DAFTAR PUSTAKA

Agu, P.C., Afiukwa, C.A., Orji, O.U., Ezeh, E.M., Ofoke, I.H., Ogbu, C.O., Ugwuja, E.I., and Aja, P.M., 2023, Molecular docking as a tool for the discovery of molecular targets of nutraceuticals in diseases management, *Scientific Reports*, 13(1), 13398.

Ali, E.N., and Tay, C.I., 2013, Characterization of biodiesel produced from palm oil via base catalyzed transesterification, *Procedia Engineering*, 53, 7–12.

Bahuguna, A., Khan, I., Bajpai, V.K., and Kang, S.C., 2017, MTT assay to evaluate the cytotoxic potential of a drug, *Bangladesh Journal of Pharmacology*, 12(2), 115–118.

Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R.L., Soerjomataram, I., and Jemal, A., 2024, Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries, *CA: A Cancer Journal for Clinicians*, 74(3), 229–263.

Campanella, A., Fontanini, C., and Baltanás, M.A., 2008, High yield epoxidation of fatty acid methyl esters with performic acid generated in situ, *Chemical Engineering Journal*, 144(3), 466–475.

Changmai, B., Vanlalveni, C., Ingle, A.P., Bhagat, R., and Rokhum, L., 2020, Widely used catalysts in biodiesel production: A review, *RSC Advances*, 10(68), 41625–41679.

Charisiadis, P., Kontogianni, V.G., Tsiafoulis, C.G., Tzakos, A.G., Siskos, M., and Gerothanassis, I.P., 2014, ^{1}H-NMR as a structural and analytical tool of intra- and intermolecular hydrogen bonds of phenol-containing natural products and model compounds, *Molecules*, 19(9), 13643–13682.

Chen, L., Liu, S., and Tao, Y., 2020, Regulating tumor suppressor genes: Post-translational modifications, *Signal Transduction and Targeted Therapy*, 5(1), 90.

Cox, J., and Weinman, S., 2016, Mechanisms of doxorubicin resistance in hepatocellular carcinoma, *Hepatic Oncology*, 3(1), 57–59.

Cui, P.H., Petrovic, N., dand Murray, M., 2011, The ω-3 epoxide of eicosapentaenoic acid inhibits endothelial cell proliferation by p38 MAP kinase activation and cyclin D1/CDK4 down-regulation, *British Journal of Pharmacology*, 162(5), 1143–1155.

Doxsee, I., Jones, G., and Pollastri, M., 2016, The Design and Synthesis of Novel Aromatic Analogues of Cerulenin, *Thesis,* The Faculty of the College of Science, Northeastern University, Boston.

Fatmayanti, B.R., Jumina., Purwono, B., Kurniawan, Y.S., Pranowo, H.D., and Sholikhah, E.N. (2024). Oleate epoxides derived from palm oil as new anticancer

agents: Synthesis, cytotoxicity evaluation, and molecular docking studies against FASN protein. *ChemistrySelect,* 9(17), 20240075

Fhu, C.W., and Ali, A., 2020, Fatty acid synthase: An emerging target in cancer, *Molecules*, 25(17), 3935.

Flavin, R., Peluso, S., Nguyen, P.L., and Loda, M., 2010, Fatty acid synthase as a potential therapeutic target in cancer, *Future Oncology*, 6(4), 551–562.

Foon, C. S., and Hock, C, 2004, Kinetics study on transesterification of palm oil, *Journal of oil palm research*, 16(2), 19-29.

Fridlender, M., Kapulnik, Y., and Koltai, H., 2015, Plant derived substances with anti-cancer activity: From folklore to practice, *Frontiers in Plant Science*, 6, 799.

Ganot, N., Meker, S., Reytman, L., Tzubery, A., and Tshuva, E.Y., 2013, Anticancer metal complexes: synthesis and cytotoxicity evaluation by the MTT assay, *Journal of visualized experiments : JoVE*, 81, 50767.

Grabowski, S.J., 2006, Theoretical studies of strong hydrogen bonds, *Annual Reports on the Progress of Chemistry - Section C*, 102, 131–165.

Gunawan, E.R., Suhendra, D., Arimanda, P., Asnawati, D., and Murniati, 2023, Epoxidation of Terminalia catappa L. Seed oil: Optimization reaction, *South African Journal of Chemical Engineering*, 43, 128–134.

Hanahan, D., and Weinberg, R.A., 2011, Hallmarks of cancer: The next generation, *Cell*, 144(5), 646–674.

Hao, X., Zhu, X., Tian, H., Lai, G., Zhang, W., Zhou, H., and Liu, S., 2023, Pharmacological effect and mechanism of orlistat in anti-tumor therapy: A review, *Medicine (United States)*, 102, E34671.

Hayes, D.G., B.Y.C., A.J.M., and S.F., 1998, Urea complexation for the rapid, ecologically responsible fractionation of fatty acids from seed oil, *Journal of the American Oil Chemists' Society,* 75, 1403–1409.

Idris, N.A., Loh, S.K., and Choo, Y.M., 2014, Urea fractionation of used palm oil methyl esters, *J. Oil Palm Res*, 26(3), 226–231.

Jalil, M.J., Hadi, A., and Azmi, I.S., 2021, Catalytic epoxidation of palm oleic acid using in situ generated performic acid – Optimization and kinetic studies, *Materials Chemistry and Physics*, 270, 124754.

Jumaah, M.A., Khaleel, F.L., Salih, N., and Salimon, J., 2024, Synthesis of tri, tetra, and hexa-palmitate polyol esters from Malaysian saturated palm fatty acid distillate for biolubricant production, *Biomass Conversion and Biorefinery*, 14(2), 1919–1937.

Kheang L.S., 2014, Urea fractionation of used palm oil methyl esters *Malaysian Palm Oil Board*, 226-231.

Kitaeva, K.V., Rutland, C.S., Rizvanov, A.A., and Solovyeva, V.V., 2020, Cell culture based in vitro test systems for anticancer drug screening, *Frontiers in Bioengineering and Biotechnology*, 8, 322.

Kong, P.S., Aroua, M.K., and Daud, W.M.A., 2015, Catalytic esterification of bioglycerol to value-added products, *Reviews in Chemical Engineering*, 31(5), 437–451.

Landree, L.E., Hanlon, A.L., Strong, D.W., Rumbaugh, G., Miller, I.M., Thupari, J.N., Connolly, E.C., Huganir, R.L., Richardson, C., Witters, L.A., Kuhajda, F.P., and Ronnett, G. V., 2004, C75, a Fatty Acid Synthase Inhibitor, Modulates AMP-activated Protein Kinase to Alter Neuronal Energy Metabolism, *Journal of Biological Chemistry*, 279(5), 3817–3827.

Lewinska, A., Chochrek, P., Smolag, K., Rawska, E., and Wnuk, M., 2015, Oxidant-based anticancer activity of a novel synthetic analogue of capsaicin, capsaicin epoxide, *Redox Report*, 20(3), 116–125.

Liu, J., and Tao, B., 2022, Fractionation of fatty acid methyl esters via urea inclusion and its application to improve the low-temperature performance of biodiesel, *Biofuel Research Journal*, 9(2), 1617–1629.

Liu, Y.P., Zheng, C.C., Huang, Y.N., He, M.L., Xu, W.W., and Li, B., 2021, Molecular mechanisms of chemo- and radiotherapy resistance and the potential implications for cancer treatment, *MedComm*, 2(3), 315–340.

Mallick, R., Bhowmik, P., and Duttaroy, A.K., 2023, Targeting fatty acid uptake and metabolism in cancer cells: A promising strategy for cancer treatment, *Biomedicine and Pharmacotherapy*, 167, 115591.

Mancini, A., Imperlini, E., Nigro, E., Montagnese, C., Daniele, A., Orrù, S., and Buono, P., 2015, Biological and nutritional properties of palm oil and palmitic acid: Effects on health, *Molecules*, 20919, 17339–17361.

Marino, P., Mininni, M., Deiana, G., Marino, G., Divella, R., Bochicchio, I., Giuliano, A., Lapadula, S., Lettini, A.R., and Sanseverino, F., 2024, Healthy lifestyle and cancer risk: Modifiable risk factors to prevent cancer, *Nutrients*, 16(6), 800.

Maulidiyah, Nurdin, M., Fatma, F., Natsir, M., and Wibowo, D., 2017, Characterization of methyl ester compound of biodiesel from industrial liquid waste of crude palm oil processing, *Analytical Chemistry Research*, 12, 1–9.

Menendez, J.A., Cuyàs, E., Encinar, J.A., Vander Steen, T., Verdura, S., Llop-Hernández, À., López, J., Serrano-Hervás, E., Osuna, S., Martin-Castillo, B., and Lupu, R.,

2024, Fatty acid synthase (FASN) signalome: A molecular guide for precision oncology, *Molecular Oncology*, 18(3), 479–516.

Meng, Y., Taddeo, F., Aguilera, A.F., Cai, X., Russo, V., Tolvanen, P., and Leveneur, S., 2021, The lord of the chemical rings: Catalytic synthesis of important industrial epoxide compounds, *Catalysts*, 11,(7), 765.

Moser, B.R., Cermak, S.C., Doll, K.M., Kenar, J.A., and Sharma, B.K., 2022, A review of fatty epoxide ring opening reactions: Chemistry, recent advances, and applications, *Journal of the American Oil Chemists' Society*, 99(10), 801–842.

Mosmann, T., 1983, Rapid colorimetric assay for cellular growth and survival: Application to proliferation and cytotoxicity assays, *Journal of Immunological Methods,* 65(1-2), 55-63.

Mukherjee, S., Balius, T.E., and Rizzo, R.C., 2010, Docking validation resources: Protein family and ligand flexibility experiments, *Journal of Chemical Information and Modeling*, 50(11), 1986–2000.

Pemble IV, C.W., Johnson, L.C., Kridel, S.J., and Lowther, W.T., 2007, Crystal structure of the thioesterase domain of human fatty acid synthase inhibited by orlistat, *Nature Structural and Molecular Biology*, 14(8), 704–709.

Piccinin, E., Cariello, M., De Santis, S., Ducheix, S., Sabbà, C., Ntambi, J.M., and Moschetta, A., 2019, Role of oleic acid in the gut-liver axis: From diet to the regulation of its synthesis via Stearoyl-CoA desaturase 1 (SCD1), *Nutrients*, 11(10), 2283.

Poudyal, H., Panchal, S.K., Diwan, V., and Brown, L., 2011, Omega-3 fatty acids and metabolic syndrome: Effects and emerging mechanisms of action, *Progress in Lipid Research*, 50(4), 372–387.

Rajput, C. V., Mukherjee, R.B., Sastry, N. V., and Chikhaliya, N.P., 2022, Extraction, characterization and epoxidation of Cassia fistula (Indian laburnum) seed oil: A bio-based material, *Industrial Crops and Products*, 187, 115496.

Schcolnik-Cabrera, A., Chávez-Blanco, A., Domínguez-Gómez, G., Taja-Chayeb, L., Morales-Barcenas, R., Trejo-Becerril, C., Perez-Cardenas, E., Gonzalez-Fierro, A., and Dueñas-González, A., 2018, Orlistat as a FASN inhibitor and multitargeted agent for cancer therapy, *Expert Opinion on Investigational Drugs*, 27(5), 475–489.

Selvaraj, J., 2017, Fatty acids and their analogues as anticancer agents, *Fatty Acids*, 21, 72-86.

Sethy, C., and Kundu, C.N., 2021, 5-Fluorouracil (5-FU) resistance and the new strategy to enhance the sensitivity against cancer: Implication of DNA repair inhibition, *Biomedicine and Pharmacotherapy*, 137, 111285.

Setyawardhani, D.A., Sediawan, B.W., Fahrurrozi, M., and Sulistyo, H., 2015, Separating poly-unsaturated fatty acids from vegetable oil using urea complexation: The crystallisation temperature effects, *J. Eng. Sci. Technol*, 10, 41–49.

Sh, R. N., Abbasov, V. M., Nasirov, F. A., Nasirova, L. I., dan Musayeva, 2018, Epoxidated vegetable oils: preparation, properties and application. *Ppro*, 19(4), 427.

Shahbaz, K., Min, P.H., Walvekar, R.G., Mjalli, F.S., Hashim, M.A., and Alnashef, I.M., 2015, Removal of residual catalyst from palm oil-based biodiesel using new iconic liquids analogous. *Journal of Engineering Science and Technology*, 10, 35-49.

Sokolowska, E., Presler, M., Goyke, E., Milczarek, R., Swierczynski, J., and Sledzinski, T., 2017, Orlistat reduces proliferation and enhances apoptosis in human pancreatic cancer cells (PANC-1), *Anticancer Research*, 37(11), 6321–6327.

Toikka, M., Kuzmenko, P., Samarov, A., and Trofimova, M., 2022, Phase behavior of the oleic acid – methanol – methyl oleate – water mixture as a promising model system for biodiesel production: Brief data review and new results at 303.15 K and atmospheric pressure, *Fuel*, 319, 123730.

Turco, R., Tesser, R., Russo, V., Cogliano, T., Di Serio, M., and Santacesaria, E., 2021, Epoxidation of linseed oil by performic acid produced *in situ*, *Industrial and Engineering Chemistry Research*, 60(46), 16607–16618.

Vanauberg, D., Schulz, C., and Lefebvre, T., 2023, Involvement of the pro-oncogenic enzyme fatty acid synthase in the hallmarks of cancer: a promising target in anti-cancer therapies, *Oncogenesis*, 12(1), 16.

Wai, P.T., Jiang, P., Shen, Y., Zhang, P., Gu, Q., and Leng, Y., 2019, Catalytic developments in the epoxidation of vegetable oils and the analysis methods of epoxidized products, *RSC Advances*, 9(65), 38119–38136.

Wang, B., Wang, B., Shukla, S.K., and Wang, R., 2023, Enabling catalysts for biodiesel production via transesterification, *Catalysts*, 13(4), 740.

Widiandani, T., Tandian, T., Zufar, B.D., Suryadi, A., Purwanto, B.T., Hardjono, S., and Siswandono, 2023, In vitro study of pinostrobin propionate and pinostrobin butyrate: Cytotoxic activity against breast cancer cell T47D and its selectivity index, *Journal of Public Health in Africa*, 14, 1.

Won, S.R., Hong, M.J., Kim, Y.M., Li, C.Y., Kim, J.W., and Rhee, H.I., 2007, Oleic acid: An efficient inhibitor of glucosyltransferase, *FEBS Letters*, 581(25), 4999–5002.

Wu, Q., Zhao, B., Sui, G., and Shi, J., 2021, Phytochemicals block glucose utilization and lipid synthesis to counteract metabolic reprogramming in cancer cells, *Applied Sciences*, 11(3), 1–17.

Zhang, G., Panigrahy, D., Mahakian, L.M., Yang, J., Liu, J.Y., Lee, K.S.S., Wettersten, H.I., Ulu, A., Hu, X., Tam, S., Hwang, S.H., Ingham, E.S., Kieran, M.W., Weiss, R.H., Ferrara, K.W., and Hammock, B.D., 2013, Epoxy metabolites of docosahexaenoic acid (DHA) inhibit angiogenesis, tumor growth, and metastasis, *Proceedings of the National Academy of Sciences of the United States of America*, 110(16), 6530–6535.

Zhao, B., Li, H., Lan, T., Wu, D., Pan, L., and Chen, Z., 2019, Preparation of high-purity trilinolein and triolein by enzymatic esterification reaction combined with column chromatography, *Journal of Oleo Science*, 68(2), 159–165.

Zheng, Z., Dai, Z., and Shen, Q., 2018, Enrichment of polyunsaturated fatty acids from seal oil through urea adduction and the fatty acids change rules during the process, *Journal of Food Processing and Preservation*, 42(5), e13593.

Zhu, J. and Luo, J., 2017, The Synthesis of Milk Medium-Chain Fatty Acids in Mammary Gland,. In, *Fatty Acids*, 200-207.