

## DAFTAR PUSTAKA

- Adi, A.C., Rifqi, M.A., Adriani, M., Farapti, Haryana, N.R. dan Astina, J. 2020. Effect of Cooking Methods and Rice Variety on the Sensory Quality and Consumer Acceptance. *Media Gizi Indonesia* 15(3), hlm. 159–166.
- Al-Kuraishy, H.M., Hussian, N.R., Al-Naimi, M.S., Al-Gareeb, A.I., Al-Mamorri, F. dan Al-Buhadily, A.K. 2021. The Potential Role of Pancreatic  $\gamma$ -Aminobutyric Acid (GABA) in Diabetes Mellitus: A Critical Reappraisal. *International journal of preventive medicine* 12, hlm. 19. doi: 10.4103/ijpvm.IJPVM\_278\_19.
- American Diabetes Association. 2010. Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care* 33(Supplement\_1), hlm. S62–S69. doi: 10.2337/dc10-S062.
- Association of Official Analytical Chemist. 2005. *Official Methods of Analysis*. 18 ed. Helrich, K. ed. Arlington: Association of Official Analytical Chemist.
- Barragán-Bonilla, M.I., Mendoza-Bello, J.M., Aguilera, P., Parra-Rojas, I., Illades-Aguir, B., Ramírez, M. dan Espinoza-Rojo, M. 2019. Combined Administration of Streptozotocin and Sucrose Accelerates the Appearance of Type 2 Diabetes Symptoms in Rats. *Journal of Diabetes Research* 2019, hlm. 1–12. doi: 10.1155/2019/3791061.
- Basith, A., Noer, S. dan Faizah, M. 2023. Variation of Anthocyanin Content Level Among Four Local Varieties of Black Rice (*Oryza sativa* L.) In Indonesia. *Jurnal Pertanian* 14(1), hlm. 1–8.
- Cáceres, P.J., Martínez-Villaluenga, C., Amigo, L. dan Frias, J. 2014. Assessment on Proximate Composition, Dietary Fiber, Phytic Acid and Protein Hydrolysis of Germinated Ecuatorian Brown Rice. *Plant Foods for Human Nutrition* 69(3), hlm. 261–267. doi: 10.1007/s11130-014-0433-x.
- Chaiyasut, C. dkk. 2016. Germinated Thai Black Rice Extract Protects Experimental Diabetic Rats from Oxidative Stress and Other Diabetes-Related Consequences. *Pharmaceuticals* 10(4), hlm. 3. doi: 10.3390/ph10010003.
- Chao, P.-C., Li, Y., Chang, C.-H., Shieh, J.P., Cheng, J.-T. dan Cheng, K.-C. 2018. Investigation of insulin resistance in the popularly used four rat models of type-2 diabetes. *Biomedicine & Pharmacotherapy* 101, hlm. 155–161. doi: 10.1016/j.biopha.2018.02.084.

- Chinma, C.E. dkk. 2024. Impact of germination on the techno-functional properties, nutritional composition, and health-promoting compounds of brown rice and its products: A review. *Journal of Food Science* 89(1), hlm. 8–32. doi: 10.1111/1750-3841.16832.
- Chung, S.I. dan Kang, M.Y. 2021. Oral Administration of Germinated, Pigmented, Giant Embryo Rice (*Oryza sativa* L. cv. Keunnunjami) Extract Improves the Lipid and Glucose Metabolisms in High-Fat Diet-Fed Mice. *Oxidative medicine and cellular longevity* 2021, hlm. 8829778. doi: 10.1155/2021/8829778.
- Cintya, H., Putra, E.D.L., Muhammad, M., Pranata, C. dan Syahputra, H.D. 2022. Analysis of carbohydrate, protein and fat levels using various type rice with different cooking process. *IOP Conference Series: Earth and Environmental Science* 977(1), hlm. 012079. doi: 10.1088/1755-1315/977/1/012079.
- Dasgupta, R. dan Shetty, S.P. 2024. Assessment of insulin resistance: From the bench to bedside. Dalam: *Metabolic Syndrome*. Elsevier, hlm. 351–365. doi: 10.1016/B978-0-323-85732-1.00053-0.
- Deeds, M.C. dkk. 2011. Single dose streptozotocin-induced diabetes: considerations for study design in islet transplantation models. *Laboratory Animals* 45(3), hlm. 131–140. doi: 10.1258/la.2010.010090.
- Fatima, M.T., Bhat, A.A., Nisar, S., Fakhro, K.A. dan Al-Shabeeb Akil, A.S. 2023. The role of dietary antioxidants in type 2 diabetes and neurodegenerative disorders: An assessment of the benefit profile. *Heliyon* 9(1), hlm. e12698. doi: 10.1016/j.heliyon.2022.e12698.
- Fitriyanto, R.E., Sugiarto, S. dan Ardiyanto, D.T. 2020. Effects of methanol extracts of insulin leaves (*Tithonia diversifolia* (hemsl.) A. Gray) on insulin resistance and secretion of alloxan induced-obese diabetic rats. *Jurnal Kedokteran dan Kesehatan Indonesia* 11(2), hlm. 180–190. doi: 10.20885/JKKI.Vol11.Iss2.art11.
- Franco-San Sebastián, D., Alaniz-Monreal, S., Rabadán-Chávez, G., Vázquez-Manjarrez, N., Hernández-Ortega, M. dan Gutiérrez-Salmeán, G. 2023. Anthocyanins: Potential Therapeutic Approaches towards Obesity and Diabetes Mellitus Type 2. *Molecules* 28(3), hlm. 1237. doi: 10.3390/molecules28031237.
- Friedman, M.I. dan Ramirez, I. 1994. Food intake in diabetic rats: Relationship to metabolic effects of insulin treatment. *Physiology & Behavior* 56(2), hlm. 373–378. doi: 10.1016/0031-9384(94)90209-7.

- Galicia-Garcia, U. dkk. 2020. Pathophysiology of Type 2 Diabetes Mellitus. *International Journal of Molecular Sciences* 21(17), hlm. 6275. doi: 10.3390/ijms21176275.
- Ghosh, M.N. 2019. *Fundamentals of Experimental Pharmacology*. 7th edition. Kolkata: Hilton & Company.
- Gunathunga, C., Senanayake, S., Jayasinghe, M.A., Brennan, C.S., Truong, T., Marapana, U. dan Chandrapala, J. 2024. Germination effects on nutritional quality: A comprehensive review of selected cereals and pulses changes. *Journal of Food Composition and Analysis* 128. doi: 10.1016/j.jfca.2024.106024.
- Guo, X., Wang, Y., Wang, K., Ji, B. dan Zhou, F. 2018. Stability of a type 2 diabetes rat model induced by high-fat diet feeding with low-dose streptozotocin injection. *Journal of Zhejiang University-SCIENCE B* 19(7), hlm. 559–569. doi: 10.1631/jzus.B1700254.
- Indriarsih, S., Astuti, M., Kanoni, S. dan Rahayu, E.S. 2017. Fatty Acid Composition and Physicochemical Properties in Germinated Black Rice. *Indonesian Food and Nutrition Progress* 14(1), hlm. 29–36. Tersedia pada: <http://journal.ugm.ac.id/jifnp>.
- International Diabetic Federation. 2021. Indonesia diabetes report 2000 — 2045. *IDF Diabetes Atlas* 10th edition.
- Itagi, H.N. dan Singh, V. 2015. Status in physical properties of coloured rice varieties before and after inducing retro-gradation. *Journal of Food Science and Technology* 52(12), hlm. 7747–7758. doi: 10.1007/s13197-015-1929-6.
- Ito, V.C. dan Lacerda, L.G. 2019a. Black rice (*Oryza sativa* L.): A review of its historical aspects, chemical composition, nutritional and functional properties, and applications and processing technologies. *Food Chemistry* 301, hlm. 125304. doi: 10.1016/j.foodchem.2019.125304.
- Ito, V.C. dan Lacerda, L.G. 2019b. Black rice (*Oryza sativa* L.): A review of its historical aspects, chemical composition, nutritional and functional properties, and applications and processing technologies. *Food Chemistry* 301. doi: 10.1016/j.foodchem.2019.125304.
- Jiuhardi. 2023. Analisis Kebijakan Impor Beras terhadap Peningkatan Kesejahteraan Petani di Indonesia. *INOVASI: Jurnal Ekonomi, Keuangan dan Manajemen* 19(1), hlm. 98–110.

- Juliano, B. 2016. *Encyclopedia of Food Grains*. Second Edition. Wrigley, C., Corke, H., Seetharaman, K., dan Faubion, J. ed. Oxford: Academic Press.
- Kemenkes RI. 2014. *Profil Kesehatan Indonesia 2014*. Jakarta.
- Kim, D. dan Han, G.D. 2014. Fermented Rice Bran Attenuates Oxidative Stress. Dalam: *Wheat and Rice in Disease Prevention and Health*. Elsevier, hlm. 467–480. doi: 10.1016/B978-0-12-401716-0.00036-2.
- Kottaisamy, C.P.D., Raj, D.S., Prasanth Kumar, V. dan Sankaran, U. 2021. Experimental animal models for diabetes and its related complications—a review. *Laboratory Animal Research* 37(1), hlm. 23. doi: 10.1186/s42826-021-00101-4.
- Kozuka, C., Yabiku, K., Takayama, C., Matsushita, M., Shimabukuro, M. dan Masuzaki, H. 2013. Natural food science based novel approach toward prevention and treatment of obesity and type 2 diabetes: Recent studies on brown rice and  $\gamma$ -oryzanol. *Obesity Research & Clinical Practice* 7(3), hlm. e165–e172. doi: 10.1016/j.orcp.2013.02.003.
- Kulshreshtha, B., Sharma, N., Pant, S., Sharma, L., Pahuja, B. dan Singh, P. 2023. Isocaloric diet is as effective as the hypocaloric diet in ameliorating symptoms in PCOS patients. *International Journal of Diabetes in Developing Countries*. doi: 10.1007/s13410-023-01256-7.
- Kurniawan, L., Laili, A.N., Anggaini, D.S., Qurrotu 'ain, S., Retno Wulandari, D. dan Ulum, F.B. 2023. *Poliploidy induction of Indonesian Black Rice Oryza sativa L. var. Cempo Ireng with Bio-catharanthine*.
- Laili, A. 2015. *Pengaruh Waktu Perkecambahan Beras Hitam Varietas Cempo Terhadap Sifat Fisik, Komposisi Gizi, dan Daya Cerna Protein secara In Vitro*. Yogyakarta: Universitas Gadjah Mada.
- Li, X. dkk. 2022. Use of Ferulic Acid in the Management of Diabetes Mellitus and Its Complications. *Molecules (Basel, Switzerland)* 27(18). doi: 10.3390/molecules27186010.
- Magalhaes, D.A. De dkk. 2019. High-fat diet and streptozotocin in the induction of type 2 diabetes mellitus: a new proposal. *Anais da Academia Brasileira de Ciências* 91(1). doi: 10.1590/0001-3765201920180314.
- Mantara, C.D.P. 2024. *Evaluasi Potensi Antidiabetik Beras Hitam Germinasi varietas Cempo Ireng dan Jeliteng secara In Vitro (Naskah sedang diterbitkan)*. Yogyakarta: Universitas Gadjah Mada.

- Mao, T., Huang, F., Zhu, X., Wei, D. dan Chen, L. 2021. Effects of dietary fiber on glycemic control and insulin sensitivity in patients with type 2 diabetes: A systematic review and meta-analysis. *Journal of Functional Foods* 82, hlm. 104500. doi: 10.1016/j.jff.2021.104500.
- Marques, C. dkk. 2016. High-fat diet-induced obesity Rat model: a comparison between Wistar and Sprague-Dawley Rat. *Adipocyte* 5(1), hlm. 11–21. doi: 10.1080/21623945.2015.1061723.
- Mateo Bulatao, R., Bulatao, R.M. dan Romero, M. V. 2014. Effects of Germination on the Proximate Composition, Antioxidant Property and Eating Quality of Brown Rice (*Oryza sativa* L.). *Philippine Agricultural Scientist* 97(1), hlm. 19–27. Tersedia pada: <https://www.researchgate.net/publication/293335774>.
- Mattei, L. dkk. 2021. Antioxidant and anti-inflammatory properties of gamma-oryzanol attenuates insulin resistance by increasing GLUT- 4 expression in skeletal muscle of obese animals. *Molecular and Cellular Endocrinology* 537, hlm. 111423. doi: 10.1016/j.mce.2021.111423.
- Mbanjo, E.G.N., Kretzschmar, T., Jones, H., Ereful, N., Blanchard, C., Boyd, L.A. dan Sreenivasulu, N. 2020. The Genetic Basis and Nutritional Benefits of Pigmented Rice Grain. *Frontiers in genetics* 11, hlm. 229. doi: 10.3389/fgene.2020.00229.
- Moini, J. 2019. *Epidemiology of Diabetes*. Amsterdam: Elsevier.
- Munarko, H., Sitanggang, A.B., Kusnandar, F. dan Budijanto, S. 2022. Germination of five Indonesian brown rice: evaluation of antioxidant, bioactive compounds, fatty acids and pasting properties. *Food Science and Technology* 42. doi: 10.1590/fst.19721.
- Nugerahani, I., Sutedja, A.M., Srianta, I., Widharna, R.M. dan Marsono, Y. 2017. In vivo evaluation of monascus-fermented durian seed for antidiabetic and antihypercholesterol agent. *Food Research* 1(3), hlm. 83–88. doi: 10.26656/fr.2017.3.023.
- Offor, U., Edwin, C.S.N., Ogedengbe, O.O., Jegede, A.I., Peter, A.I. dan Onyemaechi, O.A. 2019. Renal histopathological and biochemical changes following adjuvant intervention of *Momordica charantia* and antiretroviral therapy in diabetic rats. *Iranian journal of basic medical sciences* 22(11), hlm. 1359–1367. doi: 10.22038/ijbms.2019.31848.7663.
- Pasaribu, S.F., Wiboworini, B. dan Kartikasari, L.R. 2021. Effect of Germinated Black Rice Krishna Extract on Fasting Blood Glucose and Body Weight in Diabetes

- Mellitus Rats. *International Journal of Nutrition Sciences* 6(4), hlm. 194–200. doi: 10.30476/IJNS.2021.93204.1163.
- Pauzi, N.A.S., Abubakar, A.M., Fakurazi, S., Arulselvan, P. dan Ahmad, Z. 2013. Preliminary Study of the Optimization of Protocol for Development of Type 2 Diabetic Model in Rats. *Indian Journal of Science and Technology* 6(7), hlm. 4960–4965. Tersedia pada: <https://www.researchgate.net/publication/272792027>.
- Purnomo, S.B., Utama, B.I., John, O. dan Iqbal, M. 2020. Insulin Resistance in Obese Women: Does it Affect Fertility? *Indonesian Journal of Obstetrics and Gynecology* 8(3), hlm. 151–155.
- Rahman, A.N.F., Asfar, M., Suwandi, N. dan Amir, M.R.R. 2019. The Effect of Grain Germination to Improve Rice Quality. *IOP Conference Series: Earth and Environmental Science* 355(1), hlm. 1–8. doi: 10.1088/1755-1315/355/1/012110.
- Rahman, M.S. dkk. 2021. Role of Insulin in Health and Disease: An Update. *International journal of molecular sciences* 22(12). doi: 10.3390/ijms22126403.
- Rais, N. dkk. 2021. Model of Streptozotocin-nicotinamide Induced Type 2 Diabetes: a Comparative Review. *Current Diabetes Reviews* 18(8). doi: 10.2174/1573399818666211117123358.
- Reeves, P. 1997. Components of the AIN-93 Diets as Improvements in the AIN-76A Diet. Dalam: *Animal Diets for Nutritional and Toxicological Research*. hlm. 8385–8415.
- Santos, M.M.R. dkk. 2021. Combination of cafeteria diet with intraperitoneally streptozotocin in rats. A type-2 diabetes model. *Acta Cirúrgica Brasileira* 36(7). doi: 10.1590/acb360702.
- Savira, A.P.I., Wahyuni, S. dan Faradilla, R.H.F. 2020. Analisis Kandungan Gizi, Organoleptik dan Aktivitas Antioksidan Snack Bar Berbasis Beras Warna Organik (*Oryza sativa* L.) Varietas Lokal (Merah Wakawondu, Hitam Wakombe, dan Cokelat Warumbia) sebagai Alternatif Makanan Selingan Penderita Diabetes Melitus. *Jurnal Sains dan Teknologi Pangan* 5(6), hlm. 3436–3452.
- Sharp, P. dan Villano, J. 2012. *The Laboratory Rat*. CRC Press.
- Skovsø, S. 2014. Modeling type 2 diabetes in rats using high fat diet and streptozotocin. *Journal of Diabetes Investigation* 5(4), hlm. 349–358. doi: 10.1111/jdi.12235.
- Sugiyono. 2013. *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.



- Sunita, R., Sadewa, A.H. dan Farmawati, A. 2015. Lower HOMA- $\beta$  values are detected among individuals with variant of E23K polymorphism of potassium inwardly-rectifying channel, subfamily J, member 11 (KCNJ11) gene. *Egyptian Journal of Medical Human Genetics* 16(3), hlm. 227–231. doi: 10.1016/j.ejmhg.2015.03.005.
- Susanti, E.F.A., Susilowati, E. dan Siswoyo, T.A. 2022. Effect of germination period on the antioxidant activities and angiotensin-I converting enzyme inhibitory of Indonesian black rice. *Food Research* 6(4), hlm. 59–67. doi: 10.26656/fr.2017.6(4).439.
- Syauqy, A., Mattarahmawati, S.A. dan Pramono, A. 2022. Food Consumption in Relation to Hyperglycemia in Middle-Aged Adults (45–59 years): A Cross-Sectional National Data Analysis. *Jurnal Gizi dan Pangan* 17(3), hlm. 187–194. doi: 10.25182/jgp.2022.17.3.187-194.
- Tuan, P.A., Sun, M., Nguyen, T.N., Park, S. dan Ayele, B.T. 2018. Molecular mechanisms of seed germination. Dalam: *Sprouted Grains: Nutritional Value, Production, and Applications*. Elsevier, hlm. 1–24. doi: 10.1016/B978-0-12-811525-1.00001-4.
- Vlachos, D., Malisova, S., Lindberg, F.A. dan Karaniki, G. 2020. Glycemic Index (GI) or Glycemic Load (GL) and Dietary Interventions for Optimizing Postprandial Hyperglycemia in Patients with T2 Diabetes: A Review. *Nutrients* 12(6), hlm. 1561. doi: 10.3390/nu12061561.
- Willing, A.E., Walls, E.K. dan Koopmans, H.S. 1994. Insulin Increases the Daily Food Intake of Diabetic Rats on High and Low Fat Diet. *Physiology & Behavior* 56(5), hlm. 963–991.
- World Health Organization. 2000. *General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine*.
- Wu, F., Chen, H., Yang, N., Wang, J., Duan, X., Jin, Z. dan Xu, X. 2013. Effect of germination time on physicochemical properties of brown rice flour and starch from different rice cultivars. *Journal of Cereal Science* 58(2), hlm. 263–271. doi: 10.1016/j.jcs.2013.06.008.