

DAFTAR PUSTAKA

- Abghari, A., & Chen, S. (2014). *Yarrowia lipolytica* as an oleaginous cell factory platform for production of fatty acid-based biofuel and bioproducts. *Frontiers in Energy Research*, 2, 21. <https://doi.org/10.3389/fenrg.2014.00021>
- Ageitos, J. M., Vallejo, J. A., Veiga-Crespo, P., & Villa, T. G. (2011). Oily yeasts as oleaginous cell factories. *Applied Microbiology and Biotechnology*, 90(4), 1219-1227. <https://doi.org/10.1007/s00253-011-3200-z>
- Anjani, K. D., & Ilmi, M. (2018). Penapisan isolat khamir oleaginous dari nektar bunga dan madu hutan. *Jurnal Mikologi Indonesia*, 2(2), 99-111. <https://doi.org/10.46638/jmi.v2i2.42>
- Amaretti, A., Raimondi, S., Sala, M., Roncaglia, L., De Lucia, M., Leonardi, A., & Rossi, M. (2010). Single cell oils of the cold-adapted oleaginous yeast *Rhodotorula glacialis* DBVPG 4785. *Microbial Cell Factories*, 9(1), 1-6. <https://doi.org/10.1186/1475-2859-9-73>
- Atabani, A. E., Silitonga, A. S., Badruddin, I. A., Mahlia, T. M. I., Masjuki, H. H., & Mekhilef, S. (2012). A comprehensive review on biodiesel as an alternative energy resource and its characteristics. *Renewable and Sustainable Energy Reviews*, 16(4), 2070–2093. <https://doi.org/10.1016/j.rser.2012.01.003>
- Athenaki, M., Gardeli, C., Diamantopoulou, P., Tchakouteu, S. S., Sarris, D., Philippoussis, A., & Papanikolaou, S. (2017). Lipids from yeasts and fungi: physiology, production and analytical considerations. *Journal of Applied Microbiology*, 124(2), 336-367. <https://doi.org/10.1111/jam.13633>
- Bertin, E. P. (1978). Qualitative and Semiquantitative Analysis. In: *Introduction to X-Ray Spectrometric Analysis*, pp. 255-278. Boston: Springer. https://doi.org/10.1007/978-1-4899-2204-5_7
- Bettencourt, S., Miranda, C., Pozdniakova, T. A., Sampaio, P., Franco-Duarte, R., & Pais, C. (2020). Single cell oil production by oleaginous yeasts grown in synthetic and waste-derived volatile fatty acids. *Microorganisms*, 8(11), 1809. <https://doi.org/10.3390/microorganisms8111809>
- Bishop, K. S., Erdrich, S., Karunasinghe, N., Han, D. Y., Zhu, S., Jesuthasan, A., & Ferguson, L. R. (2015). An investigation into the association between DNA damage and dietary fatty acid in men with prostate cancer. *Nutrients*, 7(1), 405-422. <https://doi.org/10.3390/nu7010405>

- Bonturi, N., Matsakas, L., Nilsson, R., Christakopoulos, P., Miranda, E. A., Berglund, K. A., & Rova, U. (2015). Single cell oil producing yeasts *Lipomyces starkeyi* and *Rhodospiridium toruloides*: selection of extraction strategies and biodiesel property prediction. *Energies*, 8(6), 5040-5052.
<https://doi.org/10.3390/en8065040>
- Brandenburg, J., Blomqvist, J., Shapaval, V., Kohler, A., Sampels, S., Sandgren, M., & Passoth, V. (2021). Oleaginous yeasts respond differently to carbon sources present in lignocellulose hydrolysate. *Biotechnology For Biofuels*, 14(1), 1-12.
<https://doi.org/10.1186/s13068-021-01974-2>
- Brauer, M. J., Huttenhower, C., Airoidi, E. M., Rosenstein, R., Matese, J. C., Gresham, D., Boer, V. M., Troyanskaya, O. G., & Botstein, D. (2008). Coordination of growth rate, cell cycle, stress response, and metabolic activity in yeast. *Molecular Biology of the Cell*, 19(1), 352-367.
<https://doi.org/10.1091/mbc.E07-08-0779>
- Brundrett, M. C., Kendrick, B., & Peterson, C. A. (1991). Efficient lipid staining in plant material with Sudan Red 7B or Fluoral Yellow 088 in polyethylene glycol-glycerol. *Biotechnic & Histochemistry*, 66(3), 111-116.
<https://doi.org/10.3109/10520299109110562>
- Burgstaller, L., Löffler, S., De Marcellis, L., Ghassemi, K., & Neureiter, M. (2022). The influence of different carbon sources on growth and single cell oil production in oleaginous yeasts *Apiotrichum brassicae* and *Pichia kudriavzevii*. *New Biotechnology*, 69, 1-7.
<https://doi.org/10.1016/j.nbt.2022.02.003>
- Caporusso, A., Capece, A., & De Bari, I. (2021). Oleaginous Yeasts as Cell Factories for the Sustainable Production of Microbial Lipids by the Valorization of Agri-Food Wastes. *Fermentation*, 7(2), 50.
<https://doi.org/10.3390/fermentation7020050>
- Carsanba, E., Papanikolaou, S., Fickers, P., & Erten, H. (2020). Lipids by *Yarrowia lipolytica* strains cultivated on glucose in batch cultures. *Microorganisms*, 8(7), 1054. <https://doi.org/10.3390/microorganisms8071054>
- Chaturvedi, S., Bhattacharya, A., & Khare, S. K. (2018). Trends in Oil Production from Oleaginous Yeast Using Biomass: Biotechnological Potential and Constraints. *Applied Biochemistry and Microbiology*, 54(4), 361-369.
<https://doi.org/10.1134/S000368381804004X>
- Chew, K. W., Chia, S. R., Show, P. L., Ling, T. C., & Chang, J. S. (2018). Biofuels from microbial lipids. In *Bioreactors for Microbial Biomass and Energy Conversion* (pp. 359-388). Springer, Singapore. http://doi.org/10.1007/978-981-10-7677-0_9

- De Souza, P. A., Moreira, L. F., Sarmiento, D. H. A., & da Costa, F. B. (2018). Cacao—*Theobroma cacao*. *Exotic Fruits*, 69–76. <https://doi.org/10.1016/b978-0-12-803138-4.00010-1>
- De Vuyst, L., & Leroy, F. (2020). Functional role of yeasts, lactic acid bacteria and acetic acid bacteria in cocoa fermentation processes. *FEMS Microbiology Reviews*, 44(4), 432-453. <https://doi.org/10.1093/femsre/fuaa014>
- De Vuyst, L., & Weckx, S. (2016). The cocoa bean fermentation process: from ecosystem analysis to starter culture development. *Journal of Applied Microbiology*, 121(1), 5-17. <https://doi.org/10.1111/jam.13045>
- Deak, T. (2009). Ecology and biodiversity of yeasts with potential value in biotechnology. In *Yeast biotechnology: diversity and applications* (T. Satyanarayana, G. Kunze, Eds.), 151-168. Springer Science + Business Media B.V. https://doi.org/10.1007/978-1-4020-8292-4_8
- Delgado-Ospina, J., Triboletti, S., Alessandria, V., Serio, A., Sergi, M., Paparella, A., ... & Chaves-López, C. (2020). Functional biodiversity of yeasts isolated from Colombian fermented and dry cocoa beans. *Microorganisms*, 8(7), 1086. <https://doi.org/10.3390/microorganisms8071086>
- Diwan, B., & Gupta, P. (2018). Comprehending the influence of critical cultivation parameters on the oleaginous behaviour of potent rotten fruit yeast isolates. *Journal of Applied Microbiology*, 125(2), 490-505. <https://doi.org/10.1111/jam.13904>
- Dourou, M., Aggeli, D., Papanikolaou, S., & Aggelis, G. (2018). Critical steps in carbon metabolism affecting lipid accumulation and their regulation in oleaginous microorganisms. *Applied Microbiology and Biotechnology*, 102, 2509-2523. <https://doi.org/10.1007/s00253-018-8813-z>
- Fahy, E., Cotter, D., Sud, M., & Subramaniam, S. (2011). Lipid classification, structures and tools. *Biochimica et Biophysica Acta*, 1811(11), 637–647. <https://doi.org/10.1016/j.bbaliip.2011.06.009>
- Fahy, E., Subramaniam, S., Murphy, R. C., Nishijima, M., Raetz, C. R., Shimizu, T., ... & Dennis, E. A. (2009). Update of the LIPID MAPS comprehensive classification system for lipids. *Journal of Lipid Research*, 50, S9-S14. <https://doi.org/10.1194/jlr.R800095-JLR200>
- Fukumoto, S., & Fujimoto, T. (2002). Deformation of lipid droplets in fixed samples. *Histochemistry and Cell Biology*, 118, 423-428. <https://doi.org/10.1007/s00418-002-0462-7>

- Gálvez-López, D., Chávez-Meléndez, B., Vázquez-Ovando, A., & Rosas-Quijano, R. (2019). The metabolism and genetic regulation of lipids in the oleaginous yeast *Yarrowia lipolytica*. *Brazilian Journal of Microbiology*, 50, 23-31. <https://doi.org/10.1007/s42770-018-0004-7>
- Gientka, I., Kieliszek, M., Jermacz, K., & Błażej, S. (2017). Identification and characterization of oleaginous yeast isolated from kefir and its ability to accumulate intracellular fats in deproteinated potato wastewater with different carbon sources. *BioMed Research International*, 2017. <https://doi.org/10.1155/2017/6061042>
- Gosalawit, C., Insoonthornruksa, S., Gilroyed, B. H., Mcnea, L., Boontawan, A., & Ketudat-Cairns, M. (2021). The potential of the oleaginous yeast *Rhodotorula paludigena* CM33 to produce biolipids. *Journal of Biotechnology*, 329, 56-64. <https://doi.org/10.1016/j.jbiotec.2021.01.021>
- Guadalupe-Daqui, M., Chen, M., Thompson-Witrick, K. A., & MacIntosh, A. J. (2021). Yeast morphology assessment through automated image analysis during fermentation. *Fermentation*, 7(2), 44. <https://doi.org/10.3390/fermentation7020044>
- Guzmán-Alvarez, R. E., & Márquez-Ramos, J. G. (2021). Fermentation of Cocoa Beans. In *Fermentation - Processes, Benefits and Risks*. IntechOpen. <https://doi.org/10.5772/intechopen.98756>
- Ho, V. T. T., Zhao, J., & Fleem, G. (2014). Yeasts are essential for cocoa bean fermentation. *International Journal of Food Microbiology*, 174, 72-87. <https://doi.org/10.1016/j.ijfoodmicro.2013.12.014>
- Horobin, R. W. (2002). Dis-, tris- and polyazo dyes. In R. W. Horobin & J. A. Kiernan (Ed.), *Conn's Biological Stains* (10th ed., pp. 125-143). Taylor & Francis.
- Ihwah, A., Deoranto, P., Wijana, S., & Dewi, I. A. (2018). Comparative study between Federer and Gomez method for number of replication in complete randomized design using simulation: study of Areca Palm (*Areca catechu*) as organic waste for producing handicraft paper. *International Conference Series: Earth and Environmental Science*, 131. <https://doi.org/10.1088/1755-13115/131/1/012049>
- Ilmi, M., & Siswontoro, M. (2021). Lipid production from *Zygosaccharomyces siamensis* AP1 using glycerol as a carbon source. *Proceedings of the 10th International Seminar and 12th Congress of Indonesian Society for Microbiology (ISISM 2019)*, 71-75. <https://doi.org/10.2991/absr.k.210810.014>
- Jagtap, S. S., Bedekar, A. A., Liu, J. J., Jin, Y. S., & Rao, C. V. (2019). Production of galactitol from galactose by the oleaginous yeast *Rhodospiridium toruloides*

IFO0880. *Biotechnology for Biofuels*, 12, 1-13.

<https://doi.org/10.1186/s13068-019-1586-5>

- Jamili, J., Yanti, N. A., & Susilowati, P. E. (2016). Diversity and the role of yeast in spontaneous cocoa bean fermentation from Southeast Sulawesi, Indonesia. *Biodiversitas Journal of Biological Diversity*, 17(1). <https://doi.org/10.13057/biodiv/d170113>
- Jiru, T. M., Abate, D., Kiggundu, N., Pohl, C., & Groenewald, M. (2016). Oleaginous yeasts from Ethiopia. *AMB Express*, 6(1), 1-11. <https://doi.org/10.1186/s13568-016-0242-8>
- Jiru, T. M., Groenewald, M., Pohl, C., Steyn, L., Kiggundu, N., & Abate, D. (2017). Optimization of cultivation conditions for biotechnological production of lipid by *Rhodotorula kratochvilovae* (syn, *Rhodospiridium kratochvilovae*) SY89 for biodiesel preparation. *3 Biotech*, 7(2), 145. <https://doi.org/10.1007/s13205-017-0769-7>
- Kadhim, R. A., Al-Saadoon, A. H., & Al-Mahmoud, W. A. (2019). Morphological and phylogenetic identification of *Pichia* species associated with foods in Basrah, Iraq. *Basrah Journal of Science*, 37(2), 223-236. <https://doi.org/10.29072/basjs.20190206>
- Karamerou, E. E., & Webb, C. (2019). Cultivation modes for microbial oil production using oleaginous yeasts—a review. *Biochemical Engineering Journal*, 151, 107322. <https://doi.org/10.1016/j.bej.2019.107322>
- Kim, J., Lee, K. W., & Lee, H. J. (2011). Cocoa (*Theobroma cacao*) seeds and phytochemicals in human health. *Nuts and Seeds in Health and Disease Prevention*, 351–360. <https://doi.org/10.1016/B978-0-12-375688-6.10042-8>
- Klug, L., & Daum, G. (2014). Yeast lipid metabolism at a glance. *FEMS Yeast Research*, 14(3), 369-388. <https://doi.org/10.1111/1567-1364.12141>
- Kohlwein, S. D. (2010). Triacylglycerol homeostasis: insights from yeast. *Journal of Biological Chemistry*, 285(21), 15663-15667. <https://doi.org/10.1074/jbc.R110.118356>
- Kolouchová, I., Schreiberová, O., Sigler, K., Masák, J., & Řezanka, T. (2015). Biotransformation of volatile fatty acids by oleaginous and non-oleaginous yeast species. *FEMS Yeast Research*, 15(7), <https://doi.org/10.1093/femsyr/fov076>
- Kolouchová, I., Mařátková, O., Sigler, K., Masák, J., & Řezanka, T. (2016). Lipid accumulation by oleaginous and non-oleaginous yeast strains in nitrogen and

phosphate limitation. *Folia Microbiologica*, 61(5), 431-438. <https://doi.org/10.1007/s12223-016-0454-y>

Kot, A. M., Gientka, I., Bzducha-Wróbel, A., Błażej, S., & Kurcz, A. (2020). Comparison of simple and rapid cell wall disruption methods for improving lipid extraction from yeast cells. *Journal of Microbiological Methods*, 176, 105999. <http://doi.org/10.1016/j.mimet.2020.105999>

Koutinas, A. A., & Papanikolaou, S. (2011). Biodiesel production from microbial oil. In *Handbook of Biofuels Production* (pp. 177-198). Woodhead Publishing.

Kraisintu, P., Yongmanitchai, W., & Limtong, S. (2010). Selection and optimization for lipid production of a newly isolated oleaginous yeast, *Rhodospiridium toruloides* DMKU3-TK16. *Agriculture and Natural Resources*, 44(3), 436-445. <https://li01.tci-thaijo.org/index.php/anres/article/view/244948>

Kumar, S. V., Kumutha, K., Krishnan, P. S., & Gopal, H. (2010). Effect of carbon sources on lipid and biomass production by oleaginous yeast cultures. *Madras Agricultural Journal*, 91(1-3), 62-64. <https://doi.org/10.29321/MAJ.10.100344>

Kurtzman, C. P. (2011). *Meyerozyma* Kurtzman & M. Suzuki (2010). In Kurtzman, C.P., Fell, J.W., Boekhout, T. (Eds.), 5th ed. *The Yeasts: A Taxonomic Study* vol. 2. (pp. 621-624). London, UK: Elsevier Science. <https://doi.org/10.1016/B978-0-444-52149-1.00047-1>

Lamers, D., van Biezen, N., Martens, D., Peters, L., van de Zilver, E., Jacobs-van Dreumel, N., ... & Lokman, C. (2016). Selection of oleaginous yeasts for fatty acid production. *BMC Biotechnology*, 16(1), 1-10. <https://doi.org/10.1186/s12896-016-0276-7>

Laude, S., Rahim, A., Kadir, S., Lamusa, A., & Ismail. (2014). Pemberdayaan masyarakat dalam pemanfaatan limbah dan pengolahan biji kakao di Desa Uenuni Kecamatan Palolo Kabupaten Sigi. *Jurnal Pengabdian Masyarakat*, 2, 102-108.

Ledesma-Amaro, R., & Nicaud, J. M. (2016). Metabolic engineering for expanding the substrate range of *Yarrowia lipolytica*. *Trends in Biotechnology*, 34(10), 798-809. <http://dx.doi.org/10.1016/j.tibtech.2016.04.010>

Lefeber, T., Janssens, M., Camu, N., & De Vuyst, L. (2010). Kinetic analysis of strains of lactic acid bacteria and acetic acid bacteria in cocoa pulp simulation media toward development of a starter culture for cocoa bean fermentation. *Applied and Environmental Microbiology*, 76(23), 7708-7716. <https://doi.org/10.1128/AEM.01206-10>

- Leiva-Candia, D. E., Pinzi, S., Redel-Macías, M. D., Koutinas, A., Webb, C., & Dorado, M. P. (2014). The potential for agro-industrial waste utilization using oleaginous yeast for the production of biodiesel. *Fuel*, *123*, 33-42. <https://doi.org/10.1016/J.FUEL.2014.01.054>
- Liszkowska, W., & Berlowska, J. (2021). Yeast fermentation at low temperatures: Adaptation to changing environmental conditions and formation of volatile compounds. *Molecules*, *26*(4), 1035. <https://doi.org/10.3390/molecules26041035>
- Marham, H. D., Rustam, Y., & Sukmawati, D. (2016). Uji kemampuan antagonisme khamir asal daun jati (*Tectona grandis*) terhadap kapang pengkontaminan pada pakan ternak ayam. *Bioma*, *12*(2), 118-125. [https://doi.org/10.21009/Bioma12\(2\).7](https://doi.org/10.21009/Bioma12(2).7)
- Maslanka, R., Zadrag-Tecza, R., & Kwolek-Mirek, M. (2020). Linkage between carbon metabolism, redox status and cellular physiology in the yeast *Saccharomyces cerevisiae* devoid of SOD1 or SOD2 gene. *Genes*, *11*(7), 780. <https://doi.org/10.3390/genes11070780>
- Maya, F. N., & Alami, N. H. (2019). Uji potensi isolat khamir dari rhizosfer mangrove Wonorejo dan Gunung Anyar sebagai agen penghasil IAA (Indole Acetic Acid). *Jurnal Sains dan Seni ITS*, *8*(1), 4-8. <http://dx.doi.org/10.12962/j23373520.v8i1.41855>
- Mussagy, C. U., Ribeiro, H. F., & Pereira, J. F. (2023). *Rhodotorula* sp. as a cell factory for production of valuable biomolecules. *Advances in Applied Microbiology*, *123*, 133-156. <https://doi.org/10.1016/bs.aambs.2023.04.001>
- Neves, R. P., de Carvalho, A. M. R., da Silva, C. M., Macêdo, D. P. C., & de Lima-Neto, R. G. (2019). *Rhodotorula* spp. Pocket Guide to Mycological Diagnosis, 63-68. <https://doi.org/10.1201/b22205-7>
- Niehus, X., Casas-Godoy, L., Vargas-Sánchez, M., & Sandoval, G. (2018). A fast and simple qualitative method for screening oleaginous yeasts on agar. *Journal of Lipids*, *2018*. <https://doi.org/10.1155/2018/5325804>
- Nigam, P. S. N. (2014). Cocoa and Coffee Fermentations-II. In *Encyclopedia of Food Microbiology*- (pp. 485-492). Elsevier.
- Nunes, C., da Silva, M., Camilloto, G. P., Machado, B., Hodel, K., Koblitz, M., Carvalho, G., & Uetanabaro, A. (2020). Potential applicability of cocoa pulp (*Theobroma cacao* L.) as an adjunct for beer production. *The Scientific World Journal*, *2020*, 3192585. <https://doi.org/10.1155/2020/3192585>

- Oliveira, J. M. S. D. (2015). How to construct and use a simple device to prevent the formation of precipitates when using Sudan Black B for histology. *Acta Botanica Brasilica*, 29, 489-498. <https://doi.org/10.1590/0102-33062015abb0093>
- Osman, M. E., Abdel-Razik, A. B., Zaki, K. I., Mamdouh, N., & El-Sayed, H. (2022). Isolation, molecular identification of lipid-producing *Rhodotorula diobovata*: optimization of lipid accumulation for biodiesel production. *Journal of Genetic Engineering and Biotechnology*, 20(1), 1-15. <https://doi.org/10.1186/s43141-022-00304-9>
- Papanikolaou, S., & Aggelis, G. (2011). Lipids of oleaginous yeasts. Part I: Biochemistry of single cell oil production. *European Journal of Lipid Science and Technology*, 113(8), 1031-1051. <https://doi.org/10.1002/ejlt.201100014>
- Papanikolaou, S. (2012). Oleaginous yeasts: biochemical events related with lipid synthesis and potential biotechnological applications. *Fermentation Technology*, 1(01), 1-3. <https://doi.org/10.4172/2167-7972.1000e103>
- Patel, A., Arora, N., Mehtani, J., Pruthi, V., & Pruthi, P. A. (2017). Assessment of fuel properties on the basis of fatty acid profiles of oleaginous yeast for potential biodiesel production. *Renewable and Sustainable Energy Reviews*, 77, 604-616. <http://dx.doi.org/10.1016/j.rser.2017.04.016>
- Patel, A., Karageorgou, D., Rova, E., Katapodis, P., Rova, U., Christakopoulos, P., & Matsakas, L. (2020). An overview of potential oleaginous microorganisms and their role in biodiesel and omega-3 fatty acid-based industries. *Microorganisms*, 8(3), 434. <https://doi.org/10.3390/microorganisms8030434>
- Patel, A., Matsakas, L., Hrušová, K., Rova, U., & Christakopoulos, P. (2019). Biosynthesis of nutraceutical fatty acids by the oleaginous marine microalgae *Phaeodactylum tricorutum* utilizing hydrolysates from organosolv-pretreated birch and spruce biomass. *Marine Drugs*, 17(2), 119. <https://doi.org/10.3390/md17020119>
- Patel, A., Pruthi, V., Singh, R. P., & Pruthi, P. A. (2015a). Synergistic effect of fermentable and non-fermentable carbon sources enhances TAG accumulation in oleaginous yeast *Rhodospiridium kratochvilovae* HIMPA1. *Bioresource Technology*, 188, 136-144. <https://doi.org/10.1016/j.biortech.2015.02.062>
- Patel, R., Dadida, C., Sarker, K., & Sen, D. J. (2015b). Sudan dyes as lipid soluble aryl-azo naphthols for microbial staining. *European Journal of Pharmaceutical and Medical Research*, 2(3), 417-419. ISSN 3294-3211.

- Pateraki, C., Paramithiotis, S., Doulgeraki, A. I., Kallithraka, S., Kotseridis, Y., & Drosinos, E. H. (2014). Effect of sulfur dioxide addition in wild yeast population dynamics and polyphenolic composition during spontaneous red wine fermentation from *Vitis vinifera* cultivar *Agiorgitiko*. *European Food Research and Technology*, 239(6), 1067–1075. <https://doi.org/10.1007/s00217-014-2303-z>
- Pereira, G. V. M., Soccol, V. T., & Soccol, C. R. (2016). Current state of research on cocoa and coffee fermentations. *Current Opinion in Food Science*, 7, 50-57. <https://doi.org/10.1016/j.cofs.2015.11.001>
- Phale, S. (2018). Yeast: Characteristics and economic significance. *Journal of Bioprocessing and Biotechniques*, 8(5), 2155-9821. <https://doi.org/10.4172/2155-9821.1000337>
- Polburee, P., Yongmanitchai, W., Lertwattanasakul, N., Ohashi, T., Fujiyama, K., & Limtong, S. (2015). Characterization of oleaginous yeasts accumulating high levels of lipid when cultivated in glycerol and their potential for lipid production from biodiesel-derived crude glycerol. *Fungal Biology*, 119(12), 1194-1204. <http://doi.org/10.1016/j.funbio.2015.09.002>
- Poli, J. S., da Silva, M. A. N., Siqueira, E. P., Pasa, V. M., Rosa, C. A., & Valente, P. (2014). Microbial lipid produced by *Yarrowia lipolytica* QU21 using industrial waste: a potential feedstock for biodiesel production. *Bioresource Technology*, 161, 320-326. <https://doi.org/10.1016/j.biortech.2014.03.083>
- Poontawee, R., Lorliam, W., Polburee, P., & Limtong, S. (2023). Oleaginous yeasts: biodiversity and cultivation. *Fungal Biology Reviews*, 44, 100295. <https://doi.org/10.1016/j.fbr.2022.11.003>
- Probst, K. V., Schulte, L. R., Durrett, T. P., Rezac, M. E., & Vadlani, P. V. (2016). Oleaginous yeast: a value-added platform for renewable oils. *Critical Reviews in Biotechnology*, 36(5), 942-955. <http://dx.doi.org/10.3109/07388551.2015.1064855>
- Qian, X., Gorte, O., Chen, L., Zhang, W., Dong, W., Ma, J., ... & Ochsenreither, K. (2019). Co-production of single cell oil and gluconic acid using oleaginous *Cryptococcus podzolicus* DSM 27192. *Biotechnology for Biofuels*, 12(1), 1-9. <https://doi.org/10.1186/s13068-019-1469-9>
- Ramírez-Castrillón, M., Jaramillo-García, V. P., Rosa, P. D., Landell, M. F., Vu, D., Fabricio, M. F., Ayub, M., Robert, V., Henriques, J., & Valente, P. (2017). The oleaginous yeast *Meyerozyma guilliermondii* BI281A as a new potential biodiesel feedstock: selection and lipid production optimization. *Frontiers in Microbiology*, 8, 1776. <https://doi.org/10.3389/fmicb.2017.01776>

- Ratledge, C. (2004). Fatty acid biosynthesis in microorganisms being used for Single Cell Oil production. *Biochimie*, 86(11), 807–815. <https://doi.org/10.1016/j.biochi.2004.09.017>
- Ratledge, C. (2010). Single cell oils for the 21st century. In *Single Cell Oils* (pp. 3-26). AOCS Press. <https://doi.org/10.1016/B978-1-893997-73-8.50005-0>
- Ratledge, C., & Wynn, J. P. (2002). The biochemistry and molecular biology of lipid accumulation in oleaginous microorganisms. *Advances in Applied Microbiology*, 51, 1-52. [https://doi.org/10.1016/S0065-2164\(02\)51000-5](https://doi.org/10.1016/S0065-2164(02)51000-5)
- Saenge, C., Cheirsilp, B., Suksaroge, T. T., & Bourtoom, T. (2011). Potential use of oleaginous red yeast *Rhodotorula glutinis* for the bioconversion of crude glycerol from biodiesel plant to lipids and carotenoids. *Process Biochemistry*, 46(1), 210-218. <https://doi.org/10.1016/j.procbio.2010.08.009>
- Salazar, M. M. M., & Lizarazo-Medina, P. X. (2021). Assessment of the fungal community associated with cocoa bean fermentation from two regions in Colombia. *Food Research International*, 149, 110670. <https://doi.org/10.1016/j.foodres.2021.110670>
- Samanta, A., De, A., Hasnain, M. S., Bera, H., & Nayak, A. K. (2019). Gum odina as pharmaceutical excipient. In *Natural Polysaccharides in Drug Delivery and Biomedical Applications* (pp. 327-337). Academic Press. <https://doi.org/10.1016/B978-0-12-817055-7.00014-5>
- Sánchez-Albarrán, F., Salgado-Garciglia, R., Molina-Torres, J., & López-Gómez, R. (2019). Oleosome oil storage in the mesocarp of two avocado varieties. *Journal of Oleo Science*, 68(1), 87-94. <https://doi.org/10.5650/jos.ess18176>
- Saran, S., Mathur, A., Dalal, J., & Saxena, R. K. (2017). Process optimization for cultivation and oil accumulation in an oleaginous yeast *Rhodospiridium toruloides* A29. *Fuel*, 188, 324-331. <http://doi.org/10.1016/j.fuel.2016.09.051>
- Sarbu, I., & Csutak, O. (2019). The Microbiology of Cocoa Fermentation. In *Caffeinated and Cocoa Based Beverages*, 423-446. Woodhead Publishing. <https://doi.org/10.1016/B978-0-12-815864-7.00013-1>
- Schwan, R. F., & Wheals, A. E. (2004). The microbiology of cocoa fermentation and its role in chocolate quality. *Critical reviews in Food Science and Nutrition*, 44(4), 205-221. <https://doi.org/10.1080/10408690490464104>
- Setiarto, R. H. B., Widhyastuti, N., & Saskiawan, I. (2016). Pengaruh fermentasi fungi, bakteri asam laktat dan khamir terhadap kualitas nutrisi tepung sorgum. *Agritech*, 36(4), 440-449. <http://dx.doi.org/10.22146/agritech.16769>

- Setyati, W. A., Martani, E., & Zainuddin, M. (2015). Kinetika pertumbuhan dan aktivitas protease isolat 36k dari sedimen ekosistem mangrove, Karimunjawa, Jepara. *Indonesian Journal of Marine Sciences/Ilmu Kelautan*, 20(3). ISSN 0853-7291.
- Shaignani, P., Awad, D., Redai, V., Fuchs, M., Haack, M., Mehlmer, N., & Brueck, T. (2021). Oleaginous yeasts-substrate preference and lipid productivity: a view on the performance of microbial lipid producers. *Microbial Cell factories*, 20(1), 1-18. <https://doi.org/10.1186/s12934-021-01710-3>
- Sitepu, I. R., Garay, L. A., Sestric, R., Levin, D., Block, D. E., German, J. B., & Boundy-Mills, K. L. (2014). Oleaginous yeasts for biodiesel: current and future trends in biology and production. *Biotechnology Advances*, 32(7), 1336-1360. <https://doi.org/10.1016/j.biotechadv.2014.08.003>
- Siwina, S., & Leesing, R. (2021). Bioconversion of durian (*Durio zibethinus* Murr.) peel hydrolysate into biodiesel by newly isolated oleaginous yeast *Rhodotorula mucilaginosa* KKUSY14. *Renewable Energy*, 163, 237-245. <https://doi.org/10.1016/j.renene.2020.08.138>
- Spagnuolo, M., Yaguchi, A., & Blenner, M. (2019). Oleaginous yeast for biofuel and oleochemical production. *Current Opinion in Biotechnology*, 57, 73-81. <https://doi.org/10.1016/j.copbio.2019.02.011>
- Sukmawati, D., Arman, Z., Hasanah, R., Balqis, M., Setiawan, A., Tafrijiyyah, F., ... & Dailin, D. J. (2021). Application of yeasts isolated from fermented cocoa beans for biocontrol of pathogenic mold in chocolate fruit. In *Journal of Physics: Conference Series* (Vol. 1869, No. 1, p. 012042). IOP Publishing. <https://doi.org/10.1088/1742-6596/1869/1/012042>
- Sukmawati, D., Arman, Z., Sondana, G. A., Fikriyah, N. N., Hasanah, R., Afifah, Z. N., ... & Puspitaningrum, R. (2019). Potential amylase-producing yeast isolated from indigenous fermented beverages originating from Bali, Indonesia. In *Journal of Physics: Conference Series* (Vol. 1402, No. 5, p. 055021). IOP Publishing. <https://doi.org/10.1088/1742-6596/1402/5/055021>
- Suriya, J., Bharathiraja, S., Krishnan, M., Manivasagan, P., & Kim, S. K. (2016). Marine microbial amylases: properties and applications. *Advances in Food and Nutrition Research*, 79, 161-177. <http://dx.doi.org/10.1016/bs.afnr.2016.07.001>
- Thancharoen, K., Malasri, A., Leamsingorn, W., & Boonyalit, P. (2017). Selection of oleaginous yeasts with lipid accumulation by the measurement of Sudan Black B for benefits of biodiesel. *International Journal of Pharma Medicine and Biological Sciences*, 6(2), 53-37. <https://doi.org/10.18178/ijpmb.6.2.53-57>

- Villas-Bôas, S. G., Højer-Pedersen, J., Åkesson, M., Smedsgaard, J., & Nielsen, J. (2005). Global metabolite analysis of yeast: evaluation of sample preparation methods. *Yeast*, 22(14), 1155-1169. <https://doi.org/10.1002/yea.1308>
- Wierzchowska, K., Zieniuk, B., Nowak, D., & Fabiszewska, A. (2021). Phosphorus and nitrogen limitation as a part of the strategy to stimulate microbial lipid biosynthesis. *Applied Sciences*, 11(24), 11819. <https://doi.org/10.3390/app112411819>
- Wulan, R., Astuti, R. I., Rukayadi, Y., & Meryandini, A. (2021). Evaluation of indigenous *Pichia kudriavzevii* from cocoa fermentation for a probiotic candidate. *Biodiversitas Journal of Biological Diversity*, 22(3). <https://doi.org/10.13057/biodiv/d220331>
- Xing, D., Wang, H., Pan, A., Wang, J., & Xue, D. (2012). Assimilation of corn fiber hydrolysates and lipid accumulation by *Mortierella isabellina*. *Biomass and bioenergy*, 39, 494-501. <http://dx.doi.org/10.1016/j.biombioe.2012.01.024>
- Xu, J., Du, W., Zhao, X., Zhang, G., & Liu, D. (2012). Microbial oil production from various carbon sources and its use for biodiesel preparation. *Biofuels, Bioproducts and Biorefining*, 7(1), 65-77. <https://doi.org/10.1002/bbb.1372>

