

DAFTAR PUSTAKA

- Abbas, A. K., Lichtman, Andrew. H., dan Pillai, S. (2020). *Basic Immunology: Functions and Disorders of The Immune System*. India: Elsevier
- Adhila, G., Nurkhasanah, N. dan Sulistyani, N. (2019) 'In vitro immunomodulatory activity test of Bengle rhizoma extract (*Zingiber cassumunar* Roxb.): phagocytic activity of macrophages and lymphocyte proliferation in mice', *Pharmaciana*, 9(2), pp. 211. doi.org/10.12928/pharmaciana.v9i2.12881.
- Ahamad, N., Kar, A., Mehta, S., Dewani, M., Ravichandran, V., Bhardwaj, P., Sharma, S. dan Banerjee, R. (2021) 'Immunomodulatory nanosystems for treating inflammatory diseases', *Biomaterials*, 274, pp. 120875. doi.org/10.1016/j.biomaterials.2021.120875.
- Akhtar, N.M.Y., Jantan, I., Arshad, L. dan Haque, M.A. (2019) 'Standardized ethanol extract, essential oil and zerumbone of *Zingiber zerumbet* rhizome suppress phagocytic activity of human neutrophils', *BMC Complementary and Alternative Medicine*, 19(1), pp. 331. doi.org/10.1186/s12906-019-2748-5.
- Akuba, J. (2022) 'Effect Of Ethanol Extract Of Rosella Flower Petals (*Hibiscus Sabdariffa* Linn) On The Phagocytosis Activity Of Rat Macrophages (*Sprague Dawley*)', *Jambura Journal of Health Sciences and Research*, 4(3), pp. 697–705. doi.org/10.35971/jjhsr.v4i3.13353.
- Arifin, M.F., Noviani, Y., Budiati, A. dan Hidayanti, I. (2022) 'Formulasi Nanosuspensi Ekstrak Kering Rimpang Temulawak (*Curcuma xanthorrhiza* Roxb.) Dengan Metode Gelasi Ionik Dan Uji Aktivitas Antioksidan', *Jurnal Farmamedika (Pharmamedica Journal)*, 7(2), pp. 126–135. doi.org/10.47219/ath.v7i2.163.
- Barathan, M., Vellasamy, K.M., Ibrahim, Z.A., Mariappan, V., Hoong, M. dan Vadivelu, J. (2021) 'Zerumbone mediates apoptosis and induces secretion of proinflammatory cytokines in breast carcinoma cell culture', *Iran J Basic Med Sci*, 24(11), pp. 1538
- Baroroh, H.N., Warsinah, Suryoputri, M.S, Ekowati, H. (2023) 'Immune-enhancing of *Zingiber ottensii* Rhizome Extract on Lymphocyte Cells And Mouse Peritoneal Macrophages'. Laporan Penelitian. LPPM Unsoed (Tidak dipublikasikan).
- Bascones-Martinez, A., Mattila, R., Gomez-Font, R. dan Meurman, Jh. (2014) 'Immunomodulatory drugs: Oral and systemic adverse effects', *Medicina Oral Patología Oral y Cirugía Bucal*, pp. e24–e31. doi.org/10.4317/medoral.19087.

- Bashir, S.M., Ahmed Rather, G., Patrício, A., Haq, Z., Sheikh, A.A., Shah, M.Z.U.H., Singh, H., Khan, A.A., Imtiyaz, S., Ahmad, S.B., Nabi, S., Rakhshan, R., Hassan, S. dan Fonte, P. (2022) 'Chitosan Nanoparticles: A Versatile Platform for Biomedical Applications', *Materials*, 15(19), pp. 6521. doi.org/10.3390/ma15196521.
- Cai, D., Gao, W., Li, Z., Zhang, Y., Xiao, L. dan Xiao, Y. (2022) 'Current Development of Nano-Drug Delivery to Target Macrophages', *Biomedicines*, 10(5), pp. 1203. doi.org/10.3390/biomedicines10051203.
- Campillo, J.T., Eiden, C., Boussinesq, M., Pion, S.D.S., Faillie, J. dan Chesnais, C.B. (2022) 'Adverse reactions with levamisole vary according to its indications and misuse: A systematic pharmacovigilance study', *British Journal of Clinical Pharmacology*, 88(3), pp. 1094–1106. doi.org/10.1111/bcp.15037.
- Chen, W., Yue, L., Jiang, Q., Liu, X. dan Xia, W. (2018) 'Synthesis of Varisized Chitosan-Selenium Nanocomposites through Heating Treatment and Evaluation of Their Antioxidant Properties', *International Journal of Biological Macromolecules*, 114(15).
- Danaei, M., Dehghankhold, M., Ataei, S., Hasanzadeh Davarani, F., Javanmard, R., Dokhani, A., Khorasani, S. dan Mozafari, M. (2018) 'Impact of Particle Size and Polydispersity Index on the Clinical Applications of Lipidic Nanocarrier Systems', *Pharmaceutics*, 10(2), pp. 57. doi.org/10.3390/pharmaceutics1002057.
- Daskar, A., Utami, P.I., Astuti, I.Y. dan Antoni, F. (2023) 'Formulasi Dan Karakterisasi Nanopartikel Ekstrak Daun Senggani (*Melastoma Malabathricum* L.) Pada Berbagai Variasi Komposisi Kitosan Dengan Metode Gelasi Ionik', *Jurnal Farmasi*, 2(2).
- Erniati, E. dan Ezraneti, R. (2020) 'Aktivitas imunomodulator ekstrak rumput laut', *Acta Aquatica: Aquatic Sciences Journal*, 7(2), pp. 79. doi.org/10.29103/aa.v7i2.2463.
- Faris, M. (2020) 'Potensi Immunomodulator Ekstrak Cengkeh pada Kadar Limfosit dan Makrofag sebagai Mekanisme Pertahanan Tubuh', *Khazanah: Jurnal Mahasiswa*, 12(1). doi.org/10.20885/khazanah.vol12.iss1.art8.
- Garg, U., Chauhan, S., Nagaich, U. dan Jain, N. (2019) 'Current Advances in Chitosan Nanoparticles Based Drug Delivery and Targeting', *Advanced Pharmaceutical Bulletin*, 9(2), pp. 195–204. doi.org/10.15171/apb.2019.023.
- Gavas, S., Quazi, S. dan Karpiński, T.M. (2021) 'Nanoparticles for Cancer Therapy: Current Progress and Challenges', *Nanoscale Research Letters*, 16(1), pp. 173. doi.org/10.1186/s11671-021-03628-6.

- Gover Antoniraj, M., Maria Leena, M., Moses, J.A. dan Anandharamakrishnan, C. (2020) 'Cross-linked chitosan microparticles preparation by modified three fluid nozzle spray drying approach', *International Journal of Biological Macromolecules*, 147, pp. 1268–1277. doi.org/10.1016/j.ijbiomac.2019.09.254.
- Grego, E.A., Siddoway, A.C., Uz, M., Liu, L., Christiansen, J.C., Ross, K.A., Kelly, S.M., Mallapragada, S.K., Wannemuehler, M.J. dan Narasimhan, B. (2020) 'Polymeric Nanoparticle-Based Vaccine Adjuvants and Delivery Vehicles', in H.S. Gill and R.W. Compans (eds) *Nanoparticles for Rational Vaccine Design*. Cham: Springer International Publishing (Current Topics in Microbiology and Immunology), pp. 29–76.
- Hall, John E; Guyton, Arthur C. (2019). *Guyton Dan Hall: Buku Ajar Fisiologi Kedokteran* 13th. Singapore: ELSEVIER.
- Hami, Z. (2021) 'A Brief Review on Advantages of Nano-based Drug Delivery Systems', *Annals of Military and Health Sciences Research*, 19(1). doi.org/10.5812/amh.112274.
- Handayani, N. (2018) 'Uji Aktivitas Fagositosis Makrofag Ekstrak Etanol Daun Suji (*Dracaena angustifolia* (Medik.)Roxb.) Secara In Vitro', *Jurnal Farmasi Medica/Pharmacy Medical Journal (PMJ)*, 1(1). doi.org/10.35799/pmj.1.1.2018.19648.
- Hanutami, B. dan Budiman, A. (2017) 'Review Artikel : Penggunaan Teknologi Nano Pada Formulasi Obat Herbal', *Farmaka*, 15(2), pp. 29–39.
- Hasnaeni, Wisdawati, dan Usman, S. (2019) 'Pengaruh Metode Ekstraksi Terhadap Rendemen Dan Kadar Fenolik Ekstrak Tanaman Kayu Beta-Beta (*Lunasia amara Blanco*)', *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*, 5(2), pp. 175–182.
- Hejjaji, E.M.A., Smith, A.M. dan Morris, G.A. (2017) 'Designing chitosan-tripolyphosphate microparticles with desired size for specific pharmaceutical or forensic applications', *International Journal of Biological Macromolecules*, 95, pp. 564–573. doi.org/10.1016/j.ijbiomac.2016.11.092.
- Hidayat, S. dan Syahputa, A.A. (2020) 'Sistem Imun Tubuh Pada Manusia', *Visual Heritage: Jurnal Kreasi Seni dan Budaya*, 2(3), pp. 144–149.
- Hoang, N.H., Le Thanh, T., Sangpueak, R., Treekoon, J., Saengchan, C., Thepbandit, W., Papatoti, N.K., Kamkaew, A. dan Buensanteai, N. (2022) 'Chitosan Nanoparticles-Based Ionic Gelation Method: A Promising Candidate for Plant Disease Management', *Polymers*, 14(4), pp. 662. doi.org/10.3390/polym14040662.

- Hussain, Y. dan Khan, H. (2022) 'Immunosuppressive Drugs', in *Encyclopedia of Infection and Immunity*. Elsevier, pp. 726–740. doi.org/10.1016/B978-0-12-818731-9.00068-9.
- Istini, I. dan Santoso, B. (2018) 'Pengaruh Penambahan Serum Dan Lama Waktu Inkubasi Lateks Terhadap Aktivitas Fagositosis Makrofag Tikus Sprague Dawley (SD) Dalam Menunjang Kegiatan Penelitian', *Indonesian Journal of Laboratory*, 1(1), pp. 16. doi.org/10.22146/ijl.v1i1.40965.
- Jaferník, K., Ładniak, A., Blicharska, E., Czarnek, K., Ekiert, H., Wiącek, A.E. dan Szopa, A. (2023) 'Chitosan-Based Nanoparticles as Effective Drug Delivery Systems—A review', *Molecules*, 28(4), pp. 1963. doi.org/10.3390/molecules28041963.
- Jain, P., Darji, P., Thakur, B.S., Jain, A., Jain, P.K. dan Khare, B. (2022) 'Immunostimulants: Concepts, Types and Functions', *Asian Journal of Dental and Health Sciences*, 2(4), pp. 26–34. doi.org/10.22270/ajdhs.v2i4.22.
- Karimaa, A. (2019) 'Uji in Vitro Senyawa Antikanker SA 2014 terhadap Aktivitas Fagositosis Sel Makrofag (Mus musculus)', *Jurnal Sains dan Seni ITS*, 7(2), pp. 27–33. doi.org/10.12962/j23373520.v7i2.30846.
- Khalaf, A.A., Hussein, S., Tohamy, A.F., Marouf, S., Yassa, H.D., Zaki, A.R. dan Bishayee, A. (2019) 'Protective effect of *Echinacea purpurea* (Immulant) against cisplatin-induced immunotoxicity in rats', *DARU Journal of Pharmaceutical Sciences*, 27(1), pp. 233–241. doi.org/10.1007/s40199-019-00265-4.
- Khammaneejan, O., Jaratsittisin, J., Roytrakul, S., Nimlamool, W., Okonogi, S., Wikan, N. dan Smith, D. (2020) 'Anti-proliferative Activity of Zingiberaceae Crude Extracts against Human Embryonic Kidney Cell Line (HEK 293T/17)', *RSU International Research Conference*.
- Kirana, I.D.A.A., Bodhi, W., Lebang, J.S. dan Fatimawali (2023) 'Uji Aktivitas Fagositosis Makrofag Dari Ekstrak Kulit Buah Jeruk Nipis (*Citrus aurantifolia*) Sebagai Imunomodulator', *Jurnal Kesehatan Tambusai*, 4(3).
- Kurniasari, D. dan Atun, S. (2017) 'Pembuatan Dan Karakterisasi Nanopartikel Ekstrak Etanol Temu Kunci (*Boesenbergia pandurata*) Pada Berbagai Variasi Komposisi Kitosan', *Jurnal Sains Dasar*, 6(1), pp. 31-35.
- Lestari, F. dan Susanti, I. (2020) 'Tumbuhan obat berpotensi imunomodulator di suku anak dalam bendar bengkulu', *JPBIO (Jurnal Pendidikan Biologi)*, 5(1), pp. 64–72. doi.org/10.31932/jpbio.v5i1.591.
- Mahfudh, N., Sulistyani, N. dan Sabillah, D.A. (2020) 'The effect of *Zingiber cassumunar* Roxb rhizome extract on in vitro phagocytic activity and lymphocyte proliferation', *Pharmaciana*, 10(2), pp. 231. doi.org/10.12928/pharmaciana.v10i2.16311.

- Maiorino, L., DaBler-Plenker, J., Sun, L. dan Egeblad, M. (2022) 'Innate Immunity and Cancer Pathophysiology', *Annual Review of Pathology: Mechanisms of Disease*, 17(1), pp. 425–457. doi.org/10.1146/annurev-pathmechdis-032221-115501.
- Marliani, Subarnas, A., Moelyono, M.W., Halimah, E., Pratiwi, F.W. dan Suhardiman, A. (2018) 'Essential Oil Components of Leaves and Rhizome of *Zingiber officinale* Val. from Bandung, Indonesia', *Research Journal of Chemistry and Environment*, 22(1).
- Marshall, J.S., Warrington, R., Watson, W. dan Kim, H.L. (2018) 'An introduction to immunology and immunopathology', *Allergy, Asthma & Clinical Immunology*, 14(S2), pp. 49. doi.org/10.1186/s13223-018-0278-1.
- Masniah, M., Rezi, J. dan Faisal, A.P. (2021) 'Isolasi Senyawa Aktif Dan Uji Aktivitas Ekstrak Jahe Merah (*Zingiber officinale*) Sebagai Imunomodulator', *Jurnal Riset Kefarmasian Indonesia*, 3(2), pp. 77–91. doi.org/10.33759/jrki.v3i2.131.
- Modena, M.M., Rühle, B., Burg, T.P. dan Wuttke, S. (2019) 'Nanoparticle Characterization: What to Measure?', *Advanced Materials*, 31(32), pp. 1901556. doi.org/10.1002/adma.201901556.
- Montagna, M.T., Lovero, G., Coretti, C., De Giglio, O., Martinelli, D., Bedini, A., Delia, M., Rosato, A., Codeluppi, M. dan Caggiano, G. (2014) 'In vitro activities of amphotericin B deoxycholate and liposomal amphotericin B against 604 clinical yeast isolates', *Journal of Medical Microbiology*, 63(12), pp. 1638–1643. doi.org/10.1099/jmm.0.075507-0.
- Mudalige, T., Qu, H., Van Haute, D., Ansar, S.M., Paredes, A. dan Ingle, T. (2019) 'Characterization of Nanomaterials', in *Nanomaterials for Food Applications*. Elsevier, pp. 313–353. doi.org/10.1016/B978-0-12-814130-4.00011-7.
- Nasrulia, F., Qomariyah, N. dan Purnama, E.R. (2021) 'Pengaruh Pemberian Ekstrak *Holothuria leucospilota* terhadap Aktivitas Fagositosis Sel Makrofag pada Mencit (*Mus musculus*) yang Diinduksi Alkohol', *LenteraBio : Berkala Ilmiah Biologi*, 9(3), pp. 211–217. doi.org/10.26740/lenterabio.v9n3.p211-217.
- Nfambi, J., Bbosa, G.S., Sembajwe, L.F., Gakunga, J. dan Kasolo, J.N. (2015) 'Immunomodulatory activity of methanolic leaf extract of *Moringa oleifera* in Wistar albino rats', *Journal of Basic and Clinical Physiology and Pharmacology*, 26(6), pp. 603–611. doi.org/10.1515/jbcpp-2014-0104.
- Ngafif, A. DAN Ikasari, E.D. (2020) 'Optimasi Kombinasi Natrium Alginat Dan Kalsium Klorida (CaCl₂) Sebagai Agen Sambung Silang Nanopartikel Ekstrak', *BIMFI*, 2(1).

- Ngoc-Sam, L., Ba-Vuong, T. dan Huong, L.T. (2016) 'Zingiber ottensii Valetton (Zingiberaceae) — a newly recorded species for Vietnam', *Bioscience Discovery*, 7(2), pp. 93–96.
- Nurkhasanah, Santoso, R.D. dan Fauziah, R. (2017) 'The immunomodulatory effect of *Zingiber cassumunar* ethanolic extract on phagocytic activity, nitrit oxide and reaxtive oxygen intermediate secretions of macrophage in mice', *IOP Conference Series: Materials Science and Engineering*, 259, pp. 012007. doi.org/10.1088/1757-899X/259/1/012007.
- Orellano, M.S., Porporatto, C., Silber, J.J., Falcone, R.D. dan Correa, N.M. (2017) 'AOT reverse micelles as versatile reaction media for chitosan nanoparticles synthesis', *Carbohydrate Polymers*, 171, pp. 85–93. doi.org/10.1016/j.carbpol.2017.04.074.
- Ortiz, R.I.C. dan Rodal, I.C. A. (2023) 'Macrophage: From Recognition of Foreign Agents to Late Phagocytosis', in S. Shamsadin Athari and E. Mehrabi Nasab (eds) *Physiology*. IntechOpen. doi.org/10.5772/intechopen.110508.
- Panyajai, P., Chueahongthong, F., Viriyaadhammaa, N., Nirachonkul, W., Tima, S., Chiampanichayakul, S., Anuchapreeda, S. dan Okonogi, S. (2022) 'Anticancer activity of Zingiber ottensii essential oil and its nanoformulations', *PLOS ONE*, 17(1), pp. e0262335. doi.org/10.1371/journal.pone.0262335.
- Pentecost, A.E., Lurier, E.B. dan Spiller, K.L. (2016) 'Nanoparticulate Systems for Kontrolling Monocyte/Macrophage Behavior', in A. Singh and A.K. Gaharwar (eds) *Microscale Technologies for Cell Engineering*. Cham: Springer International Publishing, pp. 291–304. doi.org/10.1007/978-3-319-20726-1_14.
- Pilgrim, C.R., McCahill, K.A., Rops, J.G., Dufour, J.M., Russell, K.A. dan Koch, T.G. (2022) 'A Review of Fetal Bovine Serum in the Culture of Mesenchymal Stromal Cells and Potential Alternatives for Veterinary Medicine', *Frontiers in Veterinary Science*, 9, pp. 859025. doi.org/10.3389/fvets.2022.859025.
- Prihantini, M., Zulfa, E., Prastiwi, L.D. dan Yulianti, I.D. (2019) 'Pengaruh Waktu Ultrasonikasi Terhadap Karakteristik Fisika Nanopartikel Kitosan Ekstrak Etanol Daun Suji (*Pleomele angustifolia*) Dan Uji Stabilitas Fisika Menggunakan Metode Cycling Test', *Jurnal Ilmu Farmasi dan Farmasi Klinik (JIFFK)*, 16(2), pp. 125–133.
- Putri, S.P., Fitrianiingsih, S.P. dan Hazar, S. (2022) 'Uji Aktivitas Antibakteri Ekstrak Metanol Rimpang Bangle Hitam (*Zingiber ottensii* (Val.)) terhadap Bakteri *Staphylococcus aureus*', *Bandung Conference Series: Pharmacy*, 2(2). doi.org/10.29313/bcsp.v2i2.3120.

- Rahayu, P. dan Khabibi, K. (2016) 'Adsorpsi Ion Logam Nikel(II) oleh Kitosan Termodifikasi Tripolifosfat', *Jurnal Kimia Sains dan Aplikasi*, 19(1), pp. 21. doi.org/10.14710/jksa.19.1.21-26.
- Reddy, M.S.B., Ponnamma, D., Choudhary, R. dan Sadasivuni, K.K. (2021) 'A Comparative Review of Natural and Synthetic Biopolymer Composite Scaffolds', *Polymers*, 13(7), pp. 1105. doi.org/10.3390/polym13071105.
- Rismana, E., Kusumaningrum, S., Bunga, O., Nizar, N. dan Marhamah, M. (2014) 'Penguji-an Aktivitas Antiacne Nanopartikel Kitosan – Ekstrak Kulit Buah Manggis (*Garcinia mangostana*)', *Media Penelitian dan Pengembangan Kesehatan*, 24(1), pp. 19–27. doi.org/10.22435/mpk.v24i1.3483.19-27.
- Rizvi, S.A.A. dan Saleh, A.M. (2018) 'Applications of nanoparticle systems in drug delivery technology', *Saudi Pharmaceutical Journal*, 26(1), pp. 64–70. doi.org/10.1016/j.jsps.2017.10.012.
- Rosalina, D., Yuliana, N.D., Anggraeni, R. dan Prangdimurti, E. (2023) 'Immunostimulant Compounds Identification in Indonesian Underutilized Zingiberaceae Spices', *Molekul*, 18(3), pp. 508. doi.org/10.20884/1.jm.2023.18.3.7589.
- Rosdiana, A. dan Hadisaputri, Y.E. (2016) 'Review Artikel: Studi Pustaka Tentang Prosedur Kultur Sel', *Farmaka*, 14(1).
- Rosnizar, R., Maulida, S. dan Eriani, K. (2017) 'Potensi ekstrak daun flamboyan [*Delonix regia* (Boj. Ex Hook.) Raf.] terhadap peningkatan aktivitas dan kapasitas makrofag', *BIOLEUSER*, 1(3), pp. 104-115.
- Ruttanapattanakul, J., Wikan, N., Chinda, K., Jearanaikulvanich, T., Krisanuruks, N., Muangcha, M., Okonogi, S., Potikanond, S. dan Nimlamool, W. (2021) 'Essential Oil from *Zingiber ottensii* Induces Human Cervical Cancer Cell Apoptosis and Inhibits MAPK and PI3K/AKT Signaling Cascades', *Plants*, 10(7), pp. 1419. doi.org/10.3390/plants10071419.
- Ryu, A.H., Eckalbar, W.L., Kreimer, A., Yosef, N. dan Ahituv, N. (2017) 'Use antibiotics in cell culture with caution: genome-wide identification of antibiotic-induced changes in gene expression and regulation', *Scientific Reports*, 7(1), pp. 7533. doi.org/10.1038/s41598-017-07757-w.
- Samudra, A.G., Nurfitri-n Ramadhani, Reza Pertiwi, Apriza Hongko Putra, Bambang Hernawan Nugroho, dan Fathnur Sani K (2022) 'Pengaruh Variasi Konsentrasi Natrium Tripolifosfat Pada Nanoemulsi Metode Gelasi Ionik Ekstrak Etanol Sargassum Sp.: Effect Of Variation Of Sodium Tripolyphosphate Concentration On Nanoemulsion Ionic Gelation Method Of Ethanol Extract Sargassum sp.', *Medical Sains: Jurnal Ilmiah Kefarmasian*, 7(2), pp. 181–188. doi.org/10.37874/ms.v7i2.361.

- Seyam, S., Nordin, N.A. dan Alfatama, M. (2020) 'Recent Progress of Chitosan and Chitosan Derivatives-Based Nanoparticles: Pharmaceutical Perspectives of Oral Insulin Delivery', *Pharmaceuticals*, 13(10), pp. 307. doi.org/10.3390/ph13100307.
- Shahid, N., Erum, A., Zaman, M., Tulain, U.R., Shoaib, Q., Malik, N.S., Kausar, R., Rashid, A. dan Rehman, U. (2022) 'Synthesis and evaluation of chitosan based controlled release nanoparticles for the delivery of ticagrelor', *Designed Monomers and Polymers*, 25(1), pp. 55–63. doi.org/10.1080/15685551.2022.2054117.
- Silvestro, I., Francolini, I., Di Lisio, V., Martinelli, A., Pietrelli, L., Scotto d'Abusco, A., Scoppio, A. dan Piozzi, A. (2020) 'Preparation and Characterization of TPP-Chitosan Crosslinked Scaffolds for Tissue Engineering', *Materials*, 13(16), pp. 3577. doi.org/10.3390/ma13163577.
- Sliva, J. (2019) 'Inosine Pranobex: A Key Player in the Game Against a Wide Range of Viral Infections and Non-Infectious Diseases', *Adv Ther*, 36, pp. 1878–1905. doi.org/10.1007/s12325-019-00995-6.
- Sulaeman, A., Patonah, P., dan Gg, N. (2018) 'Black Bangle (*Zingiber Ottensii* Val.) Rhizome And Katuk Leaves (*Sauropus Androgynus* L. Merr) Extract Combination Protective Role On Adipose Tissues Histologic Profile Of High-Fat And Carbohydrate Diet-Induced Obese Male Rats', *Asian Journal of Pharmaceutical and Clinical Research*, 11(13), pp. 225. doi.org/10.22159/ajpcr.2018.v11s1.26613.
- Susilawati, Y., Moektiwardoyo, M., Halimah, E., Wicaksono, I.A., Ramadhania, Z.M. dan Prastiwi, S.S. (2020) 'Aktivitas Imunomodulator Ekstrak Etanol Daun Pepaya (*Caricapapaya*L.) dengan Metode Induksi Bakteri dan CBC-Diff', *Jurnal Sains dan Kesehatan*, 2(4).
- Syarmalina, Wirawan, D. dan Rahmat, D. (2019) 'Formulasi Nanopartikel Ekstrak Temu Lawak Berbasis Kitosan Sebagai Antijerawat', *Medical Sains : Jurnal Ilmiah Kefarmasian*, 3(2), pp. 153–158. doi.org/10.37874/ms.v3i2.79.
- Taurina, W., Sari, R., Hafinur, U.C., Wahdaningsih, S. dan Isnindar, I. (2017) 'Optimization Of Stirring Speed And Stirring Time Toward Nanoparticle Size Of Chitosan-Siam Citrus Peel (*Citrus nobilis* L.Var Microcarpa) 70% Ethanol Extract', *Majalah Obat Tradisional*, 22(1), pp. 16. doi.org/10.22146/tradmedj.24302.
- Thitinarongwate, W., Nimlamool, W., Khonsung, P., Mektrirat, R. dan Kunanusorn, P. (2022) 'Anti-Inflammatory Activity of Essential Oil from *Zingiber ottensii* Valetton in Animal Models', *Molecules*, 27(13), pp. 4260. doi.org/10.3390/molecules27134260.
- Triyani, Y., Herliani, I., Patrisia, N., Achmad, S., Hendyanny, E. dan Hartati, J. (2015) 'Optimasi Dosis dan Perbandingan Efek Ekstrak Etanol Ceplukan

- (*Physalis angulata*) dengan Obat Herbal Imunomodulator Terstandar terhadap Aktivitas Makrofag Intraperitoneal Mencit Jantan Galur DDY', *Global Medical & Health Communication (GMHC)*, 3(1), pp. 25. doi.org/10.29313/gmhc.v3i1.1543.
- Tungadi, R. (2020) *Teknologi Nano Sediaan Liquida dan Semisolida*. 1st edition. Jakarta: Sagung Seto (1).
- Uribe-Querol, E. dan Rosales, C. (2020) 'Phagocytosis: Our Current Understanding of a Universal Biological Process', *Frontiers in Immunology*, 11, pp. 1066. doi.org/10.3389/fimmu.2020.01066.
- Winanta, A., Haresmita, P.P. dan Merilla, S. (2023) 'Potensi Pemanfaatan Umbi Bit (*Beta vulgaris*) Sebagai Imunomodulator dalam Meningkatkan Fagositosis Makrofag dan Proliferasi Limfosit', *JPSCR: Journal of Pharmaceutical Science and Clinical Research*, 8(3), pp. 329. doi.org/10.20961/jpscr.v8i3.71696.
- Wirasti, Rahmatullah, S., Slamet, Permadi, Y.W. dan Agmarina, S.N. (2021) 'Pengujian Karakter Nanopartikel Metode Gelasi Ionik Ekstrak Dan Tablet Daun Afrika (*Vernonia amygdalina* Del.)', *Jurnal Wiyata*, 8(2).
- Yang, G., Li, K., Liu, C., Peng, P., Bai, M., Sun, J., Li, Q., Yang, Z., Yang, Y. dan Wu, H. (2018) 'A Comparison of the Immunostimulatory Effects of Polysaccharides from Tetraploid and Diploid *Echinacea purpurea*', *BioMed Research International*, 2018, pp. 1–12. doi.org/10.1155/2018/8628531.
- Yang, S., Liu, L., Chen, H., Wei, Y., Dai, L., Liu, J., Yuan, F., Mao, L., Li, Z., Chen, F. dan Gao, Y. (2021) 'Impact of different crosslinking agents on functional properties of curcumin-loaded gliadin-chitosan composite nanoparticles', *Food Hydrocolloids*, 112, pp. 106258. doi.org/10.1016/j.foodhyd.2020.106258.
- Zarrinmehr, M. J., Daneshvar, E., Nigam, S., Gopinath, K. P., Biswas, J. K., Kwon, E. E., Wang, H., Farhadian, O., & Bhatnagar, A. (2022) 'The effect of solvents polarity and extraction conditions on the microalgal lipids yield, fatty acids profile, and biodiesel properties', *Bioresource technology*, 344(Pt B), pp. 126303. doi.org/10.1016/j.biortech.2021.126303
- Zhang, M., Liu, K., Zhang, Q., Xu, J., Liu, J., Lin, H., Lin, B., Zhu, M. dan Li, M. (2023) 'Alpha fetoprotein promotes polarization of macrophages towards M2-like phenotype and inhibits macrophages to phagocytize hepatoma cells', *Frontiers in Immunology*, 14, pp. 1081572. doi.org/10.3389/fimmu.2023.1081572.
- Zhao, J., Yang, J. dan Xie, Y. (2019) 'Improvement strategies for the oral bioavailability of poorly water-soluble flavonoids: An overview', *International Journal of Pharmaceutics*, 570, pp. 118642. doi.org/10.1016/j.ijpharm.2019.118642.

Zielińska, A., Carreiró, F., Oliveira, A.M., Neves, A., Pires, B., Venkatesh, D.N., Durazzo, A., Lucarini, M., Eder, P., Silva, A.M., Santini, A. dan Souto, E.B. (2020) 'Polymeric Nanoparticles: Production, Characterization, Toxicology and Ecotoxicology', *Molecules*, 25(16), pp. 3731. doi.org/10.3390/molecules25163731.

