

## DAFTAR PUSTAKA

- Abedi, E., & Hashemi, S. M. B. (2020). Lactic acid production – producing microorganisms and substrates sources-state of art. *Heliyon*, 6(10). <https://doi.org/10.1016/J.HELIYON.2020.E04974>
- Abreu, A., Carulla, J. E., Lascano, C. E., Díaz, T. E., Kreuzer, M., & Hess, H. D. (2004). Effects of *Sapindus saponaria* fruits on ruminal fermentation and duodenal nitrogen flow of sheep fed a tropical grass diet with and without legume. *Journal of Animal Science*, 82(5), 1392–1400. <https://doi.org/10.2527/2004.8251392x>
- Agustina, R., Noor, R., Widjayanti, R., Nuraida, L., Ratna, N., Nofi, L. S., Aitonam, M., Setiawan, B., & Giriwono, P. E. (2018). *Kajian Manfaat Pangan Fungsional Setelah Terpenuhinya Gizi Seimbang*. <https://fdokumen.com/document/kajian-manfaat-pangan-fungsional-setelah-terpenuhinya-gizi-gizi-namun.html?page=1>. <https://fdokumen.com/document/kajian-manfaat-pangan-fungsional-setelah-terpenuhinya-gizi-gizi-namun.html?page=1>
- Akbari, P., Braber, S., Alizadeh, A., Verheijden, K. A. T., Schoterman, M. H. C., Kraneveld, A. D., Garssen, J., & Fink-Gremmels, J. (2015). Galacto-oligosaccharides Protect the Intestinal Barrier by Maintaining the Tight Junction Network and Modulating the Inflammatory Responses after a Challenge with the Mycotoxin Deoxynivalenol in Human Caco-2 Cell Monolayers and B6C3F1 Mice. *The Journal of Nutrition*, 145(7), 1604–1613. <https://doi.org/10.3945/JN.114.209486>
- Ali, F., Ismail, A., Esa, N. M., & Pei, C. P. (2015). Transcriptomics expression analysis to unveil the molecular mechanisms underlying the cocoa polyphenol treatment in diet-induced obesity rats. *Genomics*, 105(1), 23–30. <https://doi.org/10.1016/J.YGENO.2014.11.002>
- Allsopp, P., Possemiers, S., Campbell, D., Oyarzábal, I. S., Gill, C., & Rowland, I. (2013). An exploratory study into the putative prebiotic activity of fructans isolated from *Agave angustifolia* and the associated anticancer activity. *Anaerobe*, 22, 38–44. <https://doi.org/10.1016/J.ANAEROBE.2013.05.006>
- Al-Sheraji, S. H., Ismail, A., Manap, M. Y., Mustafa, S., Yusof, R. M., & Hassan, F. A. (2013). Prebiotics as functional foods: A review. *Journal of Functional Foods*, 5(4), 1542–1553. <https://doi.org/10.1016/J.JFF.2013.08.009>
- Anderson, J. W., Baird, P., Davis, R. H., Ferreri, S., Knudtson, M., Koraym, A., Waters, V., & Williams, C. L. (2009). Health benefits of dietary fiber.

- Nutrition Reviews*, 67(4), 188–205. <https://doi.org/10.1111/J.1753-4887.2009.00189.X>
- Anggraeni, F. M. A. (t.t.). *Pengujian Skor Aktivitas Prebiotik Minuman Fungsional Fidirink yang Mengandung Glukomanan Umbi Porang (Amorphophallus oncophyllus) In Vitro*. Universitas Gadjah Mada.
- Annisa, M. N. (2021). *Kinetika Ekstraksi dan Karakterisasi Glukomanan Porang (Amorphophallus oncophyllus) dengan Variasi Ukuran dan Umur Panen*. Universitas Gadjah Mada.
- AOAC. (2005). *Official method of Analysis. 18th Edition, Association of Officiating Analytical Chemists, Washington DC, Method 935.14 and 992.24*.  
[https://www.scirp.org/\(S\(351jmbntvnsjt1aadkposzje\)\)/reference/ReferencesPapers.aspx?ReferenceID=2033299](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferenceID=2033299)
- Aprilia, V. (2012). *Karakterisasi dan Potensi Prebiotik Glukomanan dari Umbi Porang (Amorphophallus muelleri Blume syn Amorphophallus oncophyllus Prain)* [Universitas Gadjah Mada].  
<http://etd.repository.ugm.ac.id/penelitian/detail/56379>
- Arif, A. (2019). *Pangan Fungsional Menjadi Tren Global*.  
<https://www.kompas.id/baca/utama/2019/10/17/pangan-fungsional-menjadi-tren-global>
- Astawan, M. A. D. E., Wresdiyati, T., & Hartanta, A. B. (2005). Pemanfaatan Rumput Laut sebagai Sumber Serat Pangan untuk Menurunkan Kolesterol Darah Tikus. *HAYATI Journal of Biosciences*, 12(1), 23–27.  
[https://doi.org/10.1016/S1978-3019\(16\)30319-9](https://doi.org/10.1016/S1978-3019(16)30319-9)
- Aydin, S. (2015). A short history, principles, and types of ELISA, and our laboratory experience with peptide/protein analyses using ELISA. *Peptides*, 72, 4–15. <https://doi.org/10.1016/j.peptides.2015.04.012>
- Bakker-Zierikzee, A. M., Van Tol, E. A. F., Kroes, H., Alles, M. S., Kok, F. J., & Bindels, J. G. (2006). Faecal SIgA secretion in infants fed on pre- or probiotic infant formula. *Pediatric Allergy and Immunology*, 17(2), 134–140. <https://doi.org/10.1111/j.1399-3038.2005.00370.x>
- Behera, S. S., & Ray, R. C. (2016). Konjac glucomannan, a promising polysaccharide of *Amorphophallus konjac* K. Koch in health care. *International Journal of Biological Macromolecules*, 92, 942–956.  
<https://doi.org/10.1016/J.IJBIOMAC.2016.07.098>
- Belenguer, A., Duncan, S. H., Calder, A. G., Holtrop, G., Louis, P., Lobley, G. E., & Flint, H. J. (2006). Two routes of metabolic cross-feeding

between *Bifidobacterium adolescentis* and butyrate-producing anaerobes from the human gut. *Applied and Environmental Microbiology*, 72(5), 3593–3599. <https://doi.org/10.1128/AEM.72.5.3593-3599.2006/ASSET/94CB5E0A-4AEC-4D1F-8279-4B7F768A72FD/ASSETS/GRAPHIC/ZAM0050667850004.JPEG>

Bermudez-Brito, M., Rösch, C., Schols, H. A., Faas, M. M., & de Vos, P. (2015). Resistant starches differentially stimulate Toll-like receptors and attenuate proinflammatory cytokines in dendritic cells by modulation of intestinal epithelial cells. *Molecular Nutrition & Food Research*, 59(9), 1814–1826. <https://doi.org/10.1002/MNFR.201500148>

Bermudez-Brito, M., Sahasrabudhe, N. M., Rösch, C., Schols, H. A., Faas, M. M., & De Vos, P. (2015). The impact of dietary fibers on dendritic cell responses in vitro is dependent on the differential effects of the fibers on intestinal epithelial cells. *Molecular Nutrition & Food Research*, 59(4), 698–710. <https://doi.org/10.1002/MNFR.201400811>

Beylot, M. (2005). Effects of inulin-type fructans on lipid metabolism in man and in animal models. *British Journal of Nutrition*, 93(S1), S163–S168. <https://doi.org/10.1079/bjn20041339>

Bharti, S. K., Krishnan, S., Kumar, A., Gupta, A. K., Ghosh, A. K., & Kumar, A. (2015). Mechanism-based antidiabetic activity of Fructo- and isomalto-oligosaccharides: Validation by in vivo, in silico and in vitro interaction potential. *Process Biochemistry*, 50(2), 317–327. <https://doi.org/10.1016/j.procbio.2014.10.014>

Bhatia, S., Prabhu, P. N., Benefiel, A. C., Miller, M. J., Chow, J., Davis, S. R., & Gaskins, H. R. (2015). Galacto-oligosaccharides may directly enhance intestinal barrier function through the modulation of goblet cells. *Molecular Nutrition & Food Research*, 59(3), 566–573. <https://doi.org/10.1002/MNFR.201400639>

BPOM. (2022). *Peraturan Kepala Badan Pengawas Obat dan Makanan Republik Indonesia Nomor 1 Tahun 2022*.

Brubaker, P. L. (2006). The Glucagon-Like Peptides. *Annals of the New York Academy of Sciences*, 1070(1), 10–26. <https://doi.org/10.1196/ANNALS.1317.006>

Brufau, M. T., Campo-Sabariz, J., Bou, R., Carné, S., Brufau, J., Vilà, B., Marqués, A. M., Guardiola, F., Ferrer, R., & Martín-Venegas, R. (2016). Salmosan, a  $\beta$ -Galactomannan-Rich Product, Protects Epithelial Barrier Function in Caco-2 Cells Infected by *Salmonella enterica* Serovar

- Enteritidis, ., *The Journal of Nutrition*, 146(8), 1492–1498.  
<https://doi.org/10.3945/JN.116.232546>
- Bunker, J. J., & Bendelac, A. (2018). IgA responses to microbiota. *Immunity*, 49(2), 211. <https://doi.org/10.1016/J.IMMUNI.2018.08.011>
- Burton-Freeman, B. (2000). Dietary fiber and energy regulation. *The Journal of nutrition*, 130(2S Suppl). <https://doi.org/10.1093/JN/130.2.272S>
- Campbell, J. M., Fahey, G. C., & Wolf, B. W. (1997). Selected Indigestible Oligosaccharides Affect Large Bowel Mass, Cecal and Fecal Short-Chain Fatty Acids, pH and Microflora in Rats. *The Journal of Nutrition*, 127(1), 130–136. <https://doi.org/10.1093/JN/127.1.130>
- Cani, P. D., & Delzenne, N. M. (2009). The Role of the Gut Microbiota in Energy Metabolism and Metabolic Disease. *Current Pharmaceutical Design*, 15, 1546–1558.
- Cerutti, A., & Rescigno, M. (2008). The Biology of Intestinal Immunoglobulin A Responses. *Immunity*, 28(6), 740–750. <https://doi.org/10.1016/j.immuni.2008.05.001>
- Chambers, E. S., Viardot, A., Psichas, A., Morrison, D. J., Murphy, K. G., Zac-Varghese, S. E. K., MacDougall, K., Preston, T., Tedford, C., Finlayson, G. S., Blundell, J. E., Bell, J. D., Thomas, E. L., Mt-Isa, S., Ashby, D., Gibson, G. R., Kolida, S., Dhillon, W. S., Bloom, S. R., ... Frost, G. (2015). Effects of targeted delivery of propionate to the human colon on appetite regulation, body weight maintenance and adiposity in overweight adults. *Gut*, 64(11), 1744–1754. <https://doi.org/10.1136/GUTJNL-2014-307913/-/DC1>
- Chang, P. V., Hao, L., Offermanns, S., & Medzhitov, R. (2014). The microbial metabolite butyrate regulates intestinal macrophage function via histone deacetylase inhibition. *Proceedings of the National Academy of Sciences of the United States of America*, 111(6), 2247–2252. [https://doi.org/10.1073/PNAS.1322269111/SUPPL\\_FILE/PNAS.201322269SI.PDF](https://doi.org/10.1073/PNAS.1322269111/SUPPL_FILE/PNAS.201322269SI.PDF)
- Chen, H. L., Fan, Y. H., Chen, M. E., & Chan, Y. (2005). Unhydrolyzed and hydrolyzed konjac glucomannans modulated cecal and fecal microflora in Balb/c mice. *Nutrition*, 21(10), 1059–1064. <https://doi.org/10.1016/J.NUT.2005.02.008>
- Chen, H. L., Lu, Y. H., Lin, J. J., & Ko, L. Y. (2001). Effects of isomalto-oligosaccharides on bowel functions and indicators of nutritional status in constipated elderly men. *Journal of the American College of Nutrition*, 20(1), 44–49. <https://doi.org/10.1080/07315724.2001.10719013>

- Chen, H.-J., Dai, F.-J., Chang, C.-R., Lau, Y.-Q., Chew, B.-S., & Chau, C.-F. (2019). Impact of dietary ingredients on the interpretation of various fecal parameters in rats fed inulin. *Journal of Food and Drug Analysis*, 27(4), 869–875. <https://doi.org/10.1016/j.jfda.2019.06.005>
- Chen, X. F., Chen, X., & Tang, X. (2020). Short-chain fatty acid, acylation and cardiovascular diseases. *Clinical Science*, 134(6), 657–676. <https://doi.org/10.1042/CS20200128>
- Christin, V., & Sekolah Tinggi Ilmu Farmasi, M. (2020). Analisis Profil Bobot Badan Tikus dan Gejala Toksis Pada Pemberian Ekstrak Etanol Daun Parang Romang (*Boehmeria virgata*) Terhadap Tikus Putih (*Rattus novergicus*) (Analysis Profile Of Body Weight and Toxic Symptom of Rats In The Administration Of Ethanol Extract Parang Roman Leaves (*Boehmeria virgata*) To Male White Rats (*Rattus novergicus*)). *Galenika Journal of Pharmacy (e-Journal)*, 6(1), 2442–7284. <https://doi.org/10.22487/j24428744.2020.v6.i1.13928>
- Claresta, O. A. (t.t.). *Formulasi dan Karakterisasi Minuman Tinggi Serat dengan FiberCremedan Glukomanan di PT. Lautan Natural Krimerindo, Mojokerto*. Universitas Gadjah Mada.
- Colonic Health: Fermentation and Short Chain Fatty Acids : Journal of Clinical Gastroenterology*. (t.t.). Diambil 5 Maret 2023, dari [https://journals.lww.com/jcge/Abstract/2006/03000/Colonic\\_Health\\_\\_Fermentation\\_and\\_Short\\_Chain\\_Fatty.15.aspx](https://journals.lww.com/jcge/Abstract/2006/03000/Colonic_Health__Fermentation_and_Short_Chain_Fatty.15.aspx)
- Cooper, P. D., Rajapaksha, K. H., Barclay, T. G., Ginic-Markovic, M., Gerson, A. R., & Petrovsky, N. (2015). Inulin crystal initiation via a glucose-fructose cross-link of adjacent polymer chains: Atomic force microscopy and static molecular modelling. *Carbohydrate Polymers*, 117, 964–972. <https://doi.org/10.1016/J.CARBPOL.2014.10.022>
- Cui, Y., Okyere, S. K., Gao, P., Wen, J., Cao, S., Wang, Y., Deng, J., & Hu, Y. (2021). Ageratina adenophora disrupts the intestinal structure and immune barrier integrity in rats. *Toxins*, 13(9). <https://doi.org/10.3390/toxins13090651>
- Cummings, J. H., Pomare, E. W., Branch, H. W. J., Naylor, C. P. E., & MacFarlane, G. T. (1987). Short chain fatty acids in human large intestine, portal, hepatic and venous blood. *Gut*, 28(10), 1221–1227. <https://doi.org/10.1136/GUT.28.10.1221>
- Cunningham, M., Azcarate-Peril, M. A., Barnard, A., Benoit, V., Grimaldi, R., Guyonnet, D., Holscher, H. D., Hunter, K., Manurung, S., Obis, D., Petrova, M. I., Steinert, R. E., Swanson, K. S., van Sinderen, D., Vulevic,



- J., & Gibson, G. R. (2021). Shaping the Future of Probiotics and Prebiotics. *Trends in Microbiology*, 29(8), 667–685. <https://doi.org/10.1016/J.TIM.2021.01.003>
- Davani-Davari, D., Negahdaripour, M., Karimzadeh, I., Seifan, M., Mohkam, M., Masoumi, S. J., Berenjian, A., & Ghasemi, Y. (2019). Prebiotics: Definition, types, sources, mechanisms, and clinical applications. Dalam *Foods* (Vol. 8, Nomor 3). MDPI Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/foods8030092>
- Dave, V., & McCarthy. (1997). Review of Konjac Glucomanan. *Journal Environ Polym*, 237–241.
- Delzenne, N., & Reid, G. (2009). No causal link between obesity and probiotics. *Nature Reviews Microbiology*. <https://doi.org/10.1038/nrmicro2209-c2>
- Den Besten, G., Van Eunen, K., Groen, A. K., Venema, K., Reijngoud, D. J., & Bakker, B. M. (2013). The role of short-chain fatty acids in the interplay between diet, gut microbiota, and host energy metabolism. *Journal of lipid research*, 54(9), 2325–2340. <https://doi.org/10.1194/JLR.R036012>
- Den Hond, E., Hiele, M., Evenepoel, P., Peeters, M., Ghoo, Y., & Rutgeerts, P. (1998). In vivo butyrate metabolism and colonic permeability in extensive ulcerative colitis. *Gastroenterology*, 115(3), 584–590. [https://doi.org/10.1016/S0016-5085\(98\)70137-4](https://doi.org/10.1016/S0016-5085(98)70137-4)
- do Nascimento, R. de P., & Marostica Junior, M. R. (2021). Emerging Prebiotics: Nutritional and Technological Considerations. *Probiotics and Prebiotics in Foods: Challenges, Innovations, and Advances*, 13–46. <https://doi.org/10.1016/B978-0-12-819662-5.00016-1>
- Elison, E., Vigsnaes, L. K., Rindom Krogsgaard, L., Rasmussen, J., Sorensen, N., McConnell, B., Hennet, T., Sommer, M. O. A., & Bytzer, P. (2016). Oral supplementation of healthy adults with 2'-O-fucosyllactose and lacto-N-neotetraose is well tolerated and shifts the intestinal microbiota. *British Journal of Nutrition*, 116(8), 1356–1368. <https://doi.org/10.1017/S0007114516003354>
- Elleuch, M., Bedigian, D., Roiseux, O., Besbes, S., Blecker, C., & Attia, H. (2011). Dietary fibre and fibre-rich by-products of food processing: Characterisation, technological functionality and commercial applications: A review. *Food Chemistry*, 124(2), 411–421. <https://doi.org/10.1016/J.FOODCHEM.2010.06.077>

- El-Zayat, S. R., Sibaii, H., & El-Shamy, K. A. (2019). Physiological process of fat loss. *Bulletin of the National Research Centre* 2019 43:1, 43(1), 1–15. <https://doi.org/10.1186/S42269-019-0238-Z>
- Fagarasan, S., & Honjo, T. (2003). Intestinal IgA synthesis: Regulation of front-line body defences. Dalam *Nature Reviews Immunology* (Vol. 3, Nomor 1, hlm. 63–72). <https://doi.org/10.1038/nri982>
- Fagarasan, S., Muramatsu, M., Suzuki, K., Nagaoka, H., Hiai, H., & Honjo, T. (2002). Critical roles of activation-induced cytidine deaminase in the homeostasis of gut flora. *Science (New York, N.Y.)*, 298(5597), 1424–1427. <https://doi.org/10.1126/SCIENCE.1077336>
- Falony, G., Vlachou, A., Verbrugghe, K., & de Vuyst, L. (2006). Cross-feeding between *Bifidobacterium longum* BB536 and acetate-converting, butyrate-producing colon bacteria during growth on oligofructose. *Applied and Environmental Microbiology*, 72(12), 7835–7841. <https://doi.org/10.1128/AEM.01296-06/ASSET/DC92DEB4-9AE7-4561-A26D-8A81B75EB512/ASSETS/GRAPHIC/ZAM0120673220004.JPEG>
- Fang, W., & Wu, P. (2004). Variations of Konjac glucomannan (KGM) from *Amorphophallus konjac* and its refined powder in China. *Food Hydrocolloids*, 18(1), 167–170. [https://doi.org/10.1016/S0268-005X\(03\)00044-4](https://doi.org/10.1016/S0268-005X(03)00044-4)
- Fernández, J., Redondo-Blanco, S., Gutiérrez-del-Río, I., Miguélez, E. M., Villar, C. J., & Lombó, F. (2016). Colon microbiota fermentation of dietary prebiotics towards short-chain fatty acids and their roles as anti-inflammatory and antitumour agents: A review. *Journal of Functional Foods*, 25, 511–522. <https://doi.org/10.1016/J.JFF.2016.06.032>
- Fernandez, M. I., Pedron, T., Tournebize, R., Olivo-Marin, J. C., Sansonetti, P. J., & Phalipon, A. (2003). Anti-inflammatory role for intracellular dimeric immunoglobulin A by neutralization of lipopolysaccharide in epithelial cells. *Immunity*, 18(6), 739–749. [https://doi.org/10.1016/S1074-7613\(03\)00122-5](https://doi.org/10.1016/S1074-7613(03)00122-5)
- Food Review Indonesia. (t.t.). *Tren Pendaftaran Pangan Fungsional di Indonesia Menurun, Mengapa?* Diambil 27 Maret 2023, dari <https://www.foodreview.co.id/blog-564917-Tren-Pendaftaran-Pangan-Fungsional-di-Indonesia-Menurun-Mengapa.html>
- Frankel, W. L., Zhang, W., Singh, A., Klurfeld, D. M., Don, S., Sakata, T., Modlin, I., & Rombeau, J. L. (1994). Mediation of the trophic effects of

- short-chain fatty acids on the rat jejunum and colon. *Gastroenterology*, 106(2), 375–380. [https://doi.org/10.1016/0016-5085\(94\)90595-9](https://doi.org/10.1016/0016-5085(94)90595-9)
- Giarnetti, M., Paradiso, V. M., Caponio, F., Summo, C., & Pasqualone, A. (2015). Fat replacement in shortbread cookies using an emulsion filled gel based on inulin and extra virgin olive oil. *LWT*, 63(1), 339–345. <https://doi.org/10.1016/J.LWT.2015.03.063>
- Gibson, G. R., Scott, K. P., Rastall, R. A., Tuohy, K. M., Hotchkiss, A., Dubert-Ferrandon, A., Gareau, M., Murphy, E. F., Saulnier, D., Loh, G., Macfarlane, S., Delzenne, N., Ringel, Y., Kozianowski, G., Dickmann, R., Lenoir-Wijnkoop, I., Walker, C., & Buddington, R. (t.t.). Dietary prebiotics: current status and new definition. *Food Science and Technology Bulletin: Functional Foods*, 7(1), 1–19. <https://doi.org/10.1616/1476-2137.15880>
- Goldberg, I. (1994). *Functional Foods: Designer Foods, Pharmafoods, Nutraceuticals*. Chapman & Hall.
- Gomez, E., Tuohy, K. M., Gibson, G. R., Klinder, A., & Costabile, A. (2010). In vitro evaluation of the fermentation properties and potential prebiotic activity of Agave fructans. *Journal of Applied Microbiology*, 108(6), 2114–2121. <https://doi.org/10.1111/J.1365-2672.2009.04617.X>
- Granato, D., Branco, G. F., Nazzaro, F., Cruz, A. G., & Faria, J. A. F. (2010). Functional Foods and Nondairy Probiotic Food Development: Trends, Concepts, and Products. *Comprehensive Reviews in Food Science and Food Safety*, 9(3), 292–302. <https://doi.org/10.1111/J.1541-4337.2010.00110.X>
- Granger, J. I., Ratti, P. L., Datta, S. C., Raymond, R. M., & Opp, M. R. (2013). Sepsis-induced morbidity in mice: effects on body temperature, body weight, cage activity, social behavior and cytokines in brain. *Psychoneuroendocrinology*, 38(7), 1047. <https://doi.org/10.1016/J.PSYNEUEN.2012.10.010>
- Greenberg, J. A., O'donnell, R., Shurpin, M., & Kordunova, D. (2016). Epicatechin, procyanidins, cocoa, and appetite: A randomized controlled trial. *American Journal of Clinical Nutrition*, 104(3), 613–619. <https://doi.org/10.3945/ajcn.115.129783>
- Guess, N. D., Dornhorst, A., Oliver, N., Bell, J. D., Thomas, E. L., & Frost, G. S. (2015). A randomized controlled trial: The effect of inulin on weight management and ectopic fat in subjects with prediabetes. *Nutrition and Metabolism*, 12(1), 1–10. <https://doi.org/10.1186/S12986-015-0033-2/FIGURES/6>



- Guimarães, J. T., Silva, E. K., Costa, A. L. R., Cunha, R. L., Freitas, M. Q., Meireles, M. A. A., & Cruz, A. G. (2018). Manufacturing a prebiotic whey beverage exploring the influence of degree of inulin polymerization. *Food Hydrocolloids*, 77, 787–795. <https://doi.org/10.1016/J.FOODHYD.2017.11.021>
- Haghikia, A., Zimmermann, F., Schumann, P., Jasina, A., Roessler, J., Schmidt, D., Heinze, P., Kaisler, J., Nageswaran, V., Aigner, A., Ceglarek, U., Cineus, R., Hegazy, A. N., van der Vorst, E. P. C., Doring, Y., Strauch, C. M., Nemet, I., Tremaroli, V., Dwibedi, C., ... Landmesser, U. (2022). Propionate attenuates atherosclerosis by immune-dependent regulation of intestinal cholesterol metabolism. *European Heart Journal*, 43(6), 518–533. <https://doi.org/10.1093/EURHEARTJ/EHAB644>
- Handbook of Prebiotics and Probiotics Ingredients : Health Benefits and Food Applications. (2009). *Handbook of Prebiotics and Probiotics Ingredients*. <https://doi.org/10.1201/9781420062151>
- Harmayani, E., Aprilia, V., & Marsono, Y. (2014). Characterization of glucomannan from *Amorphophallus oncophyllus* and its prebiotic activity in vivo. *Carbohydrate Polymers*, 112, 475–479. <https://doi.org/10.1016/j.carbpol.2014.06.019>
- Hasan, N., & Yang, H. (2019). Factors affecting the composition of the gut microbiota, and its modulation. Dalam *PeerJ* (Vol. 2019, Nomor 8). PeerJ Inc. <https://doi.org/10.7717/peerj.7502>
- Hedemann, M. S., Theil, P. K., & Bach Knudsen, K. E. (2009). The thickness of the intestinal mucous layer in the colon of rats fed various sources of non-digestible carbohydrates is positively correlated with the pool of SCFA but negatively correlated with the proportion of butyric acid in digesta. *British Journal of Nutrition*, 102(1), 117–125. <https://doi.org/10.1017/S0007114508143549>
- Hijova, E. (2007). Short chain fatty acids and colonic health. *Bratisl Lek Listy*, 108(8), 354–358. [www.bmj.sk](http://www.bmj.sk)
- Hino, S., Sonoyama, K., Bito, H., Kawagishi, H., Aoe, S., & Morita, T. (2013). Low-Methoxyl Pectin Stimulates Small Intestinal Mucin Secretion Irrespective of Goblet Cell Proliferation and Is Characterized by Jejunum Muc2 Upregulation in Rats. *The Journal of Nutrition*, 143(1), 34–40. <https://doi.org/10.3945/JN.112.167064>
- Holscher, H. D. (2017). Dietary fiber and prebiotics and the gastrointestinal microbiota. Dalam *Gut Microbes* (Vol. 8, Nomor 2, hlm. 172–184). Taylor and Francis Inc. <https://doi.org/10.1080/19490976.2017.1290756>

- Holscher, H. D., Bauer, L. L., Gourineni, V., Pelkman, C. L., Fahey, G. C., & Swanson, K. S. (2015). Agave Inulin Supplementation Affects the Fecal Microbiota of Healthy Adults Participating in a Randomized, Double-Blind, Placebo-Controlled, Crossover Trial. *The Journal of Nutrition*, 145(9), 2025–2032. <https://doi.org/10.3945/JN.115.217331>
- Hu, T., Wu, Q., Yao, Q., Jiang, K., Yu, J., & Tang, Q. (2022). Short-chain fatty acid metabolism and multiple effects on cardiovascular diseases. *Ageing Research Reviews*, 81, 101706. <https://doi.org/10.1016/J.ARR.2022.101706>
- Huang, M., Kennedy, J. F., Li, B., Xu, X., & Xie, B. J. (2007). Characters of rice starch gel modified by gellan, carrageenan, and glucomannan: A texture profile analysis study. *Carbohydrate Polymers*, 69(3), 411–418. <https://doi.org/10.1016/J.CARBPOL.2006.12.025>
- Investor Daily Indoensia. (2016). *50 Perusahaan Mamin Masuk Pasar Pangan Fungsional*. <http://id.beritasatu.com/home/50-perusahaan-mamin-masuk-pasarpangan-fungsional/141942>.
- Ito, H., Takemura, N., Sonoyama, K., Kawagishi, H., Topping, D. L., Conlon, M. A., & Morita, T. (2011). Degree of Polymerization of Inulin-Type Fructans Differentially Affects Number of Lactic Acid Bacteria, Intestinal Immune Functions, and Immunoglobulin A Secretion in the Rat Cecum. *J. Agric. Food Chem*, 59, 5771–5778. <https://doi.org/10.1021/jf200859z>
- Jatraningrum, D. (2015). *Peluang Adopsi Inovasi Berbasis Data Paten di Bidang Pangan Fungsional*. LIPI Press.
- Johnson, I. T., & Gee, J. M. (1981). Effect of gel-forming gums on the intestinal unstirred layer and sugar transport in vitro. *Gut*, 22(5), 398. <https://doi.org/10.1136/GUT.22.5.398>
- Józefiak, D., Rutkowski, A., & Martin, S. A. (2004). Carbohydrate fermentation in the avian ceca: a review. *Animal Feed Science and Technology*, 113(1–4), 1–15. <https://doi.org/10.1016/J.ANIFEEDSCI.2003.09.007>
- Karhunen, L. J., Juvonen, K. R., Flander, S. M., Liukkonen, K. H., Lähdenmäki, L., Siloaho, M., Laaksonen, D. E., Herzig, K. H., Uusitupa, M. I., & Poutanen, K. S. (2010). A psyllium fiber-enriched meal strongly attenuates postprandial gastrointestinal peptide release in healthy young adults. *The Journal of nutrition*, 140(4), 737–744. <https://doi.org/10.3945/JN.109.115436>

- Kaur, N., & Gupta, A. K. (2002). Applications of inulin and oligofructose in health and nutrition. Dalam *J. Biosci.* / (Vol. 27, Nomor 7).
- Kelly-Quagliana, K. A., Nelson, P. D., & Buddington, R. K. (2003). *Dietary oligofructose and inulin modulate immune functions in mice.* [www.elsevier.com/locate/nutres](http://www.elsevier.com/locate/nutres)
- Kementerian Kesehatan Republik Indonesia. (2019). *Peraturan Menteri Kesehatan Republik Indonesia.*
- Kim, M. H., Kang, S. G., Park, J. H., Yanagisawa, M., & Kim, C. H. (2013). Short-chain fatty acids activate GPR41 and GPR43 on intestinal epithelial cells to promote inflammatory responses in mice. *Gastroenterology*, 145(2). <https://doi.org/10.1053/J.GASTRO.2013.04.056>
- Kim, M., Qie, Y., Park, J., & Kim, C. H. (2016). Gut Microbial Metabolites Fuel Host Antibody Responses. *Cell Host & Microbe*, 20(2), 202–214. <https://doi.org/10.1016/J.CHOM.2016.07.001>
- Kiso2, Y. (2005). Effect of Xylooligosaccharide Intake on Severe Constipation in Pregnant. Dalam *J Nutr Sci Vitaminol* (Vol. 51).
- Koh, A., De Vadder, F., Kovatcheva-Datchary, P., & Bäckhed, F. (2016). From Dietary Fiber to Host Physiology: Short-Chain Fatty Acids as Key Bacterial Metabolites. *Cell*, 165(6), 1332–1345. <https://doi.org/10.1016/j.cell.2016.05.041>
- Kong, C., Elderman, M., Cheng, L., de Haan, B. J., Nauta, A., & de Vos, P. (2019). Modulation of Intestinal Epithelial Glycocalyx Development by Human Milk Oligosaccharides and Non-Digestible Carbohydrates. *Molecular Nutrition and Food Research*, 63(17). <https://doi.org/10.1002/MNFR.201900303>
- Lecerf, J.-M., Dépeint, F., Clerc, E., Dugenet, Y., Niamba, C. N., Rhazi, L., Cayzeele, A., Abdelnour, G., Jaruga, A., Younes, H., Jacobs, H., Lambrey, G., Abdelnour, A. M., & Pouillart, P. R. (2012). Xylo-oligosaccharide (XOS) in combination with inulin modulates both the intestinal environment and immune status in healthy subjects, while XOS alone only shows prebiotic properties. *British Journal of Nutrition*, 108, 1847–1858. <https://doi.org/10.1017/S0007114511007252>
- Lee, H. v., Hamid, S. B. A., & Zain, S. K. (2014). Conversion of lignocellulosic biomass to nanocellulose: Structure and chemical process. *Scientific World Journal*, 2014. <https://doi.org/10.1155/2014/631013>
- Lehmann, S., Hiller, J., Van Bergenhenegouwen, J., Knippels, L. M. J., Garssen, J., & Traidl-Hoffmann, C. (2015). In Vitro Evidence for

- Immune-Modulatory Properties of Non-Digestible Oligosaccharides: Direct Effect on Human Monocyte Derived Dendritic Cells. *PLOS ONE*, 10(7), e0132304. <https://doi.org/10.1371/JOURNAL.PONE.0132304>
- Lequin, R. M. (2005). Enzyme Immunoassay (EIA)/Enzyme-Linked Immunosorbent Assay (ELISA). *Clinical Chemistry*, 51(12), 2415–2418. <https://doi.org/10.1373/CLINCHEM.2005.051532>
- Lessard, L., Chénier, S., & Quessy, S. (2001). *Host response to various treatments to reduce Salmonella infections in swine Development of quantitative Establishment-based Risk Assessment models for Canadian food establishments, hatcheries and feed mills View project I had a similar case in a corgi welsh dog View project*. <https://www.researchgate.net/publication/11861582>
- Levrat, M. A., Remesy, C., & Demigne, C. (1991). High Propionic Acid Fermentations and Mineral Accumulation in the Cecum of Rats Adapted to Different Levels of Inulin. *The Journal of Nutrition*, 121(11), 1730–1737. <https://doi.org/10.1093/JN/121.11.1730>
- Li, X., Shimizu, Y., & Kimura, I. (2017). Gut microbial metabolite short-chain fatty acids and obesity. *Bioscience of Microbiota, Food and Health*, 36(4), 135–140. <https://doi.org/10.12938/BMFH.17-010>
- Lin, H. M., Pang, J., Fan, L. L., & Chen, J. (2010). Advances in immunological activities of Konjac glucomannan. *Chinese Pharmacological Bulletin*, 26(11), 1404–1406.
- Liu, J., Wang, J., Shi, Y., Su, W., Chen, J., Zhang, Z., Wang, G., & Wang, F. (2017). Short Chain Fatty Acid Acetate Protects against Ethanol-Induced Acute Gastric Mucosal Lesion in Mice. *Biological & pharmaceutical bulletin*, 40(9), 1439–1446. <https://doi.org/10.1248/BPB.B17-00240>
- Liu, L., Li, Q., Yang, Y., & Guo, A. (2021). Biological Function of Short-Chain Fatty Acids and Its Regulation on Intestinal Health of Poultry. *Frontiers in veterinary science*, 8. <https://doi.org/10.3389/FVETS.2021.736739>
- Liu, P., Wang, Y., Yang, G., Zhang, Q., Meng, L., Xin, Y., & Jiang, X. (2021). The role of short-chain fatty acids in intestinal barrier function, inflammation, oxidative stress, and colonic carcinogenesis. *Pharmacological Research*, 165, 105420. <https://doi.org/10.1016/J.PHRS.2021.105420>
- Liu, S., Zhao, L., Zhang, J., Wang, L., & Liu, H. (2021). Functional drink powders from vertical-stone-milled oat and highland barley with high

- dietary-fiber levels decrease the postprandial glycemic response. *Journal of Functional Foods*, 83. <https://doi.org/10.1016/j.jff.2021.104548>
- López-Salazar, V., Tapia, M. S., Tobón-Cornejo, S., Díaz, D., Alemán-Escondrillas, G., Granados-Portillo, O., Noriega, L., Tovar, A. R., & Torres, N. (2021). Consumption of soybean or olive oil at recommended concentrations increased the intestinal microbiota diversity and insulin sensitivity and prevented fatty liver compared to the effects of coconut oil. *Journal of Nutritional Biochemistry*, 94. <https://doi.org/10.1016/J.JNUTBIO.2021.108751>
- Majima, A., Handa, O., Naito, Y., Suyama, Y., Onozawa, Y., Higashimura, Y., Mizushima, K., Morita, M., Uehara, Y., Horie, H., Iida, T., Fukui, A., Dohi, O., Okayama, T., Yoshida, N., Kamada, K., Katada, K., Uchiyama, K., Ishikawa, T., ... Itoh, Y. (2017). Real-time monitoring of trans-epithelial electrical resistance in cultured intestinal epithelial cells: the barrier protection of water-soluble dietary fiber. *Journal of Digestive Diseases*, 18(3), 151–159. <https://doi.org/10.1111/1751-2980.12456>
- Mandaliya, D. K., Patel, S., & Seshadri, S. (2021). The Combinatorial Effect of Acetate and Propionate on High-Fat Diet Induced Diabetic Inflammation or Metaflammation and T Cell Polarization. *Inflammation*, 44(1), 68–79. <https://doi.org/10.1007/S10753-020-01309-7>
- Mantis, N. J., Rol, N., & Corthésy, B. (2011). Secretory IgA's complex roles in immunity and mucosal homeostasis in the gut. *Mucosal Immunology*, 4(6), 603–611. <https://doi.org/10.1038/MI.2011.41/ATTACHMENT/57796770-7F9E-426E-9D7E-E1DB646E695C/MMC3.PPT>
- Marete, E. N., Jacquier, J. C., & O'Riordan, D. (2011). Feverfew as a source of bioactives for functional foods: Storage stability in model beverages. *Journal of Functional Foods*, 3(1), 38–43. <https://doi.org/10.1016/j.jff.2011.01.004>
- Markowiak-Kopeć, P., & Śliżewska, K. (2020). The effect of probiotics on the production of short-chain fatty acids by human intestinal microbiome. Dalam *Nutrients* (Vol. 12, Nomor 4). MDPI AG. <https://doi.org/10.3390/nu12041107>
- Marsh, C., Carter, H., Guelfi, K., Smith, K., Pike, K., Naylor, L., & Green, D. (2017). The acute effect of chocolate consumption on vascular and cerebrovascular function, cognition and appetite. *Journal of Science and Medicine in Sport*, 20, 81. <https://doi.org/10.1016/J.JSAMS.2017.09.357>



- Marsono, Y. (2004). Serat Pangan dalam Perspektif Ilmu Gizi. Dalam *Pidato pengukuhan Guru Besar, Universitas Gadjah Mada*.
- Marsono, Y. (2008). Prospek Pengembangan Makanan Fungsional. *Jurnal Teknologi Pangan dan Gizi (Journal of Food Technology and Nutrition)*, 7(1). <http://jurnal.wima.ac.id/index.php/JTPG/article/view/147>
- Marsono, Y., Illman, R. J., Clarke, J. M., Trimble, R. P., & Topping, D. L. (1993). Plasma lipids and large bowel volatile fatty acids in pigs fed on white rice, brown rice and rice bran. *The British journal of nutrition*, 70(2), 503–513. <https://doi.org/10.1079/BJN19930144>
- Marsono, Y., Putri, R. G., & Arianti, E. D. (2020). The Effects of Replacement of Dietary Fiber with FiberCreme™ on Lowering Serum Glucose and Improvement of Lipid Profile in Hypercholesterolemia-Diabetic Rats and Its Mechanism. *Pakistan Journal of Nutrition*, 19(4), 204–211. <https://doi.org/10.3923/PJN.2020.204.211>
- Marsono, Y., & Topping, D. L. (1999). Effects of Particle Size of Rice on Resistant Starch and SCFA of the Digesta in Caecostomised Pigs. *Indonesian Food and Nutrition Progress*, 6(2), 44–50. <https://doi.org/10.22146/JIFNP.80>
- Marsono, Y., Triwitono, P., Arianti, E. D., Gunawan, H., & Indrawanto, R. (2020). Pengaruh Bubur Pisang Isomaltosa-oligosakarida dan Fibercreme terhadap Kadar Glukosa dan Lipida Darah serta Profil Digesta Tikus Diabetes. *agriTECH*, 40(3), 190. <https://doi.org/10.22146/agritech.43742>
- Martin-Gallausiaux, C., Marinelli, L., Blottière, H. M., Larraufie, P., & Lapaque, N. (2021). SCFA: mechanisms and functional importance in the gut. *Proceedings of the Nutrition Society*, 80(1), 37–49. <https://doi.org/10.1017/S0029665120006916>
- Maryusman, T., Imtihanah, S., & Firdaus, N. I. (2020). Kombinasi Diet Tinggi Serat dan Senam Aerobik terhadap Profil Lipid Darah pada Pasien Dislipidemia. *GIZI INDONESIA*, 43(2), 67–76. <https://doi.org/10.36457/gizindo.v43i2.354>
- Matsui, N., Ito, R., Nishimura, E., Yoshikawa, M., Kato, M., Kamei, M., Shibata, H., Matsumoto, I., Abe, K., & Hashizume, S. (2005). Ingested cocoa can prevent high-fat diet-induced obesity by regulating the expression of genes for fatty acid metabolism. *Nutrition*, 21(5), 594–601. <https://doi.org/10.1016/J.NUT.2004.10.008>
- McLoughlin, R. F., Berthon, B. S., Jensen, M. E., Baines, K. J., & Wood, L. G. (2017). Short-chain fatty acids, prebiotics, synbiotics, and systemic inflammation: a systematic review and meta-analysis. *The American*

*Journal of Clinical Nutrition*, 106(3), 930–945.  
<https://doi.org/10.3945/AJCN.117.156265>

Mendis, M., Leclerc, E., & Simsek, S. (2016). Arabinoxylan hydrolyzates as immunomodulators in lipopolysaccharide-induced RAW264.7 macrophages. *Food & Function*, 7(7), 3039–3045.  
<https://doi.org/10.1039/C6FO00500D>

Mendis, M., Leclerc, E., & Simsek, S. (2017). Arabinoxylan hydrolyzates as immunomodulators in Caco-2 and HT-29 colon cancer cell lines. *Food & function*, 8(1), 220–231. <https://doi.org/10.1039/C6FO00866F>

Miqdady, M., Mistarihi, J. Al, Azaz, A., & Rawat, D. (2020). Prebiotics in the infant microbiome: The past, present, and future. *Pediatric Gastroenterology, Hepatology and Nutrition*, 23(1), 1–14.  
<https://doi.org/10.5223/pghn.2020.23.1.1>

Moens, F., Verce, M., & De Vuyst, L. (2017). Lactate- and acetate-based cross-feeding interactions between selected strains of lactobacilli, bifidobacteria and colon bacteria in the presence of inulin-type fructans. *International Journal of Food Microbiology*, 241, 225–236.  
<https://doi.org/10.1016/J.IJFOODMICRO.2016.10.019>

Mora, J. R., Iwata, M., Eksteen, B., Song, S. Y., Junt, T., Senman, B., Otipoby, K. L., Yokota, A., Takeuchi, H., Ricciardi-Castagnoli, P., Rajewsky, K., Adams, D. H., & von Andrian, U. H. (2006). Generation of gut-homing IgA-secreting B cells by intestinal dendritic cells. *Science*, 314(5802), 1157–1160.  
[https://doi.org/10.1126/SCIENCE.1132742/SUPPL\\_FILE/MORA\\_SOM.PDF](https://doi.org/10.1126/SCIENCE.1132742/SUPPL_FILE/MORA_SOM.PDF)

Moran, T. H., Smedh, U., Kinzig, K. P., Scott, K. A., Knipp, S., & Ladenheim, E. E. (2005). Peptide YY(3-36) inhibits gastric emptying and produces acute reductions in food intake in rhesus monkeys. *American journal of physiology. Regulatory, integrative and comparative physiology*, 288(2).  
<https://doi.org/10.1152/AJPREGU.00535.2004>

Mulyono. (2010). *Peningkatan Mutu Tepung Iles-Iles (Amorphophallus Oncophillus) (Foodgrade: Glukomannan 80%) sebagai Bahan Pengelastis Ml (4% = Meningkatkan Elastisitas Ml 50%) dan Pengental (1% = 16.000 Cps) Melalui Teknologi Pencucian Bertingkat dan Enzimatik pada Kapasitas Produksi 250 Kg Umbi/Hari.*

Nair, M. K. M., Joy, J., Vasudevan, P., Hinckley, L., Hoagland, T. A., & Venkitanarayanan, K. S. (t.t.). *Antibacterial Effect of Caprylic Acid and*

*Monocaprylin on Major Bacterial Mastitis Pathogens.*  
[https://doi.org/10.3168/jds.S0022-0302\(05\)73033-2](https://doi.org/10.3168/jds.S0022-0302(05)73033-2)

Nakamura, Y. K., & Omaye, S. T. (2012). Metabolic diseases and pro- and prebiotics: Mechanistic insights. *Nutrition and Metabolism*, 9(1), 1–9.  
<https://doi.org/10.1186/1743-7075-9-60/FIGURES/2>

Nakamura, Y., Nosaka, S., Suzuki, M., Nagafuchi, S., Takahashi, T., Yajima, T., Takenouchi-Ohkubo, N., Iwase, T., & Moro, I. (2004). Dietary fructooligosaccharides up-regulate immunoglobulin A response and polymeric immunoglobulin receptor expression in intestines of infant mice. *Clinical and Experimental Immunology*, 137(1), 52.  
<https://doi.org/10.1111/J.1365-2249.2004.02487.X>

Nasrollahzadeh, M., Sajjadi, M., Nezafat, Z., & Shafiei, N. (2021). Polysaccharide biopolymer chemistry. *Biopolymer-Based Metal Nanoparticle Chemistry for Sustainable Applications: Volume 1: Classification, Properties and Synthesis*, 45–105.  
<https://doi.org/10.1016/B978-0-12-822108-2.00019-3>

Nielsen, T. S., Lærke, H. N., Theil, P. K., Sørensen, J. F., Saarinen, M., Forssten, S., & Bach Knudsen, K. E. (2014). Diets high in resistant starch and arabinoxylan modulate digestion processes and SCFA pool size in the large intestine and faecal microbial composition in pigs. *The British journal of nutrition*, 112(11), 1837–1849.  
<https://doi.org/10.1017/S000711451400302X>

O’Flaherty, S., Saulnier, D., Pot, B., & Versalovic, J. (2010). How can probiotics and prebiotics impact mucosal immunity? *Gut Microbes*, 1(5), 293–300.  
<https://doi.org/10.4161/GMIC.1.5.12924>

Okazaki, Y., & Katayama, T. (2017). Glucomannan consumption elevates colonic alkaline phosphatase activity by up-regulating the expression of IAP-1, which is associated with increased production of protective factors for gut epithelial homeostasis in high-fat diet-fed rats. *Nutrition Research*, 43, 43–50.  
<https://doi.org/10.1016/j.nutres.2017.05.012>

Oliveira, R. P. D. S., Perego, P., Oliveira, M. N. de, & Converti, A. (2011). Effect of inulin as prebiotic and synbiotic interactions between probiotics to improve fermented milk firmness. *Journal of Food Engineering*, 107(1), 36–40.  
<https://doi.org/10.1016/J.JFOODENG.2011.06.005>

Onishi, N., Kawamoto, S., Suzuki, H., Santo, H., Aki, T., Shigeta, S., Hashimoto, K., Hide, M., & Ono, K. (2007). Dietary Pulverized Konjac Glucomannan Suppresses Scratching Behavior and Skin Inflammatory

- Immune Responses in NC/Nga Mice. *International Archives of Allergy and Immunology*, 144(2), 95–104. <https://doi.org/10.1159/000103220>
- Ortega-González, M., Ocón, B., Romero-Calvo, I., Anzola, A., Guadix, E., Zarzuelo, A., Suárez, M. D., Sánchez de Medina, F., & Martínez-Augustín, O. (2014). Nondigestible oligosaccharides exert nonprebiotic effects on intestinal epithelial cells enhancing the immune response via activation of TLR4-NFκB. *Molecular Nutrition & Food Research*, 58(2), 384–393. <https://doi.org/10.1002/MNFR.201300296>
- P3FNI. (2020). *Apa itu Pangan Fungsional? - P3FNI*. <https://p3fni.org/apa-itu-pangan-fungsional/>
- Pahwa, H., & Sharan, K. (2022). Food and nutrition as modifiers of the immune system: A mechanistic overview. *Trends in Food Science and Technology*, 123, 393–403. <https://doi.org/10.1016/J.TIFS.2022.03.017>
- Park, Y. H., Kim, N., Shim, Y. K., Choi, Y. J., Nam, R. H., Choi, Y. J., Ham, M. H., Suh, J. H., Lee, S. M., Lee, C. M., Yoon, H., Lee, H. S., & Lee, D. H. (2015). Adequate Dextran Sodium Sulfate-induced Colitis Model in Mice and Effective Outcome Measurement Method. *Journal of Cancer Prevention*, 20(4), 260. <https://doi.org/10.15430/JCP.2015.20.4.260>
- Parry, J. M. (2009). Konjac Glucomannan. *Food Stabilisers, Thickeners and Gelling Agents*, 198–217. <https://doi.org/10.1002/9781444314724.CH11>
- Peterson, D. A., McNulty, N. P., Guruge, J. L., & Gordon, J. I. (2007). IgA Response to Symbiotic Bacteria as a Mediator of Gut Homeostasis. *Cell Host and Microbe*, 2(5), 328–339. <https://doi.org/10.1016/j.chom.2007.09.013>
- Pietrzak, B., Tomela, K., Olejnik-Schmidt, A., Mackiewicz, A., & Schmidt, M. (2020). Secretory IgA in Intestinal Mucosal Secretions as an Adaptive Barrier against Microbial Cells. *International Journal of Molecular Sciences* 2020, Vol. 21, Page 9254, 21(23), 9254. <https://doi.org/10.3390/IJMS21239254>
- Pimentel, T. C., Cruz, A. G., & Prudencio, S. H. (2013). Short communication: Influence of long-chain inulin and *Lactobacillus paracasei* subspecies *paracasei* on the sensory profile and acceptance of a traditional yogurt. *Journal of Dairy Science*, 96(10), 6233–6241. <https://doi.org/10.3168/JDS.2013-6695>
- Plaisancié, P., Dumoulin, V., Chayvialle, J. A., & Cuber, J. C. (1996). Luminal peptide YY-releasing factors in the isolated vascularly perfused rat colon. *Journal of Endocrinology*, 151(3), 421–429. <https://doi.org/10.1677/JOE.0.1510421>

- Popoola-Akinola, O. O., Raji, T. J., & Olawoye, B. (2022). Lignocellulose, dietary fibre, inulin and their potential application in food. *Heliyon*, 8(8), e10459. <https://doi.org/10.1016/J.HELİYON.2022.E10459>
- Pourabedin, M., Guan, L., & Zhao, X. (2015). *Xylo-oligosaccharides and virginiamycin differentially modulate gut microbial composition in chickens*. <https://doi.org/10.1186/s40168-015-0079-4>
- Pourabedin, M., & Zhao, X. (2015). Prebiotics and gut microbiota in chickens. *FEMS microbiology letters*, 362(15). <https://doi.org/10.1093/FEMSLE/FNV122>
- PT. Lautan Natural Krimerindo. (t.t.). *Product Specification FiberCreme*.
- Puddu, A., Sanguineti, R., Montecucco, F., & Viviani, G. L. (2014). Evidence for the gut microbiota short-chain fatty acids as key pathophysiological molecules improving diabetes. *Mediators of Inflammation*, 2014. <https://doi.org/10.1155/2014/162021>
- Purwaningsih, I., Hardiyati, R., Zulhamdani, M., Laksani, C. S., & Rianto, Y. (2021). Current Status of Functional Foods Research and Development in Indonesia: Opportunities and Challenges. *Jurnal Teknologi dan Industri Pangan*, 32(1), 83–91. <https://doi.org/10.6066/jtip.2021.32.1.83>
- Putri, R. G. (2018). *Bubur Kacang Merah (Phaseolus vulgaris L.) Instan : Pengaruh Isomalto-oligosakarida dan FiberCreme sebagai Pengganti Sukrosa terhadap Sifat Sensoris dan Fisik serta Perbaikan Profil Lipid pada Tikus Sprague Dawley* [Universitas Gadjah Mada]. <http://etd.repository.ugm.ac.id/penelitian/detail/158649>
- Putri, R. G., Triwitono, P., & Marsono, Y. (2019). *Formulasi dan Karakteristik Bubur Kacang Merah (Phaseolus vulgaris L.) Instan dengan Pemanis Sukrosa, Isomalto-oligosakarida dan Fibercreme*. AgriTECH. <https://jurnal.ugm.ac.id/agritech/article/view/46262/27196>
- Reeves, P. G. (1997). Components of the AIN-93 Diets as Improvements in the AIN-76A Diet. *The Journal of Nutrition*, 127(5), 838S-841S. <https://doi.org/10.1093/JN/127.5.838S>
- Remesy, C., & Demigne, C. (1989). Specific effects of fermentable carbohydrates on blood urea flux and ammonia absorption in the rat cecum. *The Journal of nutrition*, 119(4), 560–565. <https://doi.org/10.1093/JN/119.4.560>
- Ríos-Covián, D., Ruas-Madiedo, P., Margolles, A., Gueimonde, M., de los Reyes-Gavilán, C. G., & Salazar, N. (2016). Intestinal short chain fatty acids and their link with diet and human health. *Frontiers in*



- Microbiology*, 7(FEB), 185.  
<https://doi.org/10.3389/FMICB.2016.00185/BIBTEX>
- Rivera-Chávez, F., Zhang, L. F., Faber, F., Lopez, C. A., Byndloss, M. X., Olsan, E. E., Xu, G., Velazquez, E. M., Lebrilla, C. B., Winter, S. E., & Bäumler, A. J. (2016). Depletion of Butyrate-Producing Clostridia from the Gut Microbiota Drives an Aerobic Luminal Expansion of Salmonella. *Cell Host and Microbe*, 19(4), 443–454.  
<https://doi.org/10.1016/J.CHOM.2016.03.004>
- Roberfroid, M., Gibson, G. R., Hoyles, L., McCartney, A. L., Rastall, R., Rowland, I., Wolvers, D., Watzl, B., Szajewska, H., Stahl, B., Guarner, F., Respondek, F., Whelan, K., Coxam, V., Davicco, M. J., Léotoing, L., Wittrant, Y., Delzenne, N. M., Cani, P. D., ... Meheust, A. (2010). Prebiotic effects: Metabolic and health benefits. Dalam *British Journal of Nutrition* (Vol. 104, Nomor SUPPL.2).  
<https://doi.org/10.1017/S0007114510003363>
- Roberfroid MB. (1999). Concepts in functional foods: the case of inulin and oligofructose. *Nutr.*
- Saeed, M., Arain, M. A., Abd El-Hack, M. E., & Emam, M. (2017). *Use of Mannan-Oligosaccharides (MOS) As a Feed Additive in Poultry Nutrition*. <https://www.researchgate.net/publication/320322444>
- Sakaguchi, E., Sakoda, C., & Toramaru, Y. (1998). Caecal fermentation and energy accumulation in the rat fed on indigestible oligosaccharides. *British Journal of Nutrition (United Kingdom)*.  
<https://doi.org/10.3/JQUERY-UIJS>
- Sakata, T. (1987). Stimulatory effect of short-chain fatty acids on epithelial cell proliferation in the rat intestine: a possible explanation for trophic effects of fermentable fibre, gut microbes and luminal trophic factors. *The British journal of nutrition*, 58(1), 95–103.  
<https://doi.org/10.1079/BJN19870073>
- Saleh, N., Rahayuningsih, St. A., Radjit, B. S., Ginting, E., Harnowo, D., & Mejaya, I. M. J. (2015). *Tanaman Porang: Pengenalan, Budidaya, dan Pemanfaatannya*.
- Salleh, S. N., Fairus, A. A. H., Zahary, M. N., Bhaskar Raj, N., & Mhd Jalil, A. M. (2019). Unravelling the Effects of Soluble Dietary Fibre Supplementation on Energy Intake and Perceived Satiety in Healthy Adults: Evidence from Systematic Review and Meta-Analysis of Randomised-Controlled Trials. *Foods*, 8(1), 15.  
<https://doi.org/10.3390/foods8010015>

- Salmean, Y. A. (2017). Acute fiber supplementation with inulin-type fructans curbs appetite sensations: A randomized, double-blind, placebo-controlled study. *Food and Nutrition Research*, 61. <https://doi.org/10.1080/16546628.2017.1341808>
- Saputri, R., Qurrota, R. A., Huriyati, E., Arsanti Lestari, L., Rahayoe, S., Haksaiha Sulisty, O., Harmayani, E., Biostatistika, D., Kesehatan Populasi, dan, Kedokteran, F., Masyarakat, K., Keperawatan, dan, Gadjah Mada, U., & Gizi dan Kesehatan, D. (2021). Pengaruh pemberian jelly mengandung glukomanan porang (*Amorphophallus oncophyllus*) dan inulin sebagai makanan selingan terhadap berat badan, IMT, lemak tubuh, kadar kolesterol total, dan trigliserida pada orang dewasa obesitas. *Jurnal Gizi Klinik Indonesia*, 17(4), 166–183. <https://doi.org/10.22146/ijcn.58343>
- Sawicki, C. M., Livingston, K. A., Obin, M., Roberts, S. B., Chung, M., & McKeown, N. M. (2017). Dietary Fiber and the Human Gut Microbiota: Application of Evidence Mapping Methodology. *Nutrients*, 9(2). <https://doi.org/10.3390/NU9020125>
- Schley, & Field. (2002). The immune-enhancing effects of dietary fibres and prebiotics. *The British journal of nutrition*, 87 Suppl 2(6), 221–230. <https://doi.org/10.1079/BJNBJN/2002541>
- Schneeman, B. O. (1985). *Effects of nutrients and nonnutrients on food intake 1-3*. <https://academic.oup.com/ajcn/article-abstract/42/5/966/4692051>
- Schröder, N. W. J., & Schumann, R. R. (2005). Single nucleotide polymorphisms of Toll-like receptors and susceptibility to infectious disease. *Lancet Infectious Diseases*, 5(3), 156–164. [https://doi.org/10.1016/S1473-3099\(05\)01308-3](https://doi.org/10.1016/S1473-3099(05)01308-3)
- Schroeder, N., Marquart, L. F., & Gallaher, D. D. (2013). The role of viscosity and fermentability of dietary fibers on satiety- and adiposity-related hormones in rats. *Nutrients*, 5(6), 2093–2113. <https://doi.org/10.3390/nu5062093>
- Scott, K. P., Gratz, S. W., Sheridan, P. O., Flint, H. J., & Duncan, S. H. (2013). The influence of diet on the gut microbiota. *Pharmacological Research*, 69(1), 52–60. <https://doi.org/10.1016/J.PHRS.2012.10.020>
- Setyani, T. S. (t.t.). *Pengaruh Konsumsi FiberCeme™ Tipe 01 terhadap Karakteristik Digesta Sekum, SCFA, dan Imunitas (sIgA) pada Tikus Sprague Dawley*. Universitas Gadjah Mada.

- Shoaib, M., Shehzad, A., Omar, M., Rakha, A., Raza, H., Sharif, H. R., Shakeel, A., Ansari, A., & Niazi, S. (2016). Inulin: Properties, health benefits and food applications. *Carbohydrate Polymers*, 147, 444–454. <https://doi.org/10.1016/J.CARBPOL.2016.04.020>
- Shokryazdan, P., Faseleh Jahromi, M., Navidshad, B., & Liang, J. B. (2017). Effects of prebiotics on immune system and cytokine expression. *Medical Microbiology and Immunology*, 206(1), 1–9. <https://doi.org/10.1007/S00430-016-0481-Y/TABLES/3>
- Sinurat, E., Fransiska, D., Sihono, S., & Kusumawati, R. (2021). Efek Pemberian Biskuit Ulva terhadap Penurunan Kadar Glukosa Darah Tikus yang Diinduksi Sukrosa. *Jurnal Pascapanen dan Bioteknologi Kelautan dan Perikanan*, 16(1), 63. <https://doi.org/10.15578/jpbkp.v16i1.682>
- Soesatyo, M. H. N. E. (1993). Mucosal Immunity: Role of Gut-Associated Lymphoid Tissue (GALT) in IgA Response. *Journal of the Medical Sciences*, 25(04).
- Sood, N., Baker, W. L., & Coleman, C. I. (2008). Effect of glucomannan on plasma lipid and glucose concentrations, body weight, and blood pressure: systematic review and meta-analysis. *The American Journal of Clinical Nutrition*, 88(4), 1167–1175. <https://doi.org/10.1093/AJCN/88.4.1167>
- Sorndech, W., Nakorn, K. N., Tongta, S., & Blennow, A. (2018). Isomalto-oligosaccharides: Recent insights in production technology and their use for food and medical applications. Dalam *LWT* (Vol. 95, hlm. 135–142). Academic Press. <https://doi.org/10.1016/j.lwt.2018.04.098>
- Sousa-Pereira, P. de, & Woof, J. M. (2019). Iga: Structure, function, and developability. Dalam *Antibodies* (Vol. 8, Nomor 4). MDPI. <https://doi.org/10.3390/antib8040057>
- Subroto, M. A., & Armando, R. (2008). *Real food, true health : makanan sehat untuk hidup lebih sehat / Muhammad Ahkam Subroto ; penyunting, Rokhim Armando*. 152. <https://agromedia.net/katalog/real-food-true-health/>
- Supriati, Y. (t.t.). *Keanekaragaman iles-iles (Amorphophallus spp.) dan potensinya untuk Industri Pangan Fungsional, Kosmetik, dan Bioetanol*. <https://doi.org/10.21082/jp3.v35n2.2016.p69-80>
- Sy, M., Yang, H., Seo, S. G., Shin, S. H., Chung, M.-Y., Kim, J., Lee, S. J., Lee, H. J., & Lee, K. W. (2013). Cocoa polyphenols suppress adipogenesis in vitro and obesity in vivo by targeting insulin receptor.

- International Journal of Obesity*, 37, 584–592.  
<https://doi.org/10.1038/ijo.2012.85>
- Tester, R. F., & Al-Ghazzewi, F. H. (2013). Mannans and health, with a special focus on glucomannans. *Food Research International*, 50(1), 384–391.  
<https://doi.org/10.1016/J.FOODRES.2012.10.037>
- Topping, D. L., & Clifton, P. M. (2001). Short-chain fatty acids and human colonic function: roles of resistant starch and nonstarch polysaccharides. *Physiological reviews*, 81(3), 1031–1064.  
<https://doi.org/10.1152/PHYSREV.2001.81.3.1031>
- Tucker, L. A., & Thomas, K. S. (2009). Increasing total fiber intake reduces risk of weight and fat gains in women. *The Journal of nutrition*, 139(3), 576–581. <https://doi.org/10.3945/JN.108.096685>
- Turnbaugh, P. J., Ley, R. E., Mahowald, M. A., Magrini, V., Mardis, E. R., & Gordon, J. I. (2006). An obesity-associated gut microbiome with increased capacity for energy harvest. *Nature* 2006 444:7122, 444(7122), 1027–1031. <https://doi.org/10.1038/nature05414>
- Uddin, M. H., & Rumman, M. (2022). Digestion and immune health. Dalam *Nutrition and Functional Foods in Boosting Digestion, Metabolism and Immune Health* (hlm. 79–88). Elsevier. <https://doi.org/10.1016/B978-0-12-821232-5.00020-3>
- van der Beek, C. M., Dejong, C. H. C., Troost, F. J., Masclee, A. A. M., & Lenaerts, K. (2017). Role of short-chain fatty acids in colonic inflammation, carcinogenesis, and mucosal protection and healing. *Nutrition Reviews*, 75(4), 286–305.  
<https://doi.org/10.1093/NUTRIT/NUW067>
- Venter, C., Meyer, R. W., Greenhawt, M., Pali-Schöll, I., Nwaru, B., Roduit, C., Untersmayr, E., Adel-Patient, K., Agache, I., Agostoni, C., Akdis, C. A., Feeney, M., Hoffmann-Sommergruber, K., Lunjani, N., Grimshaw, K., Reese, I., Smith, P. K., Sokolowska, M., Vassilopoulou, E., ... O'Mahony, L. (2022). Role of dietary fiber in promoting immune health—An EAACI position paper. *Allergy*, 77(11), 3185–3198. <https://doi.org/10.1111/all.15430>
- Vitaglione, P., Lumaga, R. B., Stanzione, A., Scalfi, L., & Fogliano, V. (2009).  $\beta$ -Glucan-enriched bread reduces energy intake and modifies plasma ghrelin and peptide YY concentrations in the short term. *Appetite*, 53(3), 338–344. <https://doi.org/10.1016/J.APPET.2009.07.013>
- Vuksan, V., Jenkins, A. L., Rogovik, A. L., Fairgrieve, C. D., Jovanovski, E., & Leiter, L. A. (2011). Viscosity rather than quantity of dietary fibre

- predicts cholesterol-lowering effect in healthy individuals. *British Journal of Nutrition*, 106(9), 1349–1352. <https://doi.org/10.1017/S0007114511001711>
- Vulevic, J., Juric, A., Tzortzis, G., & Gibson, G. R. (2013). A Mixture of trans-Galactooligosaccharides Reduces Markers of Metabolic Syndrome and Modulates the Fecal Microbiota and Immune Function of Overweight Adults 1-3. *J. Nutr*, 143, 324–331. <https://doi.org/10.3945/jn.112.166132>
- Wahjuningsih, S. B., Marsono, Y., & Noor, Z. (2005). Konsentrat Serat Kedelai: Preparasi dan Pengaruhnya Terhadap Sifat Fisik dan Kimia Digesta pada Tikus. *Agritech*, 25, 90–95.
- Wang, T., Dooley, H., Steinel, N. C., Christian, S. L., Smith, N. C., & Rise, M. L. (2019). A Comparison of the Innate and Adaptive Immune Systems in Cartilaginous Fish, Ray-Finned Fish, and Lobe-Finned Fish. *Frontiers in Immunology* / [www.frontiersin.org](http://www.frontiersin.org), 10, 2292. <https://doi.org/10.3389/fimmu.2019.02292>
- Wardhani, D. H., Rahayu, L. H., Cahyono, H., & Ulya, H. L. (2020). Purification of Glucomannan of Porang (*Amorphophallus oncophyllus*) Flour using Combination of Isopropyl Alcohol and Ultrasound-Assisted Extraction. *Reaktor*, 20(4), 203–209. <https://doi.org/10.14710/REAKTOR.20.4.203-209>
- Wichienchot, S., Thammarutwasik, P., Jongjareonrak, A., Chansuwan, W., Hmadhlu, P., Hongpattarakere, T., Itharat, A., & Ooraikul, B. (2011). Extraction and analysis of prebiotics from selected plants from southern Thailand. *Songklanakarin Journal of Science and Technology (SJST)*, 33(5), 517–523. <https://doaj.org/article/d2aee12247744b9197eb50be1451afad>
- Wilson, B., & Whelan, K. (2017). Prebiotic inulin-type fructans and galactooligosaccharides: definition, specificity, function, and application in gastrointestinal disorders. Dalam *Journal of Gastroenterology and Hepatology (Australia)* (Vol. 32, hlm. 64–68). Blackwell Publishing. <https://doi.org/10.1111/jgh.13700>
- Wismar, R., Brix, S., Frøkiær, H., & Lærke, H. N. (2010). Dietary fibers as immunoregulatory compounds in health and disease. *Annals of the New York Academy of Sciences*, 1190, 70–85. <https://doi.org/10.1111/J.1749-6632.2009.05256.X>
- Wong, J. M. W., & Jenkins, D. J. A. (2007). Carbohydrate Digestibility and Metabolic Effects. *The Journal of Nutrition*, 137(11), 2539S–2546S. <https://doi.org/10.1093/JN/137.11.2539S>



- Woof, J. M., & Ken, M. A. (2006). The function of immunoglobulin A in immunity. *The Journal of Pathology*, 208(2), 270–282. <https://doi.org/10.1002/PATH.1877>
- Woof, J. M., & Russell, M. W. (2011). Structure and function relationships in IgA. Dalam *Mucosal Immunology* (Vol. 4, Nomor 6, hlm. 590–597). <https://doi.org/10.1038/mi.2011.39>
- Wu, W. T., Yang, L. C., & Chen, H. L. (2014). Effects of konjac glucomannan, inulin and cellulose on acute colonic responses to genotoxic azoxymethane. *Food chemistry*, 155, 304–310. <https://doi.org/10.1016/J.FOODCHEM.2014.01.065>
- Xiong, R.-G., Zhou, D.-D., Wu, S.-X., Huang, S.-Y., Saimaiti, A., Yang, Z.-J., Shang, A., Zhao, C.-N., Gan, R.-Y., & Li, H.-B. (2022). Health Benefits and Side Effects of Short-Chain Fatty Acids. *Foods*, 11(18), 2863. <https://doi.org/10.3390/foods11182863>
- Xu, C., Yu, C., Yang, S., Deng, L., Zhang, C., Xiang, J., & Shang, L. (2023). Effects of Physical Properties of Konjac Glucomannan on Appetite Response of Rats. *Foods* 2023, Vol. 12, Page 743, 12(4), 743. <https://doi.org/10.3390/FOODS12040743>
- Yang, Y., Iji, P. A., & Choct, M. (2009). Dietary modulation of gut microflora in broiler chickens: a review of the role of six kinds of alternatives to in-feed antibiotics. *World's Poultry Science Journal*, 65(01), 97. <https://doi.org/10.1017/s0043933909000008>
- Yanuriati, A., Marseno, D. W., Rochmadi, & Harmayani, E. (2017). Characteristics of glucomannan isolated from fresh tuber of Porang (*Amorphophallus muelleri* Blume). *Carbohydrate Polymers*, 156, 56–63. <https://doi.org/10.1016/j.carbpol.2016.08.080>
- Yao, Y., Cai, X., Fei, W., Ye, Y., Zhao, M., & Zheng, C. (2022). The role of short-chain fatty acids in immunity, inflammation and metabolism. *Critical reviews in food science and nutrition*, 62(1), 1–12. <https://doi.org/10.1080/10408398.2020.1854675>
- Yaqoob, P., & Newsholme, E. A. (1999). Comparison of cytokine production in cultures of whole human blood and purified mononuclear cells. *Cytokine*, 11(8), 600–605. <https://doi.org/10.1006/CYTO.1998.0471>
- Yazbeck, R., Lindsay, R. J., Geier, M. S., Butler, R. N., & Howarth, G. S. (2019). Prebiotics Fructo-, Galacto-, and Mannan-Oligosaccharide Do Not Protect against 5-Fluorouracil-Induced Intestinal Mucositis in Rats. *Journal of Nutrition*, 149(12), 2164–2173. <https://doi.org/10.1093/jn/nxz192>

- Yen, C. H., Tseng, Y. H., Kuo, Y. W., Lee, M. C., & Chen, H. L. (2011). Long-term supplementation of isomalto-oligosaccharides improved colonic microflora profile, bowel function, and blood cholesterol levels in constipated elderly people—A placebo-controlled, diet-controlled trial. *Nutrition*, 27(4), 445–450. <https://doi.org/10.1016/J.NUT.2010.05.012>
- Yohana, W. (2013). Secretory IgA sebagai Bagian Reaksi Sistem Imunitas Mukosa Oral Akibat Aplikasi Material Kurang Tepat. *Jurnal Material Kedokteran Gigi*, 83–89.
- Ze, X., Duncan, S. H., Louis, P., & Flint, H. J. (2012). Ruminococcus bromii is a keystone species for the degradation of resistant starch in the human colon. *The ISME Journal* 2012 6:8, 6(8), 1535–1543. <https://doi.org/10.1038/ismej.2012.4>
- Zenhom, M., Hyder, A., de Vrese, M., Heller, K. J., Roeder, T., & Schrezenmeir, J. (2011). Prebiotic Oligosaccharides Reduce Proinflammatory Cytokines in Intestinal Caco-2 Cells via Activation of PPAR $\gamma$  and Peptidoglycan Recognition Protein 3. *The Journal of Nutrition*, 141(5), 971–977. <https://doi.org/10.3945/JN.110.136176>
- Zhang, D., Liu, J., Cheng, H., Wang, H., Tan, Y., Feng, W., & Peng, C. (2022). Interactions between polysaccharides and gut microbiota: A metabolomic and microbial review. *Food Research International*, 160. <https://doi.org/10.1016/J.FOODRES.2022.111653>
- Zhang, N., Jin, M., Wang, K., Zhang, Z., Shah, N. P., & Wei, H. (2022). Functional oligosaccharide fermentation in the gut: Improving intestinal health and its determinant factors-A review. *Carbohydrate Polymers*, 284, 119043. <https://doi.org/10.1016/J.CARBPOL.2021.119043>
- Zhao, X. H., & Geng, Q. (2016). Acid production and conversion of konjac glucomannan during in vitro colonic fermentation affected by exogenous microorganisms and tea polyphenols. <http://dx.doi.org/10.3109/09637486.2016.1150437>, 67(3), 274–282. <https://doi.org/10.3109/09637486.2016.1150437>
- Zhou, M., Pu, C., Xia, L., Yu, X., Zhu, B., Cheng, R., Xu, L., & Zhang, J. (2014). Salecan diet increases short chain fatty acids and enriches beneficial microbiota in the mouse cecum. *Carbohydrate Polymers*, 102(1), 772–779. <https://doi.org/10.1016/J.CARBPOL.2013.10.091>
- Zijlstra, N., Mars, M., de Wijk, R. A., Westerterp-Plantenga, M. S., Holst, J. J., & de Graaf, C. (2009). Effect of viscosity on appetite and gastrointestinal hormones. *Physiology & Behavior*, 97(1), 68–75. <https://doi.org/10.1016/J.PHYSBEH.2009.02.001>