

DAFTAR PUSTAKA

- Aizzat, O., Sopiah, H., Madiha, M.M., Hazreen, M., Shailah, A., Wan, J.W.Y., Nur, S.A., Srijit, D., Musalmah, M., Yasmin, A.M.Y. 2010. Modulation of Oxidative Stress by *Chlorella vulgaris* in Streptozotocin (STZ) Induced Diabetic Sprague-Dawley rats. *Advances in Medical Sciences*, 55 (2) : 281-288.
- American Diabetes Association. 2014. Standards of Medical Care in Diabetes. *Diabetes Care*, 37 (1) : 14-80.
- Andrade, L.M., Andrade, C.J., Dias, M., Nascimento, C.A.O., Mendes, M.A. 2018. *Chlorella* and *Spirulina* Microalgae as Sources of Functional Foods, Nutraceutical, and Food Supplements; An Overview. *MOJ Food Process & Technology*, 6 (1) : 45-58.
- Ardiani, F., W. Lestariana, E. Huryati. 2011. Ekstrak Air Daun Ceplikan (*Ruellia tuberosa* L.) Berpengaruh Terhadap Kadar SGOT, SGPT Dan Gambaran Histologis Hepar Tikus DM. *Jurnal Gizi Klinik Indonesia*, 8 (2) : 99-105.
- Armitage, D. 2004. "*Rattus norvegicus*" (On-line), Animal Diversity Web. http://animaldiversity.org/accounts/Rattus_norvegicus/. Diakses tanggal 17 September 2017.
- Azrimaidaliza. 2011. Asupan Zat Gizi dan Penyakit Diabetes Mellitus. *Jurnal Kesehatan Masyarakat*, 6 (1) : 36-41.
- Balamash, K.S., Alkreathy, H.M., Al Gahdali, E.H., Khoja, S.O., Ahmad, A. 2018. Comparative Biochemical and Histopathological Studies on the Efficacy of Metformin and Virgin Olive Oil Against Streptozotocin-Induced Diabetes in Sprague-Dawley Rats. *Journal of Diabetes Research*, 1-10.
- Baradero, M., Dayrit, M.W., Siswadi, Y. 2005. *Seri Asuhan Keperawatan : Klien Gangguan Hati*. Buku Kedokteran EGC. Jakarta. Hal 1-9.
- Belay, A., Ota, Y., Miyakawa, K., Sihmamatsu, H. 1993. Current Knowledge on Potential Health Benefits of Spirulina. *Journal of Applied Phycology*, 5 : 235-241.
- Berlean, R., Rosioru, C.L., Tarba, C. 2014. Effects of *Arthrospira* (*Spirulina*) on Hematopoiesis in Rats. *Studia Universitatis Babeş – Bolyai, Biologia*, 2 : 69-76.
- Bhargavi, G., Josthna, P., Naidu, C.V. 2015. Changes in Serum Biochemical Parameters and Lipid Profile in Normal and STZ Induced Diabetic Rats with The Administration of Ethanol Extract of *Polyalthia Cerasoides* Stem Bark. *International Research Journal of Pharmacy*, 6 (2) : 153-156.
- Christwardana, M., Nur, M.M.A., Hadiyanto. H. 2011. Spirulina Platensis : Potensinya Sebagai Bahan Pangan Nasional. *Jurnal Aplikasi Teknologi Pangan*, 2 (1) : 1-4.
- Cobb, J.P., Hotchkiss, R.S., Karl, I.E., Buchman, T.G., 1996. Mechanism of Cell Injury and Death. *British Journal of Anaesthesia*, 77 : 3-10.
- Constantini, D. 2014. *Oxidative Stress and Hormones in Evolutionary Ecology and Physiology*. Springer. Berlin. P. 13-15
- Dancygier, H. 2010. *Clinical Hepatology : Principles and Practice of Hepatobiliary Diseases*. Springer-Verlag Berlin Heidelberg. Berlin. P. 582-584.

- Davilia, J.C., Levin, S., Radi, Z.A. 2018. *Cell Injury and Necrosis*. In Comprehensive Toxicology. Elsevier. London. P. 407.
- Day, C. & Bailey, C.J. 2016. *Metformin*. In Reference Module in Biomedical Sciences. Elsevier. London.
- Delrue, F., Alaux, E., Moudjaoui, L., Gaignard, C., Fleury, G., Perilhou, A., Richaud, P., Petitjean, M., Sassi, J. 2017. Optimization of *Arthrospira platensis* (*Spirulina*) Growth : From Laboratory Scale to Pilot Scale. *Fermentation*, 3 (59) : 1-14.
- Departemen Kesehatan RI. 2007. *Pharmaceutical Care Untuk Penyakit Hati*. Direktorat Bina Farmasi Komunitas dan Klinik. Ditjen Bina Kefarmasian dan Alat Kesehatan. Departemen Kesehatan RI. Hal. 3.
- Dlife Editor. 2018. Can Diabetes Causes Weight Loss?. <https://dlife.com/can-diabetes-cause-weight-loss/>. Diakses tanggal 9 Juni 2019.
- Ebrahimi-Mameghani, M., Sadeghi, Z., Farhangi, M.A., Vaghef-Mehrabany, E., Aliasharfi, S. 2017. Glucose Homeostasis, Insulin Resistance and Inflammatory Biomarkers in Patients with Non-alcoholic Fatty Liver Disease : Beneficial Effects of Supplementation with Microalgae *Chlorella vulgaris* : A double-blind Placebo-controlled Randomized Clinical Trial. *Clinical Nutrition*, 36 : 1001-1006.
- Estrada, J.E.P., Bescos, P.B., Villar del Fresno, A.M. 2001. Antioxidant Activity of Different Fractions of *Spirulina Platensis* Protean Extract. *Il Farmaco*, 56 : 497-500.
- Fernandes, A.A.H., Novelli, E.L.B., Junior, A.F., Galhardi, C.M. 2009. Effect of Naringerin on Biochemical Parameters in the Streptozotocin-Induced Diabetic Rats. *Brazilian Archives of Biology and Technology*, 52 (1) : 55-59.
- Firdaus, M. 2017. *Diabetes dan Rumput Laut Cokelat*. UB Press. Malang. Hal 108-109.
- Fishbach, F.T., Dunning, M.B. 2009. *A Manual of Laboratory and Diagnostic Test*. 8th Ed. Lippincott Williams & Wilkins. Philadelphia. P. 364.
- Foster, J.R., Frost, D. 2018. *The History of the Rat*. In Boorman's Pathology of the Rat. Elsevier Inc. London. P 7-8.
- Gibson, J. 1990. *Fisiologi dan Anatomi Modern untuk Perawat*. Buku Kedokteran EGC. Jakarta. Hal. 214
- Gong, Li., Goswami, S., Giacomini, K.M., Altman, R.B., Klein, T.E. 2012. Metformin Pathways : Pharmacokinetics and Pharmacodynamics. *Pharmacogenetics and Genomics*, 22 : 820-827.
- Guiry, M.D. & Guiry, G.M. 2019. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. <http://www.algaebase.org/>; searched on 23 January 2019.
- Gropper, S.S., Smith, J.L., Groff, J.L. 2009. *Advanced Nutrition and Human Metabolism*. Wadsworth Cengage Learning. California. P. 201.
- Hedrich, H.J. 2006. *The Laboratory Rat*. 2nd Ed. Elsevier Inc. London. P. 72.
- Heussner, A.H. Mazija, L., Fastner, J., Dietrich, D.R. 2012. Toxin Content and Cytotoxicity of Algal Dietary Supplement. *Toxicology and Applied Pharmacology*, 266 : 263-271.
- Hickman, D.L., Johnson, J., Vemulapalli, T.H., Crisler, J.R., Shepherd, R. 2017. *Commonly Used Animal Models*. In Principles of Animal Research for Graduate and Undergraduate Students. Elsevier Inc. London. P. 127-134.

- Hidayat, A., Christijanti, W., Marianti, A. 2013. Pengaruh Vitamin E Terhadap Kadar SGPT dan SGOT Tikus Putih Galur Wistar yang Dipapar Timbal. *Unnes Journal of Life Science*, 2 (1) : 16-21.
- Hollander, D., & Tarnawski, A.S. 1989. *Gastric Cytoprotection A Clinician's Guide*. Plenum Publishing Corporation. New York. P. 39.
- Hossain, M.A. & Pervin, R. 2018. *Current Antidiabetic Drugs: Review of Their Efficacy and Safety*. In Nutritional and Therapeutic Interventions for Diabetes and Metabolic Syndrome. Elsevier Inc. London. P. 462-463.
- Johnson, M. 2012. *Laboratory Mice and Rats*. Mater Methods 2 : 113. <http://www.labome.com/method/Laboratory-Mice-and-Rats.html>. Diakses tanggal 17 September 2017.
- Jong-Yuh, C., & Mei-Fen, S. 2005. Potential hypoglycemic effects of *Chlorella* in Streptozotocin-induced diabetic mice. *Life Sciences*, 7 : 980-990.
- Laili, U. 2013. *Pengaruh Pemberian Temulawak (*Curcuma xanthoriza* Roxb) Dalam Bentuk Kapsul Terhadap Kadar SGPT (Serum Glutamat Piruvat Transaminase) dan SGOT (Serum Glutamat Oksaloasetat Transaminase) pada Orang Sehat*. Naskah Skripsi. Universitas Negeri Yogyakarta. Yogyakarta. P. 26.
- Lazzeroni, M. & Gandini, S. 2019. *Metformin*. In Encyclopedia of Cancer 3rd ed. Elsevier Inc. London. P. 435-436.
- Lu, F.C. 1995. *Toksikologi Dasar : Asas, Organ Sasaran, Dan Penilaian Resiko*. Edisi kedua. UI press. Jakarta.
- Maharani, P. 2007. *Histopatologi organ hati dan mata pada tikus penderita diabetes mellitus eksperimental*. Naskah Skripsi. Fakultas Kedokteran Hewan. Institut Pertanian Bogor. Bogor
- Maniar, K., Singh, V., Kumar, D., Moideen, A., Bhattacharyya, R., Banerjee, D. 2019. *Metformin: A Candidate Drug to Control the Epidemic of Diabetes and Obesity by Way of Gut Microbiome Modification*. In Microbiome and Metabolome in Diagnosis, Therapy, and other Strategic Applications. Elsevier Inc. London. P. 401-402.
- Marks, D.B., Marks, A.D., Smith, C.M. 2000. *Biokimia Kedokteran Dasar : Sebuah Pendekatan Klinis*. Buku Kedokteran EGC. Jakarta. Hal 608.
- Mescher, A.L. 2016. *Junqueira's Basic Histology Text and Atlas*. 14th ed. McGraw Hill. New York. P. 335-339.
- Mohan, H. 2019. *Textbook of Pathology*. 8th ed. Jaypee Brothers Medical Publisher. New Delhi. P. 47.
- Muench, M.O. 2013. *Stem Cells and Progenitors in Liver Development*. Morgan & Claypool Life Sciences. California. P. 1
- Nikmah U.A., & Dany, F. 2017. Kadar Leptin sebagai Petanda Diabetes pada Individu dengan Diabetes dan Toleransi Glukosa Terganggu. *Buletin Penelitian Kesehatan*, 45 (3) : 145-152.
- Noguchi, N., Konishi, F., Kumamoto, S., Matuyama, I., Ando, Y., Yanagita, T. 2013. Beneficial Effects of *Chlorella* on Glucose and Lipid Metabolism in Obese Rodents on A High-Fat Diet. *Obesity Research & Clinical Practice*, 7 : 95-105.
- Nugroho, A.E. 2006. Hewan Percobaan Diabetes Mellitus : Patologi dan Mekanisme Aksi Diabetogenik. *Biodiversitas*, 7 (4): 378-382.

- Nuhu, A.A. 2013. *Spirulina (Arthrospira): An Important Source of Nutritional and Medicinal Compounds*. Hindawi Publishing Corporation. Mesir.
- Parikh, P., Mani, U., Iyer, U. 2001. Role of Spirulina in the Control of Glycemia and Lipidemia in Type 2 Diabetes Mellitus. *Journal of Medicinal Food*, 4 (4) : 193-199.
- Patek, A.J. 1936. Chlorophyll and Regeneration of the Blood : Effect of Administration of Chlorophyll Derivatives to Patients with Chronic Hypochromic Anemia. *Archives of Internal Medicine*, 57 (1) : 73-84
- Pearce, E.C. 2009. *Anatomi dan Fisiologi untuk Paramedis*. Gramedia Pustaka Utama. Jakarta. Hal. 243.
- Phillips, J., A. Hogan, E. Lynch. 2013. *Animals in research : Rats*. www.theconversation.com/animals-in-research-rats-16634. Diakses tanggal 17 september 2017.
- Ponnuswamy, I., Madhavan, S., Shabudeen, S. 2013. Isolation and Characterization of Green Microalgae for Carbon Sequestration, Waste Water Treatment and Bio-fuel Production. *International Journal of Bio-Science and Bio-Technology*, 5 (2) : 17-25.
- Porth, C.M. 2011. *Essentials of Pathophysiology : Concepts of Altered Health States*. Lippincot Williams & Wilkins. Philadelphia. P. 44.
- Posten, C. & Chen, S.F. 2016. *Microalgae Biotechnology*. Springer. London. P. 3.
- Rani, K., Sandal, N., Sahoo, P.K. 2018. A Comprehensive Review on *Chlorella*- Its Composition, Health Benefits, Market and Regulatory Scenario. *The Pharma Innovation Journal*, 7 (7) : 584-589.
- Safi, C., Zebib, B., Merah, O., Pontalier, P., Vaca-Garcia, C. 2014. Morphology, Composition, Production, Processing and Applications of *Chlorella vulgaris* : A review. *Renewable and Sustainable Energy Reviews*, 35 : 265-278.
- Sakti, M., S, Darmono, W, Nyoman. 2015. Pengaruh Suplementasi *Spirulina* Terhadap Beberapa Parameter Sindrom Metabolik (Studi di Puskesmas Lebdosari Kota Semarang). *Jurnal Gizi Indonesia*, 3 (2) : 94-100.
- Sanchez, M., Bernal-Castillo, J., Rozo, C., Rodruguez, I. 2003. *Spirulina (Arthrospira): An Edible Microorganism : A review*. *Universitas Scietiarium*. 8 (1) : 7-24.
- Sari, H.K., Budihardjo, R., Sulistyani, E. 2015. Kadar Serum *Glutamat Piruvat Transaminase* (SGPT) pada Tikus Wistar (*Rattus norvegicus*) Jantan yang Dipapar Stresor Rasa Sakit berupa *Electrical Foot Shock* selama 28 Hari. *Pustaka Kesehatan*, 3 (2) : 205-211.
- Sengupta, P. 2013. The Laboratory Rat : Relating Its Age With Human's. *International Journal of Preventive Medicine*, 4 (6) : 624-630.
- Setyaningsih, I., Bintang, M., Madina, N. 2015. Potentially Antihyperglycemic from Biomass and Phycocyanin of *Spirulina fusiformis* Voronikhin by in Vivo Test. *Procedia Chemistry*, 14 : 211-215.
- Sili, C., Torzillo, G., Vonshak, A. 2012. *Arthrospira (Spirulina)*. In. Whitton B. (eds) *Ecology of Cyanobacteria II*. Springer. Dordrecht.
- Song, R. 2016. Mechanism of Metformin : A Tale of Two Sites. *Diabetes Care*, 39 : 187-189.
- Sotiroudis, T.G. & Sotiroudis, G.T. 2013. Health aspects of *Spirulina (Arthrospira)* microalga food supplement. *Journal of the Serbian Chemical Society*, 78 (3) : 395-405.

- Tang, G. & Suter, P M. 2011. Vitamin A, Nutrition, and Health Values of Algae: *Spirulina*, *Chlorella*, and *Dunaliella*. *Journal of Pharmacy and Nutrition Sciences*, 1 (2) : 111-118
- Taufiqurrohmah. 2005. *Pengaruh Darah Ular Kobra (*Naja naja sputatrix* W.) Terhadap Kadar Serum Glutamat Piruvat Transaminase (SGPT) Darah Tikus Putih (*Rattus norvegicus* L.) Hiperglikemia*. Naskah Skripsi. Fakultas Biologi Universitas Gadjah Mada. Yogyakarta
- Thapa, B.R. & Walia, A. 2007. Liver Function Test and their Interpretation. *Indian Journal of Pediatrics*, 74 (7) : 663-671.
- Triastuti, N., A. Basori, S. Zakaria. 2017. Pengaruh Ekstrak Jahe (*Zingiber officinale* L.) Pada Kadar Glikogen Hati Tikus dengan Hiperglikemia. *Qanun Medika*, 1 (1): 1-9.
- Treuting, P.M., Dintzis, S.M., Montine, K.S. 2018. *Comparative Anatomy and Histology : A Mouse, Rat, and Human Atlas*. Academic Press. London. P. 33.
- Vdoviakova, K., Petrova, E., Kresakova, L., Maloveska, M., Teleky, J., Jencova, J., Zivcak, J., Jenca, A. 2016. Importance Rat Liver Morphology and Vasculature in Surgical Research. *Medical Science Monitor*, 22 : 4716-4728.
- Viollet, B., Guigass, B., Garcia, N.S., Leclerc, J., Foretz, M., Andreelli, F. 2012. Cellular and Molecular Mechanism of Metformin : An Overview. *Clinical Science*, 122 : 253-270.
- Viollet, B., & Foretz, M. 2013. Revisiting the Mechanism of Metformin Action in the Liver. *Annales d'Endocrinologie*, 74 : 123-129
- Weatherby, D. Ferguson, S. 2002. *Blood chemistry and CBC analysis : Clinical laboratory testing from a functional perspective*. Bear Mountain Publishing. USA. p. 133.
- Widjaja, H. 2008. *Anatomi Abdomen*. Penerbit Buku Kedokteran EGC. Jakarta. Hal 67.
- World Heart Organization. 1999. *Definition, Diagnosis and Classification of Diabetes Mellitus and Its Complications. Part 1 : Diagnosis and Classification of Diabetes Mellitus*. World Health Organization. Department of Noncommunicable Disease Surveillance. Geneva. P. 2.
- Yanardag, R., Ozsoy_sacan, O., Bolkent, S., Orak, H., Karabut-Bulan, O. 2005. Protective Effects of Metformine Treatment on the Liver Injury of Streptozotoci-diabetic Rats. *Human & Experimentaal Toxicology*, 24 : 129-135.
- Yanuhar, U. 2016. *Mikroalga Laut *Nannochloropsis oculata**. UB Press. Malang. Hal. 64.
- Yousefi, R., Saidpour, A., Mottaghi, A. 2019. The Effects of Spirulina Supplementation on Metabolic Syndrome Components, Its Liver Manifestation and Related Inflammatory Markers : A Systematic Review. *Complementary Therapies in Medicine*, 42 : 137-144.
- Zachary, J.F., & McGavin, M.D. 2012. *Pathologic Basis of Veterinary Disease*. Moby, Inc. Missouri. P. 17.