

## DAFTAR PUSTAKA

- Aggarwal ML, Chacko KM, Kuruvilla BT. *Systematic and comprehensive investigation of the toxicity of curcuminoid-essential oil complex: A bioavailable turmeric formulation*. Mol Med Rep. 2016;13(1):592–604.
- Almeida Junior L, Quaglio A, de Almeida Costa C, Di Stasi L. Intestinal anti-inflammatory activity of Ground Cherry (*Physalis angulata*L.) standardized CO<sub>2</sub>phytopharmaceutical preparation. World Journal of Gastroenterology. 2017;23(24):4369.
- Amjad Khan, Somia Iqtadar, Sami Ullah Mumtaz, Michael Heinrich, Domingo A. Pascual-Figal, Shona Livingstone and Sajid Abaidullah. Oral CoSupplementation of Curcumin, Quercetin, and Vitamin D3 as an Adjuvant Therapy for Mild to Moderate Symptoms of COVID-19: Results From a Pilot Open-Label, Randomized Controlled Trial. Frontiers in Pharmacology. (13): 898062; 2022. DOI: 10.3389/fphar.2022.898062
- Annane, D., Bellissant, E., Bollaert, P. E., Briegel, J., Keh, D., & Kupfer, Y. (2015). Corticosteroids for treating sepsis. *Cochrane database of systematic reviews*, (12).
- Ansul Kumar, Arpita Rai, Mohd Saif Khan, Amit Kumar, Zeya Ul Haque, Mohammad Fazil, Gulam Rabbani (2022). Role of herbal medicines in the management of patients with COVID- 19: A systematic review and meta-analysis of randomized controlled trials. Journal of Traditional and Complementary Medicine (12): 100-113
- Burhan, E., Susanto, AD., Nasution, SA., Ginanjar, E., Pitoyo, CA., Susilo, A., Santoso, A., Juzar, DA., Arif, SK., Wulung, NGHL., Damayanti, T., Wiyono, WH., Prasenohadi., Afiatin., Wahyudi, ER., Tarigan, THE., Hidayat, R., Muchtar, F., IDAI, Tim COVID-19. (2020). Protokol Tatalaksana COVID-19. Jakarta.
- Chisania, Veronica. Gambaran Tingkat Keparahan Gejala, Rasio Neutrofil Limfosit, C-Reactive Protein, D-Dimer, Kadar Gula Darah Dan HbA1C Pada Penderita Covid-19 Dengan Komorbid Diabetes Melitus Di Murni Teguh Memorial Hospital Medan Pada Tahun 2020. 2020. Medan
- Chow S-C, Shao J, Wang H. Sample size calculations in clinical research. 2nd ed. Boca Raton: Chapman & Hall/CRC; 2008. Section 3.2.1, page 58.
- Conti P, Caraffa A, Gallenga CE, Ross R, Kritas SK, Frydas I, Younes A, Di Emidio P, Ronconi G, Toniato E. IL-1 induces thromboxane-A<sub>2</sub> (TxA<sub>2</sub>) in

- COVID-19 causing inflammation and micro-thrombi: inhibitory effect of the IL-1 receptor antagonist (IL-1Ra). *J Biol Regul Homeost Agents*. 2020 Sep-Oct;34(5):1623-1627. doi: 10.23812/20-34-4EDIT-65. PMID: 32744052.
- Del M, Peredaphd C V, Dieamantphd G, Nogueiramd C, Eberlinphd S, Facchinimd G, *et al.*, Sterol - standardized phytopharmaceutical from ground cherry : Corticoid - like properties on human keratinocytes and fibroblasts and its effects in a randomized double -blind placebo - controlled clinical trial. *J Cosmet Dermatol*. 2018;(May):1–13
- Direktorat Jendral Pencegahan dan Pengendalian Penyakit Kementerian Kesehatan Republik Indonesia. (2020). *Pedoman Pencegahan dan Pengendalian Coronavirus Disease (COVID-19)*. Jakarta.
- Fariya A, Araf Y, Hosen MJ. Corticosteroids for COVID-19: worth it or not? *Mol Biol Rep*. 2022 Jan;49(1):567-576. doi: 10.1007/s11033-021-06793-0. Epub 2021 Oct 13. PMID: 34643927; PMCID: PMC8511618.
- Fernandes R, Lima S, Lima PJ, Carolina L, Opretzka F, Nogueira RC, *et al.* *Physalis angulata* concentrated ethanolic extract suppresses nociception and inflammation by modulating cytokines and prostanoids pathways suppresses nociception and inflammation by. *Nat Prod Res [Internet]*. 2019;0(0):1–5.
- Gholamreza Askari, Amirhossein Sahebkar, Davood Soleimani, Atena Mahdavi, Sahar Rafee, Muhammed Majeed, Farzin Khorvash, Bijan Iraj, Mahshid Elyasi, Mohammad Hossein Rouhani and Mohammad Bagherniya (2022). The efficacy of curcumin-piperine co-supplementation on clinical symptoms, duration, severity, and inflammatory factors in COVID-19 outpatients: a randomized double-blind, placebo-controlled trial, 23: 472: <https://doi.org/10.1186/s13063-022-06375-w>
- Hulley SB, Cummings SR, Browner WS, Grady D, Newman TB. *Designing clinical research : an epidemiologic approach*. 4th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2013. Appendix 6A, page 73.
- Jo S, Kim S, Shin D, Kim M. Inhibition of SARS-CoV 3CL protease by flavonoids. *Journal of Enzyme Inhibition and Medicinal Chemistry*. 2020;35(1):145-151.
- Jo S, Kim H, Kim S, Shin D, Kim M. Characteristics of flavonoids as potent MERS-CoV 3C-like protease inhibitors. *Chemical Biology & Drug Design*. 2019;94(6):2023-2030.
- Jurenka, J. Anti-inflammatory properties of curcumin, a major constituent of *Curcuma longa*. A preclinical and clinical research. *Alternative Medicine Review*, 2009; 14(2):141-153
- Kartika, R. W., Tendean, M., Yong, B. J. C., Sartika, K. D., Suradji, E. W., & Hasan, I. (2022, February). Curcumin as Adjuvant Therapy in Mild-Moderate

- Covid 19. In *Proceedings Book of International Conference and Exhibition on The Indonesian Medical Education Research Institute* (Vol. 6, pp. 39-47).
- Kementerian Kesehatan Republik Indonesia. 2020. *Tentang Novel Corona Virus (NCOV)*. Direktorat Jendral pencegahan dan Pengendalian Penyakit : Jakarta.
- Kementerian Kesehatan Republik Indonesia. 2020. *Pedoman Pencegahan dan Pengendalian Coronavirus Disease 2019 (COVID-19)*. Direktorat Jendral pencegahan dan Pengendalian Penyakit : Jakarta.
- Kermali, M., Khalsa, R. K., Pillai, K., Ismail, Z., & Harky, A. The role of biomarkers in diagnosis of COVID-19 – A systematic review. *Life Sciences*. 2020; 117788. doi:10.1016/j.lfs.2020.117788.
- Li, G., Fan, Y., Lai, Y., Han, T., Li, Z., Zhou, P., Pan, P., Wang, W., Hu, D., Liu, X., Zhang, Q., Wu, J. (2020). *Coronavirus Infections and Immune Responses. Journal of Medical Virology* 2020;92 : 424-432.
- Listyawati S. Toxicity studies of the rhizome *Curcuma xanthorrhiza* Roxb. and *Curcuma zedoaria* Roscoe on hematological and male reproduction system of mice (*Mus musculus* L.). *Biofarmasi J Nat Prod Biochem*. 2006;4(1):10–3.
- Mehdi Hassaniazad, Ebrahim Eftekhari, Behnaz Rahnema Inchehsablagh, Hossein Kamali, Abdolali Tousi, Mahmoud Reza Jaafari<sup>5</sup>, Milad Rafat, Mohammad Fathalipour, Sara Nikoofal-Sahlabadi, Hamed Gouklani, Hesam Alizade, Amin Reza Nikpoor (2021). A triple-blind, placebo-controlled, randomized clinical trial to evaluate the effect of curcumin-containing nanomicelles on cellular immune responses subtypes and clinical outcome in COVID-19 patients. 35:6417–6427. DOI: 10.1002/ptr.7294
- Moghadamtousi, S. Z., Kadir, H. A., Hassandarvish, P., Tajik, H., Abubakar, S., & Zandi, K. A review on antibacterial, antiviral, and antifungal activity of curcumin. *BioMed research international*, 2014. 186864. DOI.org/10.1155/2014/186864
- Mollazadeh H., Cicero A. F. G., Blesso C. N., Pirro M., Majeed M., Sahebkar A. Immune modulation by curcumin: The role of interleukin-10. *Critical Reviews in Food Science and Nutrition*. 2017; 59(1): 89–101.
- Muhammad adnan Shereen, Suliman Khan., Abeer Kazmi., Nadia Bashir., Rabeea Shidiq. 2020. *COVID-19 Infection : Origin, Transmission, and Characteristics of Human Coronavirus*. Wuhan University : Wuhan.
- Nguyen T, Woo H, Kang H, Nguyen V, Kim Y, Kim D *et al*. Flavonoid-mediated inhibition of SARS coronavirus 3C-like protease expressed in *Pichia pastoris*. *Biotechnology Letters*. 2012;34(5):831-838.
- Or Assouline, Eli Ben-Chetrit, Yigal Helviz, Ramzi Kurd, Marc Leone, Sharon Einav. Experimental and Compassionate Drug Use During the First Wave of the COVID-19 Pandemic: A Retrospective Single-Center Study *Adv Ther* 2021. 38:5165–5177. DOI.org/10.1007/s12325-021-01890-9



- Pinto NB, Morais TC, Carvalho KMB, Silva CR, Andrade GM, Brito GAC, *et al.* Phytomedicine Topical anti-inflammatory potential of Physalin E from *Physalis angulata* on experimental dermatitis in mice. *Phytomedicine* [Internet]. 2010;17(10):740–3.
- Qin, Chuan., Zhou, Luoqi., Hu, Ziwei., Yang, Shuoqi., Yang, Sheng., Tao, Yu., Xie, Cuihong. 2020. *Dysregulation of Immune Response in Patients with COVID-19 in Wuhan China*. Huazhong University of Science and Technology : Wuhan.
- Rivera D, Ocampo Y, Franco LA. *Physalis angulata* Calyces Modulate Macrophage Polarization and Alleviate Chemically Induced Intestinal Inflammation in Mice. *biomedicines*. 2020;8(24):1–11.
- Reza Ahmadi, Soofia Salari, Mohammad Davood Sharifi, Hamidreza Reihani, Mohammad Bagher Rostamiani, Morteza Behmadi, Zhila Taherzadeh, Saeed Eslami, Seyed Mahdi Rezayat, Mahmoud Reza Jaafari, Sepideh Elyasi (2021). Oral nano-curcumin formulation efficacy in the management of mild to moderate outpatient COVID-19: A randomized triple blind placebo-controlled clinical trial. *Food Sci Nutr*; (9); 4068–4075. DOI: 10.1002/fsn3.2226
- Rhodes, B., Fürnrohr, B. G., & Vyse, T. J. C-reactive protein in rheumatology: biology and genetics. *Nature Reviews Rheumatology*. 2011;7(5), 282–289.
- Rostami M, Mansouritorghabeh H. D- dimer level in COVID-19 infection: a systematic review. *Expert Rev Hematol*. 2020 Nov 1;13(11):1265–75.
- Sadeghi-Haddad-Zavareh M, Bayani M, Shokri M, Ebrahimpour S, Babazadeh A, Mehraeen R, Moudi E, Rostami A, Barary M, Hosseini A, Bijani A, Javanian M. C-Reactive Protein as a Prognostic Indicator in COVID-19 Patients. *Interdiscip Perspect Infect Dis*. 2021 Apr 23;2021:5557582. doi: 10.1155/2021/5557582. PMID: 33968148; PMCID: PMC8083820.
- Samantha N. Fessler, Yung Chang, Li Liu and Carol S. Johnston (2023). Curcumin Confers Anti-Inflammatory Effects in Adults Who Recovered from COVID-19 and Were Subsequently Vaccinated: A Randomized Controlled Trial. *15*, 1548. <https://doi.org/10.3390/nu15071548>
- Schwarz S, Sauter D, Wang K, Zhang R, Sun B, Karioti A *et al.* Kaempferol Derivatives as Antiviral Drugs against the 3a Channel Protein of Coronavirus. *Planta Medica*. 2014;80(02/03):177-182.
- Sharma VK, Prateeksha, Singh SP, Singh BN, Rao CV, Barik SK. Nanocurcumin Potently Inhibits SARS-CoV-2 Spike Protein-Induced Cytokine Storm by Deactivation of MAPK/NF- $\kappa$ B Signaling in Epithelial Cells. *ACS Appl Bio Mater*. 2022 Feb 21;5(2):483-491. doi: 10.1021/acsabm.1c00874. Epub 2022 Feb 3. PMID: 35112841; PMCID: PMC8845439.

- Singh AK, Majumdar S, Singh R, Misra A. Role of corticosteroid in the management of COVID-19: A systemic review and a Clinician's perspective. *Diabetes Metab Syndr*. 2020 Sep-Oct;14(5):971-978. doi: 10.1016/j.dsx.2020.06.054. Epub 2020 Jun 27. PMID: 32610262; PMCID: PMC7320713.
- Solihah, R., Haris, M. S. and Abror, Y. K. (2019) ANALYSIS OF APO-B SERUM LEVELS IN BALB/C MICE HYPERCHOLESTEROLEMIC AGAINST TEMULAWAK EXTRACT (*Curcuma xanthoriza* Roxb). *Indonesian Journal of Medical Laboratory Science and Technology*; 1(1) : 1-7. doi: 10.33086/ijmlst.v1i1.799.
- Sukandar EY, Sheba SH. Acute and Sub-Chronic Toxicity Studies of Combination of *Physalis Angulata* L. (Cecendet) Extract and Methylprednisolone on Animals. *Int J Integr Heal Sci*. 2019;7(1):48–55.
- Sun L, Liu J, Liu P, Yu Y, Ma L, Hu L. Immunosuppression effect of Withangulatin A from *Physalis angulata* via heme oxygenase 1-dependent pathways. *Process Biochem* [Internet]. 2011;46(2):482–8.
- Tahmasebi S, El-Esawi MA, Mahmoud ZH, Timoshin A, Valizadeh H, Roshangar L, Varshoch M, Vaez A, Aslani S, Navashenaq JG, Aghebati-Maleki L, Ahmadi M. Immunomodulatory effects of nanocurcumin on Th17 cell responses in mild and severe COVID-19 patients. *J Cell Physiol*. 2021 Jul;236(7):5325-5338. doi: 10.1002/jcp.30233. Epub 2020 Dec 28. PMID: 33372280.
- Tahmasebi S, Saeed BQ, Temirgalieva E, Yumashev AV, El-Esawi MA, Navashenaq JG, Valizadeh H, Sadeghi A, Aslani S, Yousefi M, Jadidi-Niaragh F, Adigozalou J, Ahmadi M, Roshangar L. Nanocurcumin improves Treg cell responses in patients with mild and severe SARSCoV2. *Life Sci*. 2021; 276:119437
- Ujjan ID, Khan S, Nigar R, Ahmed H, Ahmad S, Khan A. The possible therapeutic role of curcumin and quercetin in the *early-stage* of COVID-19-Results from a pragmatic randomized clinical trial. *Front Nutr*. 2023 Jan 18;9:1023997. doi: 10.3389/fnut.2022.1023997. PMID: 36742008; PMCID: PMC9889936.
- Velasco M, Bañuelos R, Abarca N, López M, Valdez L, Reyes J *et al*. Phenolic profiles and antioxidant properties of *Physalis angulata* L. as quality indicators. *Journal of Pharmacy & Pharmacognosy Research*. 2017;5(2):114-128.
- Vikasari, Suci N., Sutjiatmo, Afifah B., Sukandar, Elin Y., Suryani., Perdana, Puput A. Efek Ekstrak Etanol Herba Cecendet (*Physalis Angulata* L.) pada Kadar Proteinuria Hewan Model Lupus Eritematosus Sistemik. *Kartika Jurnal Ilmiah Farmasi*. 2015; 2 (1): 15-20.
- Xiaowei Li., Manman Geng., Yizhao Peng., Liesu Meng., Shemin Lu. 2020. *Molecular Immune Pathogenesis and Diagnosis of COVID-19*. Xian Jiaotong : Beijing.

- Yang Y, Yi L, Wang Q, Xie B, Dong Y, Sha C. Anti-inflammatory effects of physalin E from *Physalis angulata* on lipopolysaccharide-stimulated RAW 264 . 7 cells through inhibition of NF- j B pathway. 2017: 74-79.
- Yu M, Lee J, Lee J, Kim Y, Chin Y, Jee J *et al.* Identification of myricetin and scutellarein as novel chemical inhibitors of the SARS coronavirus helicase, nsP13. *Bioorganic & Medicinal Chemistry Letters*. 2012;22(12):4049-4054.
- Zahedipour F, Hosseini SA, Sathyapalan T, Majeed M, Jamialahmadi T, Al-Rasadi K, Banach M, Sahebkar A. Potential effects of curcumin in the treatment of COVID-19 infection. *Phytother Res*. 2020 Nov;34(11):2911-2920. doi: 10.1002/ptr.6738. Epub 2020 Jun 23. PMID: 32430996; PMCID: PMC7276879.