

DAFTAR PUSTAKA

- Abbas, A. K., Lichtman, A. H., & Pillai, S. (2017). *Cellular and molecular immunology-9th ed.* Elsevier
- Abbas, Aster, & Kumar. (2015). *Buku Ajar Patologi Robbins*. Elsevier Saunders.
- Arlita, & Antari. (2017). *Imunologi Dasar*. Deepublish.
- Bagnoli, Rappuoli, & G, G. (2017). *Staphylococcus aureus: Microbiology, Pathology, Immunology, Therapy and Prophylaxis*. Springer International Publishing.
- Baratawidjaya. (2014). *Imunologi Dasar*. Faculty of Medicine, University of Indonesia.
- Bromelain*. (2021). <https://pubchem.ncbi.nlm.nih.gov/compound/Bromelain>
- Coico, R., & Sunshine, G. (2015). *Immunology a short course* (7th ed.). John Wiley & Sons Ltd. [https://doi.org/10.1016/s0307-4412\(98\)00101-0](https://doi.org/10.1016/s0307-4412(98)00101-0)
- Colletti, A., Li, S., Marengo, M., Adinolfi, S., & Cravotto, G. (2021). Recent advances and insights into bromelain processing, pharmacokinetics and therapeutic uses. *Applied Sciences (Switzerland)*, 11(18). <https://doi.org/10.3390/app11188428>
- Davis, T. E., Kis-Toth, K., Szanto, A., Tsukos, G. C. 2013. *Glucocorticoid Suppress T Cell Function by upregulating microRNA 98. Arthritis and Rheumatism*. 65 (7):1882-1890
- Esti, M., Benucci, I., Liburdi, K., & Garzillo, A. M. V. (2015). Effect of wine inhibitors on free pineapple stem bromelain activity in a model wine system. *Food and Bioproducts Processing*.
- Febriana. M. V. (2015). *Pengaruh Meniran (Phyllanthus niruri Linn) Terhadap Gambaran Histopatologi Hepar Tikus Putih (Rattus norvegicus) Jantan Yang Diinduksi Obat Anti Tuberkulosis (Rifampisin dan Isoniazid)*. Skripsi fakultas kedokteran universitas Airlangga.
- Gautam., S.S., Mishra, S., Dash, V., Amit, K. and Rath, G. (2010). *Comparative*

- study of extraction, purification and estimation of bromelain from stem and fruit of pineapple plant.* India: Thai J. Pharm. Sci. 34
- Govind, P, Madhuri S, dan K. A Mandloi. 2012. Immunostimulant Effect of Medicinal Plants on Fish. *International Research Journal of Pharmacy.* 3(3):112-114
- Guyton and Hall, J. E. (2007). *Buku Ajar Fisiologi Kedokteran* (9th ed.). EGC.
- Habibie, Nur Ahmad (2019). Perubahan Karakteristik Bahan Pangan Pada Keripik Buah dengan Metode Freeze Dry. *Review*
- Haeria, Dhuha, N. S., & Hasbi, M. I. (2017). Uji Efek Imunomodulator Ekstrak Daun Kemangi (*Ocimum basilicum*. L) dengan Parameter Aktivitas Dan Kapasitas Fagositosis Sel Makrofag Pada Mencit (*Mus musculus*) Jantan. *Farmasi Galenika*, 4, 1–7.
- Haeria, Tahar, N., & Ramadhani, N. H. (2017). Uji Efektivitas Imunomodulator Ekstrak Etanol Korteks Kayu Jawa (*Lannea coromandelica* Hout .Merr.) terhadap Aktivitas dan Kapasitas Fagositosis Makrofag pada Mencit (*Mus musculus*) Jantan. *Jf Fik Uinam*, 5(4), 294–302.
- Harborne, J.B. (1998). *Phytochemical Methods: A Guide to Modern Techniques of Plant Analysis* (3th ed). New York: Chapman and Hall.
- Hariyanti, Sunaryo, H., & Nurlaily, S. (2015). Efek Imunomodulator Fraksi Etanol Dari Ekstrak Etanol 70 % Kulit Buah Manggis (*Garcinia mangostona* L.) Berdasarkan Peningkatan Aktivitas Dan Kapasitas Fagositosis Makrofag Peritoneum Mencit Secara In Vitro. *Jurnal Pharmacy*, 12(1), 58–69.
- Harvey, Champe, & Fisher. (2007). *Microbiology* (2nd ed.). Lippincott Williams and Wilkins.
- Hidayat, S., & Napitupulu, R. M. (2015). *Kitab Tumbuhan Obat* (F. A. Nurrohmah (Ed.)). AgriFlo.
- Jawetz, Melnick, & Adelberg's. (2013). *Medical Microbiology*. McGraw-Hill Education.
- Kakodkar, P., Kaka, N., & Baig, M. N. (2020). A Comprehensive Literature Review on the Clinical Presentation, and Management of the Pandemic Coronavirus Disease 2019 (COVID-19). *Cureus*, 4. 10.7759/cureus.7560

- Katzung, B. g., Masters, S. B., & Trevor, A. J. (2014). *Farmakologi Dasar & Klinik*. Penerbit Buku Kedokteran EGC.
- Kementerian Kesehatan Republik Indonesia. (2020). *Farmakope Indonesia* (6th ed.). Kementerian Kesehatan Republik Indonesia.
- Kholifah, S. N., & Fitmawati, F. (2020). Efektivitas Imunomodulator Ekstrak Daun Macang (*Mangifera foetida* L.) Terhadap Sel Makrofag Tikus Putih (*Rattus norvegicus*). *Jurnal Pendidikan Matematika Dan IPA*, 11(1), 130–141. <https://doi.org/10.26418/jpmipa.v11i1.32763>
- Kresno, S. B. (2010). *Imunologi: diagnosa dan prosedur laboratorium*. Badan Penerbit Fakultas kedokteran Universitas Indonesia.
- Kritis, P., Karampela, I., Kokoris, S., & Dalamaga, M. (2020). The combination of bromelain and curcumin as an immune-boosting nutraceutical in the prevention of severe COVID-19. *Metabolism Open*, 8, 100066. <https://doi.org/10.1016/j.metop.2020.100066>
- Leonardy, C., Nurmainah, Riza, H. 2019. Karakterisasi dan Skrining Fitokimia Infusa Kulit Buah Nanas (*Ananas comosus* (L.) Merr.) pada Variasi Usia Kematangan Buah. Prodi Farmasi. Pontianak.
- McMillan, K., Sean, C. M., Catherine, M. M., Narelle, F., & Edward, M. . (2016). *Characterization of Staphylococcus aureus Isolates from Raw Milk Sources in Victoria*. BMC Microbiology.
- Nugraheni. (2016). *Sehat Tanpa Obat dengan Nanas*. Rapha Publishing.
- Nugroho, R. A., & Nur, F. M. (2018). *Potensi Bahan Hayati sebagai Imunostimulan Hewan Akuatik* (1st ed.). Deepublish.
- Nuraini, D. N. (2014). *Aneka Daun Berkhasiat Untuk Obat*. Gava Media.
- Pambudi, P. A. (2020). Pandemi Covid-19: Refleksi Pentingnya Optimasi Lahan Pekarangan Sebagai Penyokong Kemandirian Pangan Dan Kesehatan Keluarga. *EnviroScientiae*, 16(3), 408. <https://doi.org/10.20527/es.v16i2.9683>
- Pavan, R., Jain, S., Shraddha, & Kumar, A. (2012). Properties and Therapeutic Application of Bromelain: A Review. *Biotechnology Research International*. *Biotechnology Research International*, 1–6.
- Prakoso, Y. A., Setiyo Rini, C., & Wirjaatmadja, R. (2018). Efficacy of Aloe vera,

- Ananas comosus, and Sansevieria masoniana Cream on the Skin Wound Infected with MRSA. *Advances in Pharmacological Sciences*. <https://doi.org/10.1155/2018/4670569>
- Priya, S. P., Jayakumar, Mathai, V., Chintu, & Babu, S. (2012). Immobilization and Kinetic Studies of Bromelain: A Plant Cysteine Bromelin From Pineapple (*Ananas comosus*) Plant Parts. *Int J Med Health Sci*.
- Rahmani, J., Ernawati, R., & Handijatno, D. (2021). Aktivitas Ekstrak Meniran (*Phyllanthus niruri* linn) Sebagai Immunostimulator pada Ayam yang Divaksin Penyakit Tetelo. *Jurnal Veteriner*, 22.
- Ram Mohan, M., Baba Shankar Rao, G., Narender, B., Ananda Kumar, C., Venkateswara Rao, P., & Bakshi, V. (2019). Indian medicinal plants used as immunomodulatory agents: A review. *International Journal of Green Pharmacy*, 13(4), 312.
- Rathnavelu, V., Alitheen, N. B., Sohila, S., Kanagesan, S., & Ramesh, R. (2016). Potential role of bromelain in clinical and therapeutic applications. *Biomed Rep*, 3, 283–288.
- Saparinto, C. dan S. R. (2016). *Grow Your Own Fruits-Panduan Praktiks Menanam 28 Tanaman Buah Populer di Pekarangan*. Lily Publisher.
- Serkan, S., Ayliz, V.-O., & Ahmet Ozer, S. (2021). Bromelain: A potential therapeutic application in SARS-CoV-2 infected patients. *Annals of Antivirals and Antiretrovirals*, June, 015–018. <https://doi.org/10.17352/aaa.000011>
- Singh, S., Yadav, C. P. S., Noolvi, M. N. (2012): Immunomodulatory activity of butanol fraction of *Gentiana olivieri* Griseb. on BALB/c mice, *Asian Pacific Journal of Tropical Biomedicine*, 2(6), 433-437
- Suhendi, A., Nurcahyanti, Muhtadi dan Sutrisna, E. M. (2011). Aktivitas Antihiperurisemia Ekstrak Air Jinten Hitam (*Coleus ambonicus* Lour) Pada Mencit Jantan Galur *Balb-C* dan Standarisasinya. *Majalah Farmasi Indonesia*, 22(2), 77-84.
- Torok, M., Moran, & Cooke, F. J. (2017). *Oxford Handbook of Infectious Diseases and Microbiology*. Oxford University Press.
- Wahyuni, Yusuf, M. I., Malik, F., Lubis, A. F., Indalifiyany, A., & Sahidin. (2019).

- Efek Imunomodulator Ekstrak Etanol Spons *Melophlus sarasinorum* Terhadap Aktivitas Fagositosis Sel Makrofag Pada Mencit Jantan Balb/c. *Jurnal Farmasi Galenika*. 10.22487/j24428744.2019.v5.i2.13611%0D
- WHO. (2021). *Dashboard Covid-19*. <https://covid19.who.int/>
- Wiyati, P. I., & Tjitraesmi, A. (2018). Karakterisasi, Aktivasi, dan Isolasi Enzim Bromelin dari Tumbuhan Nanas (*Ananas sp.*). *Farmaka*, 16(2), 179–185.
- Wulandari. (2016). *Cara Gampang Budidaya Nanas*. Vilam Media.
- Yulinery, T., Nurhidayat, N. (2012). Penggunaan Ekstrak Fermentasi Beras Dari Beberapa Jenis *Monascus purpureus* Untuk Aktivitas in vitro Fagositosis Sel Makrofag Dan Polimorfonuklear Peritoneum Mencit Sebagai Imunomodulator [In Vitro Phagocytosis Activities of Macrophage and Polymorphonucle. *Berita Biologi*, 11(2), 263–273.
- Yusuf, Firdayanti, & Wahyuni. (2019). Peningkatan Imunitas Non Spesifik (Innate Immunity) Mencit Balb/c Yang Diberi Ekstrak etanol Daun Tumbuhan Galing (*Cayratia trifolia L. Domin*). *Jurnal Medical Sains*, 83–92.
- Zhai, Y., Wu, B., Li, J., Yao, X., Zhu, P., & Chen, Z. (2016). CD147 promotes IKK/IkappaB/ NF-kappaB pathway to resist TNF-induced apoptosis in rheumatoid arthritis synovial fibroblasts. *J Mol Med*, 1, 71–82. 10.1007/s00109-015-1334-7