

## DAFTAR PUSTAKA

- Ahmad, A. R., Juwita, J., & Ratulangi, S. A. D. (2015). Penetapan Kadar Fenolik dan Flavonoid Total Ekstrak Metanol Buah dan Daun Patikala (*Etlingera elatior* (Jack) R.M.SM). *Pharmaceutical Sciences and Research*, 2(1), 1–10. <https://doi.org/10.7454/psr.v2i1.3481>
- Ait Kaki El-Hadef El-Okki, A., Gagaoua, M., Bourekoua, H., Hafid, K., Bennamoun, L., Djekrif-Dakhmouche, S., El-Hadef El-Okki, M., & Meraihi, Z. (2017). Improving Bread Quality with the Application of a Newly Purified Thermostable  $\alpha$ -Amylase from *Rhizopus oryzae* FSIS4. *Foods*, 6(1), 1. <https://doi.org/10.3390/foods6010001>
- Briard, B., Heddergott, C., & Latgé, J.-P. (2016). Volatile Compounds Emitted by *Pseudomonas aeruginosa* Stimulate Growth of the Fungal Pathogen *Aspergillus fumigatus*. *MBio*, 7(2). <https://doi.org/10.1128/mBio.00219-16>
- Benabda, O., M'hir, S., Kasmi, M., Mnif, W., & Hamdi, M. (2019). Optimization of Protease and Amylase Production by *Rhizopus oryzae* Cultivated on Bread Waste Using Solid-State Fermentation. *Journal of Chemistry*, 2019, 1–9. <https://doi.org/10.1155/2019/3738181>
- Bennett, J. W., Hung, R., Lee, S., & Padhi, S. (2012). 18 Fungal and Bacterial Volatile Organic Compounds: An Overview and Their Role as Ecological Signaling Agents. Dalam *Fungal Associations* (hlm. 373–393). Springer Berlin Heidelberg. [https://doi.org/10.1007/978-3-642-30826-0\\_18](https://doi.org/10.1007/978-3-642-30826-0_18)
- Cantabrana, I., Perise, R., & Hernández, I. (2015). Uses of *Rhizopus oryzae* in the kitchen. *International Journal of Gastronomy and Food Science*, 2(2), 103–111. <https://doi.org/10.1016/j.ijgfs.2015.01.001>
- Chakravorty, S., Helb, D., Burday, M., Connell, N., & Alland, D. (2007). A detailed analysis of 16S ribosomal RNA gene segments for the diagnosis of pathogenic bacteria. *Journal of Microbiological Methods*, 69(2), 330–339. <https://doi.org/10.1016/j.mimet.2007.02.005>
- Duliński, R., Cielecka, E. K., Pierzchalska, M., Byczyński, Ł., & Żyła, K. (2016). Profile and bioavailability analysis of *myo*-inositol phosphates in rye bread

- supplemented with phytases: a study using an *in vitro* method and Caco-2 monolayers. *International Journal of Food Sciences and Nutrition*, 67(4), 454–460. <https://doi.org/10.3109/09637486.2016.1162769>
- Ezeilo, U. R., Wahab, R. A., & Mahat, N. A. (2020). Optimization studies on cellulase and xylanase production by *Rhizopus oryzae* UC2 using raw oil palm frond leaves as substrate under solid state fermentation. *Renewable Energy*, 156, 1301–1312. <https://doi.org/10.1016/j.renene.2019.11.149>
- Feng, X. M., Passoth, V., Eklund-Jonsson, C., Alminger, M. L., & Schnürer, J. (2007). *Rhizopus oligosporus* and yeast co-cultivation during barley tempeh fermentation—Nutritional impact and real-time PCR quantification of fungal growth dynamics. *Food Microbiology*, 24(4), 393–402. <https://doi.org/10.1016/j.fm.2006.06.007>.
- Frey-Klett, P., Burlinson, P., Deveau, A., Barret, M., Tarkka, M., & Sarniguet, A. (2011). Bacterial-Fungal Interactions: Hyphens between Agricultural, Clinical, Environmental, and Food Microbiologists. *Microbiology and Molecular Biology Reviews*, 75(4), 583–609. <https://doi.org/10.1128/MMBR.00020-11>.
- Ghosh, B., & Rani Ray, R. (2011). Current Commercial Perspective of *Rhizopus oryzae*: A Review. *Journal of Applied Sciences*, 11(14), 2470–2486. <https://doi.org/10.3923/jas.2011.2470.2486>
- Gmoser, R., Fristedt, R., Larsson, K., Undeland, I., Taherzadeh, M. J., & Lennartsson, P. R. (2020). From stale bread and brewers spent grain to a new food source using edible filamentous fungi. *Bioengineered*, 11(1), 582–598. <https://doi.org/10.1080/21655979.2020.1768694>
- Goesaert, H., Brijs, K., Veraverbeke, W. S., Courtin, C. M., Gebruers, K., & Delcour, J. A. (2005). Wheat flour constituents: how they impact bread quality, and how to impact their functionality. *Trends in Food Science & Technology*, 16(1–3), 12–30. <https://doi.org/10.1016/j.tifs.2004.02.011>
- Gryganskyi, A. P., Golan, J., Dolatabadi, S., Mondo, S., Robb, S., Idnurm, A., Muszewska, A., Steczkiewicz, K., Masonjones, S., Liao, H.-L., Gajdeczka, M. T., Anike, F., Vuek, A., Anishchenko, I. M., Voigt, K., de Hoog, G. S.,

- Smith, M. E., Heitman, J., Vilgalys, R., & Stajich, J. E. (2018). Phylogenetic and Phylogenomic Definition of *Rhizopus* Species. *G3 Genes/Genomes/Genetics*, 8(6), 2007–2018. <https://doi.org/10.1534/g3.118.200235>
- Hildebrandt, U., Ouziad, F., Marner, F.-J., & Bothe, H. (2006). The bacterium *Paenibacillus validus* stimulates growth of the arbuscular mycorrhizal fungus *Glomus intraradices* up to the formation of fertile spores. *FEMS Microbiology Letters*, 254(2), 258–267. <https://doi.org/10.1111/j.1574-6968.2005.00027.x>
- Jeleń, H., Majcher, M., Ginja, A., & Kuligowski, M. (2013). Determination of compounds responsible for tempeh aroma. *Food Chemistry*, 141(1), 459–465. <https://doi.org/10.1016/j.foodchem.2013.03.047>
- Jeleń, H., & Wasowicz, E. (1998). Volatile fungal metabolites and their relation to the spoilage of agricultural commodities. *Food Reviews International*, 14(4), 391–426. <https://doi.org/10.1080/87559129809541170>
- Jia, B., Xuan, L., Cai, K., Hu, Z., Ma, L., & Wei, C. (2013). NeSSM: A Next-Generation Sequencing Simulator for Metagenomics. *PLoS ONE*, 8(10), e75448. <https://doi.org/10.1371/journal.pone.0075448>
- John, J. (2017). Amylases-Bioprocess and Potential Applications: A Review. *International Journal of Bioinformatics and Biological Science*, 5(2), 41. <https://doi.org/10.5958/2321-7111.2017.00006.3>
- Kadar, A. D., Astawan, M., Putri, S. P., & Fukusaki, E. (2020). Metabolomics-Based Study of the Effect of Raw Materials to the End Product of Tempe—An Indonesian Fermented Soybean. *Metabolites*, 10(9), 367. <https://doi.org/10.3390/metabo10090367>
- Kuligowski, M., Pawłowska, K., Jasińska-Kuligowska, I., & Nowak, J. (2016). Isoflavone composition, polyphenols content and antioxidative activity of soybean seeds during tempeh fermentation. *CyTA - Journal of Food*, 1–7. <https://doi.org/10.1080/19476337.2016.1197316>
- Lackner, G., Moebius, N., Partida-Martinez, L. P., Boland, S., & Hertweck, C.

- (2011). Evolution of an endofungal Lifestyle: Deductions from the *Burkholderia rhizoxinica* Genome. *BMC Genomics*, 12(1), 210. <https://doi.org/10.1186/1471-2164-12-210>.
- Long, L., Lin, Q., Yao, Q., & Zhu, H. (2017). Population and function analysis of cultivable bacteria associated with spores of arbuscular mycorrhizal fungus *Gigaspora margarita*. *3 Biotech*, 7(1), 8. <https://doi.org/10.1007/s13205-017-0612-1>.
- Londoño-Hernández, L., Ramírez-Toro, C., Ruiz, H. A., Ascacio-Valdés, J. A., Aguilar-Gonzalez, M. A., Rodríguez-Herrera, R., & Aguilar, C. N. (2017). *Rhizopus oryzae* – Ancient microbial resource with importance in modern food industry. *International Journal of Food Microbiology*, 257, 110–127. <https://doi.org/10.1016/j.ijfoodmicro.2017.06.012>
- Margalit, A., Carolan, J. C., Sheehan, D., & Kavanagh, K. (2020). The *Aspergillus fumigatus* Secretome Alters the Proteome of *Pseudomonas aeruginosa* to Stimulate Bacterial Growth: Implications for Co-infection. *Molecular & Cellular Proteomics*, 19(8), 1346–1359. <https://doi.org/10.1074/mcp.RA120.002059>.
- Martinez, A., & Bennett, J. W. (2021). Fungal Volatile Organic Compounds. Dalam *Encyclopedia of Mycology* (hlm. 239–245). Elsevier. <https://doi.org/10.1016/B978-0-12-819990-9.00069-X>
- Meussen, B. J., de Graaff, L. H., Sanders, J. P. M., & Weusthuis, R. A. (2012). Metabolic engineering of *Rhizopus oryzae* for the production of platform chemicals. *Applied Microbiology and Biotechnology*, 94(4), 875–886. <https://doi.org/10.1007/s00253-012-4033-0>
- Moebius, N., Üzümlü, Z., Dijksterhuis, J., Lackner, G., & Hertweck, C. (2014). Active invasion of bacteria into living fungal cells. *ELife*, 3. <https://doi.org/10.7554/eLife.03007>.
- M'hir, S., Rizzello, C. G., Di Cagno, R., Cassone, A., & Hamdi, M. (2009). Use of selected enterococci and *Rhizopus oryzae* proteases to hydrolyse wheat proteins responsible for celiac disease. *Journal of Applied Microbiology*, 106(2), 421–431. <https://doi.org/10.1111/j.1365-2672.2008.04008.x>

- Nam, Y.-D., Lee, S.-Y., & Lim, S.-I. (2012). Microbial community analysis of Korean soybean pastes by next-generation sequencing. *International Journal of Food Microbiology*, 155(1–2), 36–42. <https://doi.org/10.1016/j.ijfoodmicro.2012.01.013>.
- Novitasari, R. T. M., Anggo, A. D., & Agustini, T. W. (2021). Pengaruh Kombinasi Bahan Pengisi Maltodekstrin Dan Karagenan Terhadap Karakteristik Bubuk Flavor Lemi Dari Rajungan. *Jurnal Ilmu Dan Teknologi Perikanan*, 3(1), 16–25. <https://doi.org/10.14710/Jitpi.2021.11407>
- Nur'aeni. (2017). Identifikasi dan analisis filogenetik bakteri endosimbion pada kapang rhizopus spp. berdasarkan gen penyandi 16s rna. [Skripsi] Universitas Jenderal Soedirman. <https://repository.unsoed.ac.id/1998/>.
- Pangastuti, A., Alfisah, R. K., Istiana, N. I., Sari, S. L. A., Setyaningsih, R., Susilowati, A., & Purwoko, T. (2019). Metagenomic analysis of microbial community in over-fermented tempeh. *Biodiversitas Journal of Biological Diversity*, 20(4), 1106–1114. <https://doi.org/10.13057/biodiv/d200423>
- Polanowska, K., Grygier, A., Kuligowski, M., Rudzińska, M., & Nowak, J. (2020). Effect of tempe fermentation by three different strains of *Rhizopus oligosporus* on nutritional characteristics of faba beans. *LWT*, 122, 109024. <https://doi.org/10.1016/j.lwt.2020.109024>
- Schulz-Bohm, K., Tyc, O., de Boer, W., Peereboom, N., Debets, F., Zaagman, N., Janssens, T. K. S., & Garbeva, P. (2017). Fungus-associated bacteriome in charge of their host behavior. *Fungal Genetics and Biology*, 102, 38–48. <https://doi.org/10.1016/j.fgb.2016.07.011>
- Splivallo, R., Deveau, A., Valdez, N., Kirchhoff, N., Frey-Klett, P., & Karlovsky, P. (2015). Bacteria associated with truffle-fruited bodies contribute to truffle aroma. *Environmental Microbiology*, 17(8), 2647–2660. <https://doi.org/10.1111/1462-2920.12521>
- Sun, X., Tiffany, D. G., Urriola, P. E., Shurson, G. G., & Hu, B. (2021). Nutrition upgrading of corn-ethanol co-product by fungal fermentation: Amino acids enrichment and anti-nutritional factors degradation. *Food and Bioproducts*

*Processing*, 130, 1–13. <https://doi.org/10.1016/j.fbp.2021.09.004>

- Suparno, S., Giyanto, G., Kusumadati, W. ., & Sadono, A. . (2020). PENGARUH LAMA PERENDAMAN KEDELAI DAN PROPORSI TEPUNG BERAS SEBAGAI UPAYA MENINGKATKAN MUTU GIZI TEMPE. *Agrienvi: Jurnal Ilmu Pertanian*, 14(2), 50–58. Diambil dari <https://ejournal.upr.ac.id/index.php/aev/article/view/2431>.
- Steffan, B. N., Venkatesh, N., & Keller, N. P. (2020). Let's Get Physical: Bacterial-Fungal Interactions and Their Consequences in Agriculture and Health. *Journal of Fungi*, 6(4), 243. <https://doi.org/10.3390/jof6040243>.
- Tamam, B. (2022). Tempe: Pangan Lokal Unggul (Superfood) Khasanah Budaya Bangsa. *Indonesian Red Crescent Humanitarian Journal*, 1(1), 41–48. <https://doi.org/10.56744/irchum.v1i1.14>
- Underwood, A. P., Dallman, T., Thomson, N. R., Williams, M., Harker, K., Perry, N., Adak, B., Willshaw, G., Cheasty, T., Green, J., Dougan, G., Parkhill, J., & Wain, J. (2013). Public Health Value of Next-Generation DNA Sequencing of Enterohemorrhagic *Escherichia coli* Isolates from an Outbreak. *Journal of Clinical Microbiology*, 51(1), 232–237. <https://doi.org/10.1128/JCM.01696-12>
- Utami, R., Wijaya, C. H., & Lioe, H. N. (2016). Taste of Water-Soluble Extracts Obtained from Over-Fermented Tempe. *International Journal of Food Properties*, 19(9), 2063–2073. <https://doi.org/10.1080/10942912.2015.1104509>
- Wu, X., Liu, Q., Deng, Y., Chen, X., Zheng, Z., Jiang, S., & Li, X. (2018). Production of Fumaric Acid by Bioconversion of Corn cob Hydrolytes Using an Improved *Rhizopus oryzae* Strain. *Applied Biochemistry and Biotechnology*, 184(2), 553–569. <https://doi.org/10.1007/s12010-017-2554-9>
- Xiao, C. W. (2008). Health Effects of Soy Protein and Isoflavones in Humans. *The Journal of Nutrition*, 138(6), 1244S–1249S. <https://doi.org/10.1093/jn/138.6.1244S>.

- Yarlina, V.P. and Astuti, D.I. (2021) ‘Karakterisasi Kandungan vitamin B12, Folat Dan isoflavon Tempe Kedelai Dengan isolat murni rhizopus oryzae, Rhizopus oligosporus, Dan Rhizopus Stolonifer Sebagai Bahan Pangan fungsional’, *Teknologi Pangan : Media Informasi dan Komunikasi Ilmiah Teknologi Pertanian*, 12(1), pp. 92–102. <https://doi.org/10.35891/tp.v12i1.2219>.
- Yang, B., Wang, Y., & Qian, P.-Y. (2016). Sensitivity and correlation of hypervariable regions in 16S rRNA genes in phylogenetic analysis. *BMC Bioinformatics*, 17(1), 135. <https://doi.org/10.1186/s12859-016-0992-y>