

## DAFTAR PUSTAKA

- Ahmad, A. and Patong, R., 2005, Aktivitas Antikanker Senyawa Bahan Alam Kurkumin dan Analognya pada Tingkat Molekuler, Laboratorium Biokimia dan Bioteknologi, Departemen Kimia, Universitas Makasar.
- Aichaoui, H., Guenadil, C. N., Kapanda, C. N., Lambert, D. M., McCurdy, C.R., and Poupaert, J. H., 2009, Synthesis and Pharmacological Evaluation of Antioxidant Chalcone Derivative of 2 (3H)-benzoxazolones, *Med. Chem. Res.*, 18, 467-476.
- Aponthe, J. C., Varestegui, M., Malaga, E., Zimic, M., Quiliano, M., Vaisberg, A. J., Gilman, R.H., and Hammond, G. B., 2008, Synthesis, Cytotoxicity, and Anti-Trypanosoma Cruzi Activity of New Chalcones, *J. Med. Chem.*, 51, 6230-6234.
- Bano, S., Javed, K., Ahmad, S., Rathish. I. G., and Singh, S., 2013, Synthesis of some novel Chalcones, flavanones, and flavones and evaluation of their anti-inflammatory agents. *World j. pharm. Sci.*, 1(4), 1446-1453.
- Cardenas, M., Marder, M., Blank, V.C., and Roguin, L.P., 2006, Antitumor Activity of Some Natural Flavonoids and Synthetic Derivatives on Various Human and Murine Cancer Cell Lines, *Med. Bio. Chem.*, 14, 2966-2971.
- Choy, P. Y., and Kwong, F. Y., 2013, Palladium-Catalyzed Ortho-CH-Bond Oxygenation of Aromatic Ketones, *Org. Lett.*, 15, 2, 270-273.
- Clark, R. A., Levine, R., and Snedeker, S., 1997, The Biology of Breast Cancer, Program on Breast Cancer and Environmental Risk Factors (BCERF) College of Veterinary Medicine, Cornell University, New York.
- Defilippis, R.A., Goodwin, E.C., Wu, L. and Maio, D., 2003, Endogenous Human Papillovirus E6 and E7 Protein Differentially Regulate Proliferation, Senescence, and Apoptosis In HeLa Cervical Carcinoma Cells, *J. Virol.*, 77, 1551-1564.
- Djajanegara, I., dan Wahyudi, P., 2009, Pemakaian Sel HeLa dalam Uji Sitotoksiitas Fraksi Kloroform dan Etanol Ekstrak Daun *Annona squamosa*, *Jurnal Ilmu Kefarmasian Indonesia*, 7(1), 7-11.
- Ferrer, R., Lobo, G., Gamboa, N., Rodrigues, J., Abramjuk, C., Jung, k., Lein, M., and Charris J. E., 2009. Synthesis of [(7-Chloroquinolin-4yl)amino] Calcones: Potent malarial and Anticancer Agent, *J. Sci. Pharm.*, 77, 725-741.

- Firmansyah, R., Khambri, D., Edison, E., dan Rofinda, Z.D., 2015. Kejadian Demam Neutropenia Pada Pasien Kanker Payudara Yang Mendapat Kemoterapi. *Majalah Kedokteran Andalas*, **37**: 12–19.
- Fitzmaurice, C., Dicker, D., Pain, A., Hamavid, H., Moradi-Lakeh, M., MacIntyre, M.F., 2015. The Global Burden of Cancer 2013. *JAMA Oncology*, **1**: 505.
- Hirata, T., Fuji, A. K., Yanaka, N., Ogawa, K., and kuroyanagi, M., 2009, Identification and Phisiological Evaluation of the Component from Citrus Fruits as Potential Drugs fot Anti-Corpulence and Anticancer, *Bioorg. Med. Chem.*, **17**, 25-28.
- Horner, S.M., Defilippis, R.A., Manuelidis, L. and Dimaio, D., 2004, Repression of The Human Papillomavirus E6 Gene Initiates p53-Dependent, Telomerase-Indipendent Senescence and Apoptosis In HeLa Cervical Carcinoma Cells, *J. Virol.*, **28**(8), 4063-4073.
- Hsiesh, C. T., Hsieh, T. J., El-Shazly, M., Chuang, D. W., Tsai, Y. H., Yen, C. T., Wu, S. E., Wu, Y. C., and Chang, F. R., 2012, Synthesis of Chalcone Derivatives as Potential Anti-Diabetic Agents, *Bioor. Med. Chem. Lett.*, **22**, 3912-3915.
- Ismiyarto, 2000, Synthesis chalcone and flavones compound using raw material of asetophenone and benzaldehyde derivative, *indones. J. chem.* 81-89.
- Isoda, H., Matojima, H., Onaga, S., Samet, I., Villareal, M.O., and Han, J., 2014, Analysis of The Erythroid Differentiation Effect of Flavonoid Apigenin on k562 Human Chronic Leukimia Cells, *Chemico-Biological Interactions*, **220**, 269-277.
- Kamuhabwa, A., Nashimo, C., and de Witte. P., 2000, Cytotoxicity of Some Medicinal Plant Extracts Used in Tanzanian 12 tRaditional *Medicine*, *J. Ethnopharmacol.*, **70**, 143-149.
- Ketabforoosh, S.H.M.E., Kheirollahi, A., Safavi, M., and Esmati, N., 2014, Full Paper Synthesis and Anti-Cancer Activity Evaluation of New Dimethoxylated Chalcone and Flavanone Analogs, *Arch. Pharm. Chem. Life Sci.*, **347**, 853-860.
- Kishor V.G., Sandip V.G., Satish B.J., and Shantilal D.R., 2010, Synthesis of Some Novel Chalcones of Phthalimidoester possessing good antiinflamatory and antimicrobial activity, *Indian Journal of Chemistry*, **49B** : 131 – 136.

- Koohpar, Z. K., Entezari, m., Movafagh, A., and Hashemi, M., 2015, Anticancer Activity of Curcumin on Human Breast Adenocarcinoma: Role of Mc1-1 Gene, *Iran J. Cancer Prev.*, 8(3), e2331.
- Kozlowski, D., Trouillas, P., Calliste, C., Marsal, P., Lazzaroni, R., and Duroux, J.L., 2006, Density Functionla Theory Study of Conformational, Electronic, and Antioxidant Properties of Natural Chalcones, *J. Phys. Chem.*, 111, 1138-1145.
- Kshatriya, R.B., Machhi, J., and Nazeruddin, G.M., 2014, Novel Methodology and Process Optimization for the Synthesis of Flavon, *Inter. J. of Pharm Reasearch and review*, 3, 47-57.
- Lavrero, M., De Laurenzi, V., Costanzo, A., Gong, J., Wang, J.Y., and Melino, G., 2000, The p53/p63/p73 Family of Transcription Factors: Overlapping and Distinct Funcyions, *J. Cell Sci.*, 113(10), 1661-1670.
- Lee, D. H., Jung, Y. J., Koh, D., and Lee, Y. H., 2016, A Synthesis Chalcones 2-Hidroxy-2,3,5-trimetoxychalcones Triggres Unfolded Protein Response Mediated Apoptosis in Breast Cancer Cell, *Cancer Lett.*, 371, 1-9.
- Lee, J.I. and Jung, M.G., 2005, A New Route for The Synthesis of Flavanones from 2-methoxybenzoic Acids, *Bull. Korean Chem, Soc.*, 26, 2044-2046.
- Lee, J. S., 2014, Reproductive Factors and Subtype of Breast Cancer Defined by Estrogen Reseptor, Progesterone Reseptor, and Human Epidermal Growth Factor Reseptor 2: A Register-Based Study From Korea, *Clin. Breast. Cancer.*, 14, 426-434.
- Li, J., Feng, J., Li, M., Wang, Q., Su, Y., and Jia, Z., 2013, Studies of Manufacturing Controlled-Release Graphene Acid and Catalyzing Synthesis of Chalcone with Claisen-Schmidt Condensation Reaction, *Sol. Sci.*, 21, 1-5.
- Li, Y. P., Yang, Y. C., Li, Y. K., Jiang, Z. Y., Hung, X. Z., Wang, W, W. G., and Gao, X. M., 2014, Prenilated Chalcones from *Desmodium renifolium*, *Photochem. Lett.*, 9, 41-45.
- Lim, S. S., Kim, H. S., and Lee, D. U., 2007, in vitro Antimalarial Activity Of Flavonoids and Chalcones, *Bull, Korean Chem.*, 28 (12), 2495-2497.
- Liu, H. C., Chen, G. G., Vlantis, A. C., Leung, B. C., Tong, M. C., and van Hasselt, C. A., 2006, 5-Flourouracil Mediates Apoptosis and G1/S Arrest in laryngeal Squamous Cell Carcinoma via a P53-Independent Pathways, *Cancer J.*, 12(6), 482-493.

- Mai, C. Wai, Yaeghoobi, M., Abd-rahman, N., Kang, Y., and Rao, M., 2014, Chalcones with Electron-withdrawing and Electron-donating Substituents: Anticancer Activity Against Trail Resistant Cancer Cells, Structure Activity Relationship Analysis and Regulation of Apoptotic Proteins, *Eur. J. Med. Chem.*, 77, 378-387.
- Matin, A., Gavande, N., Kim, M. S., Yang, N. X., Salam, N. K., Hanrahan, J. R., Roubin, R. H. and Hibbs, D. E., 2009, 7-Hydroxy-Benzopyran-4-one Derivatives : A Novel Pharmacophore of Peroxisome of Proliferator-Activated Receptor  $\alpha$  and  $\gamma$  (PPAR  $\alpha$  and  $\gamma$ ) Dual Agonists. *J. Med. Chem.*, 52, 6835-6850.
- Matsjeh, S., 2013 *Kimia Hasil Alam Senyawa Metabolit Sekunder Tumbuhan Flavanoid, Terpenoid, dan Alkaloid*, Gre Publishing, Yogyakarta.
- Matsueda, S., Sannohe, K., and Saito, Y., 1963, The Reaction Products from Resorcinol Dimethyl Ether and Cinnamoyl Chloride by the Friedel Craft Reaction, *Notes*, 36 (11), 1528-1530.
- Mondal, R., Gupta, A., Das, and malik A.K. 2011, Synthesis of flavanones by use The Anhydrous potassium Carbonate as An Inexpensive, safe and Afficient Basic Catalyst, *Tetrahedron Lett*, 52, 5020-5024.
- Mosmann, 1983, *Rapid Colorimetric Assay for Celluler Growth and Survival: Applicaton to Proliferation and Cytotoxicity Assay*, DNA X Research Institute of Molekular and Cellular Biology, Inc. USA.
- Murthy, Y. L., Viswanath, I. V and Pandit, E. N., 2010, Synthesis, Characterization & Antibacterial Activity of 7,4-dihydroxy-3-metoxy Flavones. *Int J. Chem. Tech. Rec.*, 2(2), 1097-1101.
- Nurani, L. H., 2011, Uji Sitotoksitas dan Antiproliferatif Fraksi Etil Asetat Ekstrak Eetanol Biji Jinten Hitam (*Nigella sativa*, Lour) Terhadap sel Miolema, *Jurnal Ilmiah Kefarmasian*, 2, 11-21.
- Nurfitriia, K., 2015, Sintesis dan Uji Sitotoksitas 7-hidroksi-4'-metoksiflavanon Terhadap Sel Kanker Serviks (HeLa) dan Sel Kanker Kolon (WiDr), *Tesis, FMIPA UGM*, Yogyakarta.
- Palozza, P., Serini, S., Maggiano, N., Tringali, G., Navarra, P., Ranelletti, F. O., and Calviello, G., 2005,  $\beta$ -Carotene Downregulates the Steady-State and Heregulin- $\alpha$ -Induced COX-2 Pathways in Colon Cancer Cells, *J. Nutr.*, 135, 129-136.

- Parvaskar, P. T., Parameswaran, P. S., and Tilve, S. G., 2012, Recent Developments in The Synthesis of Five-and Six-Membered Heterocycles Using Molecular Iodine, *Chem. Eur. J.*, 18, 5460-5489.
- Patil, C.B., Mahajan, S.K., and Katti, S.A., 2009, Chalcone: A Versatile Molecule, *J. Pharm. Sci, Res.*, 1, 11-12.
- Pavia, D. L., Lampman, G. M., Kriz, G. S., and Vyvyan, J. R., 2009, *Introduction to Spectroscopy, Fourth Edition*, Brooks/Cole Cengage Learning, Belmont.
- Peterson, J.J., Beecher, G.R., Bhagwat, S.A., Dwyer, J.T., Gebhardt, E., Haytowitz, D.B., and Holden, J.M., 2006, Flavanones in Grapefruit, Lemons, and Limes: A Compilation and Review of The Data from The Analytical Literature, *J. Food Comp Anal.*, 19, 74-80.
- Prasad, Y. R., Kumar, P. R., Deepti, C. A, and Ramana, M. V., 2006, Synthesis and Antimicrobial Activity Of Some Novel Chalcones Of 2-Hydroxy-1-Acetophenone and 3-Acetyl Coumarin, *E-Journal of Chemistry.*, 3 (13), 326-241.
- Rahman, A. F. M. M., Ali, R., Jahng, Y., and Kadi, A. A., 2012, A Facile Solvent Free Claisen-Schmidt Reaction: Synthesis of  $\alpha, \alpha'$ -bis-(Substituted-benzylidene) cycloalkanones and  $\alpha, \alpha'$ -bis-(Substituted-alkylidene) cycloalkanones, *Molecules*, 17, 571-583.
- Rao, N. S., Kistareddy, C., Bhavani, B., and Bhavani, R., 2013, Synthesis Antibacterial and Antifungi Activity of Some Novel Chalcones Derivatives Derived From Apocynin, *Chem. J.*, 3 (6), 143-148.
- Regina, S., 2011, The MTT Assay as Tool to Evaluate and Compare Excipient Toxicity In Vitro on Respiratory Epithelial Cells, *J. Pharm.*, 411, 98-105.
- Rifqi, A., 2018, Sintesis Kalkon, Flavon, dan Flavanon dari Veratraldehida Serta Uji Sitotoksitasnya Terhadap Sel Kanker HeLa, WiDr. T47D, dan MCF-7 Secara In Vitro, *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Sak, K., 2014, Citotoxicity of Dietary Flavanoids on Different Human Cancer Types, *Phcog rev*, 8 (16), 122-146.
- Sarda, S.R., Jadhav, W.N., Pawar, R.P., and College, J.E.S., 2009,  $I_2-Al_2O_3$ : A Suitable Heterogeneous Catalyst for The Synthesis of Flavones Under Microwave Irradiation, *Inter J. Chem Tech.*, 1, 539-543.

- Sepvianti, W., 2016. Sintesis dan uji sitotoksitas turunan kalkon terhadap sel kanker T47D, HeLa dan WiDr secara in vitro, *Tesis*, FMIPA UGM, Yogyakarta.
- Sieuwerths, A. M., Klijin, J. G., Peters, H. A., and Foekens, J. A., 1995. The MTT Tertazolium Salt Assay Scrutinized : How To Uses This Assay Reliably to Measure Metabolic Activity of Cell Culture In Vitro For the Assesment of Growth Characteristics, IC50-Values and Cell Survival, *J. Clin. Chem. Clin. Biochem.*, 33, 813-823.
- Srinivasan B., Jhonson T.E., Lad R., and Xing C., 2009, Structure-Activity Relationship Studies of Chalcone Leading to 3-Hydroxy-4,3'.4',5'-tetramethoxychalcone and Its Analogues as Potent Nuclear Factor kB Inhibitors and Their Anticancer Activities, *J. Med. Chem.*, 52, 7228-7235.
- Syam S., Abdelwahab S.I., Al-Mamary M. A., and Mohan S., 2012, Synthesis of Chalcone with Anticancer Activities, *Molecules*, 17, 6179-6195.
- Szliszka, E., Suslow, E.K., Bronikowska, J., Jaworska, D., Janeczko, T., Czuba, Z.P. and Krol, W., 2012, Synthetic Flavanones Augmment The Anticancer Effect of Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand (TRAIL), *Molecule*, 17, 11693-11711.
- Tanamatayarat, P., Limtrakul, P., Chunsakaow, S., and Duangrat, C., 2003, Screening of some Rubiaceous Plants for Citotoxic Activity Againt Cervix Carcinoma (KB-3-1) Cell Line, *Thai. J. Pharm. Sci.*, 27(3-4): 167-172.
- Wardihan, W., Rusdi, M., Alam, G., Lukman, L., ang Manggau, M. A., 2013, Selective Cytotoxicity Evaluation in Anticancer Drug Screening of *Boehmeria Virgata* (Forst) Guill Leaves to Several Human Cell Lines: HeLa, WiDr, T47D, dan Vero, *J. Pharm. Sci.*, 12(2), 87-90.
- Way, T.D., Kao, M.C., and Lin, J.K., 2004, Degradation of HER2/neu by Apigenin Induces Apoptosis Through Cytochrome C Release and Caspase-3 Activation in HER2/neu-Overexpressing Breast Cancer Cells, *FEBS Lett.*, 579, 145-152.
- Won, S. J., Liu, C. T., Tsao, L.T., Weng, J.R., and Lio, H.H., 2005, Synthesis Chalcones as potential Anti-inflammatory and cancer Chemopreventive Agent, *Eur. J. Med. Chem.*, 40, 103-112.
- Yang. Y., Lu, Y., Wu, Q.Y., Hu, H.Y., and Chen, Y. H., 2015, Evidence of ATP Assay as An Appropriate Alternative of MTT Assay of Citotoxicity of