

Daftar Pustaka

- Aamir M *et al.* 2018. In silico Prediction, Characterization, Molecular Docking, and Dynamic Studies on Fungal SDRs as Novel Targets for Searching Potential Fungicides Against Fusarium Wilt in Tomato. *Frontiers in Pharmacology* 9.
- Adnan Shereen M, Khan S, Kazmi A, Bashir N, dan Siddique R. 2020. COVID-19 infection: origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*
- Amin M & Abbas G. 2020. Docking study of Chloroquine and Hydroxychloroquine interaction with SARS-CoV-2 spike glycoprotein-An in silico insight into the comparative efficacy of repurposing antiviral drugs. *Journal of Biomolecular Structure and Dynamics*.
- Anonim. 1979. Farmakope Indonesia III. Jakarta : Depkes RI
- Asamenew G *et al.* 2019. Characterization of phenolic compounds from normal ginger (*Zingiber officinale* Rosc.) and black ginger (*Kaempferia parviflora* Wall.) using UPLC–DAD–QToF–MS. *European Food Research and Technology* 245(3) : 653–665.
- Beigel J H *et al.* 2020. Remdesivir for the treatment of Covid-19—preliminary report. *New England Journal of Medicine*.
- Bera R, Ahmed S M, Sarkar L, Sen T, dan Karmakar S. 2014. Pharmacokinetic analysis and tissue distribution of andrographolide in rat by a validated LC-MS/MS method. *Pharmaceutical biology* 52(3) : 321-329.
- Chang J S, Wang K C, Yeh C F, Shieh D E, dan Chiang L C. 2013. Fresh ginger (*Zingiber officinale*) has anti-viral activity against human respiratory syncytial virus in human respiratory tract cell lines. *Journal of Ethnopharmacology* 145(1) : 146–151
- Chen JX *et al.* Activity of andrographolide and its derivatives against influenza virus in vivo and in vitro. *Biol Pharm Bull.* 2009;32(8) : 1385-1391.
- Chen Y, Guo Y, Pan Y, dan Zhao Z J. 2020. Structure analysis of the receptor binding of 2019-nCoV. *Biochemical and Biophysical Research Communications*.
- Churiyah P O B, Rofaani E, dan Tarwadi. 2015. Antiviral and Immunostimulant Activities of *Andrographis paniculata*. *HAYATI Journal of Biosciences* 22(2) : 67–72
- Csizmadia P. 1999. MarvinSketch and MarvinView: molecule applets for the World Wide Web.
- Daina A, Michielin O, dan Zoete V. 2017. SwissADME: a free web tool to evaluate pharmacokinetics, drug-likeness and medicinal chemistry friendliness of small molecules. *Scientific reports* 7 42717.

- Deferme, S., & Augustijns, P. (2003). The effect of food components on the absorption of P-gp substrates: a review. *Journal of pharmacy and pharmacology* 55(2) : 153-162.
- Ding Y *et al.* 2017. Andrographolide inhibits influenza A virus-induced inflammation in a murine model through NF- κ B and JAK-STAT signaling pathway. *Microbes and Infection* 19(12) : 605–615.
- Dong J *et al.* 2018. ADMETlab: a platform for systematic ADMET evaluation based on a comprehensively collected ADMET database. *Journal of cheminformatics* 10(1) : 29.
- Enmozhi S K, Raja K, Sebastine I, dan Joseph J. 2020. Andrographolide as a potential inhibitor of SARS-CoV-2 main protease: an in silico approach. *Journal of Biomolecular Structure and Dynamics* 1-7.
- Forli S *et al.* 2016. Computational protein–ligand docking and virtual drug screening with the AutoDock suite. *Nature Protocols* 11(5) : 905–919.
- Forli W, Halliday S, Belew R, dan Olson A. J. 2012. AutoDock Version 4.2.
- Forni D, Cagliani R, Clerici M, dan Sironi M. (2017). Molecular evolution of human coronavirus genomes. *Trends in microbiology* 25(1) : 35-48.
- Freitas B T *et al.* 2020. Characterization and noncovalent inhibition of the deubiquitinase and deISGylase activity of SARS-CoV-2 papain-like protease. *ACS Infectious Diseases*.
- Ganjhu R K *et al.* 2015. Herbal plants and plant preparations as remedial approach for viral diseases. *VirusDisease* 26(4) : 225–236.
- Goasdoué K, Miller S M, Colditz P B, dan Björkman S T. 2017. The blood-brain barrier; protecting the developing fetal brain. *Placenta*. 54 : 111-116.
- Hevener K E *et al.* (2009). Validation of molecular docking programs for virtual screening against dihydropteroate synthase. *Journal of chemical information and modeling* 49(2) : 444-460.
- Hetényi C & Van Der Spoel D. 2006. Blind docking of drug-sized compounds to proteins with up to a thousand residues. *FEBS letters* 580(5) : 1447-1450.
- Hossain M S, Urbi Z, Sule A, dan Rahman K M H. 2014. *Andrographis paniculata* (Burm. f.) Wall. ex Nees: A Review of Ethnobotany, Phytochemistry, and Pharmacology. *The Scientific World Journal* 2014 : 1–28.
- <https://www.pharmaceutical-technology.com/news/china-favilavir-testing-approval/>
- Jin Z *et al.* 2020. Structure of Mpro from COVID-19 virus and discovery of its inhibitors. *Nature*.
- Kaushik, M. (2014). A review of innovative chemical drawing and spectra prediction computer software. *Mediterranean Journal of Chemistry* 3(1) : 759-766.

- Kulyal P, Tiwari U K, Shukla A, dan Gaur A K. 2010. Chemical constituents isolated from *Andrographis paniculata*. *Indian Journal of Chemistry* Vol 49B.
- Kumar S *et al.* 2018. Identification and Characterization of Terpenoid Lactones and Flavonoids from Ethanolic Extract of *Andrographis Paniculata* (Burm. f.) Nees Using Liquid Chromatography/Tandem Mass Spectrometry. *Separation Science Plus* 1(12) : 762-770.
- Kunnumakkara A B *et al.* 2019. Is curcumin bioavailability a problem in humans: Lessons from clinical trials. *Expert Opinion on Drug Metabolism & Toxicology*. 15(9) : 705–733
- Laksmiani N P L *et al.* 2020. Active Compounds Activity from the Medicinal Plants Against SARS-CoV-2 using in Silico Assay. *Biomedical and Pharmacology Journal* 13(2) : 873-881.
- Lan J *et al.* 2020. Structure of the SARS-CoV-2 *spike* receptor-binding domain bound to the ACE2 receptor. *Nature* 581(7807) : 215-220.
- Li Q *et al.* 2020. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *New England Journal of Medicine*.
- Liu C *et al.* 2020. Research and development on therapeutic agents and vaccines for COVID-19 and related human coronavirus diseases.
- Lu R *et al.* 2020. Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. *The Lancet* 395(10224) : 565-574.
- Mao Q Q *et al.* 2019. Bioactive Compounds and Bioactivities of Ginger (*Zingiber officinale* Roscoe). *Foods* 8(6) : 185.
- Mathew D dan Hsu W L. 2018. Antiviral potential of curcumin. *Journal of Functional Foods* 40 : 692–699
- Muramatsu T *et al.* 2016. SARS-CoV 3CL protease cleaves its C-terminal autoprocessing site by novel subsite cooperativity. *Proceedings of the National Academy of Sciences* 113(46) : 12997–13002
- Murugan N A, Pandian C J, dan Jeyakanthan J. 2020. Computational investigation on *Andrographis paniculata* phytochemicals to evaluate their potency against SARS-CoV-2 in comparison to known antiviral compounds in drug trials. *Journal of Biomolecular Structure and Dynamics* 1-12.
- Mussard E *et al.* 2019. Andrographolide, a natural antioxidant: an update. *Antioxidants* 8(12) : 571.
- Panossian A *et al.* 2000. Pharmacokinetic and oral bioavailability of andrographolide from *Andrographis paniculata* fixed combination Kan Jang in rats and human. *Phytomedicine* 7(5) : 351-364.
- Pedretti A, Mazzolari A, dan Vistoli G. 2004. VEGA ZZ: a versatile toolkit for drug design and protein modelling. *J Comput Chem* 25(13) : 1605-1612.

- Pedretti A, Villa L, dan Vistoli, G. 2004. VEGA—an open platform to develop chemo-bio-informatics applications, using plug-in architecture and script programming. *Journal of computer-aided molecular design* 18(3) : 167-173.
- Prasad S dan Tyagi A K 2015. Ginger and Its Constituents: Role in Prevention and Treatment of Gastrointestinal Cancer. *Gastroenterology Research and Practice* 2015 : 1–11.
- Rathinavel T *et al.* Phytochemical 6-Gingerol—A promising Drug of choice for COVID-19.
- Rothan H A dan Byrareddy S N. 2020. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *Journal of Autoimmunity*.
- Rout, J, Swain B C, dan Tripathy U. 2020. In Silico Investigation of Spice Molecules as Potent Inhibitor of SARS-CoV-2.
- Rukmana R. 2000. USAHA TANI JAHE Dilengkapi dengan pengolahan jahe segar, Seri Budi Daya. Penerbit Kanisius, Yogyakarta
- Rut W *et al.* 2020. Activity profiling and structures of inhibitor-bound SARS-CoV-2-PLpro protease provides a framework for anti-COVID-19 drug design. *bioRxiv*.
- Santos K B, Guedes I A, Karl A L, dan Dardenne L E. 2020. Highly Flexible Ligand Docking: Benchmarking of the DockThor Program on the LEADS-PEP Protein–Peptide Data Set. *Journal of Chemical Information and Modeling* 60(2) : 667-683.
- Sahoo M, Jena L, Rath S N, dan Kumar S. 2016. Identification of Suitable Natural Inhibitor against Influenza A (H1N1) Neuraminidase Protein by Molecular Docking. *Genomics & Informatics* 14(3) : 96.
- Salmaso V dan Moro S. 2018. Bridging molecular docking to molecular dynamics in exploring ligand-protein recognition process: An overview. *Frontiers in pharmacology* 9 : 923.
- Saputra, P. A. 2018. SKRINING TARGET MOLEKULER KANDUNGAN KIMIA RIMPANG KUNYIT PUTIH (*Curcuma Zedoaria*) SEBAGAI ANTIKANKER PAYUDARA DENGAN PENDEKATAN BIOINFORMATIKA DAN ANALISIS DOCKING MOLEKULER. Skripsi. Universitas Setia Budi. Surakarta
- Shahrajabian M H, Sun W, dan Cheng Q. 2019. Clinical aspects and health benefits of ginger (*Zingiber officinale*) in both traditional Chinese medicine and modern industry. *Acta agriculturae scandinavica*, section b—Soil & Plant Science, 69(6), 546-556.
- Stierand K dan Rarey M. 2010. Drawing the PDB: protein– ligand complexes in two dimensions. *ACS medicinal chemistry letters* 1(9) : 540-545.
- Tallei T E *et al.* 2020. Potential of Plant Bioactive Compounds as SARS-CoV-2 Main Protease (Mpro) and Spike (S) Glycoprotein Inhibitors: A Molecular Docking Study.

- Tapiory A A *et al.* 2020. In-Silico Analysis of Methoxyl Pectin Compounds from Banana Peels as HMG-CoA Reductase Inhibitor Complexes. *Journal of Smart Bioprospecting and Technology*.
- Thorn C F, Aklillu E, Klein T E, dan Altman R B. 2012. PharmGKB summary: very important pharmacogene information for CYP1A2. *Pharmacogenetics and genomics* 22(1) : 73.
- Tian, X *et al.* 2020. Potent binding of 2019 novel coronavirus *spike* protein by a SARS coronavirus-specific human monoclonal antibody. *Emerging Microbes & Infections* 9(1) : 382–385.
- Tian X *et al.* 2020. Potent binding of 2019 novel coronavirus *spike* protein by a SARS coronavirus-specific human monoclonal antibody. *Emerging Microbes & Infections* 9(1) : 382–385.
- ul Qamar M T, Alqahtani S M., Alamri M A, dan Chen L L. 2020. Structural basis of SARS-CoV-2 3CLpro and anti-COVID-19 drug discovery from medicinal plants. *Journal of pharmaceutical analysis*.
- Wang D *et al.* 2020. Clinical Characteristics of 138 ospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. <https://jamanetwork.com/ on 02/15/2020>
- Wrapp D *et al.* 2020. Cryo-EM structure of the 2019-nCoV *spike* in the prefusion conformation. *Science* 367(6483) : 1260-1263.
- Wu C *et al.* 2020. Analysis of therapeutic targets for SARS-CoV-2 and discovery of potential drugs by computational methods. *Acta Pharmaceutica Sinica B*.
- Xu J *et al.* 2020. Systematic comparison of two animal-to-human transmitted human coronaviruses: SARS-CoV-2 and SARS-CoV. *Viruses* 12(2) : 244.
- Yamamoto N *et al.* 2004. HIV protease inhibitor nelfinavir inhibits replication of SARS-associated coronavirus. *Biochemical and biophysical research communications* 318(3) : 719-725.
- Yang K Y *et al.* 2007. Oral bioavailability of curcumin in rat and the herbal analysis from *Curcuma longa* by LC-MS/MS. *Journal of Chromatography. B, Analytical Technologies in the Biomedical and Life Sciences* 853(1-2) : 183–189
- Zahedipour F *et al.* 2020. Potential effects of curcumin in the treatment of COVID-19 infection. *Phytotherapy Research*.
- Zhang D H *et al.* 2020. In silico screening of Chinese herbal medicines with the potential to directly inhibit 2019 novel coronavirus. *Journal of integrative medicine* 18(2) : 152-158.
- Zhu N *et al.* 2020. A novel coronavirus from patients with pneumonia in China, 2019. *New England Journal of Medicine*.
- Zorofchian M S *et al.* 2014. A Review on Antibacterial, Antiviral, and Antifungal Activity of Curcumin. *BioMed Research International* 2014 : 1–12.