

DAFTAR PUSTAKA

- Afshar, F.H., Delazar, A., Asnaashari, S., Vaez, H., Zolali, E. dan Asgharian, P., 2018, Screening of Anti-malarial Activity of Different Extract Obtained from Three Species of Scrophularia Growing in Iran, *Iran J. Pharm. Res.*, 17(2), 668-676.
- Agrawal, Y.K. dan Patadia, R.N., 2006, Microwave-Assisted Synthesis of Calix[4]resorcinarene of Hydroxamic Acids, *Synth. Commun.*, 36, 1083-1092.
- Anonim, 2020, *Waspadai Malaria di Tengah Pandemi Covid-19*, Kementerian Kesehatan Republik Indonesia, Jakarta.
- Anonim, 2017, *World Malaria Report 2016*, World Health Organization Press, Geneva.
- Anonim, 2021, *World Malaria Report 2020*, World Health Organization Press, Geneva.
- Basilico, N., Pagani, E., Monti, D., Oliaro, P. dan Taramelli, D., 1998, A Microtitre-Based Method for Measuring the Heme Polymerization Inhibitory Activity (HPIA) of Antimalarial Drugs, *J. Antimicrob. Chemother.* 42, 55-60.
- Cazar, R.A. dan Torres, F.J., 2014, Theoretical Indications on the Relationship Between Pyrogallol[4]arenes Dynamics of Assembling and Geometry, *Univ. Sci.*, 19(2), 133-137.
- Cui, L., Rosenthal, P.J., Rathod, P.K., Ndiaye, D. dan Mharakurwa, S., 2015, Antimalarial Drug Resistance: Literature Review and Activities and Findings of the ICEMR Network, *Am. J. Trop. Med. Hyg.*, 93(Suppl 3), 57-68.
- Da Silva, E., Bernard, C., Lazar, A. dan Coleman, A.W., 2004, Biopharmaceutical Applications of Calixarenes, *J. Drug. Del. Sci. Tech.*, 14, 3-20.
- Dodd, E.L. dan Bohle, D.D., 2014, Orienting the Heterocyclic Periphery: A Structural Model for Chloroquine's Antimalarial Activity, *Chem. Commun.*, 50, 13765-13768.
- Dsouza, R.N., Pischel, U. dan Nau, W.M., 2011, Fluorescent Dyes and Their Supramolecular Host/Guest Complexes with Macrocycles in Aqueous Solution. *Chem. Rev.*, 111:7941-7980.
- Espanol, E.S. dan Villamil, M.M., 2019, Clixarenes: Generalities and Their Role in Improving the Solubility, Biocompatibility, Stability, Bioavailability, Detection, and Transport of Biomolecules, *Biomolecules*, 9(3), 90-105.
- Fitriastuti, D., Mardjan, M.I.D., Jumina dan Mustofa, 2014, Synthesis and Heme Polymerization Inhibitory Activity (HPIA) Assay of Antiplasmodium of (1)-N-(3,4-dimethoxybenzyl)-1,10-phenanthroline Bromide from Vanillin, *Indones. J. Chem.*, 14(1), 1-6.
- Fitriastuti, D., Julianto, T.S. dan Iman, A.W.N., 2020, Identification and Heme Polymerization Inhibition Activity (HPIA) Assay of Ethanolic Extract and Fraction of Temu Mangga (*Curcuma mangga Val.*) Rhizome, *Eksakta*, 1(1), 64-72.

- Funck, M., Guest, D.P. dan Cave, G.W.V., 2010, Microwave-Assisted Synthesis of Resorcin[4]arene and Pyrogallol[4]arene Macrocycles, *Tetrahedron Lett.*, 51, 6399-6402.
- Gerkenmeier, T., Mattay, J. dan Nather, C., 2001, A New Type of Calixarene: Octahydroxypyridine[4]arenes, *Chem. Eur. J.*, 7(2), 465-474.
- Guetzoyan, L., Yu, X., Ramiandrasoa, F., Pethe, S., Rogier, C., Pradines, B., Cresteil, T., Perree-Fauvet, M. dan Mahy, J., 2009, Antimalarial Acridines: Synthesis in Vitro Activity Against *P. falciparum* and Interaction with Hematin, *Bioorg. Med. Chem.*, 17, 8032-8039.
- Guo, D.S. dan Liu, Y., 2014., Supramolecular Chemistry of p-Sulfonatocalix[n]arenes and Its Biological Applications, *Acc. Chem. Res.*, 47, 1925-1934.
- Gutsche, D.C., 1998, *Calixarenes Revisited*. The Royal Society of Chemistry, United Kingdom.
- Harizal, 2015, Sintesis 4-metoksifenilkaliks[4]pirogallolaryl Benzoate-Sinamat sebagai Senyawa Tabir Surya, *Disertasi*, FMIPA UGM, Sleman.
- Huy, N.T., Uyen, D.T., Maeda, A., Thi, D., Trang, X., Oida, T., Harada, S. dan Kamei, K., 2007, Simple Colorimetric Inhibition Assay of Heme Crystallization for High-Throughput Screening of Antimalarial Compounds, *Antimicrob. Agents Chemother.*, 51, 350-353.
- Joshi, S., Munshi, R., Talele, G. dan Shah, R., 2017, An Experimental In Vitro Study to Evaluate the Antimalarial Activity of Select Homeopathy Preparations, *Int. J. Med. Health Res.*, 3(7), 65-68.
- Kellici, S., Acord, J., Vaughn, A., Power, N.P., Morgan, J. dan Heil, T., 2016, Calixarene Assisted Rapid Synthesis of Silver-Graphene Nanocomposites with Enhanced Antibacterial Activity, *ACS Appl. Mater. Interfaces*, 1-30.
- Kumar, R., Mohanakrishnan, D., Sharma, A., Kaushik, N.K., Kalia, K., Sinha, A. K. dan Sahal, D., 2010, Reinvestigation of Structure-Activity Relationship of Methoxylated Chalcones as Antimalarials: Synthesis and Evaluation of 2,4,5-trimethoxy Substituted Patterns as Lead Candidates Derived from Abundantly Available Natural β -asarone, *Eur. J. Med. Chem.*, 4, 5292-5301.
- Kurniawan, B., Irawati, N., Suwandi, J.F. dan Tjong, D.H., 2018, Study of the K13 Gene Polymorphisms in *Plasmodium falciparum* in Pesawaran, Lampung, Indonesia, *Pak. J. Biotechnol.*, 15(4), 871-874.
- Kobayasi, K. dan Yamanaka, M., 2015, Self-Assembled Capsules Based on Tetrafunctionalized Calix[4]resorcinarenes Cavitands, *Chem. Soc. Rev.*, 44, 449-466.
- Maerz, A.K., 2011, Synthesis and Characterization of Host-Guest Complexes; Metal-Organic Nanocapsules Using Aryl Substituted Pyrogallol[4]arenes, *Dissertation*, University of Missouri-Columbia, Columbia.
- Mokhtari, B. dan Pourabdullah, K., 2012, Applications of Calixarene Nano-Baskets in Pharmacology, *J. Incl. Phenom Macrocycl Chem.*, 73, 1-15.
- Murray, C.J.L., Rosenfeld, L.C., Lim, S.S., Andrews, K.G., Foreman, K.J., Haring, D., Fullman, N., Naghavi, M., Lorenzo, R. dan Lopez, A.D., 2012, Global

- Malaria Mortality Between 1980-2010: A Systematic Analysis, *The Lancet*, 379(9814), 413-431.
- Muti'ah, R., 2012, Penyakit Malaria dan Mekanisme Kerja Obat-Obatan Antimalaria, *Alchemy*, 2(1), 80-91.
- O'Neill, P.M., Barton, V.E. dan Ward, S.A., 2010, The Molecular Mechanism of Action of Artemisinin-The Debate Continues, *Molecules*, 15(3), 1705-1721.
- Patel D.P. dan Chaudhari, B.G., 2012, Application of Supramolecules in Drug Delivery, *J. Curr. Pharm. Res.*, 9(1), 1-5.
- Pfeiffer, C.R., Feaster, K.A., Dalgarno, S.K. dan Atwood, J.L., 2015, Synthesis and Characterization of Aryl-Substituted Pyrogallol[4]arenes and Resorcin[4]arenes, *Cryst. Eng. Comm.*, 18, 222-229.
- Pur, F.N. dan Dilmaghani, K.A., 2014, Calixplatin: Novel Potential Anticancer Agent Based on the Platinum Complex with Functionalized Calixarene, *J. Coord. Chem.*, 67(3), 440-448.
- Rathore, D., Jani, D., Nagrakatti, R. dan Kumar, S., 2006, Heme Detoxification and Anti-Malarial Drug-Known Mechanisms and Future Prospect, *Drug Discov. Today Ther. Strateg.*, 3, 153-158.
- Rodik, R.V., Boyko, V.I. dan Kalchenko, V.I., 2009, Calixarenes in Biomedical Research, *Curr. Med. Chem.*, 16(13), 1630-1655.
- Rojsajakul, T., Veravong, S., Tumcharern, G., Seangprasertkij-Magee, R. dan Tuntulani, T., 1997, Synthesis and Characterization of Polyaza Crown Ether Derivatives of Calix[4]arene and Their Role as Anion Receptors, *Tetrahedron*, 53(13), 4669-4680.
- Rosenthal, P.J., 2003, Review Antimalarial Drug Discovery: Old and New Approaches, *J. Exp. Biol.*, 206, 3735-3744.
- Sayekti, E., 2018, Sintesis Senyawa Seri Alkoksifenilkaliks[4]resorsinarena sebagai Antioksidan dan Antikanker serta Ester Alkoksifenilkaliks[4]resorsinaril Oktabenzoat/Oktasinamat sebagai Tabir Surya, *Disertasi*, FMIPA UGM, Yogyakarta.
- Shah, M.D. dan Agrawal, Y.K., 2012, Calixarene: A New Architecture in The Analytical and Pharmaceutical Technology, *J. Sci. Ind. Res.*, 71, 21-26.
- Shah, R.B., Valand, N.N., Sutariya, P.G. dan 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.
- Sidhu, A.B.S., Verdier-Pinard, D. dan Fidock, D.A., 2002, Chloroquine Resistance in *Plasmodium falciparum* Malaria Parasites Conferred by pfcr1 Mutations, *Science*, 298(5591), 210-213.
- Sliwa, W. dan Deska, M., 2008, Calixarene Complexes with Soft Metal Ions, *Arkivoc*, 1, 87-89.
- Surjadjaja, C., Surya, A. dan Baird, J.K., 2016, Epidemiology of *Plasmodium vivax* in Indonesia, *Am. J. Trop. Med. Hyg.*, 95, 121-132.
- Sutanto, H., Susanto, B.H. dan Nasikin, M., 2019, Solubility and Antioxidant Potential of a Pyrogallol Derivative for Biodiesel Additive, *Molecules*, 24, 24-39.



- Trush, V.V., Cherenok, S.O., Tanchuk, V.Y., Kukhar, V.P., Kalchenko, V.I. dan Vovk, A.I., 2013, Calix[4]arene Methylenebisphosphonic Acids as Inhibitors of Protein Tyrosine Phosphatase 1B, *Bioorg. Med. Chem. Lett.*, 23(20), 5619-5623.
- Widyawaruyanti, A., Devi, A.P., Fatri, L., Tumewu, I., Tantular dan Hafid, A.F., 2014, In Vitro Antimalarial Activity Screening of Several Indonesian Plants Using HRP2 Assay, *Int. J. Pharm. Sci.*, 6, 125-128.
- Yan, C., Chen, W., Jiang, T. dan Yao, Y., 2007, Microwave Irradiation Assisted Synthesis, Alkylation Reaction and Configuration Analysis of Aryl Pyrogallol[4]arenes, *Tetrahedron*, 51, 6399-6402.
- Yasmin, L., Coyle, T., Stubbs, K. dan Rason, C.L., 2013, Stereospecific Synthesis of Resorcin[4]arenes and Pyrogallol[4]arenes in Dynamic Thin Films, *Chem. Comm.*, 49, 10932-10934.
- Yousaf, A., Hamid, S.A., Bunnori, N.M. dan Ishola, A.A., 2015, Applications of Calixarenes in Cancer Chemotherapy: Facts and Perspectives, *Drug Des. Devel. Ther.*, 9, 2831-2838.
- Zambrano, C.H., Manzano, S., Mendez, M.A., Dueno, E.E., Cazar, R.A. dan Torres, F.J., 2013, A Theoretical Study of the Conformational Preference of Alkyl- and Aryl- Substituted Pyrogallol[4]arenes and Evidence of the Accumulation of Negative Electrostatic Potential within the Cavity of Their rccc conformers, *Mol. Simul.*, 40(4), 327-334.
- Zulkoni, A., 2010, *Parasitologi*, Nuha Medika, Yogyakarta.