

DAFTAR PUSTAKA

- Abdel-Megeid, A. A., Atiia, A.E., Elmarasy, S.E., dan Ibrahim, A.M. (2008) Effect of different types of fish on rats suffering from diabetes. *Nutrition and Health*. 19(4). pp. 257-271.
- Ali, S.F. (2014) *GLUT 4 and insulin resistance*. Master of Science.thesis, Arab Medical University.
- American Diabetes Association. (2014) *Diagnosis and classification of diabetes mellitus*. *Diabetes Care*. 37(1). pp. 581-590.
- Arrafi M., Ambak, M. A., Rumeaida, M.P., dan Muchlisin, Z.A. (2016) Biology of Indian Mackerel, *Rastrelliger kanagurta* (Cuvier, 1817) in the western waters of aceh. *Iranian Journal of Fisheries Sciences*. 15(3). pp. 957-972.
- Astawan, M., Wahyuni, M., Yasuhara, T., Yamada, K., Tadokoro, T., dan Maekawa, A. (1994) Effects of Angiotensin I-Converting Enzyme Inhibitory substances derived from Indonesian dried-salted fish on blood pressure of rats. *Bioscience Biotechnology and Biochemistry*. 59(3). pp. 425-429.
- Astuti, M. dan Dalais, F.S. (2000) Tempe, a nutritious and healthy food from Indonesia. *Asia Pacific Journal of Clinical Nutrition*. 9(4). pp. 322–325.
- Barus, T., Wati, L., Melani, Suwanto, A., dan Yogiara. (2017) Diversity of protease-producing *Bacillus* spp. from fresh Indonesian tempeh based on 16S rRNA gene sequence. *HAYATI Journal of Biosciences*. 24(1). pp. 35-40.
- Bener, A., Zirie, M., Daghsh, M.H., Al-Hamaq, A.O., Daradkeh, G., dan Rikabi, A. (2007) Lipids, lipoprotein (a) profile and HbA1c among arabian type 2 diabetic patients. *Biomedical Research*. 18(2). pp. 97-102.
- Berg, J. M., Tymoczko, J.L., dan Stryer, L. (2002) Proteases: facilitating a difficult reaction. *Biochemistry*. 5th ed. New York: W H Freeman, Section 9.1.
- Bergeron, N., Deshaies, Y., dan Jacques, H. (1992) Dietary fish protein modulates high density lipoprotein cholesterol and lipoprotein lipase activity in rabbits. *The Journal of Nutrition*. 122(8). pp. 1731-1737.
- Castle, C. K., Kuiper, S. L., Blake, W. L., Paigen, B., Marotti, K. R., dan Melchior, G. W. (1998) Remodeling of the HDL in NIDDM: a fundamental role for cholesteryl ester transfer protein. *American Journal of Physiology-Endocrinology and Metabolism*. 274(6). pp. E1091–E1098.

- Cehade, J. M., Gladysz, M., dan Mooradian, A.D. (2013) Dyslipidemia in type 2 diabetes: prevalence, pathophysiology, and management. *Drugs*. 73(4). pp. 327-339.
- Chen, Q. J., Lai, H.M., Chen, B.D., Li, X.M., Zhai, H., He, C.H., Pan, S., Luo, J.Y., Gao, J., Liu, F., Ma, Y.T., dan Yang, Y.N. (2016) Appropriate LDL-C-to-HDL-C ratio cutoffs for categorization of cardiovascular disease risk factors among uygur adults in Xinjiang, China. *International Journal of Environmental Research and Public Health*. 13(2). pp. 235.
- Daliri, E.B., Oh, D.H., dan Lee, B.H. (2017) Bioactive peptides. *Foods*. 6(32). pp. 1-21.
- Duvillard, L., Florentin, E., Lizard, G., Petit, J., Galland, F., Monier, S., Gambert, P., dan Verges, B. (2003) Cell surface expression of LDL receptor is decreased in type 2 diabetic patients and is normalized by insulin therapy. *Diabetes Care*. 26(5). pp. 1540-4.
- Duvillard, L., Pont, F., Florentin, E., Galland-Jos, C., Gambert, P., dan Verges, B. (2000) Metabolic abnormalities of apolipoprotein B-containing lipoproteins in non-insulin-dependent diabetes: a stable isotope kinetic study. *European Journal of Clinical Investigation*. 30(8). pp. 685–694.
- Federer, W.T. (1977) *Experimental Design Theory and Application, 3rd Ed.*. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
- Feingold, K.R., Grunfeld, C., Pang, M., Doerrler, W., dan Krauss, R.M. (1992) LDL subclass phenotypes and triglyceride metabolism in non-insulin-dependent diabetes. *Arteriosclerosis and Thrombosis*. 12(12). pp. 1496-502.
- Fruchart, J.C. (2001) Peroxisome proliferator-activated receptor- α activation and high-density lipoprotein metabolism. *The American Journal of Cardiology*. 88(12). pp. 24–29.
- Galland, F., Duvillard, L., Petit, J.M., Lagrost, L., Vaillant, G., Brun, J.M., Gambert, P., dan Verges, B. (2006) Effect of insulin treatment on plasma oxidized LDL/LDL-cholesterol ratio in type 2 diabetic patients. *Diabetes & Metabolism*. 32(6). pp. 625-631.
- Galle, J., Schneider, R., Winner, B., Lehmann-Bodema, C., Schinzelb, R., Munchb, G., Conzelmannb, dan E., Wannera, C. (1998) Glyc-oxidised LDL impair endothelial function more potently than oxidised LDL: role of enhanced oxidative stress. *Atherosclerosis*. 138(1). pp. 65-77.
- Garg, N., Agrawal, Y.B., dan Gupta, S. (2014) A study of lipid profile levels in diabetics and non-diabetics taking TC/HDL ratio and LDL/HDL ratio into consideration. *Indian Academy of Clinical Medicine*. 15(3-4). pp. 192-195.

- Ghasemi, A., Khalifi, S., dan Jedi, S. (2014) Streptozotocin-nicotinamide-induced rat model of type 2 diabetes. *Acta Physiologica Hungarica*. 101(4). pp. 408-420.
- Gilbert, E.R, Wong, E. A., dan Webb Jr, K.E. (2008) Peptide absorption and utilization: implications for animal nutrition and health. *Journal of Animal Science*. 86. pp. 2135–2155.
- Grygiel-Górniak, B. (2014) Peroxisome proliferator-activated receptors and their ligands: nutritional and clinical implications – a review. *Nutrition Journal*. 13(17). pp. 1-10.
- Handayani, D., Aulani'Am, Djoko, W. Soeadmadji, dan Widodo, M.A. (2003) Enzim lipoprotein lipase suatu alternatif pemeriksaan gangguan metabolisme lemak pada penderita dm tipe 2 in vitro. *Jurnal Kedokteran Brawijaya*. 19(2).
- Hidaka, S., Yoshimatsu, H., Kondou, S., Oka, K., Tsuruta, Y., Sakino, H., Itateyama, E., Noguchi, H., Himeno, K., Okamoto, K., Teshima, Y., Okeda, T., dan Sakata, T. (2001) Hypoleptinemia, but not hypoinsulinemia, induces hyperphagia in streptozotocin-induced diabetic rats. *Journal of Neurochemistry*. 77(4). pp. 993-1000.
- Hong, K. B., Jung, E.Y., Kim, J.H., Chang, U.J., dan Suh, H.J. (2015) Yeast hydrolysate as a functional anti-obesity ingredient: appetite suppressive effects of yeast hydrolysate in fooddeprived mice. *Progress in Nutrition*. 17(3). pp. 262-264.
- Hosomi, R., Fukao, M., Fukunaga, K., Okuno, M., Yagita, R., Kanda, S., Nishiyama, T., dan Yoshida, M. (2010) Effect of Fish Protein and Peptides on Lipid Absorption in Rats. *Trace Nutrients Research*. 27. pp. 21-27.
- Hsiao, N.W., Chen, Y., Kuan, Y.C., Lee, Y.C., Lee, S.K., Chan, H.H., dan Kao, C.H. (2014) Purification and Characterization of An Aspartic Protease from The *Rhizopus oryzae* Protease Extract, Peptidase R. *Electronic Journal of Biotechnology*. 17(2). pp. 89–94.
- Hsieh, C.H., T.Y. Wang, C.C. Hung, M.C. Chen, dan K.C. Hsu. (2013). Improvement of glycemic control in streptozotocin- induced diabetic rats by Atlantic salmon skin gelatin hydrolysate as the dipeptidyl-peptidase IV inhibitor. *Food and Function Journal*. vol. 6 hal: 1887-1892
- International Diabetes Federation. (2017) *IDF Diabetes Atlas Eighth edition*[Internet]. Brussels, Belgium: International Diabetes Federation Tersedia di: <<http://www.diabetesatlas.org>> [Diakses pada 16 November 2018].

- Ishii, S., Kamegai, J., Tamura, H., Shimizu, T., Sugihara, H., dan Oikawa, S. (2002) Role of ghrelin in streptozotocin-induced diabetic hyperphagia. *Endocrinology Journal*. 143(12). pp. 4934–4937.
- Johnson, E. L. (2012) Glycemic variability in type 2 diabetes mellitus: oxidative stress and macrovascular complication. In : Ahmad, Shamim I.ed. *Diabetes: An Old Disease, a New Insight*. New York: Springer Science+Business Media. pp. 139-149.
- Karnila, R., Astawan, M., dan Wresdiyati, T. (2011) Potensi ekstrak, hidrolisat dan isolat protein teripang pasir (*Holothuria scabra* J.) untuk menurunkan kadar glukosa darah dan memperbaiki profil sel beta pankreas tikus diabetes mellitus. *Laporan Penelitian Universitas Riau Pekanbaru*.
- Kaul, K., Tarr J. M., Ahmad S. I., Kohner, E. M., dan Chibber R. (2012) Introduction to diabetes. In : Ahmad, S. I.ed. *Diabetes: An Old Disease, a New Insight*. New York: Springer Science+Business Media. pp. 1-10.
- Khaled, H. B., Ghlissi, Z., Chtourou, Y., Hakim, A., Ktari, N., Fatma, M.A., Barkia, A., Sahnoun, Z., dan Nasr, M. (2011) Effect of protein hydrolysates from sardinelle (*Sardinella aurita*) on the oxidative status and blood lipid profile of cholesterol-fed rats. *Food Research International*. 45(1). pp. 60–68.
- Kitts, D.D. dan Weiler, K. (2003) Bioactive proteins and peptides from food sources. Applications of bioprocesses used in isolation and recovery. *Current Pharmaceutical Design*. 9(16). pp. 1309-1323.
- Kraemer, F.B. dan Shen, W.J. (2006) Hormone-sensitive lipase knockouts. *Nutrition & Metabolism*. 3(12). pp. 1-7.
- Ktari, N., Mnafigui, K., Nasri, R., Hamden, K., Bkhairia, I., Hadj, A.B., Boudaouara, T., Elfekib, A., dan Nasria, M. (2013) Hypoglycemic and hypolipidemic effects of protein hydrolysates from zebra blenny (*Salaria basilisca*) in alloxan-induced diabetic rats. *Food & Function*. 4(11). pp. 1691–1699.
- Lassoued, I., Mezghani, M., Jridi, M., Rahmouni, F., Jamoussi, K., Rebai, T., Feki, A.E., Nasria, M., dan Barkiaa, A. (2018) Protective effects of thornback ray muscle protein hydrolysate against dyslipidemia, oxidative stress and reduced fertility induced by high cholesterol diet in adult male rats. *Royal Society Chemistry Advance*. 8(40). pp. 22303–22312.
- Lemieux, I., Lamarche, B., Couillard, C., Pascot, A., Cantin, B., Bergeron, J., Dagenais, G.R., dan Despre's, J.P. (2001) Total Cholesterol/HDL Cholesterol Ratio vs LDL Cholesterol/HDL Cholesterol Ratio as Indices of Ischemic Heart Disease Risk in Men. *Archive of Intern Medicine*. 161(22). pp. 2685-2692.

- Li-Chan, E.C.Y., Hunag, S.L., Jao, C.L., Ho, K.P., dan Hsu, K.C. (2012). Peptides derived from atlantic salmon skin gelatin as dipeptidyl-peptidase iv inhibitors. *Journal of Agricultural and Food Chemistry*. 60(4). pp. 973–978.
- Liu, X., Zhang, M., Zhang, C., dan Liu, C. (2012) Angiotensin converting enzyme (ACE) inhibitory, antihypertensive and antihyperlipidaemic activities of protein hydrolysates from *Rhopilema esculentum*. *Food Chemistry*. 134(4). pp. 2134–2140.
- Love, M. S., Passarelli, J.K., dan Diehl, C.O. (2015). The Bigeye Scad, *Selar crumenophthalmus* (Bloch, 1793) (Family Carangidae), New to the California Marine Fauna, with a List to and Keys for All California Carangids. *Bulletin Southern California Academy of Science*. 114(3). pp. 141-148.
- Mangiapane, H. (2012) Cardiovascular Disease and Diabetes. In : Ahmad, S. I.ed. *Diabetes: An Old Disease, a New Insight*. New York: Springer Science+Business Media. pp. 219-227.
- Mauger, J.F. dan Lamarche, B. (2005). *Insulin Resistance and Dyslipidemia*. England: John Wiley & Sons.
- Meetoo, D. (2014) Diabetes: complications and the economic burden. *British Journal of Healthcare Management*. 20(2). pp. 8-15.
- Meeuwisse-Pasterkamp, S.H., van der Klauw, M.M., dan Wolffenbuttel, B.H. (2008) Type 2 diabetes mellitus: prevention of macrovascular complications. *Journal Expert Review of Cardiovascular Therapy*. 6(3). pp. 323–341.
- Morato, N., Lollo, P.C., Moura, C.S., Batista, T.M., Camargo, R.L., Carneiro, E.M., dan Amaya-Farfan, J. (2013) Whey protein hydrolysate increases translocation of GLUT-4 to the plasma membrane independent of insulin in wistar rats. *PLOS ONE*. 8(8). pp. e71134.
- Nasri, R., Abdelhedi, O., Jemil, I., Amor, I.B., Elfeki, A., Gargouri, J., Boualga, A., Karra-Chaabounia, M., dan Nasria, M. (2018) Preventive effect of goby fish protein hydrolysates on hyperlipidemia and cardiovascular disease in Wistar rats fed a high-fat/fructose diet. *Royal Society of Chemistry Advance*. 8(17). pp. 9383–9393.
- Nimmanapalli, H.D., Kasi, A.D., Devapatla, P.K., dan Nuttakki, V. (2016) Lipid ratios, atherogenic coefficient and atherogenic index of plasma as parameters in assessing cardiovascular risk in type 2 diabetes mellitus. *International Journal of Research Medical Sciences*. 4(7). pp. 2863-2869.

- Nisa, K. dan Asadullah, K. (2011) Seasonal variation in chemical composition of the indian mackerel (*Rastrelliger kanagurta*) from karachi coast. *Iranian Journal of Fisheries Sciences*. Volume 10(1).pp. 67-74.
- Okon, U. A., Owo, D.U., Udokang, N.E., Udobang, J.A., dan Ekpenyong, C.E. (2012). Oral administration of aqueous leaf extract of *Ocimum gratissimum* ameliorates polyphagia, polydipsia and weight loss in streptozotocin-induced diabetic rats. *American Journal of Medicine and Medical Sciences*. 2(3). pp. 45-49.
- Ouellet, V., Marois, J., Weisnagel, S.J., dan Jacques, H. (2007) Dietary cod protein improves insulin sensitivity in insulin-resistant men and women: a randomized controlled trial. *Diabetes Care*. 30(11). pp. 2816-2821.
- Persegol, L., Verges, B., Foissac, M., Gambert, P., dan Duvillard, L. (2006) Inability of HDL from type 2 diabetic patients to counteract the inhibitory effect of oxidised LDL on endothelium-dependent vasorelaxation. *Diabetologia*. 49. pp. 1380–1386.
- Reeves, P.G., Forrest H., Nielsen, dan Fahey, G.C. (1993) AIN-93 purified diets for laboratory rodents: final report of the american institute of nutrition ad hoc writing committee on the reformulation of the AIN-76A rodent diet. *American Institute of Nutrition*. 11(1). pp. 1939–1951.
- Sanchez, A. dan Vazquez, A. (2017) Bioactive peptides: a review. *Food Quality and Safety*. 1(1). pp. 29-46.
- Shukla, A., Bettzieche, A., Hirche, F., Brandsch, C., Stangl, G.I., dan Eder, K. (2006) Dietary fish protein alters blood lipid concentrations and hepatic genes involved in cholesterol homeostasis in the rat model. *British Journal of Nutrition*. 96(4). pp. 674–682.
- Stumvoll, M., Goldstein, B. J., dan Haeften, T. W. (2005) Type 2 diabetes: principles of pathogenesis and therapy. *The Lancet*. 365(9467). pp. 1333-1346.
- Sumi E.S., Vijayan, D.K., Jayarani, R., Navaneethan, R., Anandan, R., dan Mathew, S. (2016) Biochemical composition of indian common small pelagic fishes indicates richness in nutrients capable of ameliorating malnutrition and age-associated disorders. *Journal of Chemical Biology & Therapeutics*. 1(2). pp. 112.
- Tozer, E.C. dan Carew, T.E. (1997) Residence time of low-density lipoprotein in the normal and atherosclerotic rabbit aorta. *Circulation Research*. 80(2). pp. 208–218.

- Tribble, D.L., Holl, L.G., Wood, P.D., dan Krauss, R.M. (1992) Variations in oxidative susceptibility among six low density lipoprotein subfractions of differing density and particle size. *Atherosclerosis*. 93(3). pp. 189–199.
- Verges, B. (2005) New insight into the pathophysiology of lipid abnormalities in type 2 diabetes. *Diabetes & Metabolism*. 31(5). pp. 429-439.
- Verges, B. (2009) Lipid modification in type 2 diabetes: the role of LDL and HDL. *Fundamental & Clinical Pharmacology*. 23(6). pp. 681-685.
- Verges, B., Petit, J.M., Duvillard, L., Dautin, G., Florentin, E., Galland, F., dan Gambert, P. (2006) Adiponectin is an important determinant of ApoA-I catabolism. *Arteriosclerosis, Thrombosis, and Vascular Biology*. 26(6). pp. 1364-1369.
- Young, C.E., Karas, R.H., dan Kuvin, J.T. (2004) High-density lipoprotein cholesterol and coronary heart disease. *Cardiology in Review*. 12(2). pp. 107-199.
- Zhu, C.F., Li, G.Z., Peng, H.B., Zhang, F., Chen, Y., dan Li, Y. (2010) Treatment with marine collagen peptides modulates glucose and lipid metabolism. *Applied Physiology, Nutrition, and Metabolism*. 35(6). pp. 797-804.
- Zhu, C.F., Zang, W., Mu, B., Zhang, F., Lai, N.N., Zhou, J., Xu, A., Liu, J.G., dan Li, Y. (2017) Effects of marine collagen peptides on glucose metabolism and insulin resistance in type 2 diabetic rats. *Journal Food Science Technology*. 54(8). pp. 2260–2269.