



DAFTAR PUSTAKA

- Al-Jawaldeh, A., & Abbass, M. M. (2022). Unhealthy dietary habits and obesity: The major risk factors beyond non-communicable diseases in the Eastern Mediterranean Region. *Frontiers in Nutrition*, <https://doi.org/10.3389/fnut.2022.817808>
- Arzumanian, V. A., Kiseleva, O. I., & Poverennaya, E. V. (2021). The curious case of the hepg2 cell line: 40 years of expertise. *International Journal of Molecular Sciences*, 22(23), 13135. <https://doi.org/10.3390/ijms222313135>
- Bechmann, L. P., Gieseler, R. K., Sowa, J.-P., Kahraman, A., Erhard, J., Wedemeyer, I., ... Canbay, A. (2009). Apoptosis is associated with CD36/fatty acid translocase upregulation in non-alcoholic steatohepatitis. *Liver International*, 30(6), 850–859. <https://doi.org/10.1111/j.1478-3231.2010.02248.xya>
- Buzzetti, E., Pinzani, M., & Tsochatzis, E. A. (2016). The multiple-hit pathogenesis of non-alcoholic fatty liver disease (NAFLD). *Metabolism*, 65(8), 1038–1048. <https://doi.org/10.1016/j.metabol.2015.12.012>
- Byrne, C. D., & Targher, G. (2015). NAFLD: A multisystem disease. *Journal of Hepatology*, 62(1). <https://doi.org/10.1016/j.jhep.2014.12.012>
- Dalton, C., & Kowalski, C. (1967). Automated colorimetric determination of free fatty acids in biologic fluids. *Clinical Chemistry*, 13(9), 744–751. <https://doi.org/10.1093/clinchem/13.9.744>
- Donato, M. T., Tolosa, L., & Gómez-Lechón, M. J. (2014). Culture and functional characterization of human hepatoma hepg2 cells. *Methods in Molecular Biology*, 77–93. https://doi.org/10.1007/978-1-4939-2074-7_5
- Drover, V. A., & Abumrad, N. A. (2005). CD36-dependent fatty acid uptake regulates expression of peroxisome proliferator activated receptors. *Biochemical Society Transactions*, 33(1), 311–315. <https://doi.org/10.1042/BST0330311>
- Dowman, J. K., Tomlinson, J. W., & Newsome, P. N. (2009). Pathogenesis of non-alcoholic fatty liver disease. *QJM*, 103(2), 71–83. <https://doi.org/10.1093/qjmed/hcp158>



Mamuaja, C. (2017). *LIPIDA*. Unsrat Press.

Ma, Y., Nenkov, M., Chen, Y., Press, A. T., Kaemmerer, E., & Gassler, N. (2021). Fatty acid metabolism and acyl-CoA synthetases in the liver-gut axis. *World Journal of Hepatology*, 13(11), 1512–1533.
<https://doi.org/10.4254/wjh.v13.i11.1512>

Falholt, K., Lund, B., & Falholt, W. (1973). An easy colorimetric micromethod for routine determination of free fatty acids in plasma. *Clinica Chimica Acta*, 46(2), 105–111. [https://doi.org/10.1016/0009-8981\(73\)90016-8](https://doi.org/10.1016/0009-8981(73)90016-8)

Fatima, S., Hu, X., Gong, R.-H., Huang, C., Chen, M., Wong, H. L. X., ... Kwan, H. Y. (2019). Palmitic acid is an intracellular signaling molecule involved in disease development. *Cellular and Molecular Life Sciences*. <https://doi.org/10.1007/s00018-019-03092-7>

Feng, Y., Sun, W., Sun, F., Yin, G., Liang, P., Chen, S., Liu, X., Jiang, T., & Zhang, F. (2022). Biological mechanisms and related natural inhibitors of CD36 in nonalcoholic fatty liver. *Drug Design, Development and Therapy, Volume 16*, 3829–3845. <https://doi.org/10.2147/dddt.s386982>

Gabbia, D., Roverso, M., Guido, M., Sacchi, D., Scaffidi, M., Carrara, M., Orso, G., Russo, F. P., Floreani, A., Bogiali, S., & De Martin, S. (2019). Western diet-induced metabolic alterations affect circulating markers of liver function before the development of steatosis. *Nutrients*, 11(7), 1602. <https://doi.org/10.3390/nu11071602>

Ghasemi, M., Turnbull, T., Sebastian, S., & Kempson, I. (2021). The MTT assay: Utility, Limitations, pitfalls, and interpretation in bulk and single-cell analysis. *International Journal of Molecular Sciences*, 22(23), 12827. <https://doi.org/10.3390/ijms222312827>

Glatz, F. C., & Luiken, J. F. P. (2018). Dynamic role of the transmembrane glycoprotein CD36 (SR-B2) in cellular fatty acid uptake and utilization. *Journal of Lipid Research*, 59(7), 1084–1093. <https://doi.org/10.1194/jlr.r082933>

Gottlieb, R. A., Giesing, H. A., Zhu, J. Y., Engler, R. L., & Babior, B. M. (1995). Cell acidification in apoptosis: granulocyte colony-stimulating factor delays programmed cell death in neutrophils by up-regulating the vacuolar H⁽⁺⁾-ATPase. *Proceedings of the National Academy of Sciences of the United States of America*, 92(13), 5965–5968. <https://doi.org/10.1073/pnas.92.13.5965>



Grünig, D., Duthaler, U., & Krähenbühl, S. (2018). Effect of toxicants on fatty acid metabolism in hepg2 cells. *Frontiers in Pharmacology*, 9. <https://doi.org/10.3389/fphar.2018.00257>

Guo, X., Yin, X., Liu, Z., & Wang, J. (2022). Non-alcoholic fatty liver disease (NAFLD) pathogenesis and natural products for prevention and treatment. *International Journal of Molecular Sciences*, 23(24), 15489. <https://doi.org/10.3390/ijms232415489>

Hall, J. E., & Guyton, A. C. (2016). *Guyton and Hall Textbook of Medical Physiology* (13th ed.). Elsevier.

Hardiansyah, Riyadi, dan Napitupulu. (2013). Kecukupan Energi, Protein, Lemak dan Karbohidrat. Departemen Gizi Masyarakat FEMA IPB dan FK UI.

Itaya, K. (1977). A more sensitive and stable colorimetric determination of free fatty acids in blood. *Journal of Lipid Research*, 18(5), 663–665. [https://doi.org/10.1016/s0022-2275\(20\)41609-8](https://doi.org/10.1016/s0022-2275(20)41609-8)

Jay, A. G., Simard, J. R., Huang, N., & Hamilton, J. A. (2020). SSO and other putative inhibitors of FA transport across membranes by CD36 disrupt intracellular metabolism, but do not affect FA translocation. *Journal of Lipid Research*, 61(5), 790–807. <https://doi.org/10.1194/jlr.ra120000648>

Kaur, G., & Dufour, J. M. (2012). Cell Lines. *Spermatogenesis*, 2(1), 1–5. <https://doi.org/10.4161/spmg.19885>

Klop, B., Elte, J., & Cabezas, M. (2013). Dyslipidemia in obesity: Mechanisms and potential targets. *Nutrients*, 5(4), 1218–1240. <https://doi.org/10.3390/nu5041218>

Kuda, O., Pietka, T. A., Demanova, Z., Kudova, E., Cvacka, J., Kopecky, J., & Abumrad, N. A. (2013). Sulfo-N-succinimidyl oleate (SSO) inhibits fatty acid uptake and signaling for intracellular calcium via binding CD36 lysine 164. *Journal of Biological Chemistry*, 288(22), 15547–15555. <https://doi.org/10.1074/jbc.m113.473298>

Krisanits, B., Randise, J. F., Burton, C. E., Findlay, V. J., & Turner, D. P. (2020). Pubertal mammary development as a “susceptibility window” for breast



cancer disparity. *Advances in Cancer Research*, 57–82.
<https://doi.org/10.1016/bs.acr.2020.01.004>

Kurniawati, P., & Banowati, R. (2017). *MODUL BIOKIMIA* (Vol. 1). Program DIII Analisis Kimia, Fakultas MIPA, Universitas Islam Indonesia. Retrieved June 2, 2023, from <https://diploma.chemistry.uii.ac.id/modul-biokimia-2/>.

Nock, N. L., & Pillai, A. L. P. C. (2012). Dyslipidemia: Genetics and role in the metabolic syndrome. *Dyslipidemia - From Prevention to Treatment*.
<https://doi.org/10.5772/28188>

Laporan Nasional riskesdas 2018. Jakarta: Kementerian Kesehatan, Republik Indonesia, Badan Penelitian dan Pengembangan Kesehatan; 2019.

Liao, J., Sportsman, R., Harris, J., & Stahl, A. (2005). Real-time quantification of fatty acid uptake using a novel fluorescence assay. *Journal of Lipid Research*, 46(3), 597–602. <https://doi.org/10.1194/jlr.d400023-jlr200>

Lieberman, M. and Peet, A. (2023) *Marks' basic medical biochemistry: A clinical approach*. 6th edn. Philadelphia: Wolters Kluwer Health.

Loscalzo, J., Fauci, A. S., Kasper, D. L., Hauser, S., Longo, D. L., & Jameson, J. L. (2022). *Harrison's principles of Internal Medicine* (19th ed.). New York.

Ma, Y., Nenkov, M., Chen, Y., Press, A. T., Kaemmerer, E., & Gassler, N. (2021). Fatty acid metabolism and acyl-COA synthetases in the liver-gut axis. *World Journal of Hepatology*, 13(11), 1512–1533.
<https://doi.org/10.4254/wjh.v13.i11.1512>

Marra, F., & Svegliati-Baroni, G. (2018). Lipotoxicity and the gut-liver axis in nash pathogenesis. *Journal of Hepatology*, 68(2), 280–295.
<https://doi.org/10.1016/j.jhep.2017.11.014>

Meerloo, J., Kaspers, G. J., & Cloos, J. (2011). Cell sensitivity assays: The MTT assay. *Methods in Molecular Biology*, 237–245. https://doi.org/10.1007/978-1-61779-080-5_20

Morris, R. (2015). Spectrophotometry. *Current Protocols Essential Laboratory Techniques*, 11(1). <https://doi.org/10.1002/9780470089941.et0201s11>



Munir, R., Lise, J., Swinnen, J. V., & Zaidi, N. (2022). Too complex to fail? Targeting fatty acid metabolism for cancer therapy. *Progress in lipid research*, 85, 101143. <https://doi.org/10.1016/j.plipres.2021.101143>

Murni, I. K., Sulistyoningrum, D. C., Susilowati, R., Julia, M., & Dickinson, K. M. (2022). The association between dietary intake and cardiometabolic risk factors among obese adolescents in Indonesia. *BMC Pediatrics*, 22(1). <https://doi.org/10.1186/s12887-022-03341-y>

National Center for Biotechnology Information (2023). PubChem Compound Summary for CID 90469841, Sulfo-N-succinimidyl oleate sodium. Retrieved June 16, 2023 from <https://pubchem.ncbi.nlm.nih.gov/compound/Sulfo-N-succinimidyl-oleate-sodium>.

Parthasarathy, G., Revelo, X., & Malhi, H. (2020). Pathogenesis of nonalcoholic steatohepatitis: An overview. *Hepatology Communications*, 4(4), 478–492. <https://doi.org/10.1002/hep4.1479>

Pepino, M. Y., Kuda, O., Samovski, D., & Abumrad, N. A. (2014). Structure-function of CD36 and importance of fatty acid signal transduction in fat metabolism. *Annual Review of Nutrition*, 34(1), 281–303. <https://doi.org/10.1146/annurev-nutr-071812-161220>

Rada, P., González-Rodríguez, Á., García-Monzón, C., & Valverde, Á. M. (2020). Understanding lipotoxicity in NAFLD PATHOGENESIS: IS CD36 a key driver? *Cell Death & Disease*, 11(9). <https://doi.org/10.1038/s41419-020-03003-w>

Schrauwen, P., & Westerterp, K. R. (2000). The role of high-fat diets and physical activity in the regulation of body weight. *British Journal of Nutrition*, 84(4), 417–427. <https://doi.org/10.1017/s0007114500001720>

Siregar, S. R., & Boy, E. (2022). Faktor Risiko Pada Pasien dislipidemia. *JURNAL IMPLEMENTA HUSADA*, 3(4), 230. <https://doi.org/10.30596/jih.v3i4.12241>

Sirkesnas Tahun 2016. <https://labmandat.litbang.kemkes.go.id/riset-badan-litbangkes/menu-riskesnas/menu-rikus/422-sirk-2016>

Stillwell, W. (2016). *Membrane Biogenesis. An Introduction to Biological Membranes*, 315–329. doi:10.1016/b978-0-444-63772-7.00014-2



Sukkasem, N., Chatuphonprasert, W., & Jarukamjorn, K. (2020). *Cytochrome P450 expression-associated multiple-hit pathogenesis of non-alcoholic fatty liver disease (NAFLD) in HepG2 cells*. *Tropical Journal of Pharmaceutical Research*, 19(4), 707–714. doi:10.4314/tjpr.v19i4.5

Tarhda, Z., & Ibrahimi, A. (2015). Insight into the mechanism of lipids binding and uptake by CD36 receptor. *Bioinformation*, 11(6), 302–306. <https://doi.org/10.6026/97320630011302>

Urso, C. J., & Zhou, H. (2021). Role of CD36 in Palmitic Acid Lipotoxicity in Neuro-2a Neuroblastoma Cells. *Biomolecules*, 11(11), 1567. <https://doi.org/10.3390/biom11111567>

Wali, J. A., Jarzebska, N., Raubenheimer, D., Simpson, S. J., Rodionov, R. N., & O'Sullivan, J. F. (2020). Cardio-metabolic effects of high-fat diets and their underlying mechanisms—a narrative review. *Nutrients*, 12(5), 1505. <https://doi.org/10.3390/nu12051505>

Wasityastuti, W., Nugrahaningsih, D.A., Tsany, S.F., Pasaribu, H.S., Saffana, R.D., 2023. Knockdown Reseptor Scavenger dan Translokator Asam Lemak (CD36): Pemodelan Modulasi Metabolik *In Vitro* untuk Kajian Patofisiologi dan Anti-Inflamasi/Imunoproteksi. Universitas Gadjah Mada

Wilson, C. G., Tran, J. L., Erion, D. M., Vera, N. B., Febbraio, M., & Weiss, E. J. (2015). Hepatocyte-specific disruption of CD36 attenuates fatty liver and improves insulin sensitivity in HFD-fed mice. *Endocrinology*, 157(2), 570–585. <https://doi.org/10.1210/en.2015-1866>

LAMPIRAN

Lampiran 1 Ethical Approval