



DAFTAR PUSTAKA

- Achmad, S.A., Hakim, E.H., Makmur, L., Syah, Y.M., Juliawaty, L.D., dan Muhajidin, D., 2007, *Ilmu Kimia dan Kegunaan Tumbuhan Obat Indonesia*, ITB, Bandung.
- Aher, R.B., Wanare, G., Kawathekar, N., Kumar, R.R., Kaushik, N.V., Sahal, D., and Chauhan, V.S., 2011, Dibenzylideneacetone Analogues as Novel *Plasmodium Falciparum* Inhibitors, *Bioorganic & Medicinal Chemistry Letters*, 21, 3034-3036.
- Anonim, 2016, *Malaria*, Pusat Data dan Informasi Kementerian Kesehatan RI.
- Anonim, 2020, *Profil Kesehatan Indonesia Tahun 2019*, Kementerian Kesehatan Republik Indonesia, Jakarta.
- Anonim, 2019, *World Malaria Report 2019*, World Health Organization.
- Ashley, E.A., Recht, J., and White, N.J., 2014, Primaquine: The Risks and The Benefits, *Malar. J.*, 13, 418.
- Aykul, S., and Martinez-Hackert, E., 2016, Determination of Half-Maximal Inhibitory Concentration Using Biosensor-Based Protein Interaction Analysis, *Anal Biochem*, 508, 97-103.
- Azlin, E., 2004, Obat Anti Malaria, *Sari Pediatri*, 5 (4), 150-154.
- Baird, J.K., 2005, Effectiveness of Antimalarial Drugs, *N. Engl. J. Med.*, 352, 1565-1577.
- Boulet, C., Doerig, C.D., and Carvalho, T.G., 2018, Manipulating Eryptosis of Human Red Blood Cells: A Novel Antimalarial Strategy, *Front. Cell. Infect. Microbiol*, 8 (419), 1-18.
- Chauhan, I.S., Rao, G.S., Shankar, J., Chauhan, L.K.S., Kapadia, G.J., and Singh, N., 2018, Chemoprevention of Leishmaniasis; In-vitro Antiparasitic Activity of Dibenzalacetone, A Synthetic Curcumin Analog Leads to Apoptotic Cell Death in *Leishmania donovani*, *Parasitology International* 67, 627-636.
- Cheng, Y., and Prusoff, W.H., 1973, Relationship Between The Inhibition Constant (K_I) and The Concentration of Inhibitor Which Causes 50 per Cent Inhibition (I₅₀) of An Enzymatic Reaction, *Biochemical pharmacology*, 22, 3099-3108.



- Cortes, A., Cascante, M., Cardenas, M.L., and Cornish-Bowdn, A., 2001, Relationships Between Inhibition Constants, Inhibitor Concentrations for 50% Inhibition and Types of Inhibition: New Ways of Analysing Data, *Biochem J.*, 357, 263-268.
- Cowman, A.F., Galatis, D., and Thompson, J.K., 1994, Selection for Mefloquine Resistance in *Plasmodium falciparum* is Linked to Amplification of the *pfdmrl1* Gene and Cross-Resistance to Halofantrine and Quinine, *Proc. Natl. Acad. Sci.*, 91, 1143-1147.
- Cui, L., Mao, J., and Cui, L., 2007, Cytotoxic Effect of Curcumin on Malaria Parasite *Plasmodium falciparum*: Inhibition of Histone Acetylation and Generation of Reactive Oxygen Species, *Antimicrobial Agents and Chemotherapy*, 51(2), 488-494.
- Davanco, M.G., Aguiar, A.C.C., Padilha, L.A., Santos, E.C., Campos, M.L., and Andrade, C.R., 2014, Evaluation of Antimalarial Activity and Toxicity of New Primaquine Prodrug, *PlosOne* 9 (8), 105.
- Dimi, B., Adam, A., and Alim. A., 2020, Prevalensi Malaria Berdasarkan Karakteristik Sosio Demografi, *Jurnal Ilmiah Kesehatan*, 19(1), 4-9.
- Dohutia, C., Chetia, D., Gogoi, K., and Sarma, K., 2017, Design, *In Silico* and *In Vitro* Evaluation of Curcumin Analogues Against *Plasmodium Falciparum*, *Experimental Parasitology*, 175, 51-58.
- Fernando, D., Rodrigo, C., and Rajapakse, S., 2011, Primaquine In Vivax Malaria: An Update Aand Review on Management Issues, *Malaria Journal*, 10 (351), 5-6.
- Frimayanti, N., Mora, E., and Anugrah, R., 2018, Study of Molecular Docking of Chalcone Analogue Compound as Inhibitors for Liver Cancer Cells HepG2, *Comp Eng Appl J*, 7 (2), 137-147.
- Hanif, A.U., Lukis, P.A., and Fadlan, A., 2020, Pengaruh Minimisasi Energi MMFF94 dengan MarvinSketch dan Open Babel PyRx pada Penambatan Molekular Turunan Oksindola Tersubstitusi, *Alchemy: Journal of Chemistry*, 8 (2), 33-40.
- Harjianto, P.N., 2000, *Malaria: Epidemiologi, Patogenesis, Manifestasi Klinis, dan Penanganan*, Penerbit Buku Kedokteran EGC, Jakarta.
- Heller, L.E., and Roepe, P.D., 2019, Artemisinin-Based Antimalarial Drug Therapy: Molecular Pharmacology and Evolving Resistance, *Trop. Med. Infect. Dis.*, 4 (89), 1-4.
- Irianto, K., 2014, *Epidemiologi Penyakit Menular dan Tidak Menular Panduan Klinis*, Alfabeta, Bandung.



- Jain, K., Sood, S., and Gowthamarajan, K., 2013, Modulation of Cerebral Malaria by Curcumin as An Adjunctive Therapy, *Braz. J. Infect. Dis.*, 17, 579-591.
- Joshi, B.P., Mohanakrishnan, D., Mittal, G., Kar, S., Pola, J.K., Golakoti, N.R., and Nanubolu. J.B., 2018, Synthesis, Mechanistic and Synergy Studies of Diarylidenehexanone Derivatives as New Antiplasmodial Pharmacophores, *Medicinal Chemistry Research*, 27, 2312-2324.
- Klayman, D.L., 1985, Qinghaosu (Artemisinin): An Antimalarial Drug from China, *Science*, 228, 1049-1055.
- Kohler, I., Siemska, K.J., Siems, K., Hernan'ndez, Ibarra, R.A., Barendsohn, W.G., Bienzle, U., and Eich, E., 2002, *In vitro* Antiplasmodial Investigation of Medicinal Plants from El Salvador, *Verlag der Zeitschrift fur Naturforschung Tubingen*, 57c, 277-281.
- Kombonglangi, R.S., 2015, Manajemen Terapi Malaria Falciparum yang Resisten terhadap Klorokuin, *J Majority*, 4 (6), 27-30.
- Kuile, F., White, N.J., Holloway, P., Pasvol, G., and Krishna, S., 1993, *Plasmodium falciparum: In vitro* Studies of The Pharmacodynamic Properties of Drugs for The Treatment of Severe Malaria, *Exp. Parasitol.*, 76, 85-95.
- Li, Q.G., Peggins, J.O., Fleckenstein, L.L., Masonic, K., Heiffer, M.H., and Brewer, T.G., 1998, The Pharmacokinetics and Bioavailability of Dihydroartemisinin, Arteether, Artemether, Artesunic Acid, and Artelinic Acid in Rats, *J. Pharm. Pharmacol.*, 50, 173-180.
- Liang, G.S., Yang, Jiang, L., Zhao, Y., Shao, L., Xiao, J., Ye, F., Li, Y., and Li, X., 2008, Synthesis and Anti-Bacterial Properties of Mono-Carbonyl Analogues of Curcumin, *Chemical & Pharmaceutical Bulletin*, 56 (2), 162-167.
- Luxemburger, C., Van, V.M., Jonathan, S., McGready, R., Looareswan, S., White, N.J., and Nosten, F., 1999, Treatment of Vivax Malaria in An Endemic Area on The Western Border of Thailand, *Trans R Soc Trop Med Hyg*, 93, 433-438.
- Lwin, K.M., Mon, H.M., and Myint, K.H., 2017, Evaluation of The Antimalarial Activity of *Curcuma longa* Linn. Singly and in Combination with *Eupatorium odoratum* Linn, *Journal of Ayurvedic and Herbal Medicine*, 3(1), 11-12.
- Maier, A.G., Matuschewski, K., Zhang, M., and Rug, M., 2018, *Plasmodium falciparum, Trends in Parasitology*, 1-2.



Mardianis, Y., Anwar, C., dan Haryadi, W., 2017, Sintesis Analog Kurkumin Monoketon Berbahan Dasar Sinamaldehida dan Uji Aktivitasnya sebagai Inhibitor Enzim α -Glukosidase, *J. Sains Dasar*, 6(2), 123-132.

Mimche, P.N., Taramelli, D., and Vivas, L., 2011, The Plant-Based Immunomodulator Curcumin as A Potential Candidate for The Development of An Adjunctive Therapy for Cerebral Malaria, *Malaria Journal*, 10(1), 3-4.

Mishra, S., Karmodiya, K., Surolia, N., and Surolia, A., 2008, Synthesis and Exploration of Novel Curcumin Analogues as Anti-Malarial Agents, *Bioorganic Med. Chem.*, 16, 2894-2902.

Nicholas, J.W., 2001, Antimalarial Drug Resistance, *The Journal of Clinical Investigation*, 115, 1084-1086.

Novian, D.R., Ikhwan, A.Z.N., dan Winarso, A., 2019, Uji Farmakodinamik, *Drug-Likeness*, Farmakokinetik dan Interaksi Senyawa Aktif Kayu Ular (*Strychnos lucida*) sebagai Inhibitor *Plasmodium falciparum* secara *In Silico*, *Jurnal Veteriner Nusantara*, 2 (1), 71-72.

Olliaro, P.L., and Bloland, P.B., 2001, *Antimalarial Chemotherapy: Mechanism of Action, Resistance, and New Directions in Drug Discovery*, Humana Press, Totowa.

Penna-Coutinho, J., Cortopassi, W.A., Oliveira, A.A., Franca, T.C.C., and Krettli, A.U., 2011, Antimalarial Activity of Potential Inhibitors of *Plasmodium falciparum* Lactate Dehydrogenase Enzyme Selected by Docking Studies, *Plos One*, 6 (7), 1-4.

Plowe, C.V., 2003, Monitoring Antimalarial Drug Resistance: Making the Most of The tools at Hand, *J. Exp. Biol.*, 206, 3745-3752.

Pukrittayakamee, S., Vanijanonta, S., Chantra, A., Clemens, R., and White, N.J., 1994, Blood Stage Antimalarial Efficacy of Primaquine in *Plasmodium vivax* Malaria, *J. Infect. Dis.*, 169, 932-935.

Putra, I.S.R., 2020, Aktivitas Antimalaria Analog Kurkumin Hasil Sintesis 2-hidroksibenzaldehida dengan Variasi Keton dan Studi Interaksinya terhadap Protein SERCA, *Skripsi*, Jurusan Kimia FMIPA UGM, Yogyakarta.

Rachmadenawanti, E., Hermansyah, B., and Hermansyah, Y., 2016, Uji Aktivitas Fraksi Diklorometana Ekstrak Metanol Bangle (*Zingiber cassumunar Roxb.*) sebagai Terapi Komplementer Malaria secara *In Vivo*, *Jurnal Pustaka Kesehatan*, 4 (2), 205-207.



- Rasmussen, H.B., Christensen, S.B., Kvist, L.P., and Karazmi, A., 2000, A Simple and Efficient Separation of the Curcuminoids, the Antiprotozoal Constituents of *Curcuma longa*, *Planta Med.*, 66, 396-398.
- Razak, M.R.M.A., Afzan, A., Ali, R., Jalaluddin, N.F.A., Wasiman, M.I., Zahari, S.H.S., Abdullah, N.R., and Ismail, Z., 2014, Effect of Selected Local Medicinal Plants on The Asexual Blood Stage of Chloroquine Resistant *Plasmodium falciparum*, *BMC Complementary and Alternative Medicine*, 14 (492), 1-13.
- Reddy, R.C., Vatsala, P.G., Keshamouni, V.G., Padmanaban, G., and Rangarajan, P.N., 2005, Curcumin for Malaria Therapy, *Biochemical and Biophysical Research Communications*, 326, 472-474.
- Reed, M.B., Saliba, K.J., Caruana, S.R., Kirk, K., and Cowman, A.F., 2000, Pgh1 Modulates Sensitivity and Resistance to Multiple Antimalarials in *Plasmodium falciparum*, *Nature*, 403(6772), 960-969.
- Robinson, T.P., Ehler, T., Hubbard, R.B., Bai, X., Arbiser, J.L., Goldsmith, D.J., and Bowen, J.P., 2003, Design, Synthesis and Biological Evaluation of Aromatic Enones Related to Curcumin, *Bioorg. Med. Chem.*, 13, 115-117.
- Rosdiana, S., 2010, *Parasitologi Kedokteran*, Yrama Widya, Jakarta.
- Septiana, E., Rachman, F., Lekatompessy, S.J.R., Sukiman, H.I., and Simanjuntak, P., 2018, Isolasi dan Identifikasi Kapang Endofit Asal Akar Tanaman Kunyit (*Curcuma longa*) sebagai Antimalaria, *Berita Biologi*, 17 (3), 273-274.
- Shadrack, D.M., Nyandoro, S.S., Munissi, J.J.E., and Mubofu, E.B., 2016, *In Silico* Evaluation of Anti-Malarial Agents from *Hoslundia opposita* as Inhibitors of *Plasmodium falciparum* Lactate Dehydrogenase (PfLDH) Enzyme, *Computational Molecular Bioscience*, 6, 23-32.
- Singh, D.B., and Dwivedi, S., 2016, Structural Insight into Binding Mode of Inhibitor with SAHH of *Plasmodium* and Human: Interaction of Curcumin with Anti-Malarial Drug Targets, *J Chem Biol*, 9, 107-120.
- Stohs, S.J., Chen, O., Ray, S.D., Ji, J., Bucci, L.R., and Preuss, H.G., 2020, Highly Bioavailable Forms of Curcumin and Promising Avenues for Curcumin-Based Research and Application: A Review, *Molecules*, 25 (1397), 1-12.
- Su, X., Kirkman, L.A., Fujioka, H., and Wellems, T.E., 1997, Complex Polymorphisms in an Approximately 330 Kda Protein are Linked to Chloroquine - Resistant *P. falciparum* in Southeast Asia and Africa, *Cell*, 91, 593-603.



- Susidarti, R.A., Mustofa, Lusika, V.P., and Astana, Y.N., 2014, *In Vitro* Antiplasmodial Activity of Coumarin 8-hydroxyisocapnolactone-2',3'-diol Isolated from *Micromelus minutum* (G. Forst.) Wight & Arn, *Indonesia J. Pharm.*, 25 (1), 44-50.
- Suwandi, J.F., 2015, Gen PfATP6 dan Resistensi *Plasmodium falciparum* terhadap Golongan Artmeisinin PfATP6 Gene and *Plasmodium falciparum* Resistance Against Artemisinin Derivate, *Juke Unila*, 5,141-146.
- Titulaer, H.A.C., Zuidema, J., and Lugt, C.B., 1991, Formulation and Pharmacokinetics of Artemisinin and Its Derivatives, *Int. J. Pharm.*, 69,83-92.
- Toden, S., and Goel, A., 2017, The Holy Grail of Curcumin and its Efficacy in Various Diseases: Is Bioavailability Truly a Big Concern?, *J Restor Med*, 6 (1), 27-36.
- Tracy, J.W., and Webster, L.T., 1996, Drugs Used in Chemotherapy of Protozoa Infections, *Pharmacological Basis of Therapeutics*, 965-985.
- Triwani, 2011, *Deteksi Resistensi Plasmodium falciparum terhadap Klorokuin dengan Marka Situs Polimorfik Lys76Tyr Gen Pfcrt Menggunakan PCR-RFLP*, FK UNSRI, Palembang.
- Vathsala, P.G., Dende, C., Nagaraj, V.A., Bhattacharya, D., Das, G., Rangarajan, P.N., and Padmanaban, G., 2012, Curcumin-Arteether Combination Therapy of Plasmodium Bergehi-Infected Mice Prevents Recrudescence through Immunomodulation, *Plos One*, 7 (1), 1-4.
- Waingeh, V.F., Groves, A.T., and Eberle, J.A., 2013, Binding of Quinoline-Based Inhibitors to *Plasmodium falciparum* Lactate Dehydrogenase: A Molecular Docking Study, *Open Journal of Biophysics*, 3, 285-290.
- Waknie-Grinberg, J.H., McQuillan, J.A., Hunt, N., Ginsburg, H., and Golenser, J., 2010, Modulation of Cerebral Malaria by Fasudil and Other Immune-Modifying Compounds, *Exp. Parasitol*, 125,141-146.
- Walsh, D.S., Wilairatana, P., Tang, D.B., Heppner, D.G., Brewer, T.G., Krudsood, S., Silachamroon, U., Phumratanaaprapin, W., Siriyanonda, D., and Looareesuwan, S., 2004, Randomized Trial of 3-Dose Regimens of Tafenoquine (WR238605) versus Low-Dose Primaquine for Preventing *Plasmodium vivax* Malaria Relapse, *Clin Infect Dis*, 39,1095-1103.
- Weni, A.D.D., Fitriah, Nenu, M.B.S., Tony, M.V., Andajani, S., and Basuki, S., 2019, Pengaruh Faktor Pendidikan Terhadap Akses dan Kepatuhan Pengobatan Malaria di Kabupaten Sikka Tahun 2018, *Jurnal Keperawatan Muhammadiyah Edisi Khusus*, 139-144.



White, N.J., 2004, Antimalarial Drug Resistance, *J. Clin. Inves.*, 113, 1084-1092.

White, N.J., 1994, Clinical Pharmcokinetics Aand Pharmacodynamics or Artemisinin and Derivatives, *Trans. R. Soc. Trop. Med. Hyg.*, 88, 41-43.

Yusuf, A.S., Sada, I., Hassan, Y., Olomola, T.O., Adeyemi, C.M., and Ajibade, S.O., 2018, Synthesis, Antimalarial Activity, and Docking Studies of Monocarbonyl Analogues of Curcumin, *Ovidius University Annals of Chemistry*, 29 (2), 92-96.

Zakiah, M., Syarif, R.A., Mustofa, M., Jumina, Fatmasari, N., and Sholikhah, E.N., 2021, *In Vitro* Antiplasmodial, Heme Polymerization, and Cytotoxicity of Hydroxyxanthone Derivatives, *Journal of Tropical Medicine*, 1-11.

Zein, U., 2005, *Penanganan Terkini Malaria Falciparum*, FK USU, Medan.