

DAFTAR PUSTAKA

- Al-Bari, M. A. A., 2015, Chloroquine Analogues in Drug Discovery: New Directions of Uses, Mechanism of Actions and Toxic Manifestation from Malaria to Multivarious Diseases, *J. Antimicrob. Chemother.*, 70(6), 1608-1621.
- An, L., Wang, J., Liu, J., Zhao, Z., and Song, Y., 2019, Design, Preparation, and Characterization of Novel Calix[4]arene Bioactive Carrier for Antitumor Drug Delivery, *Front. Chem.*, 732(7), 1-14.
- Ashley, E.A. and Phyto, A.P., 2018, Drugs in Development for Malaria, *Drugs*, 78, 861-879.
- Ashley, E.A., Phyto, A.P., and Woodrow, C.J., 2018, Malaria, *Lancet*, 391, 1608-1621.
- Asmara, I. G. Y., 2018, Infeksi Malaria *Plasmodium knowlesi* pada Manusia, *Jurnal Penyakit Dalam Indonesia*, 5(4), 109-120.
- Basillico, N., Pagoni, E., Monti, D., Oliaro, P., and Taramelli, D., 1998, A Microtitre Based Method for Measuring The Heme Polymerization Inhibitory Activity (HPIA) of Antimalarial Drugs, *J. Antimicrob. Chemother.*, 41, 55-60.
- Biali, S.E., Bohmer, V., Cohen, S., Ferguson, G., Grynszpan, F., Paulus, E.F., Gruttner, C., and Thondorf, I., 1996, Alkanediyl Bridged Calix[4]arenes: Synthesis, Conformational Analysis, and Rotational Barriers, *J. Am. Chem. Soc.*, 118, 12938-12949.
- Becker, K., Tilley, L., Vennerstorm, J. L., Roberts, D., Rogerson, S., and Ginsburg, H., 2004, Oxidative Stress in Malaria Parasite Infected Erythrocytes: Host-Parasite Interactions, *Int. J. Parasitol.*, 34, 163-189.
- Belete, T. M., 2020, Recent, Progress in the Development of New Antimalarial Drugs with Novel Targets, *DovePress*, 14, 3875-3889.
- Braga, C.B.E., Martins, A.C., Cayotopa, A.D.E., Klein, W.W., Schlosser, A.R., da Silva, A.F., de Souza, M.N., Andrade, B.W.B., Filgura-Junior, J.A., Pinto, W. D. J., and Nunes, M. D. S., 2015, Side Effects of Chloroquine and Primaquine and Symptom Reduction in Malaria Endemic Area (Mancio Lima, Acre, Brazil), *Interdisci. Infect. Dis*, 346853.
- Burilov, V. A., Fatikhova, G. A., Dokuchaeva, M. N., Nugmanov, R. I., Mironova, D. A., Dorovatoskii, P. V., Khrustalev, V. N., Solovieva, S. E., and Antipin, I. S., 2018, Synthesis of New *p*-tert-butylcalix[4]arene-based Polyammonium Triazolyl Amphiphiles and Their Binding with Nucleoside Phosphates, *Beilstein J. Org. Chem.*, 14, 1980-1993.
- Chenniappan, K. and Kadarkarai, M., 2010, *In vitro* Antimalarial Activity of Traditionally Used Western Ghats Plants from India and Their Interactions

- with Chloroquine Against Chloroquine-Resistant *Plasmodium falciparum*, *Parasitology Research*, 107(6), 1351-1364.
- Coronado, L.M., Nadovich, C.T., and Spadafora, C., 2014, Malarial Hemozoin from Target to Tool, *iochem. Biphys. Acta*, 1840(6), 2032-2041.
- Cui, L., Mharakurwa, S., Ndiaye, D., Rathod, P. K., and Rosental, P. J., 2015, Antimalaria Drug Resistance: Literature Review and Activities and Findings of the ICEMR Network, *Am. J. Trop. Med. Hyg.*, 93, 57-68.
- Da Silva, E., Lazas, A.N., and Coleman, A. W., 2004, Biopharmaceutical Application of Calixarenes, *J. Drug Deliv. Sci. Technol.*, 14, 3-20.
- Daysema, S.D., Waroow, S.M., Rompis, J., 2016, Gambaran Prevalensi Malaria pada Anak SD YAPIS 2 di Desa Maro Kecamatan Merauke Kabupaten Merauke Papua, *Jurnal e-Clinic*, 4(1), 41-45.
- Dodd, E. L. and Bohle, D. S., 2014, Orienting the Heterocyclic Periphery: A Structural Model for Chloroquine's Antimalarial Activity, *Chem. Commun.*, 50, 13765-13768.
- Firdaus, Jumina, dan Sastrohamidjojo, H., 2007, Sintesis dan Konformasi *p*-(Amino)Butoksikaliks[4]arena, *Indo. J. Chem.*, 7, 49-57.
- Galante, E., Geraci, C., Sciuto, S., Campo, V. L., Carulho, I., Sesti-Costa, R., Gudes, P. M. M., Silva, J. S., Hill, L., Nepogodiev, S. A., Field, R. A., 2011, Glycoclusters Presenting Lactose on Calix[4]arene Cores Display Trypanocidal Activity, *Tetrahedron*, 67, 5902-5912.
- Ginsburg, H. and Krugliak, M., 1999, Chloroquine-Some Open Questions on Its Antimalarial Mode of Action and Resistance, *Drug Resist. Update.*, 2, 180-187.
- Graham, P., 2020, *Antimalarial Agents Design and Mecanism of Action*, Elsevier, Oxford.
- Gregson, A. and Plowe, C.V., 2005, Mechanism of Resistance of Malaria Parasite to Antifolates, *Pharmacol*, 57(1), 117-145.
- Griffin, P., 2007, Pyrogallolarenes: A Synthetic Investigation, *Thesis*, Dublin City University, Dublin.
- Gutsche, C. D. and Iqbal, M., 1990, *p*-tert-butylcalix[4]arene (Preparation), *Org., Synth.*, 68, 234-237.
- Gutsche, C. D., Dhawan, B., Leoni, S. M., and Stewart, D., 1990, *p*-tert-butylcalix[6]arene (preparation), *Org., Synth.*, 68, 238-242.
- Hakim, L., 2017, Malaria: Epidemiologi dan Diagnosis, *Aspirator*, 2(3), 107-116.
- Huy, N.T., Maeda, A., Uyen, D.T., Trang, D. T. X., Susai, M., Shiono, T., 2007, Alcohols Induce Beta-Hematin Formation Via the Dissociation of Aggregated Heme and Reduction in Interfacial Tension of the Solution, *Acta Tropica*, 101, 130-138.

- Ivanna, 2013, Hubungan Antara Derajat Keparahan Malaria dengan Jumlah Trombosit pada Manusia di RSUD Bethesda Serukam Kabupaten Bengkayang Periode 2009-2012, *Jurnal Mahasiswa Fakultas Kedokteran Untan*, 1(3), 1-19.
- Jain, V. K. and Kanaiya, P. H., 2011, Chemistry of Calix[4]resorcinarene, *Russ. Chem. Rev.*, 80(1), 75-102.
- KEMENKES RI, 2014, *InfoDATIN Situasi Malaria di Indonesia*, Pusat Data dan Informasi Kesehatan RI.
- Kubik, S., 2019, *Supramolecule Chemistry in Water*, Wiley-VCH, Weinheim.
- Kumar, S., Guha, M., Coubey, V., Maity, P., and Bandyopadhyay, U., 2007, Antimalarial Drugs Inhibitory Hemozoin (β -hematin) Formation: A Mechanistic Update, *Life Science*, 80, 813-828.
- Liu, J., Gluzman, I. Y., Drew, M. T., and Goldberg, D. E., 2005, The Role of *Plasmodium falciparum* Food Vacuole Plasmepsin, *The Journal of Biological Chemistry*, 280(2), 1432-1437.
- Liu, J-L., Sun, M., Su, Y. H., Zhou, X-M., Zhang, P. Z., Jia, A-Q., Zhang, Q-F., 2022, Functional modification, self assembly and application of calix[4]resorcinarenes, *J. Incl. Phenom. Macrocycl. Chem.*
- Macetti, G., Loconte, L., Rizatto, S., Gatti, C., and Lo Presti, L., 2016, Intermolecular Recognition of the Antimalarial Drug Chloroquine: A Quantum Theory of Atoms in Molecules – Density Functional Theory Investigation of the Hydrated Dihydrogen Phosphate Salt from the 103 K X-ray Structure, *Crystal Growth & Design*, 16(10), 6043-6054.
- Mishra, N., Prajapati, K., Kaithalia, K., Bharti, S., Srivastava, B., and Phuukan, S., 2015, Surveillance of artemisinin resistance in *Plasmodium falciparum* in India using the kelch 13 molecular marker, *Antimicrob. Agents Chemother.*, 59, 2548-2553.
- Munch, J. H., and Gutsche, C. D., 1990, *p*-tert-butylcalix[8]arene (preparation), *Org., Synth.*, 68, 243-246.
- Muneer, S., Memon, S., Pahnwar, Q. K., Bhatti, A. A., and Khokharm T. S., 2017, Synthesis and Investigation of Antimicrobial Properties of Pyrolidine Appended Calix[4]arene, *J. Anal. Sci. Technol.*, 8(3), 1-6.
- Nagaraj, V.A., Sundaram, B., Varadarajan, N.M., Subramani, P.A., Kallapa, D.M., Ghosh, S.K., and Padmanaban, G., 2013, Malaria Parasite Synthesized Heme is Essential in The Mosquito and Liver Stages and Complements Host Heme in the Blood Stages of Infection, *PLoS Pathogens*, 9(8).
- Neri, P., Sessler, J. L., and Wang, M.X., 2016, *Calixarenes and Beyond*, Springer, Switzerland.
- Nosten, F. and White, N.J., 2007, Artemisinin-based Combination Treatment of *falciparum* Malaria, *Am. J. Trop. Med. Hyg.*, 77(6), 181-190.

- Notobroto, H.B. dan Hidajah, A.C., 2009, Faktor Risiko Penularan Malaria di Daerah Perbatasan, *J. Penelit. Med. Eksakta*, 2(8), 143-151.
- Pagola, S., Stephens, P.W., Bohle, D.S., Kosar, A.D., and Madsen, S. K., 2000, The Structure of Malaria Pigment β -hematin, *Nature*, 307-310.
- Pandey, A.V., Bisht, H., Babbarwal, V.K., Srivastava, J., Pandey, K.C., and Chauhan, V.S., 2001, Mechanism of Malarial Heme Detoxification Inhibition by Chloroquine, *Biochem. J.*, 355, 333-338.
- Pashirova, T. N., Gibadullina, E. M., Burilov, A. R., Kashapov, R. R., Zhiltsova, E. P., Syakaev, V. V., Habicher, W. D., Rummeli, M. H., Latypov, S. K., Konovalov, A. I., and Zakharova, L. Y., 2014, Amphiphilic O-functionalized Calix[4]resorcinarene with Tunable Structural Behaviour, *RSC Advances*, 4, 9912-9919.
- Patel, M. B., Valand, N. N., Modi, N. R., Joshi, K. V., Harikrishnan, V., 2013, Effect of *p*-sulfonatocalix[4]resorcinarene (PS[4]R) on the Solubility and Bioavailability of A Poorly Water Soluble Drug Lamotrigine (LMN) and Computational Investigation, *RSC Advances*, 36(3), 15971-15981.
- Prabowo, A., 2008, *Malaria: Mencegah dan Mengatasinya*, Puspa Swara, Jakarta.
- Pur, N. F. and Karim, A. D., 2014, Calixpenams: Synthesis, Characterization and Biological Evaluation of Penicillins V and X Clustered by Calixarene Scaffold, *Turk. J. Chem.*, 38, 288-296.
- Pur, N. F., 2016, Calixdrugs: Calixarene-based Clusters of Established Therapeutic Drug Agents, *Mol. Divers.*, 20, 781-787.
- Shah, R. B., Valand, N. N., Sutariya, P.G., and Menon, S. K., 2016, Design, Synthesis and Characterization of Quinoline – Pyrimidine Linked Calix[4]arene Scaffolds as Anti-Malarial Agents, *J. Incl. Phenom. Macrocycl. Chem.*, 84, 173-178.
- Silva, A.V., Forero, R.S., Sanabria, E.S., Redondo, A.P., and Maldonado, M., 2019, Host-Guest Inclusion System of tetra(alkyl)resorcin[4]arenes with Cholin in DMSO: Dynamic NMR Studies and X-Ray Structural Characterization of the 1:1 Inclusion Complex. *Jour. of Mol. Struct.*, 1198, 126846.
- Talisuna, A.O., Bloland, P., and D'Alessandro, U., 2004, History, Dynamics and Public Health Importance of Malaria Parasite Resistance, *CLIN. MICROBIOL. REV.*, 1(17), 235-254.
- Timmerman, P., Verboom, W., and Reinhoudt, D. N., 1996, Resorcinarenes, *Tetrahedron*, 52(8), 2663-2704.
- Tsou, L. K., Dutschman, G. E., Gullen, E. A., Telpoukhovskaia, M., Cheng, Y., and Hamilton, A. D., 2010, Discovery of A Synthetic Dual Inhibitor of HIV and HCV Infection based on A Tetrabutoxy-calix[4]arena Scaffold, *Bioorg. Med. Chem., Lett.*, 20, 2137-2139.

- Van der Pluijm, R.W., Tripura, R., Hoglund, R.M., Phyto, A.P., Lek, D., Ul Islam, A., Anvikar, A.R., Satpathi, P., Satpathi, S., Behera, P.K., Tripura, A., Baidya, S., Oyamboko, M., Chau, N.H., and Sovann, Y., 2020, Triple Artemisinin-based Combination Therapies Versus Artemisinin-based Combination Therapies for Uncomplicated Plasmodium Malaria: a Multicentre, Open-label, Randomised Clinical Trial, *Lancet*, 395, 1345-1360.
- Vanderesse, R., Colombeau, L., Frochot, C., and Acherar, S., 2016, *Current Topics in Malaria*, Intech Open, Vienna.
- Widoyono, 2011, *Penyakit Tropis: Epidemiologi, Penularan, Pencegahan, dan Pemberantasannya*, Erlangga, Jakarta.
- Widyawaruyanti, A., Zaini, N.C., dan Syarifuddin, 2011, Mekanisme dan Aktivitas Antimalaria dari Senyawa Flavonois yang Diisolasi dari Cempedak (*Artocarpus Champeden*), *JBP*, 2(13), 67-77.
- World Health Organisation (WHO), 2015, *Guideline for treatment of malaria*, 3 rd edition, World Health Organisation, Geneva.
- World Health Organisation (WHO), 2021, *World Malaria Report*, World Health Organisation, Geneva.
- Zakiah, M., Syarif, R. A., Mustofa, M., Jumina, J., Fatmasari, N., and Sholikhah, E. N., 2021, *In Vitro* Antiplasmodial, Heme Polymerization, and Cytotoxicity of Hydroxyxanthone Derivatives, *J. Trop. Med.*, 2021, 1-11.
- Zhou, J., Yu, G., and Huang, F. H., 2017, Supramolecular chemotherapy based on host-guest molecular recognition: a novel strategy in the battle against cancer with a bright future, *Chem. Soc. Rev.*, 46, 7021-7053.