

DAFTAR PUSTAKA

- Abubakar, A. R. & Haque, M. 2017. Preparation of medicinal plants: basic extraction and fractionation procedures for experimental purposes. *Asian Journal of Pharmaceutical and Clinical Research*. 7(10): 1–5. <https://doi.org/10.4103/jpbs.JPBS>.
- Ahmed, D., Eide1, P. W., Eilertsen, I. A., Danielsen, S. A., Eknæs, M., Hektoen, M., Lind, G. E. & Lothe, R. A. 2013. Epigenetic and genetic features of 24 colon cancer cell lines. *Oncogenesis*. 2(e71):1-8.
- Ahn, J. H., Kim, M. H., Kwon, H. J., Choi, S. Y., & Kwon, H. Y. 2013. Protective Effects of Oleic Acid Against Palmitic Acid-Induced Apoptosis in Pancreatic AR42J Cells and Its Mechanisms. *Korean Journal Physiology & Pharmacology*. 17:43–50.
- Albright, C. D., Klem, E., Shah, A. A., & Gallagher, P. 2005. Breast cancer cell-targeted oxidative stress: enhancement of cancer cell uptake of conjugated linoleic acid, activation of *p53*, and inhibition of proliferation. *Experimental and Molecular Pathology*. 79(2):118–125. doi: 10.1016/j.yexmp.2005.05.005.
- Alizadeh, F., Bolhassani, A., Khavari, A., Bathaie, S. Z., Naji, T. & Bidgoli, S. A. Retinoids and their biological effects against cancer. *Int Immunopharmacol*. 18:43-9. <https://doi.org/10.1016/j.intimp.2013.10.027>.
- Aikins, A. R., Birikorang, P. A., Chama, M., Dotse, E., Anning, A., & Appiah-Opong, R. 2021. Antiproliferative Activities of Methanolic Extract and Fractions of Tetrapleura Tetraptera Fruit. *Evidence-Based Complementary and Alternative Medicine*. 1–11. <https://doi.org/10.1155/2021/4051555>.
- Amundson, S. A., Myers, T. G., Scudiero, D., Kitada, S., Reed, J. C., and Fornace, A. J. 2000. An Informatics Approach Identifying Markers of Chemosensitivity in Human Cancer Cell Lines, *Cancer Res*. 60:6101-6110.
- Anggraito, Y.U., Susanti, R., Iswari, R.S., Yuniastuti A, Lisdiana, W.H., Nugrahaningsih, Habibah, N.A, & Bintari, S.H. 2018. Metabolit Sekunder dari Tanaman. [Thesis]. Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Semarang, Semarang.
- Anonim_a. 2009. *Worldwide Cancer Data*. <https://www.wcrf.org/dietandcancer/cancer-trends/worldwide-cancer-data>. Diakses pada 30 Agustus 2018.
- Anonim_b. 2022. *Breast Cancer*. World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>. Diakses pada 14 Juli 2022.
- Anonim_c. 2015. *Types of Cancer Treatment*. National Cancer Institute . <https://www.cancer.gov/about-cancer/treatment/types>. Diakses pada 25 September 2018.
- Anonim_d. 2009. *In Vitro Test Protocol*. Cancer Chemoprevention Researches Center (CCRC) Universitas Gadjah Mada.

- http://ccrc.farmasi.ugm.ac.id/en/?page_id=240. Diakses pada November 2018.
- Anonim_e. 2018. *Comparison of Different Methods to Measure Cell Viability*. <https://www.creative-bioarray.com/support/comparison-of-different-methods-to-measure-cell-viability>. Diakses pada tanggal 20 Agustus 2017
- Anonim_f. 2018. *Diet, Nutrition, Physical activity and Cancer: a Global Perspective*. <http://wcrf.org/sites/default/files/summary-of-third-expert-report-2018>. Diakses pada 02 Desember 2019.
- Anonim_g. 2022. International Agency for Cancer Research: *Breast*. <https://gco.iarc.fr/today/data/factsheets/cancers/20-Breast-fact-sheet.pdf>. Diakses pada tanggal 17 Juli 2022.
- Anonim_h. 2017. *Types of Cancer Treatment*. <https://www.cancer.gov/about-cancer/treatment/types>. Diakses pada tanggal 3 Juli 2018.
- Anonim_i. 2014. *Animal Cell Culture Guide*. ATCC The Essentials of Life Science Research. https://www.atcc.org/~media/PDFs/Culture%20Guides/AnimCellCulture_Guide.ashx. Diakses pada tanggal 20 Juni 2018.
- Anonim_j. 2022. *Doubling time*. National Cancer Institute. <https://www.cancer.gov/publications/dictionaries/cancerterms/def/doubling-time>. Diakses pada tanggal 25 Maret 2022.
- Anonim_k. 2021. *Stigmasterol*. National Center for Biotechnology Information. PubChem Compound Summary for CID 5280794. <https://pubchem.ncbi.nlm.nih.gov/compound/Stigmasterol>. Diakses pada tanggal 20 Desember 2021.
- Anonim_l. 2021. *Campesterol*. National Center for Biotechnology Information. 2021. PubChem Compound Summary for CID 173183. <https://pubchem.ncbi.nlm.nih.gov/compound/Campesterol>. Diakses pada tanggal 20 Desember 2021.
- Anonim_m. 2022. *Mouse Rabbit Probe HRP Labeling Kit with DAB Brown*. <https://biotna.net/products/mouserabbit-probe-hrp-labeling-kit-with-dab-brown/>. Diakses pada 5 Januari 2022.
- Anonim_n. 2004. *Compound Summary for CID 3931, 9,12-Octadecadienoic acid*. PubChem, Bethesda (MD): National Library of Medicine (US), National Center for Biotechnology Information. https://pubchem.ncbi.nlm.nih.gov/compound/9_12-Octadecadienoic-acid. Diakses pada tanggal 12 April 2022.
- Anonim_o. 2016. *A comparison between HPLC and GC*. Bitesizebio. <https://bitesizebio.com/29109/run-fly-comparison-hplc-gc/>. Diakses pada 20 Juli 2022.
- Anonim_p. 2021. *Understanding the difference between GCMS dan HPLC*. Gentech Scientific. Diakses pada 20 Juli 2022. <https://gentechscientific.com/understanding-the-difference-between-gcms-and-hplc/>.
- Anonim_q. 2008. Technical data sheet, FITC annexin V apoptosis detection kit I, BDBioscience. Diakses pada tanggal 17 Januari 2022.

- <https://www.bdbiosciences.com/en-eu/products/reagents/flow-cytometry-reagents/research-reagents/panels-multicolor-cocktails-ruo/fitc-annexin-v-apoptosis-detection-kit-i.556547>.
- Anonim., 2022. T-47D, HTB-133. Diakses tanggal 30 April 2022. <https://www.atcc.org/products/htb-133>.
- Anonim., 2009. *Guidance for the Validation of Analytical Methodology and Calibration of Equipment used for Testing of Illicit Drugs in Seized Materials and Biological Specimens*. United Nations Office on Drugs and Crime. https://www.unodc.org/documents/scientific/validation_E. Diakses pada tanggal 25 Februari 2022.
- Agostini-Costa, T. S., Vieira, R. F., Bizzo, H. R., Silveira, D. & Gimenes, M. A. 2012. *Secondary Metabolites*. University of Brasilia. Brasilia. 135-164pp.
- Ali, J. S., Riaz, N., Mannan, A., Tabassum, S., & Zia, M. 2022. Antioxidative-, Antimicrobial-, Enzyme Inhibition-, and Cytotoxicity-Based Fractionation and Isolation of Active Components from *Monothea buxifolia* (Falc.) A. DC. Stem Extracts. *ACS Omega*. 7(4): 3407–3423. <https://doi.org/10.1021/acsomega.1c05647>.
- Ammerman, N. C., Beier-Sexton, M., & Azad, A. F. 2008. Growth and maintenance of vero cell lines. *Current Protocols in Microbiology SUPPL.* 11:1–10. <https://doi.org/10.1002/9780471729259.mca04es11>.
- Aral, K., Aral, C. A., & Kapila, Y. 2019. The role of caspase-8, caspase-9, and apoptosis inducing factor in periodontal disease. *Journal Periodontol*. 90(3):288-294. <https://doi.org/10.1002/JPER.17-0716>.
- Arifin, Z., Suzery, M. & Cahyono, B. 2017. Kandungan Minyak Atsiri Daun *Hyptis Pectinata* POIT dari Jawa Barat. Seminar Nasional II USM. 41-46.
- Arvindganth. R, Anupriya K.V. & Kathiravan. G. 2017. Enhancement of Anticancer Drug *Annona muricata* Against HT-29 Cell Line using Silver Nano Particles. *Research Journal Pharmaceutical and Technology*. 10(2):529-532.
- Aslanturk, O. S. 2017. *In Vitro Cytotoxicity and Cell Viability Assays: Principle, Advantages and Disadvantages*. IntechOpen. England 4-5p.
- Awad, A. B., & Fink, C.S. 2000. Phytosterols as anticancer dietary components: Evidence and mechanism of action. *American Society for Nutritional Science*. 2127–2130. <https://doi.org/10.1093/jn/130.9.2127>.
- Awouafack, M. D., McGaw, L. J., Gottfried, S., Mbouangouere, R., Tane, P., Spiteller, M., & Eloff, J. N. 2013. Antimicrobial activity and cytotoxicity of the ethanol extract, fractions and eight compounds isolated from *Eriosema robustum* (Fabaceae). *BMC Complementary and Alternative Medicine*. 13(1): 1–9. <https://doi.org/10.1186/1472-6882-13-289>.
- Azmin, S. N. H. M., Manan, Z. A., Alwi, S. R. W., Chua, L. S., Mustaffa, A. A., & Yunus, N. A. 2016. Herbal processing and extraction technologies. *Separation and Purification Reviews*. 45(4), 305–320. <https://doi.org/10.1080/15422119.2016.1145395>.
- Bader, A., Omran, Z., Al-Asmari, A. I., Santoro, V., De Tommasi, N., D'Ambola, M., Dal Piaz, F., Conti, B., Bedini, S. & Halwani, M. 2021. Systematic

- phytochemical screening of different organs of *calotropis procera* and the ovicidal effect of their extracts to the foodstuff pest *cadra cautella*. *Molecules*. 26(4):1-15. <https://doi.org/10.3390/molecules26040905>.
- Badisa, R. B., Darling-reed, S. F., Joseph, P., John, S., Latinwo, L. M., & Goodman, C. B. 2009. NIH Public Access. *Anticancer Research*. 29(8): 2993–2996.
- Bae, H., Song, G. & Lim, W. 2020. Stigmasterol causes ovarian cancer cell apoptosis by inducing endoplasmic reticulum and mitochondrial dysfunction. *Pharmaceutics*. 12 (6): 488. DOI: 10.3390/pharmaceutics12060488.
- Bai, J., Li, Y. & Zhang, G. 2017. Cell Cycle Regulation and Anticancer Drug Discovery. *Cancer biology & medicine*. 14(4), 348–362.
- Baig, S., Seevasant, I. & Mohamad, J. 2016. Potential of apoptotic pathway-targeted cancer therapeutic research: Where do we stand?. *Cell Death Disease*. 7:e2058.
- Bailon-moscoso, N., Cevallos-solorzano, G., Romero-benavides, J. C., Isabel, M., & Orellana, R. 2017. Natural Compounds as Modulators of Cell Cycle Arrest: Application for Anticancer Chemotherapies. *Current Genomics*. 18: 106–131. <https://doi.org/10.2174/138920291766616080812>.
- Balakrishnan, V., Ganapathy, S., Veerasamy, V., Duraisamy, R., Sathiyakoo, V. A., Krishnamoorthy, V., & Lakshmanan, V. 2022. Anticancer and antioxidant profiling effects of Nerolidol against DMBA induced oral experimental carcinogenesis. *Journal of Biochemical and Molecular Toxicology*. 36(6). <https://doi.org/10.1002/jbt.23029>.
- Bana, S. W. A., Khumaidi, A. & Pitopang R. 2016. Studi Etnobotani Tumbuhan Obat pada Masyarakat Kairi Rai di Desa Taripa Kecamatan Sindue Kabupaten Donggala Sulawesi Tengah. *Biocelbes*. 10(2):68-81.
- Banerjee, A., Sengupta, A., Maji, B., Nandi, A. & Pal, S. 2017. Possible Cytotoxic Activity of *Annona muricata* Leaves in Huh-7 Human Liver Cancer Cells. *Hepatology and Pancreatic Science*. 1: 104.
- Bayala, B., Nadembega, C., Guenné, S., Buñay, J., Zohoncon, T. M., Djigma, F. W., Yonli, A., Baron, S., Figueredo, G., Lobaccaro, J. M. A., & Simporé, J. 2020. Chemical composition, antioxidant and cytotoxic activities of *Hyptis suaveolens* (L.) poit. essential oil on prostate and cervical cancers cells. *Pakistan Journal of Biological Sciences*. 23(9), 1184–1192. <https://doi.org/10.3923/pjbs.2020.1184.1192>
- Belkacemi, L. 2018. Exploiting the Extrinsic and the Intrinsic Apoptotic Pathways for Cancer Therapeutics. *Journal of Cancer and Cure*. 1(1):1004.
- Bertoli, A., Ruffoni, B., Pistelli, L., & Pistelli, L. 2010. *Analytical Methods for the Extraction and Identification of Secondary Metabolite Production in “In Vitro” Plant Cell Cultures in Bio-Farms for Nutraceuticals: Functional Food and Safety Control by Biosensors*. Texas: Landes Bioscience. pp1–32. <https://doi.org/10.1016/978-1-4160-3106-2.00019-2>.
- Bertoli, C., Skotheim, J.M., & de Bruin, R.A.M. 2013. Control of cell cycle transcription during G1 and S phases. *Nat. Rev. Molecular Cell Biology*. 14 (8): 518–528.

- Bharath, B., Perinbam, K., Devanesan, S., AlSalhi, M. S., & Saravanan, M. 2021. Evaluation of the anticancer potential of Hexadecanoic acid from brown algae *Turbinaria ornata* on HT-29 colon cancer cells. *Journal of Molecular Structure*. 1235: 130229. <https://doi.org/10.1016/j.molstruc.2021.130229>.
- Bispo de Jesus, M., Zambuzzi, W. F., Ruela de Sousa, R. R., Areche, C., Santos de Souza, A. C., Aoyama, H., Schmeda-Hirschmann, G., Rodríguez, J. A., Monteiro de Souza Brito, A. R., Peppelenbosch, M. P., den Hertog, J., de Paula, E., & Ferreira, C. V. 2008. Ferruginol suppresses survival signaling pathways in androgen-independent human prostate cancer cells. *Biochimie*. 90(6): 843–854. <https://doi.org/10.1016/j.biochi.2008.01.011>.
- Bower, J. J., Vance, L. D., Psioda, M. L. Smith-Roe, S. A. Simpson, D. G. Ibrahim, J. A. Hoadley, K. M. Perou, C. & K. Kaufmann, W. 2017. Patterns of Cell Cycle Checkpoint Deregulation Associated with Intrinsic Molecular Subtypes Of Human Breast Cancer Cells. *Nature Partner Journal Breast Cancer*. 3:9.
- Bruce, J. 2016. *Understanding Chemotherapy: A Guide for People with Cancer, Their Families and Friends*. Australia. Cancer Council Australia. 5-6p.
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A. & Jemal, A. 2008. Global Cancer Statistics 2018: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: Cancer Journal for Clinicial*. 68 :394-424.
- Burdall, S. E., Hanby, A. M., Lansdown, M. R. J. & Speirs, V. 2003. Breast Cancer Cell Line: Friend or Foe?. *Breast Cancer Research*. 5(2):89-95.
- Caesar, L. K., & Cech, N. B. 2019. Synergy and antagonism in natural product extracts: when 1 + 1 does not equal 2. *Natural Product Reports*. 176(5): 139–148. <https://doi.org/10.1039/c9np00011a>.
- Carneiro, B. A., & El-deiry, W. S. 2020. Targeting apoptosis in cancer therapy. *National Review Clinical Oncology*. 17(7): 395–417. <https://doi.org/10.1038/s41571-020-0341-y>.
- Cho, Y., McQuade, T., Zhang, H., Zhang, J., Chan, F. K. 2011. RIP1-dependent and inde- pendent effects of necrostatin-1 in necrosis and T cell activation. *PLoS ONE*. 6:e23209
- Cominetti, M. R., Altei, W. F., & Araujo, Selistre-de-, H. S. 2019. Metastasis inhibition in breast cancer by targeting cancer cell extravasation. *Breast Cancer: Targets and Therapy*. 11: 165–178.
- Costa-Lotufo, Araújo, L., Lima, E., Moraes, M., Pessoa, E., Silviera, C., Moraes, E. & Manoel. 2004. Antiproliferative effects of abietane diterpenoids isolated from *Hyptis martiusii* Benth (Labiatae). *Die Pharmazie*. 59: 78-9.
- Celik, T.A. 2018. Cytotoxicity. Intechopen. London, 4p.
- Chen, Y. 2012. Scratch Wound Healing Assay. *Bioprotocol*. 2(5):1-3.
- Chen, Y., Yeh, T., Chu, F., Hsu, F., & Chang, S. 2015. Proteomics Investigation Reveals Cell Death-Associated Proteins of Basidiomycete Fungus *Trametes versicolor* Treated with Ferruginol. *Journal of Agricultural and Food Chemistry*. 63 (1):85-91. <https://doi.org/10.1021/jf504717x>.
- Chen, M., Hsu, S., Lin, H., & Yang, T. 2014. Review article Retinoic acid and cancer treatment. *Biomedicine*. 4(4), 1–6. <https://doi.org/10.7603/s40>.

- Chen, T. R., Drabkowski, D., Hay, R. J., Macy, M. & Peterson, W. Jr. 1987. WiDr is a Derivative of Another Colon Adenocarcinoma Cell Line, HT-29, *Cancer Genet Cytogenetics*. 27(1):125-34 .
- Chun, K. S., Kundu, J., Chae, I. G., & Kundu, J. K. 2014. Carnosol: A Phenolic Diterpene With Cancer Chemopreventive Potential. *Journal of Cancer Prevention*. 19(2): 103–110. <https://doi.org/10.15430/jcp.2014.19.2.103>.
- Cui, H. X., Tang, L., Cheng, F. R. & Yuan, K. 2017. Antitumor effects of ethanol extracts from *Hyptis rhomboidea* in H22 tumor-bearing mice. *Pharmacognosy Magazine*. 13:571-5.
- Datar, M. N., Lakshminarasimhan, P. & Rao, P. S. N. 2007. *Hyptis capitata* Jacq (Lamiaceae)- A New Recoed for Northernwestern Ghats. *Indian Journal of Forestry*. 30(3): 355-356.
- Dai, X., Cheng, H., Bai, Z. & Li, J. 2017. Breast Cancer Cell Line Classification and Its Relevance with Breast Tumor Subtyping. *Journal of Cancer*. 8: 3131-3141.
- De las Heras, B., Rodrigues, B., Bosca, L. & Villa, A. M. 2003. Terpenoids: Sources, Structure Elucidation and Therapeutic Potential in Inflammation. *Current Topics in Medicinal Chemistry*. 3:53-67.
- Deng, Y. 2010. *Bioactive Constituents of Two Medicinal Plants from Indonesia*. *Pharmacy Program*. Ohio State University. 56-86p.
- Demain, A. L., & Fang, A. 2000. The natural functions of secondary metabolites. *Adv Biochem Eng Biotechnol*. 9:1-39. https://doi/10.1007/3-540-44964-7_1.
- Dewatisari, W. F. 2020. Perbandingan Pelarut Kloroform dan Etanol terhadap Rendemen Ekstrak Daun Lidah Mertua (*Sansevieria trifasciata* Prain.) Menggunakan Metode Maserasi. *Prosiding Seminar Nasional Biologi Di Era Pandemi COVID-19* 127–132. <http://journal.uin-alauddin.ac.id/index.php/psb/>
- Dörrie, J., Sapala, K. & Zunino S. J. 2001. Carnosol-induced apoptosis and down-regulation of BCL-2 in B-lineage leukemia cells. *Cancer Letter*. 170: 33-39.
- Engelbrecht, A. M., Toit-Kohn, J. L., Ellis, B., Thomas, M., Nell, T., & Smith, R. Differential induction of apoptosis and inhibition of the PI3-kinase pathway by saturated, monounsaturated and polyunsaturated fatty acids in a colon cancer cell model. *Apoptosis : an international journal on programmed cell death*. 13(11):1368–77.
- Escobar, M. L., Echeverría, O. M., & Vázquez-Nin, G. H. 2015. Necrosis as Programmed Cell Death. In (Ed.), *Cell Death - Autophagy, Apoptosis and Necrosis*. (pp1-23). London: IntechOpen. <https://doi.org/10.5772/61483>.
- Faisel, C.T.W. 2012. *Gambaran Efek Samping Kemoterapi Berbasis Antrasiklin pada Pasien Kanker Payudara di RSUD Dokter Soedarso Pontianak*. Program Studi Pendidikan Dokter. Universitas Tanjung Pura Pontianak.
- Fang, J., Reichelt, M., Hidalgo, W., Agnolet, S., & Schneider, B. 2012. Tissue-Specific Distribution of Secondary Metabolites in Rapeseed (*Brassica napus* L.). *PLoS ONE*. 7(10), 1–8. <https://doi.org/10.1371/journal.pone.0048006>.
- Feitelson, M. A., Arzumanyan, A., Kulathinal, R. J., Blain, S. W., Holcombe, R. F., Mahajna, J. & Nowshien, S. 2015. Sustained proliferation in cancer:

- Mechanisms and novel therapeutic targets. *Seminars in Cancer Biology*. 35 Suppl(Suppl): S25–S54.
- Fink, S. L., & Cookson, B. T. 2005. Apoptosis, Pyroptosis, and Necrosis : Mechanistic Description of Dead and Dying Eukaryotic Cells. *Infection & Immunity*. 73(4): 1907–1916. <https://doi.org/10.1128/IAI.73.4.1907>
- Flaster, T. 1996. *Ethnobotanical Approaches to The Discovery of Bioactive Compounds..* In: J. Janick (ed.), Progress in new crops. ASHS Press, Arlington, VA. 561-565p.
- Florento, L., Matias, R., Tuano, E., Santiago, K., dela Cruz, F. & Tuazam, A. 2012. Comparison of Toxicity Activity of Anticancer Drugs against Various Human Tumor Cell Lines using In Vitro Cell. *International Journal Biomedical Science*. 8(1):76-80.
- Frión-Herrera, Y., Díaz-García, A., Rodríguez-Sánchez, H., Ruiz-Fuentes, J. L., Setzer, W. N., & Fidalgo, L. M. 2014. Cytotoxic effect of Cuban propolis extracts on normal cells and in-vitro basal toxicity assay to estimate acute oral toxicity. *American Journal of Essential Oils and Natural Products AJEONP*. 2(21):19–23.
- Gandjar, I. G., & Rohman, A. 2008. Kimia Farmasi. Yogyakarta: Pustaka Pelajar.
- Ganguly, A., Yang, H., Zhang, H., Cabral, F., & Patel, K. D. 2013. Microtubule Dynamics Control Tail Retraction in Migrating Vascular Endothelial Cells. *Mol. Cancer Therapy*. 12: 2837–2846.
- Ganguly, A., Cabral, F., Yang, H., & Patel, K. D. 2015. Peloruside A is a microtubule-stabilizing agent with exceptional anti-migratory properties in human endothelial cells Peloruside A is a microtubule-stabilizing agent with exceptional anti-migratory properties in human endothelial cells. *Oncoscience*. 1–11. <https://doi.org/10.18632/oncoscience.169>.
- Ghosh, T., Maity, T. K. & Singh, J. 2011. Evaluation of antitumor activity of stigmasterol, a constituent isolated from *Bacopa monnieri* Linn aerial parts against Ehrlich Ascites Carcinoma in mice. *Orient Pharm Exp Med*. 11 (1): 41-49. <https://doi.org/10.1007/s13596-011-0001-y>.
- Gonçalves, E. M., Ventura, C. A., Yano, T., Rodrigues-Macedo, M. L., & Genari, S. C. 2006. Morphological and growth alterations in Vero cells transformed by cisplatin. *Cell Biology International*. 30(6):485-94. doi: 10.1016/j.cellbi.2005.12.007.
- Gonzalez, M. A. 2012. Total iron measurement in human serum with a smartphone. *Natural Product Reports*. 1–17. <https://doi.org/10.1039/x0xx00000x>.
- Graidist, P., Martla, M. & Sukpondma, Y. 2015. Cytotoxic Activity Piper cubeba Extract in Breast Cancer Cell lines. *Nutrients*. 7;2707-2718.
- Granados-Romero, J. J., Valderrama-Treviño, A. I., Contreras-Flores, E. H., Barrera-Mera, B., Miguel-Herrera-Enríquez, M. H., Uriarte-Ruíz, K., Ceballos-Villalva, J. C., Estrada-Mata, A. G., Rodríguez, C. A. & Arauz-Peña, G. 2017. Colorectal cancer: a review. *International Journal of Research in Medical Sciences*. 5(11):4667-4676.
- Greenwell, M., & Rahman, P. K. S. 2015. Europe PMC Funders Group Medicinal

- Plants : Their Use in Anticancer Treatment. *International Journal Pharma Science Reseach*. 6(10): 4103–4112. <https://doi.org/10.13040/IJPSR.0975-8232>.
- Gu, R., Wang, Y., Long, B., Kennely, E., Wu, S., Liu, B., Li, P. & Long, C. 2014. Prospecting for Bioactive Constituents from Medicinal Plants Through Ethnobotanical Approach. *Biology & Pharmaceutical Bulletin*. 37(6):903-915.
- Gutzeit, H. O. & Ludwig-Muller, J. 2014. *Plant Natural Products: Synthesis, biological functions and practical applications*, First Edition. New York: Wiley-VCH Verlag GmbH & Co.
- Hameed E. 2012. Phytochemical studies and evaluation of antioxidant, anticancer and antimicrobial properties of *Conocarpus erectus* L. growing in Taif, Saudi Arabia. *Europe Journal Medicinal Plants*. 2 (2): 93-112. <https://doi.org/10.9734/ejmp/2012/1040>.
- Hanahan, D. 2022. Hallmarks of Cancer: New Dimensions. *Cancer Discovery*. 12(1):31–46. <https://doi.org/10.1158/2159-8290.CD-21-1059>.
- Hanahan, D. & Weinberg, R. A. 2011. Hallmarks of Cancer: The Next Generation. *Cell*. March (4):646-674.
- Hadi, R. S. 2011. Mekanisme Apoptosis Pada Regresi Sel Luteal. *Majalah Kesehatan PharmaMedika*, 3(1):246-254.
- Harada, H., Yamashita, U., Kurihara, H., Fukushi, E., Kawabata, J., Kamei, Y. 2022. Antitumor activity of palmitic acid found as a selective cytotoxic substance in a marine red alga. *Anticancer Research*. 22(5):2587–90.
- Harborne, J. B. 1987. *Metode Fitokimia. Penuntun Cara Modern Menganalisis Tumbuhan*. Terjemahan K. Padmawinata & I. Soediro, Penerbit ITB, Bandung. 8-9p, 235p.
- Haryanti, S. & Widiastuti, Y. 2017 Aktivitas Sitotoksik pada Sel MCF-7 dari Tumbuhan Indonesia untuk Pengobatan Tradisional Kanker Payudara. *Media Litbangkes*, 27(4):247-254.
- Hasanah, S. N. & Widowati, L. 2016 Jamu pada Pasien Tumor/Kanker sebagai Terapi Komplementer. *Jurnal kefarmasian Indonesia*, 6(1):49-49.
- Hazekawa, M., Nishinakagawa, T., Kawakubo-Yasukochi, T., & Nakashima, M. 2019. Evaluation of IC50 levels immediately after treatment with anticancer reagents using a real-time cell monitoring device. *Experimental and Therapeutic Medicine*. 18 (4): 3197-3205. <https://doi.org/10.3892/etm.2019.7876>.
- Ho, S. T., Tung, Y. T., Kuo, Y. H., Lin, C. C., & Wu, J. H. 2015. Ferruginol inhibits non-small cell lung cancer growth by inducing caspase-associated apoptosis. *Integrative Cancer Therapies*. 14(1): 86–97. <https://doi.org/10.1177/1534735414555806>.
- Hostettmann, K., Hostettmann, M., & Marston, A. 1986. Planar Chromatography. In: *Preparative Chromatography Techniques*. Berlin, Heidelberg: Springer. pp6-18. https://doi.org/10.1007/978-3-662-02492-8_3.

- Huang, M., Lu, J., Huang, M. Q., Bao, J., Chen & Wang, Y. 2012. Terpenoids: Natural Products for Cancer Therapy. *Expert Opinion Investigating Drugs*. 21(12): 1801-1818.
- Ibrahim, H.A.H. 2019. *Fractionation*. London: Intechopen. <https://doi.org/10.5772/intechopen.78050>.
- Idikio, H. A. 2011. Human Cancer Classification: A Systems Biology- Based Model Integrating Morphology, Cancer Stem Cells, Proteomics, and Genomics. *Journal of Cancer*. 2:107-115.
- Ifandari. 2021. *Aktivitas sitotoksik dan antiproliferasi fraksi ekstrak rhizoma ganyong (Canna indica L.) terhadap sel WiDr serta karakterisasi kandungan kimia fraksi aktifnya* [Disertasi]. Fakultas Biologi, Universitas Gadjah Mada.
- Irawati, S. 2018. *Pemrofilan aktivitas antikanker terhadap sel kanker payudara (T47D) dan toksisitas terhadap sel normal (vero) pada tanaman krisan putih (Chrysanthemum cinerariifolium (trev.))*. Jurusan Farmasi, Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Islam Negeri Maulana Malik Ibrahim, Malang.
- Jia, Y., Wu, C., Zhang, B., Zhang, Y. & Li J. 2019. Ferruginol induced apoptosis on SK-Mel-28 human malignant melanoma cells mediated through P-p38 and NF- κ B. *Hum Exp Toxicol*. 38(2):227-238. <https://doi.org/10.1177/0960327118792050>.
- Jin, D., Dai, K., Xie, Z., & Chen, J. 2020. Secondary Metabolites Profiled in Cannabis Inflorescences, Leaves, Stem Barks, and Roots for Medicinal Purposes. *Scientific Reports*. 10(1), 1–14. <https://doi.org/10.1038/s41598-020-60172-6>.
- Joshi, A., Haque, N., Lateef, A., Patel, A. & Patel, P. 2017. Apoptosis and Its Role in Physiology. *International Journal of Livestock Research*. 7(10):33-45.
- Kabera, J. N., Semana, E., Mussa, A. C. & He, X. 2014. Plant Secondary Metabolites: Biosynthesis, Classification, Function and Pharmacological Properties. *Journal of Pharmacy and Pharmacology*. 2(7):377-92.
- Kangsamaksin, T., Chaithongyot, S., Wootthichairangsarn, C., Hanchaina, R., Tangshewinsirikul, C. & Svasti J. 2017. Lupeol and stigmasterol suppress tumor angiogenesis and inhibit cholangiocarcinoma growth in mice via downregulation of tumor necrosis factor- α . *PLoS ONE*. 12 (12): e0189628. <https://doi.org/10.1371/journal.pone.0189628>.
- Kaverinaa, I. & Straube, A. 2012. Regulation of cell migration by dynamic microtubules. *NIH Public Access*. 22(9): 968–974. <https://doi.org/10.1016/j.semcd.2011.09.017>.
- Kazłowska, K., Lin, H. T. V., Chang, S. H. & Tsai, G. J. 2013. *In vitro* and *in vivo* anticancer effects of sterol fraction from red algae *Porphyra dentata*. *Evidence-Based Complement Altern Med*. 2013: 11-13. <https://doi.org/10.1155/2013/493869>.
- Khasawneh, M. A., Koch, A., Elwy, H. M., Hamzah, A. A., & Schneider-Stock, R. 2015. *Leptadenia pyrotechnica* Induces P53-Dependent Apoptosis in Colon Cancer Cells. *Natural Products Chemistry & Research*. 3(3): <https://doi.org/10.4172/2329-6836.1000177>.

- Kisztelinski, D., Alink, G. M., Rietjens, I. M. C. M., Bielecki, S., Tramper, J., & Martens, D. E. 2006. Application of a continuous bioreactor cascade to study the effect of linoleic acid on hybridoma cell physiology. *Biotechnology and Bioengineering*. 95(3):370–383. doi: 10.1002/bit.20897.
- Kingston, D. G., Rao, M. M. & Zucker, W. V. 1979 Plant anticancer agent IX. Constituents of *Hyptis tomentosa*. *Journal Natural Product*, 2(5):496-9.
- Koch, A., Tamez, P., Pezzuto, J. & Soejarto, D. 2005. Evaluation of plants used for antimalarial treatment by the Massai of Kenya. *Journal Ethnopharmacology*. 101:95–99.
- Khairiyah, N., Anam, S. & Khumaidi, A. 2016. Studi Etnofarmasi Tumbuhan Berkhasiat Obat pada Suku Banggai di Kabupaten Banggai Laut Provinsi Sulawesi Tengah. *GALENKA Journal of Pharmacy*. 2(1);1-7.
- Kristiani, E. B. E. 2017. *Sitotoksitas dan Mekanisme Aksi Fraksi Paling Toksik Akar Tumbuhan Mekai (Albertisia papuanna Becc.) Terhadap Sel Kanker Payudara T47D*. [Disertasi]. Fakultas Biologi, Universitas Gadjah Mada.
- Kuipers, E. J., Grady, W. M., Lieberman, D., Seufferlein, T., Sung, J. J., Boelens, P.G., van de Velde, C. J. H. & Watanabe, T. 2015. Colorectal Cancer. *Nature Review*. 1:1-25.
- Kumar, P. P., Kumaravel, S. & Lalitha, C. 2010. Screening of antioxidant activity, total phenolics and GC-MS study of *Vitex negundo*. *African Journal Biochemistry Research*. 4(7):191-5.
- Kumar, S., Jyotirmayee, K. & Sarangi, M. 2013. Thin layer chromatography: A tool of biotechnology for isolation of bioactive compounds from medicinal plants. *International Journal of Pharmaceutical Sciences Review and Research*. 18(1):126–132.
- Lee, J. H., Kim, C., Kim, S. H., Sethi, G., & Ahn, K. S. 2015. Farnesol inhibits tumor growth and enhances the anticancer effects of bortezomib in multiple myeloma xenograft mouse model through the modulation of STAT3 signaling pathway. *Cancer Letters*. 360(2):280–293. <https://doi.org/10.1016/j.canlet.2015.02.024>.
- Lee, S. M., Ha, C. S. & Cho, W. J. 2000. Antitumor and Antiangiogenic Activities of Phthalic Acid Derivative Polymers with Medium- Molecular-Weight. *Molecular Crystals and Liquid Crystals Science and Technology*. 354 (1), 287-301.
- Lehner, C. F. 1995. The role of cyclin E in the regulation of entry into S phase. *Program Cell Cycle Research*, 1:125-139.
- Levrero, M., Laurenzi, V. D, Constanzo, A., Sabatini, S., Gong, J., Wang, J. Y. J. & Melino, G. 2000. The p53/p63/p73 Family of Transcription Factors: Overlapping and Distinct Functions, *Journal of Cell Science*. 113:1661-1670.
- Lim, B., Greer, Y., Lipkowitz, S., & Takebe, N. 2019. Novel Apoptosis-Inducing Agents for the Treatment of Cancer , a New Arsenal in the Toolbox. *Cancers*. 11: 1–39. <https://doi.org/10.3390/cancers11081087>.
- Lopes, A. P., Bagatela, B. S., Rosa, P. C. P., Nanayakkara, D. N. P., Carlos T. C.

- J., Maistro, E. L., Bastos, J. K., & Perazzo, F. F. 2013. Antioxidant and cytotoxic effects of crude extract, fractions and 4-nerolidylcathecol from aerial parts of *Pothomorphe umbellata* L. (Piperaceae). *BioMed Research International*. 2013: 1–5. <https://doi.org/10.1155/2013/206581>.
- Lopez-Lazaro, M. 2015. Two Preclinical Tests to Evaluate Anticancer Activity and to Help Validate Drug Candidates for Clinical Trials. *Oncoscience*. 2(2):91-98.
- López-Sáez, J. F., de la Torre, C., Pincheira, J. & Giménez-Martín, G. 1998. Cell proliferation and cancer. *Histology & Histopathology*. 13(4):1197-214. doi: 10.14670/HH-13.1197.
- Liao, T. T., Shi, Y. L., Jia, J. W., & Wang, L. 2010. Sensitivity of different cytotoxic responses of vero cells exposed to organic chemical pollutants and their reliability in the bio-toxicity test of trace chemical pollutants. *Biomedical and Environmental Sciences*. 23(3), 219–229. [https://doi.org/10.1016/S0895-3988\(10\)60056-6](https://doi.org/10.1016/S0895-3988(10)60056-6)
- Liu, H. C., Chen, G. G., Vlantis, A. C., Leung, B. C. S., Tong, M. C. E. & van Hasselt, C. A. 2006. 5-Fluorouracil Mediates Apoptosis and G1/S Arrest in Laryngeal Squamous Cell Carcinoma via a p53-Independent Pathway. *The Cancer Journal*. 12(6):482-493.
- Liu, Y., Rakotondraibe, L. H., Brodie, P. J., Wiley, J. D., Cassera, M. B., Miller, J. S., Ratovoson, F., Rakotobe, E., Rasamison, V. E. & Kingston, D. G. I. 2015. Antimalarial 5,6-Dihydro- α -pyrones from *Cryptocarya rigidifolia* : Related Bicyclic Tetrahydro- α -Pyrones Are Artifacts 1. *Journal of Natural Products*. 78:1330–1338. <https://doi.org/10.1021/acs.jnatprod.5b00187>.
- Luo, G., Zhou, J., Li, G., Hu, N., Xia, X. & Zhou, H. 2019. Retraction: Ferruginol diterpenoid selectively inhibits human thyroid cancer growth by inducing mitochondrial dependent apoptosis, endogenous reactive oxygen species (ros) production, mitochondrial membrane potential loss and suppression of Mitogen-Activa. *Medical Science Monitoring*. 25: 2935-2942. <https://doi.org/10.12659/MSM.932341>.
- Mahavorasirikul, W., Viyanant, V., Chaijaroenkul, W., Itharat, A. & Na-Bangchang, K. 2010. Cytotoxic activity of Thai medicinal plants against human cholangiocarcinoma, laryngeal and hepatocarcinoma cells in vitro. *BMC Complement Altern Med*. 10: 4-11. DOI: 10.1186/1472-6882-10-55.
- Malumbres, M., & Barbacid, M. 2009. Cell cycle, CDKs and cancer: a changing paradigm. *National Rev. Cancer*. 9(3):153–166.
- Martin, T. A., Ye, L., Sanders, A. J., Lane, J. & Jiang, W. G. 2013. Cancer Invasion and Metastasis: Molecular and Cellular Perspective Cancer Invasion and Metastasis: The Role of Cell Adhesion Molecules. In *Madam Curie Bioscience Database* (pp. 2000–2013). Landes Bioscience. <https://doi.org/https://www.ncbi.nlm.nih.gov/books/NBK164700>.
- Maslakhah, F. 2018. *Metabolite profiling bagian akar, batang, daun, dan biji Helianthus annuus L. menggunakan instrumen UPLC-MS*. Jurusan Farmasi, Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Islam Negeri Maulana Malik Ibrahim, Malang. Indonesia.

- Maurya, A., Kalani, K., Verma, S. C., Singh, R. & Srivastava, A. 2018. Vacuum Liquid Chromatography: Simple, Efficient and Versatile Separation Technique for Natural Products. *Organic and Medicinal Chemistry International Journal*. 7(2):001–003. <https://doi.org/10.19080/OMCIJ.2018.07.555710>.
- McIlwain, D. R., Berger, T. & Mak, T. W. 2013. Caspase Functions in Cell Death and Disease. *Cold Spring Harbor Perspective in Biology* 1–28.
- Meiyanto, E., Susidarti, R. A., Jenie, R. I., Utomo, R. Y., Novitasari, D., Wulandari, F., & Kirihata, M. 2010. Synthesis of new boron containing compound (CCB-2) based on curcumin structure and its cytotoxic effect against cancer cells. *Journal Applied Pharmaceutical Science*. 10(2):60-66. <https://doi.org/10.7324/JAPS.2020.102010>.
- Martinez, M. M., Reif, R. D. & Pappas, D. 2010. Detection of Apoptosis: a Review of Conventional and Novel Techniques. *Analytical Methods*. 2:996-1004.
- Mastuti, R. 2016. *Metabolit Sekunder dan Pertahanan Tumbuhan*. Jurusan FMIPA Universitas Brawijaya. Malang. 4-17p.
- Matsuura, H. N. & Arthur, G. F. A. G. 2015. *Plant Alkaloids: Main Features, Toxicity, and Mechanisms of Action*. Federal University of Rio Grande do Sul (UFRGS). Porto Alegre. Brazil. 243-261p.
- McCauley, J., Zivanovic, A. & Skropeta, D. 2013. Bioassay for Anticancer Activities. *Method in Molecular Biology*. 1055:191-205.
- McNeil, M., Facey, P. & Porter, R. 2011. Essential Oils from The *Hyptis* Genus- A review (1909-2009). *Natural Product Communications*. 6(11):1775-1796.
- Mehrara, E., Forssell-aronsson, E. & Bernhardt, P. 2007. Specific Growth Rate versus Doubling Time for Quantitative Characterization Specific Growth Rate versus Doubling Time for Quantitative Characterization of Tumor Growth Rate. *Cancer Research*. 67:3970–3975. <https://doi.org/10.1158/0008-5472>.
- Mellado, M., Soto, M., Madrid, A., Montenegro, I., Jara-Gutiérrez, C., Villena, J., Werner, E., Godoy, P., & Aguilar, L. F. 2019. In vitro antioxidant and antiproliferative effect of the extracts of *Ephedra chilensis* K Presl aerial parts. *BMC Complementary and Alternative Medicine*. 19(1):19–53. <https://doi.org/10.1186/s12906-019-2462-3>.
- Mithöfer, A. & Boland W. 2012. Plant defense against herbivores: chemical aspects. *Annual Review of Plant Biology*. 63:431–50. <https://doi.org/10.1146/annurev-arplant-042110-103854>.
- Mohammad, R. M., Muqbil, I., Lowe, L., Yedjou, C., Hsu, H., Lin, L., David, M., Fimognari, C., Kumar, N. B., Dou, Q. P., Yang, H., Samadi, A. K., Luigi, G., Spagnuolo, C., Ray, S. K., Chakrabarti, M., Morre, J. D., Coley, H. M., Honoki, K. & Azmi, A. S. 2015. Seminars in Cancer Biology Broad targeting of resistance to apoptosis in cancer. *Seminars in Cancer Biology*. 35: 78–103.
- Mondal, J., Panigrahi, A. K. & Khuda-Bukhsh, A. R. 2014. Conventional Chemotherapy: Problems and Scope for Combined Therapies with Certain Herbal Products and Dietary Supplements. *Austin Journal Molecular & Cell Biology*. 1(1): 10.

- Mooney, L. M., Al-Sakkaf, K. A. & Brown, B. L. 2002. Apoptotic Mechanisms in T47D and MCF-7 Human Breast Cancer Cells. *British Journal of Cancer*. 87:909-917.
- Moorthi, C., Kathiresan, K., Krishnan, K. & Manavalan R. 2011. InVitro Cell Based Assay: A Preferred Anticancer Drug Screening Techniques for The Academic Researchers. *Journal of Pharmacy Research*. 4(3): 671-675.
- Moreira, A. C. P., de Oliveira Lima, E., Wanderley, P. A., Carmo, E. S. & de Souza, E. L. 2010. Chemical Composition and Antifungal Activity Of *Hyptis Suaveolens* (L.) Poit Leaves Essential Oil Against Aspergillus Species. *Brazilian Journal of Microbiology*. 41: 28-33.
- Morley, K. L., Ferguson, P. J. & Koropatnick, J. 2007. Tangeretin and nobiletin induce G1 cell cycle arrest but not apoptosis in human breast and colon cancer cells. *Cancer Letter*. 251(1):168-178. <https://doi.org/10.1016/j.canlet.2006.11.016>.
- Mouradov, D., Sloggett, C., Jorissen, R. N., Love, C. G., Li, S., Antony W. Burgess, A. W., Arango, D., Strausberg, R. L., Buchanan, D., Samuel Wormald, S., O'Connor, L., Wilding, J. L., Bicknell, D., Ian P. M. Tomlinson, I. P. M., Bodmer, W. F., Mariadason, J. M. & Sieber, O. M. 2014. Colorectal Cancer Cell Lines Are Representative Models of the Main Molecular Subtypes of Primary Cancer. *Molecular and Celular Pathobiology*. 74(12):OF1-OF10.
- Mroczek, T., Dymek, A., Widelski, J. & Wojtanowski, K. K. 2020. The Bioassay-Guided Fractionation and Identification of Potent Acetylcholinesterase Inhibitors from *Narcissus c. v. "Hawera"* Using Optimized Vacuum Liquid Chromatography , High Resolution Mass Spectrometry and Bioautography. *Metabolites*. 395(10): 1–16.
- Muhartono, & Subeki. 2017. Ekspresi Caspase-3 pada Kanker Payudara Tikus Caspase-3 Expression on Breast Cancer Rats After Brusein-A Administration. *Global Medical and Health Communication*. 5(3):189–193. <https://doi.org/http://dx.doi.org/10.29313/gmhc.v5i3.2263>
- Mukhriani. 2014. Ekstraksi, Pemisahan Senyawa dan Identifikasi Senyawa Aktif. *Jurnal Kesehatan*, 7(2)361-367.
- Munkholm P. 2003. Review article: the incidence and prevalence of colorectal cancer in inflammatory bowel disease. *Aliment Pharmacology Therapeutics*. 2: 1- 5.
- Musika, S., & Indrapichate, K. 2014. Cytotoxicity and apoptotic induction of Mintweed (*Hyptis suaveolens* L. Poit) leaf extracts on human t-leukemia cell Line, Jurkat cells. *World Journal of Pharmacy and Pharmaceutical Science*. 3(3):303-317.
- Nakayama, M. & Oshima, M. 2019. Mutant p53 in Colon Cancer. *Journal of Molecular Cell Biology*, 11(4): 267–276.
- Nguyen, M. T., & Ho-Huynh, T. D. 2016. Selective cytotoxicity of a Vietnamese traditional formula , Nam Dia long , against MCF-7 cells by synergistic effects. *BMC Complementary and Alternative Medicine*. 16:1–10. <https://doi.org/10.1186/s12906-016-1212-z>.
- Nigg, E. A. 1995. Cyclin-dependent protein kinases: key regulators of the

- eukaryotic cell cycle. *Bioessays*. 17(6):471-80. doi: 10.1002/bies.950170603.
- Nugroho, L. H. 2017. *Struktur dan produk jaringan sekretori tumbuhan*. Yogyakarta: Gadjah Mada University Press.
- Nur, R. M. & Nugroho, L. H. 2018. Cytotoxic Activities of Fractions from *Dioscorea bulbifera* L. Chloroform and Methanol Extracts on T47D Breast Cancer Cells. *Pharmacognosy Journal*. 10(1), 33–38. <https://doi.org/10.5530/pj.2018.1.7>.
- Nurcholis, W., Khumaida, N., Bintang, M. & Syukur, M. 2021. GC-MS analysis of rhizome ethanol extracts from *Curcuma aeruginosa* accessions and their efficiency activities as anticancer agent. *Biodiversitas*. 22(3):1179–1186. <https://doi.org/10.13057/biodiv/d220313>.
- Nurgali, K., Jagoe, R. T. & Abalo, R. 2018. Editorial: Adverse Effects of Cancer Chemotherapy: Anything New to Improve Tolerance and Reduce Sequelae?. *Frontiers in pharmacology*. 9:245.
- Nurrani, L. 2013. Pemanfaatan Tradisional Tumbuhan Berkhasiat Obat oleh Masyarakat di Sekitar Cagar Alam Tangale. *Info BPK Manado*. 3(1):1-22.
- Oraiopoulou, M. E., Tzamali, E., Tzedakis, G., Vakis, A., Papamatheakis, J. & Sakkalis, V. 2017 *In Vitro/In Silico* Study on the Role of Doubling Time Heterogeneity among Primary Glioblastoma Cell Lines. *Biomedical Research International*. 2017: 1-13 doi: 10.1155/2017/8569328.
- Oran, S. A., Althaher, A. R., & Shhab, M. A. 2022. Chemical composition , in vitro assessment of antioxidant properties and cytotoxicity activity of ethanolic and aqueous extracts of *Ajuga orientalis* L . (Lamiaceae). *Journal of Pharmacy and Pharmacognosi Research*. 10(3): 486–495.
- Otto, T., & Sicinski, P. 2017. Cell cycle peoreins as promising targets in cancer therapy. *National Review of Cancer*. 17(2):93–115. <https://doi.org/10.1038/nrc.2016.138>.
- Pachkore, G. L., Dhale, D. A. & Dharasurkar, N. 2011. Antimicrobial and phytochemical screening of *Hyptis suaveolens* (L.Poit) Lamiaceae. *International Multidisciplinary Research Journal*. 1(4):01-03.
- Padma, V. V. 2015. An Overview of Targeted Cancer Therapy. *Biomedicine*. 5(4): 1-6.
- Palozza, P., Serini, S., Maggiano, N., Giuseppe, T., Navarra, P. & Ranelletti, F. O. 2005. β -Carotene Downregulates the Steady-State and Heregulin-a-Induced COX-2 Pathways in Colon Cancer Cells. *Journal of Nutrition*. 135:129-136.
- Pant, P., Pandey, S. & Dall'Acqua, S. 2021. The influence of environmental conditions on secondary metabolites in medicinal plants: a literature review. *Chemistry and Biodiversity*. 18(11): e210034 <https://doi.org/10.1002/cbdv.202100345>.
- Pasorong, Y. S., Tambaru, E., Umar, M. R. & Masniawati, A. 2015. *Identifikasi Tumbuhan Berkhasiat Obat dan Potensi Pemanfaatannya pada Beberapa Desa di sekitar Gunung Sesean Kabupaten Tana Toraja*. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Hasanuddin Makassar.

- Pasquier, E., Andre, N., & Braguer, D. 2007. Targeting Microtubules to Inhibit Angiogenesis and Disrupt Tumour Vasculature: Implications for Cancer Treatment. *Current Cancer Drug Targets*, 7: 566–581.
- Passos, J. L., Barbosa, L. C., Demuner, A. J., Alvarenga, E. S., da Silva, C. M., & Barreto, R. W. 2012. Chemical characterization of volatile compounds of *Lantana camara* L. and *L. radula* Sw. and their antifungal activity. *Molecules*. 17:11447–11455.
- Pelengaris, S. & Khan, M. 2006. *The Molecular Biology of Cancer*. University of Warwick. Blackwell Publishing, Australia. 3-10p.
- Pereira, D. M., Correia-da-Silva, G., Valentao, P., Teixeira, N. & Andrade, P. B. 2013. Palmiticacid and ergosta-7,22-dien-3-ol contribute to the apoptotic effect and cell cycle arrest of an extract from *Marthasterias glacialis* L. in neuroblastoma cells. *Marine drugs*. 12(1):54–68.
- Permadi, A., Sutanto, & Wardatun, S. 2015. *Perbandingan Metode Ekstraksi Bertingkat Dan Tidak Bertingkat Terhadap Flavonoid Total Herba Ciplukan Secara Kolorimetri*. Program studi Farmasi, Fakultas MIPA, Universitas Pakuan.
- Peter, M. The regulation of cyclin-dependent kinase inhibitors (CKIs). *Program Cell Cycle Research*. 13: 99-108
- Pfeffer, C. M., & Singh, A. T. K. 2018. Apoptosis : A Target for Anticancer Therapy. *International Journal of Molecular Science*. 19: 1–10. <https://doi.org/10.3390/ijms19020448>.
- Poonkodi, K., Karthika, J., Tamilselvi, V., Anitha, R. & Vasanthamani S. 2017. Chemical Composition of Essential oils of *Hyptis suaveolens* (L.) POIT and Its In vitro Anticancer Activity. *Journal of Pharmcy Research*. 1(5):410-413.
- Porquet, N., Gout, S., & Huot, J. 2010. The Metastatic Process : An Overview. In *Metastasis of Colorectal Cancer* (pp. 1–29). New Switzerland :Springer Science & Bussiness media. <https://doi.org/10.1007/978-90-481-8833-8>.
- Pratama, F. E., & Nuwarda, R. F. 2018. Review: Senyawa Aktif Antikanker dari Bahan Alam dan Aktivitasnya. *Farmaka*. 16(1):149-157.
- Prasad, R., & Koch, B. 2014. Antitumor Activity of Ethanolic Extract of *Dendrobium formosum* in T-Cell lymphoma: An in Vitro and in Viro Study. *Biomed Research Intenational*. Article ID:753451:1-11.
- Pu, X., Storr, S. J., Zhang, Y., Rakha, E. A., Green, A. R., Ellis, I. O. & Martin, S. G. 2017. Caspase-3 and Caspase-8 Expression in Breast Cancer: Caspase-3 is Associated with Survival. *Apoptosis*. 22:357–368.
- Radji, M., Aldrat, H., Harahap, Y. & Irawan, C. 2010. Penggunaan Obat Herbal pada Pasien Kanker Serviks. *Jurnal Ilmu Kefarmasian Indonesia*. 8(1):33-39.
- Raafat, K. 2018. Phytochemical analysis of *Juglans regia* oil and kernel exploring their antinociceptive and anti-inflammatory potentials utilizing combined bio-guided GC–FID, GC–MS and HPLC analyses. *Revista Brasileira de Farmacognosia*. 28(3):358-368. <https://doi.org/10.1016/j.bjp.2018.03.007>.

- Rahardian, M. R. R. & Utami, D. 2018. Uji Sitotoksik dan Antiproliferasi Ekstrak Eter Daun Binahong (*Androdera cordifolia* (Tenore) Steen.) Terhadap Sel Hela. *Media Farmasi Indonesia*. 13(1);1-1284-1292.
- Ramprasath, V. R. & Awad, A. B. 2015. Role of phytosterols in cancer prevention and treatment. *Journal AOAC International*. 98(3):735-738. <https://doi.org/10.5740/jaoacint>.
- Rao, Y. S. V. S. J., Lanka, A., Bhavani, K. G., Ramachandran, D. & Bollikolla, H. B. 2020. Phytochemical Screening and GC-MS analysis of Pavonia Zeylanica. *Caribbean Journal of Science and Technology*. 8(1):93–104. <https://doi.org/10.55434/cbi.2020.8106>.
- Rasul, M. G. 2018. Conventional Extraction Methods Use in Medicinal Plants, their Advantages and Disadvantages. *International Journal of Basic Sciences and Applied Computing*. 2(6): 10–14.
- Rath, G., Christophe, S., Benoit, L., Hervé, S., Hamid, M., Hassan, E. L. B, Stephane, D. & Laurent, M. 2008. De novo ceramide synthesis is responsible for the anti-tumor properties of camptothecin and doxorubicin in follicular thyroid carcinoma. *International Journal Biochemical Cell Biology*. 41 (2009):p5-1172. <https://doi.org/10.1016/j.biocel.2008.10.021>.
- Ren, H., Ye, X. P., & Borole, A. P. 2017. Separation of chemical groups from bio-oil water-extract via sequential organic solvent extraction. *Journal of Analytical and Applied Pyrolysis*. 123:30-39. <https://doi.org/10.1016/j.jaap.2017.01.004>.
- Reza, A. S. M. A., Haque, A., Sarker, J., Samima, M., Rahman, M., Montakim, A., Zidan, T., Mamunur, K., Sadik, G., Tsukahara, T., & Khurshid, A. H. M. 2021. Antiproliferative and antioxidant potentials of bioactive edible vegetable fraction of *Achyranthes ferruginea* Roxb. in cancer cell line. *Food Science and Nutrition*. 9: 3777–3805. <https://doi.org/10.1002/fsn3.2343>.
- Riss, T. L., Moravec, R. A., Niles A. L., Duellman, S., Benink, H. A., Worzella, T. J. & Minor, L. 2016. *Cell Viability Assays*. May 1 [Updated 2016 Jul 1]. In: Sittampalam GS, Grossman A, Brimacombe K, et al., editors. Assay Guidance Manual. Bethesda (MD): Eli Lilly & Company and the National Center for Advancing Translational Sciences.2-6p.
- Roberts, J. M., Koff, A., Polyak, K., Firpo, E., Collins, S., Ohtsubo, M., & Massagué, J. 1994. Cyclins, Cdks, and cyclin kinase inhibitors. *Cold Spring Harb. Symposium Quant. Biology*. 59:31-38.
- Rupa, D. C. Sulistyaningsih, Dorly & Ratnadewi, D. 2017. Identification of Secretory Structure Histochemistry and Phytochemical Compounds of Medical Plant *Hyptis capitata* Jacq. *Biotropia*. 24(2):94-103.
- Saifuddin, A. 2014. *Senyawa Alam Metabolit Sekunder*. Budi Utama. Yogyakarta. 1-10p.
- Santana, F. R., Luna-Dulcey, L., Antunes, V. U., Tormena, C. F., Cominetti, M. R., Duarte, M. C. & da Silva, J. A. 2020. Evaluation of the cytotoxicity on breast cancer cell of extracts and compounds isolated from *Hyptis pectinata* (L.) poit. *Natural Product Research*. 34(1):102–109. doi: 10.1080/14786419.2019.1628747.
- Sameri, S., Mohammadi, C., Mehrabani, M. & Najafi, R. 2021. Targeting the

- hallmarks of cancer: the effects of silibinin on proliferation, cell death, angiogenesis, and migration in colorectal cancer. *BMC Complementary Medicine and Therapies*. 21(160):1–9.
- Sampaio, B. L., Edrada-Ebel, R. & Da Costa, F. B. 2016. Effect of the environment on the secondary metabolic profile of *Tithonia diversifolia*: A model for environmental metabolomics of plants. *Scientific Reports*. 6(October 2015): 1–11. <https://doi.org/10.1038/srep29265>.
- Sari, L. M. 2018. Apoptosis: Mekanisme Molekular Kematian Sel. *Cakradonya Dental Journal*. 10(2):65-70.
- Sarker, S. D., Latif, Z. & Gray, A. I. 2006. *Natural products isolation*. In: Sarker, S. D., Latif, Z. and Gray, A. I. editors. *Natural Products Isolation*. 2nd ed. Totowa (New Jersey). Humana Press Inc. 6-10p, 18p.
- Satyanarayana, A. & Kaldis, P. 2009. Mammalian cell-cycle regulation: several Cdk's, numerous cyclins, and diverse compensatory mechanisms. *Oncogene*. 28:2925-2939.
- Schafer, J. M., Lee, E. S., O'Regan, R. M., Yao, K. & Jordan, V. C., 2000, Rapid Development of Tamoxifen-stimulated Mutant p53 Breast Tumors (T47D) in Athymic Mice. *Clinical Cancer Research*. 6:4373-4380
- Schwartz, G. K. & Shah, M. A. 2005. Targeting the cell cycle: a new approach to cancer therapy. *Journal Clinical Oncology*. 23(36):9408-21. <https://doi.org/10.1200/JCO.2005.01.5594>.
- Seebacher, N. A., Stacy, A. E. & Porter, G. M. 2019. Clinical development of targeted and immune based anti-cancer therapies. *Journal of Experimental & Clinical Cancer Research*. 38:156.
- Senapati, S., Mahanta, A. K., Kumar, S. & Maiti, P. 2018. Controlled drug delivery vehicles for cancer treatment and their performance. *Signal Transduction and Targeted Therapy*. 3(1):1–19. <https://doi.org/10.1038/s41392-017-0004-3>.
- Setiawati, A. 2017. Cytotoxic Selectivity of *Ganoderma lucidum* in Colon Cancer through Cyclooxygenase 2 (COX-2) as Its Molecular Target. *The Journal Of Tropical Life Science*. 7(2):177 – 183.
- Setiawati, A., Susidarti, R.A. & Meiyanto, E. 2011. Peningkatan Efek Sitotoksik Doxorubicin oleh Hesperidin pada Sel T47D. *Bionatura-Jurnal Ilmu-Ilmu Hayati & Fisik*. 13(2):85-92.
- Setyawati, T., Narulita, S., Bahri, I. P. & Raharjo, G. T. 2015. A Guide Book to Invasive Alien Plant Species in Indonesia. Research, Development and Innovation Agency Ministry of Environment and Forestry Republic of Indonesia, Indonesia.
- Sheets, R. 2016. *Cell lines profile*. 84113001, 1–2. <https://www.phe-culturecollections.org.uk/media/122249/vero-cell-line-profile.pdf>. Diakses pada 23 juni 2019.
- Sherma, J. & Fried, B. 1987. Preparative Thin Layer Chromatography. *Journal of Chromatography Library*. 38:105–127. [https://doi.org/10.1016/S0301-4770\(08\)60365-6](https://doi.org/10.1016/S0301-4770(08)60365-6).
- Siregar, F. & Hadijono, B.S. 2000. Uji Sitotoksitas dengan Esei MTT. *Jurnal Kedokteran Gigi Universitas Indonesia* 7(Edisi Khusus):28-32.

- Siti, M. S., Nurhanan, M., Haffiz, J., Ilham, A., Getha, K., Asia, O., Norhayati, I., Sahrira, H. & Suryani, S. 2011. Potential anticancer compound from *Cerbera odollam*. *Journal of Tropical Forest Science*. 23(1): 89–96.
- Son, K., Ishigami, Y. & Hikosaka, S. 2020. Enhancement of accumulation of bioactive compounds in red leaf lettuce by manipulation of UV light before harvest. *Innovation and New Technologies in Protected Cultivation*. February: 79–84. <https://doi.org/10.17660/ActaHortic.2020.1271.11>.
- Srisawat, T., Chumkaew, P., Heed-Chim, W., Sukpondma, Y. & Kanokwiroon, K. 2013. Phytochemical screening and cytotoxicity of crude extracts of *Vatica diospyroides* Symington type LS. *Tropical Journal of Pharmaceutical Research*. 12 (1): 71-76. <https://doi.org/10.4314/tjpr.v12i1.12>.
- Sumitha, V., Murugan, K. & Mini, I. 2018. Physico-Chemical and Phytochemical Evaluation of a Medicinal Herb *Hyptis capitata* Jacq . (Lamiaceae). *Trends in Bioscience*. 11(7), 1188–1193.
- Sumitha, V., Murugan, K. & Mini, I. (2018). Physico-Chemical and Phytochemical Evaluation of a Medicinal Herb *Hyptis capitata* Jacq . (Lamiaceae). *Trends in Bioscience*, 11(7):1188–1193.
- Sundarraaj, S., Thangam, R., Sreevani, V., Kaveri, K., Gunasekaran, P., Achiraman, S. & Kannan, S. 2012. γ -Sitosterol from *Acacia nilotica* L. induces G2/M cell cycle arrest and apoptosis through c-Myc suppression in MCF-7 and A549 cells. *Journal of Ethnopharmacology*, 141(3):803–809. <https://doi.org/10.1016/j.jep.2012.03.014>.
- Susianti. 2016. Efek Timoquinon terhadap Apoptosis pada Sel Kanker Serviks. *JK Unila*, 1(2): 267-271.
- Sutardjo, U.S. 2018. Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia: Profil Kesehatan Indonesia 2018. Kementerian Kesehatan Republik Indonesia. Jakarta. 145p.
- Suzery, M. & Cahyono, B. 2014. Evaluation of Cytotoxicity Effect of *Hyptis Pectinata* Poit (Lamiaceae) Extracts Using Bslt and Mtt Methods. *Jurnal Sains Dan Matematika*. 22(3), 84–88.
- Swantara, M. D., Rita, W. S., Suartha, N., & Agustina, K. K. 2019. Anticancer activities of toxic isolate of *Xestospongia testudinaria* sponge. *Veterinary World*. 12(9):1434–1440. <https://doi.org/10.14202/vetworld.2019.1434-1440>.
- Suzery, M., Khumairoh, S. & Cahyono, B. 2019. Total Hyptolide of Indonesian *Hyptis pectinata* extracts in a various solvent using HPLC and UV-Vis spectroscopy and their toxicities. *Jurnal Kimia Sains Dan Aplikasi*. 22(6), 305–309. <https://doi.org/10.14710/jksa.22.6.305-309>.
- Suzuki-Karasaki, Y., Suzuki-Karasaki, M., Uchida, M. & Ochiai, T. 2014. Depolarization controls TRAIL-sensitization and tumor-selective killing of cancer cells: Crosstalk with ROS. *Frontiers in Oncology*. 4(May):1–14. <https://doi.org/10.3389/fonc.2014.00128>.
- Tallima, H., Azzazy, H. M. E. & El Ridi, R. 2021. Cell surface sphingomyelin: key role in cancer initiation, progression, and immune evasion. *Lipids Health and Disease*. 150(20):1-12. <https://doi.org/10.1186/s12944-021-01581-y>.
- Venkata, R. B., Samuel, L. A., Pardha, S. M., Narashima, R. B., Naga, V. K. A.,

- Sudhakar, M., Radhakrishnan, T. M. 2012. Antibacterial, antioxidant activity and GC-MS analysis of *Eupatorium odoratum*. *Asian J Pharm Clin Res.* 5(2): 99-106.
- Wagner, L., Peukert, M., Kranz, B., Gerhardt, N., Andr, S., Busch, U., & Brüggemann, D. A. 2020. Undeclared Addition of Protein Hydrolysates in Turkey Breast Muscle. *Foods.* 9:1–16. <https://doi.org/doi:10.3390/foods9081084>.
- Wang, C., & Youle, R. J. 2009. The role of mitochondria in apoptosis induced in vitro. *General Physiology and Biophysics*, 18(SPEC. ISS.), 33–40. <https://doi.org/10.1146/annurev-genet-102108-134850>.
- Wahidin, M., Sabrida, H. & Tahuteru, E.S. 2015. Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia: Situasi Penyakit Kanker. Jakarta: Kementerian Kesehatan Republik Indonesia. 1-24p.
- Wiseman, M. J. 2019. Nutrition and cancer: Prevention and survival. *British Journal of Nutrition.* 122(5):481–487. <https://doi.org/10.1017/S0007114518002222>.
- Woyengo, T. A., Ramprasath, V. R. & Jones, P. J. H. 2009. Anticancer effects of phytosterols. *European Journal of Clinical Nutrition.* 63(7):813–820. <https://doi.org/10.1038/ejcn.2009.29>.
- Wu, Z. J., Z. K. Xie, L. Yang, R. Y. Wang, Z. H. Guo, Y. B. Zhang, L. Wang, & H. R. Kutcher. 2015. Identification of autotoxins from root exudates of Lanzhou lily (*Lilium davidii* var. unicolor). *Allelopathy Journal.* 35:35–48.
- Tallima, H., Azzazy, H. M. E. & El Ridi, R. 2021. Cell surface sphingomyelin: key role in cancer initiation, progression, and immune evasion. *Lipids Health Disease.* 20 (1): 1-12. <https://doi.org/10.1186/s12944-021-01581-y>.
- Tamiru, Y., Abebe, N. & Kebede, A. 2017. Review on mechanisms of regulating apoptosis in animal cells. *World Journal of Biomedicine and Pharmaceutical Sciences.* 2: 33-38.
- Tabata, K., Kim, M., Makino, M. Satoh, M., Satoh, Y. & Suzuki, T. 2012. Phenolic Diterpen Derived from *Hyptis incana* Induce Apoptosis G2/M Arrest of Neuroblastoma cells. *Anticancer Research.* 32:4781-4790.
- Tiwari, R. & Rana, C. S. 2015. Plant Secondary Metabolites: a review. *International Journal of Engineering Research and General Science.* 3(5):661-670.
- Topcul, M. & Cetin, I. 2015. *Treatment of Colon Cancer*. OMICS Group eBooks. United State of America. 2p.
- Ubah, O. C. & Wallace H. M. 2014. Cancer therapy: targeting mitochondria and other sub-cellular organelles. *Current Pharmaceutical.* 20: 201–222.
- Umar, M. I., Javeed, A., Ashraf, M., Riaz, A., Mukhtar, M. M., Afzal, S & Altaf, R. 2013. Polarity-Based Solvents Extraction of *Opuntia dillenii* and *Zingiber officinale* for In Vitro Antimicrobial Activities. *International Journal of Food Properties.* 16:1, 114-124, <https://doi.org/10.1080/10942912.2010.517886>.
- Wang, S., Yu, H. & Wickliffe, J. K. 2011. Toxicology in Vitro. *Elsevier*, 2147-2151.
- Wang, X., Decker, C. C., Zechner, L., Krstin, S. & Wink, M. 2019. In vitro

- wound healing of tumor cells: inhibition of cell migration by selected cytotoxic alkaloids. *BMC Pharmacology and Toxicology*. 20(4):1–12.
- Wei, L. S., Wee, W., Yong, J., Siong, F. & Syamsumir, D. F. 2011. Characterization of Anticancer, Antimicrobial, Antioxidant Properties and Chemical Compositions of *Peperomia pellucida* Leaf Extract. *Acta Medica Iranica*. 49(10): 671–674.
- Weir, H. K., Anderson, R. N., Coleman King, S. M., Soman, A., Thompson, T. D. & Hong Y. 2016. Heart Disease and Cancer Deaths-Trends and Projections in the United States, 1969–2020. *Previous Chronic Disease*, 13:160211.
- Wing, R. E., & Bemiller, J. N. 1972. Preparative Thin-Layer Chromatography. In *General Carbohydrate Method* (pp. 60–64). USA: Academic press. <https://doi.org/https://doi.org/10.1016/B978-0-12-746206-6.50015-1>.
- Wong, R. S. Y. 2011. Apoptosis in cancer: from pathogenesis to treatment. *Journal of Experimental & Clinical Cancer Research*. 30(87): 1–14.
- Wu, H., Chang, D. & Huang, C. 2006. Targeted Therapy for Cancer. *Journal Cancer Molecular*. 2(2);57-66.
- Vijayarathna, S. & Sasidharan, S. 2012. Cytotoxicity of methanol extracts of *Elaeis guineensis* on MCF-7 and Vero cell lines. *Asian Pacific Journal of Tropical Biomedicine*, 2(10):826–829. [https://doi.org/10.1016/S2221-1691\(12\)60237-8](https://doi.org/10.1016/S2221-1691(12)60237-8).
- Xie, Z., Liu, Q., Liang, Z., Zhao, M., Yu, X., Yang, D. & Xu, X. 2013. The GC/MS analysis of volatile components extracted by different methods from *exocarpium citri grandis*. *Journal of Analytical Methods in Chemistry*. 2013, 1–8. <https://doi.org/10.1155/2013/918406>.
- Xiong, W. D., Gong, J., Xing, C. 2017. Ferruginol exhibits anticancer effects in OVCAR-3 human ovary cancer cells by inducing apoptosis, inhibition of cancer cell migration and G2/M phase cell cycle arrest. *Mol Med Rep*. 16 (5): 7013-7017. <https://doi.org/10.3892/mmr.2017.7484>.
- Xu, D. H., Huang, Y. S., Jiang, D. Q. & Yuan, K. 2013. The Essential Oils Chemical Compositions and Antimicrobial, Antioxidant Activity of Three *Hyptis* Species. *Pharmaceutical Biology*. 51(9): 1125-1130.
- Yamagishi, T., Zhang, D. C., Chang, J. J., McPhail, D. R., McPhail, A. T. & Lee, K. H. 1988. The Cytotoxic Principle of *Hyptis capitata* and The Structures of The New Triterpenes Hyptatis Acid –A and –B. *Phytochemistry*. 27(10): 3213-3216.
- Yang, J., Xu, C., Chen, H., Huang, M., Ma, X., Deng, S., Huang, Y., Wen, Y., Yang, X., & Song, P. 2017. *In vitro* and *in vivo* antitumor effects of the diterpene-enriched extract from *Taxodium ascendens* through the mitochondrial-dependent apoptosis pathway. *Biomedical Pharmacotherapy*, 96:1199–1208.
- Zhang, Q. W., Lin, L. G. & Ye, W. C. 2018. Techniques for extraction and isolation of natural products: a comprehensive review. *Chinese Medicine*. 20(13): 1–26. <https://doi.org/10.1186/s13020-018-0177-x>.