangko, W., Bodhi, B.J. and Kepe. 2015. "Uji Resistensi Bakteri *Esherichia coli* yang Di Isolasi Dari Plak Gigi Menggunakan Ampisilin". *Jurnal e-Biomedik*, Vol. 3, No. 1.

Grespan, R., Paludo, M., de Paula Lemos, H., Barbosa, C. P., Bersani-Amado, C. A., de Oliveira Dalalio, M. M., & Cuman, R. K. N. 2012. Anti-arthritis effect of eugenol on collagen-induced arthritis experimental model. *Biological and Pharmaceutical Bulletin*, 35(10), 1818-1820

Goni, P., Lopez, P., Sanchez, C., Gomez, L.R., Becerril, R., Nerin, C. 2009. Antimicrobial activity in the vapour phase of a combination of cinnamon and clove essential oils. *Food Chemistry* 116(4):982-989.

Hadi. 2013. Pengambilan Minyak Atsiri Bunga Cengkeh (Clove Oil) Menggunakan Pelarut N- Heksana Dan Benzene. *J Bahan Alam Terbarukan.*;1(2):25–30

Hanani, E. 2016, Analisis Fitokimia, Buku Kedokteran EGC, Jakarta.

Hasanah, I.U., 2017. Analisis Kadar Senyawa Flavonoid Ekstrak Metanol Bunga Cengkeh Dengan Menggunakan Metode Spektrofotometri UV. Jakarta: FK

Hidalgo M, Shancez-Moreno C, de Pascual-Teresa S. 2010. Flavonoid-flavonoid Interaction and its effect on their antioxidant activity. 171(1):691-696.

Huda, Misbahul, Rodhiansyah Djayasinga, and Devi Sulistia Ningsih. 2018. "Efektivitas ekstrak bunga cengkeh (*Eugenia aromatica*) terhadap pertumbuhan bakteri *Staphylococcus aureus*." *Jurnal Analis Kesehatan* : 710-716.

- Hudson, L., & Hay, F. C. (1967). Practical immunology. Oxford: Blackwell Scientific publ.
- Husada, D. and Utomo, B., 2022. Identification Of Bacteria Causing Diarrhea In Under-Fives Children Using Culture Methods In Bima, Indonesia. *Jurnal Berkala Epidemiologi*, 10(1), pp.95-102.
- Hutinel, M., Huijbers, P., Fick, J., Åhrén, C., Larsson, D., & Flach, C. F. (2019). Population-level surveillance of antibiotic resistance in *Escherichia coli* through sewage analysis. *Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin*, 24(37), 1800497. <https://doi.org/10.2807/1560-7917.ES.2019.24.37.1800497>
- Jawetz, E., Melnick, J.L. & Adelberg, E.A., 2005, Mikrobiologi Kedokteran, diterjemahkan oleh Mudihardi, E., Kuntaman, Wasito, E. B., Mertaniasih, N. M., Harsono, S., Alimsardjono, L., Edisi XXII, 327-335, 362-363, Penerbit Salemba Medika, Jakarta
- Jawetz, Melnick, et al. 2007. Medical Microbiology 24th edition. USA: Mc-Graw Hill companies
- Jensch-Junior,B.E., Pressinotil,N., Borges, J.C.S and Silva, C.D., 2006, Characterization of Macrophage Phagocytosis of the Tropical Fish Prochilodus srofa, Aquaculture, 251 : 509-515
- Joshi Sj, Ghole VS, Niphadkar KB. 2006. Neonatal gram negative bacteremia. Indian J Pediatr ;67:27-32.
- Juliantina, FR 2008, Manfaat Sirih Merah (*Piper crocatum*) Sebagai Agen Anti Bakterial Terhadap Bakteri Gram Positif
- Karima, A. 2018. Uji in Vitro Senyawa Antikanker SA 2014 terhadap Aktivitas Fagositosis Sel Makrofag mencit. Jurnal Sains dan Seni ITS. Vol.7, No. 2, 2337-3520
- Karsinah, Lucky dan Mardiastuti. 2010. Buku Ajar Mikrobiologi Kedokteran. revisi. Jakarta: Binarupa Aksar
- Kissoon N, Carcillo JA, Espinosa V, Argent A, Devictor D, Madden M. World Federation of Pediatric Intensive Care and Critical Care Societies: Global Sepsis Initiative. *Pediatric Critical Care Medicine*. 2011; 12(5):494-503
- Kurhekar, J.V., 2016. Tannins-antimicrobial chemical components. *Int J Technol Sci*, 9, pp.5-9.
- Kusmardi, S.K. and Enif, E.T., 2007. Efek Imunomodulator Ekstrak Daun Ketepeng Cina (*Cassia alata*. L) Terhadap Aktivitas dan Kapasitas Fagositosis Makrofag. *Makara Kesehatan*, 11(2), pp.50-53.

Lai, J., Zhu, Y., Tang, L., & Lin, X. (2021). Epidemiology and antimicrobial susceptibility of invasive *Escherichia coli* infection in neonates from 2012 to 2019 in Xiamen, China. *BMC infectious diseases*, 21(1), 295. <https://doi.org/10.1186/s12879-021-05981-4>

Larosa DF, Orange JS. Lymphocyte allergy clin immunology 2018; 21: 364 70.

Lestarini IA. 2008. Pengaruh Pemberian Ekstrak *Phyllanthus niruri L* terhadap Respon Imunitas Seluler Mencit balb/c yang dinfeksi dengan *Salmonella typhimurium* (*Tesis*). Semarang : Universitas Diponegoro

Lisdiana, L & Nuraini. 2018. Potensi Eugenol Sebagai Agen Proteksi Kerusakan Struktur Paru Akibat Paparan Asap Rokok. Indonesian Journal of Mathematics and Natural Sciens 41(2), 87-95, 2018.

Marchese, A., Barbieri, R., Coppo, E., Orhan, I. E., Daghia, M., Nabavi, S. F., ... & Ajami, M. (2017). Antimicrobial activity of eugenol and essential oils containing eugenol: A mechanistic viewpoint. *Critical reviews in microbiology*, 43(6), 668-689.

Melchers F. 2007. The development of lymphocytes. *Int arch allergyimmunology*.11-13

Meyer, S, L, F., Lakshman, D, K., Zasada, I, A., Vinyard, B, T., Chitwod, D, J. 2008. Dose response effects of clove oil from *Syzygium aromaticum* on the root-knot nematode Meloidogyne incognita. *Pest Manag Sci* 64: 223-229

Nestri, H. 2018. Uji aktivitas fagositosis makrofag ekstrak etanol daun suji (*Dracaena angustifolia*) Secara in vitro. *Pharmacy Medical Journal*:Universitas Sebelas Maret.

Nopitasari, D. 2006. *Pengaruh Pemberian Ekstrak Buah Phaleria Papuana terhadap Aktivitas Fagositosis Makrofag Mencit balb/c* (Doctoral dissertation, Faculty of Medicine).

Nurhidayati,L.danSulistiwati. 2013. Penetapan kadar eugenol dalam minyak atsiri dari tiga varietas bunga cengkeh (*Syzygium aromaticum*(L) Merr. & L.M. Perry) secara kromatografi gas. Seminar Nasional dalam Rangka Lustrum X Fakultas Farmasi Univesitas Pancasila

Oberholzer C, Oberholzer A, Clare-salzler M, Moldawer LL. 2001. Apoptosis in sepsis: a new target for therapeutic exploration. *The FASEB Journal*; 15:879-892

Oki S A, Herawati, Sri. 2017 Aktivitas imunostimulan ekstrak bawang putih tunggal pada mencit yang diinduksi *Escherichia coli*.Vol.7, No.1, Mei 2017, Hal. 105-112ISSN:2088 4559;

Oskoueian E, Hendra R, Ahmad S, Sukari A, Shukor MY., 2011. Flavonoid Analyses and Antimicrobial Activity of Various Parts of *Phaleria macrocarpa*. Boerl Fruit. International Journal of Molecular Sciences [Internet]. 12(6):3422-3431. Available from: Pubmed

Pandey, A. and Singh, P., 2011. Antibacterial activity of *Syzygium aromaticum* (clove) with metal ion effect against food borne pathogens. *Asian J Plant Sci Res*, 1(2), pp.69-80.

Pandey, A., & Singh, P. (2011). Antibacterial activity of *Syzygium aromaticum* (clove) with metal ion effect against food borne pathogens. *Asian J Plant Sci Res*, 1(2), 69-80. Pandey, A., & Singh, P. (2011). Antibacterial activity of *Syzygium aromaticum* (clove) with metal ion effect against food borne pathogens. *Asian J Plant Sci Res*, 1(2), 69-80.

Pantas FM. 2009. Pengaruh Pemberian Seduhan Teh Hitam (*Camellia sinensis*) Dosis Bertingkat terhadap Aktivitas Fagositosis Makrofag Mencit Balb/C yang Diinokulasi *Salmonella typhimurium*. Semarang. Universitas Diponegoro.

Paul, William. Fundamental Immunology SSeventh Edition. Philadelphia: Lippincott Williams and Wilkins; 2013. 602-04

Radji, M., 2011. Mikrobiologi, Buku Kedokteran ECG, Jakarta

Ratnawati, H., Handoko, Y., & Purba, L. H. 2007. Pengaruh pemberian ekstrak buah merah (*Pandanus conoideus* Lam.) terhadap aktivitas fagositosis makrofag. *Maranatha Journal of Medicine and Health*, 7(1), 149099.

Razafimamonjison G, Jahiel M, Duclos T, Ramanoelina P, Fawbush F, Danthu P. 2014. Bud, leaf and stem essential oil composition of *Syzygium aromaticum* from Madagascar, Indonesia and Zanzibar. International Journal of Basic and Applied Sciences. 3 (3) : 224-233.

Razafimamonjison G, Jahiel M, Duclos T, RamanoelinaP, Fawbush F, DanthuP. 2014. Bud, leaf and stemessential oilcomposition of *Syzygium aromaticum* from Madagascar,Indonesia and Zanzibar. International Journal of Basic and Applied Sciences.3(3): 224-233.

Research Guideline for Evaluating The Safety and Efficacy of Herbal Medicines Manila: World HealthOrganization Regional Office for the Western Pacific, 1993: 35

Rich Robert. Clinical Immunology Fourth Edition. USA: Elsevier; 2013. h.114-18. Robinovitch, M.Proffesional and non-Proffesional Phagocytes an Introduction. Trends In Cell Biology; 1995. Vol: 5, Hal. 85-87.

Roitt I, Brostoff J, Male D.Immunology, 3rd ed. London : Mosby-Year Book Europe Ltd, 1993

- Roitt, I, M. (1990). Pokok-pokok ilmu kekebalan. Jakarta: PT. Gramedia Utama.
- Rukmana, R, Yudirachman, H 2016, Untung Selangit dari Agribisnis Cengkeh, Lily Publisher, Yogyakarta.
- Sarjadi. Patologi Umum. Semarang: Badan Penerbit Universitas Diponegoro, 2001
- Scalbert, A.,2018. Antimicrobial properties of tannins. *Phytochemistry*, 30(12), pp.3875-3883.
- Seita J, Weissman IL. Hematopoietic stem cell: self-renewal versus differentiation. *Wiley Interdiscip Rev Syst Biol Med*. 2010; 2(6):640-653
- Selles, S.M.A., Koudri, M., Belhamiti, B.T. and Amrane, A.A., 2020. Chemical composition, in-vitro antibacterial and antioxidant activities of *Syzygium aromaticum* essential oil. *Journal of Food Measurement and Characterization*, p.1.
- Sethi, J. & Singh, J, 2015, Role of Medicinal Plants as Immunostimulants in Health and Disease. *Annals of Medicinal Chemistry and Research*, 1(2): 1009
- Shankar AH dan Prasad AS. 1998. Zinc and immune function : the biological basis of altered resistance of infection. *American Journal of Clinical Nutrition*; 68 (Suppl) : 447S-463S.
- Sharma, U. K., Sharma, A. K., Gupta1, A. Kumar, R. Pandey, A. Pandey, A. K. 2017. Pharmacological activities of cinnamaldehyde and eugenol: antioxidant, cytotoxic and anti-leishmanial studies. *Cellular and Molecular Biology*. 63 : 73-78.
- Silverthorn, D. U., William, C.O., Claire, W.G., Andrew, C.S. dan Bruce, R.J, 2010, Human Physiology: an Integrated Approach. Fifth Edition. San Francisco: Pearson Benjamin Cummings.
- Sumampouw, O.J., 2018. Uji Sensitivitas Antibiotik Terhadap Bakteri *Escherichia Coli* Penyebab Diare Balita Di Kota Manado. *The Sensitivity Test of Antibiotics to Escherichia coli was Caused The Diarrhea on Underfive Children in Manado City*, 2(1), pp.104-110
- Sun, L., Wang, X., Saredy, J., Yuan, Z., Yang, X., & Wang, H. (2020). Innate-adaptive immunity interplay and redox regulation in immune response. *Redox biology*, 37, 101759. <https://doi.org/10.1016/j.redox.2020.101759>
- Suryani, Y., & Opik. Mikrobiologi Dasar. LP2M UIN Sunan Gunung Djati bandung .
- Tizard, I.R., 2017. *Veterinary Immunology-E-Book*. Elsevier Health Sciences.
- Tjokronegoro, A. (1982). Imunologi dan penyakit. Jakarta: Fakultas Kedokteran Universitas Indonesia

- Tsai, W.J., Chang, C.T., Wang, G.J., Lee, T.H., Chang, S.F., Lu, S.C. and Kuo, Y.C., 2011. Arctigenin from *Arctium lappa* inhibits interleukin-2 and interferon gene expression in primary human T lymphocytes. *Chinese Medicine*, 6(1), pp.1-8.
- Tyas, R. A. N. (2021). Uji Efektifitas Imunomodulator Suspensi Ekstrak Bunga Cengkeh Terhadap Mencit Putih Jantan. *Jusindo: Jurnal Sehat Indonesia*, 3(1), 17-26.
- Ulfa, M., Cahyani, V.S.N., Kinasih, I. 2017. Pengaruh pemberian seduhan the daun sirsak (*Annona muricata L.*) terhadap aktivitas fagositosis sel makrofag dan proliferasi sel limfosit mencit galur Balb/c yang diinduksi vaksin hepatitis B. *Momentum*. 13(2): 63-71
- Ventola CL. 2015. The Antibiotic Resistance Crisis: Part 1: causes and threats. *Pharmacy Therapeutics* 40(4): 277-283.
- Wardani, AF. 2016. Pengaruh Pemberian Ekstrak Daun Sirih Merah (*Piper crocactum*) Terhadap Kadar IL-2 Pada Mencit Musculus.
- Wael, S., Mahulette, F., Watuguly, T. W., & Wahyudi, D. 2018. Pengaruh ekstrak daun cengkeh (*Syzygium aromaticum*) terhadap limfosit dan makrofag mencit balb/c. *Tradit Med J*, 23(2), 79-83.
- Wahid. 2007. Budidaya Tanaman Cengkeh. Dinas perkebunan <http://www.tanindo.com/abdi9/hal3101.htm>
- Wahyuni, F 2014, Studi Farmakognosi *Artocarpus altilis* (sukun), Tugas Farmakognosi Review Jurnal, Makasar.
- Wang C, Yu X, Cao Q, Wang Y, Zheng G, Tan T, Zhao H, Zhao Y, Wang Y, Harris D, 2013, Characterization of murine macrophages from bone marrow, spleen and peritoneum, *BMC Immunology* 14
- Wang, H., Paton, A. W., McColl, S. R., & Paton, J. C. (2011). In vivo leukocyte changes induced by *Escherichia coli* subtilase cytotoxin. *Infection and immunity*, 79(4), 1671-1679.
- Weihua, Tsubouchi R, Qiao S, Haneda M, Murakami K, Yoshino M. Inhibitory action of eugenol compounds on the production of nitric oxide in RAW264 macrophages. 2006. *Biomed Res.*;27(2):69–74
- Wu, X., Xing, J., Tang, X., Sheng, X., Chi, H., & Zhan, W. 2022. Protective cellular and humoral immune responses to Edwardsiella tarda in flounder (*Paralichthys olivaceus*) immunized by an inactivated vaccine. *Molecular Immunology*, 149, 77-86.
- Yufri A, Aria M, Erman L. Uji Efek Imunostimulasi Ekstrak Etanol Herba Ciplukan (*Physalis angulata* L.) Terhadap Aktivitas dan Kapasitas Fagositosis Sel Makrofag Pada Mencit Putih Betina. *Sci J Farm dan Kesehat*. 2014;4(1):38.