

DAFTAR PUSTAKA

- Adewole, S. O., & Caxton-Martins, E. A. (2006). Morphological changes and hypoglycemic effects of *Annona muricata* linn. (annonaceae) leaf aqueous extract on pancreatic β -cells of streptozotocin-treated diabetic rats. *African Journal of Biomedical Research*, 9(3). <https://doi.org/10.4314/ajbr.v9i3.48903>
- Adibe, M., Gabriel, I., Akintunde, A., & Esther, A. (2019). Chemical compositions and antioxidant activity of leaf and stem essential oils of *Bryophyllum pinnatum* (lam.) Kurz. *GSC Biological and Pharmaceutical Sciences*. <https://doi.org/10.30574/gscbps.2019.9.2.0184>.
- Afriyanti, T. (2015). Uji potensi antidiabetik pada ekstrak daun *Garcinia mangostana* L. melalui penghambatan aktifitas alfa glukosidase dan alfa amilase serta penapisan fitokimia pada ekstrak teraktif. *Universitas Indonesia*.
- Agustí, J., & Blanco-Touriñán, N. (2026). Environmental regulation of plant vascular networks. *Trends in plant science*, 31(4), 442–455. <https://doi.org/10.1016/j.tplants.2025.10.010>
- Alam, B., Li, J., Gě, Q., Khan, M. A., Gōng, J., Mehmood, S., Yuán, Y., & Gōng, W. (2021). *Endophytic Fungi: From Symbiosis to Secondary Metabolite Communications or Vice Versa?*. *Frontiers in plant science*, 12, 791033. <https://doi.org/10.3389/fpls.2021.791033>
- Alara, O. R., Abdurahman, N. H., & Alara, J. A. (2022). *Carica papaya*: comprehensive overview of the nutritional values, phytochemicals and pharmacological activities. *Advances in traditional medicine*, 22(1), 17-47. <https://doi.org/10.1007/s13596-020-00481-3>
- Aleshin, A. E., Firsov, L. M., & Honzatko, R. B. (1994). Refined structure for the complex of acarbose with glucoamylase from *Aspergillus awamori* var. X100 to 2.4-Å resolution. *The Journal of biological chemistry*, 269(22), 15631–15639. [https://doi.org/10.1016/S0021-9258\(17\)40728-9](https://doi.org/10.1016/S0021-9258(17)40728-9)
- Alhayyu, W. N., Astuti, W., & Marlina, E. (2022). Potensi bakteri endofit daun pucuk merah (*Syzygium myrtifolium* Walp.) sebagai antibakteri terhadap *Propionibacterium acnes*. *Jurnal Kimia Mulawarman*, 20(1), 1-8.
- Anacleto-Santos, J., Mondragón-Flores, R., López-Camacho, P., Rivera-Vivanco, M., De Jesús López-Pérez, T., Casarrubias-Tabares, B., Mondragón-Castelán, M., González-Pozos, S., Calzada, F., Vega-Ávila, E., & Rivera-Fernández, N. (2025). Anti-Toxoplasma and Antioxidant Activity of a Terpene and Methyl-Ester-Rich Subfraction from *Pleopeltis crassinervata*. *Antioxidants*, 14. <https://doi.org/10.3390/antiox14030342>.

- Arif, D. A. A., & Ramadhan, M. R. (2023). Anova Dan Tukey HSD Perbandingan Produksi Padi Antara Tiga Kabupaten Di Provinsi Jambi Anova and Tukey HSD Comparison of Rice Production Between Three Regencies in Jambi Province. *Multi Proximity: Jurnal Statistika Universitas Jambi*, 2(1), 23-31.
- Arunachalam, C., & Gayathri, P. (2010). Studies on bioprospecting of endophytic bacteria from the medicinal plant of *Andrographis paniculata* for their antimicrobial activity and antibiotic susceptibility pattern. *Int J Curr Pharm Res*, 2(4), 63-68.
- Ayoub, I., Kořinek, M., El-Shazly, M., Wetterauer, B., El-Beshbishy, H., Hwang, T., Chen, B., Chang, F., Wink, M., Singab, A., & Youssef, F. (2021). Anti-Allergic, Anti-Inflammatory, and Anti-Hyperglycemic Activity of *Chasmanthe aethiopica* Leaf Extract and Its Profiling Using LC/MS and GLC/MS. *Plants*, 10. <https://doi.org/10.3390/plants10061118>.
- Azevedo, J. L., Maccheroni Jr, W., Pereira, J. O., & De Araújo, W. L. (2000). Endophytic microorganisms: a review on insect control and recent advances on tropical plants. *Electronic journal of biotechnology*, 3(1), 15-16. <https://doi.org/10.2225/vol3-issue1-fulltext-4>
- Baxter, N. T., Lesniak, N. A., Sinani, H., Schloss, P. D., & Koropatkin, N. M. (2019). The Glucoamylase Inhibitor Acarbose Has a Diet-Dependent and Reversible Effect on the Murine Gut Microbiome. *mSphere*, 4(1), e00528-18. <https://doi.org/10.1128/mSphere.00528-18>
- Bhutani, N., Maheshwari, R., Kumar, P., Dahiya, R., & Suneja, P. (2021). Bioprospecting for extracellular enzymes from endophytic bacteria isolated from *Vigna radiata* and *Cajanus cajan*. *J Appl Biol Biotechnol*, 9(3), 26-34. <https://doi.org/10.7324/JABB.2021.9304>.
- Burdock, G.A. (2010). *Fenaroli's Handbook of Flavor Ingredients* (6th ed.). CRC Press. <https://doi.org/10.1201/9781439847503>.
- Butt, E., Altemimi, A. B., Younas, A., Butt, M. S., Jalal, M., Bhatti, M., Abdi, G., & Aadil, R. M. (2025). Guava (*Psidium guajava*): A brief overview of its therapeutic and health potential. *Food chemistry: X*, 31, 103027. <https://doi.org/10.1016/j.fochx.2025.103027>
- Candraningrat, I. D. A. A. D., Santika, A. A. G. J., Dharmayanti, I. A. M. S., Prayascita, P. W. 2021. Review kemampuan metode gc-ms dalam identifikasi flunitrazepam terkait dengan aspek forensik dan klinik. *Jurnal Kimia*. vol 15(1): 12. <https://doi.org/10.24843/jchem.2021.v15.i01.p03>
- Chandrasekhar, C., Rajpurohit, H., Javaji, K., Kuncha, M., Setti, A., Ali, A. Z., Tiwari, A. K., Misra, S., & Kumar, C. G. (2021). Anti-hyperglycemic and genotoxic studies of 1-*O*-methyl chrysophanol, a new anthraquinone isolated from *Amycolatopsis thermoflava* strain SFMA-103. *Drug and*

- chemical toxicology*, 44(2), 148–160.
<https://doi.org/10.1080/01480545.2018.1551406>
- Chang, H., Pujiyanto, S., Prastya, M. E., Primahana, G., Yuswan, A., Retnowati, D., & Permatasari, V. (2024). Uji Aktivitas Antibakteri dan Antioksidan dari Metabolit Ekstraseluler Bakteri Endofit Tumbuhan Mahang (*Macaranga bancana*). *Jurnal Sumberdaya Hayati Упередителу: Institut Pertanian Bogor*, 10(4), 190-197.
- Chaudhary, P., Agri, U., Chaudhary, A., Kumar, A., & Kumar, G. (2022). Endophytes and their potential in biotic stress management and crop production. *Frontiers in microbiology*, 13, 933017.
<https://doi.org/10.3389/fmicb.2022.933017>
- Chen, H., Yan, X., Lin, W., Zheng, L., & Zhang, W. (2004). A New Method for Screening α -Glucosidase Inhibitors and Application to Marine Microorganisms. *Pharmaceutical Biology*, 42(6), 416–421.
<https://doi.org/10.1080/13880200490885987>
- Cherigo, L., & Martínez-Luis, S. (2018). α -glucosidase inhibitor isolated from *Blechum pyramidatum*. *Natural Product Communications*, 13(4), 1934578X1801300421.
- Chigurupati, S., Marri, M. R., Vijayabalan, S., & Selvarajan, K. K. (2018). Bacterial endo-symbiont Inhabiting *Durio zibethinus* leaves and their antibacterial potential. *Int. J. Pharm. Tech. Res*, 11(3), 198-205.
<https://doi.org/10.20902/IJPTR.2018.11301>
- Chigurupati, S., Vijayabalan, S., Palanimuthu, V. R., Das, S., & Bhatia, S. (2021). Bacterial endophyte inhabiting *Durio zibethinus* and its radical scavenging and antidiabetic potential. *Indian Journal of Pharmaceutical Education and Research*, 55(3), 857-862.
<https://doi.org/10.5530/ijper.55.3.159>
- Chigurupati, S., Vijayabalan, S., Selvarajan, K. K., Alhowail, A., & Kauser, F. (2021). Bacterial endosymbiont inhabiting *Leucaena leucocephala* leaves and their antioxidant and antidiabetic potential. *Journal of Complementary and Integrative Medicine*, 18(2), 319-325.
<https://doi.org/10.1515/jcim-2020-0203>
- Coria-Téllez, A. V., Montalvo-González, E., Yahia, E. M., & Obledo-Vázquez, E. N. (2018). *Annona muricata*: A comprehensive review on its traditional medicinal uses, phytochemicals, pharmacological activities, mechanisms of action and toxicity. *Arabian Journal of chemistry*, 11(5), 662-691.
<https://doi.org/10.1016/j.arabjc.2016.01.004>
- Cronquist, A. (1981). *An integrated system of classification of flowering plants*. Columbia university press.

- Da Silva, J. T., Rashid, Z., Nhut, D. T., Sivakumar, D., Gera, A., Souza Jr, M. T., & Tennant, P. F. (2007). Papaya (*Carica papaya* L.) biology and biotechnology. *Tree and forestry science and biotechnology*, 1(1), 47-73.
- Demain A. L. (1981). Industrial microbiology. *Science (New York, N.Y.)*, 214(4524), 987–995. <https://doi.org/10.1126/science.6946560>
- Duhan, P., Bansal, P., & Rani, S. (2020). Isolation, identification and characterization of endophytic bacteria from medicinal plant *Tinospora cordifolia*. *South African Journal of Botany*, 134, 43-49. <https://doi.org/10.1016/j.sajb.2020.01.047>.
- Ehiguese, F., González-Delgado, M., Garrido-Pérez, C., Araújo, C., & Martin-Diaz, L. (2021). Effects and Risk Assessment of the Polycyclic Musk Compounds Galaxolide® and Tonalide® on Marine Microalgae, Invertebrates, and Fish. *Processes*. <https://doi.org/10.3390/pr9020371>.
- Faizah, L. N., Budiharjo, A., & Kusdiyantini, E. (2017). Optimasi pertumbuhan dan potensi antagonistik *Bacillus pumilus* terhadap patogen *Xanthomonas campestris* serta identifikasi molekuler gen penyandi PKS dan NRPS. *Jurnal Akademika Biologi*, 6(1), 38-48.
- Fallo, G., Buak, A., & Pardosi, L. (2022). SELEKSI Seleksi Dan Identifikasi Bakteri Penambat Nitrogen Pada Perakaran Tanaman Kacang Hijau (*Vigna radiata* L) Dan Tomat (*Solanum lycopersicum* L) Di Kabupaten Belu:- *Jurnal Biologi Dan Pembelajarannya (Jb&P)*, 9(1), 34-41.
- Fatin N, Pujiyanto S, Raharjo B. (2018). Uji aktivitas inhibisi α -glukosidase isolat bakteri endofit tanaman duwet (*Syzygium cumini* L. Skeels) sebagai sumber alternatif antidiabetes. *Bioma*, 20(2): 165-169.
- Fatin, N., Pujiyanto, S., & Raharjo, B. (2025). Uji aktivitas inhibisi α -glukosidase isolat bakteri endofit tanaman duwet (*Syzygium cumini* L. Skeels) sebagai sumber alternatif antidiabetes. *Berkala Bioteknologi*, 3(1).
- Fitriani, H., Sanif, E., & Nurdina, A. F. (2025). Efektifitas Kombinasi Ekstrak Daun Pepaya (*Carica Papaya* L.) Dengan Ekstrak Biji Pepaya (*Carica Papaya* L.) Terhadap Penurunan Kadar Gula Darah Pada Tikus Putih Jantan Hiperqlikemik. *Journal of Syntax Literate*, 10(8).
- Gamalero, E., & Glick, B. R. (2020). The Use of Plant Growth-Promoting Bacteria to Prevent Nematode Damage to Plants. *Biology*, 9(11), 381. <https://doi.org/10.3390/biology9110381>
- Gaspersz, N., Fransina, E. G., & Ngarbingan, A. R. (2022). Uji aktivitas penghambatan enzim α -amilase dan glukamilase dari ekstrak etanol daun kirinyuh (*Chromolaena odorata* L.). *Jurnal Kimia Mulawarman*, 19(2), 51-57.
- Gavamukulya, Y., Abou-Elella, F., Wamunyokoli, F., & AEl-Shemy, H. (2014). Phytochemical screening, anti-oxidant activity and in vitro anticancer

- potential of ethanolic and water leaves extracts of *Annona muricata* (Graviola). *Asian Pacific journal of tropical medicine*, 7S1, S355–S363. [https://doi.org/10.1016/S1995-7645\(14\)60258-3](https://doi.org/10.1016/S1995-7645(14)60258-3)
- Ginting, L., Wijanarka, W., & Kusdiyantini, E. (2020). Isolasi Bakteri Endofit Tanaman Pepaya (*Carica Papaya* L.) Dan Uji Aktivitas Enzim Amilase. *Berkala Bioteknologi*, 3(2), 1-7.
- Gomathi, D., Kalaiselvi, M., Ravikumar, G., Devaki, K., & Uma, C. (2015). GC-MS analysis of bioactive compounds from the whole plant ethanolic extract of *Evolvulus alsinoides* (L.) L. *Journal of food science and technology*, 52(2), 1212–1217. <https://doi.org/10.1007/s13197-013-1105-9>
- Goyal, R., Singhal, M., & Jialal, I. (2023). Type 2 diabetes. *StatPearls [Internet]*.
- Gumbirasari, R., Bachtiar, E., & Rochima, E. (2025). Potensi antioksidan bakteri endofit kulit batang *Rhizophora stylosa* sebagai penangkal radikal bebas. *Acta Aquatica: Aquatic Sciences Journal*, 12(3), 291-296.
- Gupta, S., Chaturvedi, P., Kulkarni, M. G., & Van Staden, J. (2020). A critical review on exploiting the pharmaceutical potential of plant endophytic fungi. *Biotechnology advances*, 39, 107462. <https://doi.org/10.1016/j.biotechadv.2019.107462>
- Hammami, B., Ghannay, S., Arraouadi, S., Hajlaoui, H., Aouadi, K., & Kadri, A. (2025). Fatty acid profiling and bioactive potential of date palm (*Phoenix dactylifera*) seed oil: antioxidant, antimicrobial, and α -glucosidase inhibitory activities. *Discover Applied Sciences*, 7. <https://doi.org/10.1007/s42452-025-06780-1>.
- Haque, M. A., Lee, J. H., & Cho, K. M. (2015). Endophytic bacterial diversity in Korean kimchi made of Chinese cabbage leaves and their antimicrobial activity against pathogens. *Food Control*, 56, 24-33.
- Hardoim, P. R., van Overbeek, L. S., & Elsas, J. D. (2008). Properties of bacterial endophytes and their proposed role in plant growth. *Trends in microbiology*, 16(10), 463–471. <https://doi.org/10.1016/j.tim.2008.07.008>
- Harris, R. A. (2004). Glycolysis, overview. *Encyclopedia of Biological Chemistry*, 2, 266-271. <https://doi.org/10.1016/B978-0-12-378630-2.00044-X>
- Hartina, F., Jannah, A., & Maunatin, A. (2014). Fermentasi tetes tebu dari pabrik gula Pagotan Madiun menggunakan *saccharomyces cerevisiae* untuk menghasilkan bioetanol dengan variasi pH dan lama fermentasi. *ALCHEMY: Journal of Chemistry*, 3(1), 93-100.

- Himeoka, Y., & Kaneko, K. (2017). Theory for transitions between exponential and stationary phases: universal laws for lag time. *Physical Review X*, 7(2), 021049. <https://doi.org/10.1103/PhysRevX.7.021049>
- Hnamte, L., Vanlallawmzuali, Kumar, A., Yadav, M. K., Zothanpuia, & Singh, P. K. (2024). An updated view of bacterial endophytes as antimicrobial agents against plant and human pathogens. *Current research in microbial sciences*, 7, 100241. <https://doi.org/10.1016/j.crmicr.2024.100241>
- Hua, H., Luo, H., Bai, Y., Wang, K., Niu, C., Huang, H., Shi, P., Wang, C., Yang, P., & Yao, B. (2014). A thermostable glucoamylase from *Bispora* sp. MEY-1 with stability over a broad pH range and significant starch hydrolysis capacity. *PloS one*, 9(11), e113581. <https://doi.org/10.1371/journal.pone.0113581>
- Huang, L., Zhu, X., Zhou, S., Cheng, Z., Shi, K., Zhang, C., & Shao, H. (2021). Phthalic Acid Esters: Natural Sources and Biological Activities. *Toxins*, 13. <https://doi.org/10.3390/toxins13070495>.
- Huynh, H. D., Nargotra, P., Wang, H. D., Shieh, C. J., Liu, Y. C., & Kuo, C. H. (2025). Bioactive Compounds from Guava Leaves (*Psidium guajava* L.): Characterization, Biological Activity, Synergistic Effects, and Technological Applications. *Molecules (Basel, Switzerland)*, 30(6), 1278. <https://doi.org/10.3390/molecules30061278>
- Imran, S., Taha, M., Selvaraj, M., Ismail, N. H., Chigurupati, S., & Mohammad, J. I. (2017). Synthesis and biological evaluation of indole derivatives as α -amylase inhibitor. *Bioorganic chemistry*, 73, 121–127. <https://doi.org/10.1016/j.bioorg.2017.06.007>
- J. Hallmann, A. Quadt-Hallmann, W. F. Mahaffee, and J. W. Kloepper. 1997. Bacterial endophytes in agricultural crops. *Canadian Journal of Microbiology*. 43(10): 895-914. <https://doi.org/10.1139/m97-131>
- Joshi, D. M., Pathak, S. S., Banmare, S., & Bhaisare, S. S. (2023). Review of Phytochemicals Present in *Psidium guajava* Plant and Its Mechanism of Action on Medicinal Activities. *Cureus*, 15(10), e46364. <https://doi.org/10.7759/cureus.46364>
- Kaku, Y., Tsuchiya, A., Kanno, T., Nakano, T., & Nishizaki, T. (2014). Dipalmitoleoyl-phosphatidylethanolamine induces apoptosis of NCI-H28 malignant mesothelioma cells.. *Anticancer research*, 34 4, 1759-64.
- Kandel, S. L., Joubert, P. M., & Doty, S. L. (2017). Bacterial Endophyte Colonization and Distribution within Plants. *Microorganisms*, 5(4), 77. <https://doi.org/10.3390/microorganisms5040077>
- Kaur, N., Kumar, V., Nayak, S. K., Wadhwa, P., Kaur, P., & Sahu, S. K. (2021). Alpha-amylase as molecular target for treatment of diabetes melitus: A

- comprehensive review. *Chemical biology & drug design*, 98(4), 539–560. <https://doi.org/10.1111/cbdd.13909>
- Kerru, N., Gummidi, L., Maddila, S., Gangu, K. K., & Jonnalagadda, S. B. (2020). A Review on Recent Advances in Nitrogen-Containing Molecules and Their Biological Applications. *Molecules (Basel, Switzerland)*, 25(8), 1909. <https://doi.org/10.3390/molecules25081909>
- Kobayashi, D. Y., & Palumbo, J. D. (2000). Bacterial endophytes and their effects on plants and uses in agriculture. In *Microbial endophytes* (pp. 213-250). CRC Press. <https://doi.org/10.1201/9781482277302-11>
- Koul, B., Pudhuvai, B., Sharma, C., Kumar, A., Sharma, V., Yadav, D., & Jin, J.-O. (2022). *Carica papaya* L.: Buah Tropis dengan Manfaat yang Melebihi Daerah Tropis. *Diversity*, 14 (8), 683. <https://doi.org/10.3390/d14080683>
- Krishnan, P., Bhat, R., Kush, A., & Ravikumar, P. (2012). Isolation and functional characterization of bacterial endophytes from *Carica papaya* fruits. *Journal of applied microbiology*, 113(2), 308–317. <https://doi.org/10.1111/j.1365-2672.2012.05340.x>
- Kulkarni, V. M., & Rathod, V. K. (2014). A novel method to augment extraction of mangiferin by application of microwave on three phase partitioning. *Biotechnology reports (Amsterdam, Netherlands)*, 6, 8–12. <https://doi.org/10.1016/j.btre.2014.12.009>
- Kumar, M., Saurabh, V., Tomar, M., Hasan, M., Changan, S., Sasi, M., Maheshwari, C., Prajapati, U., Singh, S., Prajapat, R. K., Dhumal, S., Punia, S., Amarowicz, R., & Mekhemar, M. (2021). Mango (*Mangifera indica* L.) Leaves: Nutritional Composition, Phytochemical Profile, and Health-Promoting Bioactivities. *Antioxidants (Basel, Switzerland)*, 10(2), 299. <https://doi.org/10.3390/antiox10020299>
- Kumar, M., Tomar, M., Amarowicz, R., Saurabh, V., Nair, M. S., Maheshwari, C., Sasi, M., Prajapati, U., Hasan, M., Singh, S., Changan, S., Prajapat, R. K., Berwal, M. K., & Satankar, V. (2021). Guava (*Psidium guajava* L.) Leaves: Nutritional Composition, Phytochemical Profile, and Health-Promoting Bioactivities. *Foods (Basel, Switzerland)*, 10(4), 752. <https://doi.org/10.3390/foods10040752>
- Kumar, P., & Satyanarayana, T. (2009). Microbial glucoamylases: characteristics and applications. *Critical reviews in biotechnology*, 29(3), 225–255. <https://doi.org/10.1080/07388550903136076>
- Kuntari, Z., Sumpono, S., & Nurhamidah, N. (2017). Aktivitas antioksidan metabolit sekunder bakteri endofit akar tanaman *Moringa oleifera* L (Kelor). *Alotrop*, 1(2), 80-84.

- Lawrence, G., Marchaux, I., Pejcz, E., Wojciechowicz-Budzisz, A., Olędzki, R., Zając, A., Paroń, O., Aurore, G., & Harasym, J. (2025). Prescreening of Mango (*Mangifera indica* L.) Leaves as a Potential Functional Food Ingredient: Techno-Functional and Antioxidative Characteristics. *Molecules (Basel, Switzerland)*, 30(16), 3381. <https://doi.org/10.3390/molecules30163381>
- Lee, H., Eo, Y., Kim, S. Y., & Lim, Y. (2024). Guava leaf extract attenuated muscle proteolysis in dexamethasone induced muscle atrophic mice via ubiquitin proteasome system, mTOR-autophagy, and apoptosis pathway. *Nutrition research (New York, N.Y.)*, 127, 97–107. <https://doi.org/10.1016/j.nutres.2024.05.009>
- Lehninger, 1982, Dasar-dasar Biokimia, Jil 1., Erlangga, Jakarta.
- Li, L. X., Yu, L. Y., Wang, B., & Pan, L. (2022). Impact of overexpressing NADH kinase on glucoamylase production in *Aspergillus niger*. *Journal of industrial microbiology & biotechnology*, 49(4), kuac015. <https://doi.org/10.1093/jimb/kuac015>.
- Li, X., Bai, Y., Jin, Z., & Svensson, B. (2022). Food-derived non-phenolic α -amylase and α -glucosidase inhibitors for controlling starch digestion rate and guiding diabetes-friendly recipes. *Lwt*, 153, 112455. <https://doi.org/10.1016/j.lwt.2021.112455>
- Lim, X. Y., Chan, J. S. W., Japri, N., Lee, J. C., & Tan, T. Y. C. (2021). *Carica papaya* L. Leaf: A Systematic Scoping Review on Biological Safety and Herb-Drug Interactions. *Evidence-Based Complementary and Alternative Medicine*, 2021(1), 5511221. <https://doi.org/10.1155/2021/5511221>
- Linda TM, Siregar S, Fitri WD, Martina A, Lestari W, Roslim DI, Hapsoh. (2018). Isolation and screening of culturable endophytic bacteria from leaf of rubber plant that produces of chitinase. *J Phys: Conf Ser* 1116 (5): 052038. <https://doi.org/10.1088/1742-6596/1116/5/052038>
- Lok, B., Babu, D., Tabana, Y., Dahham, S. S., Adam, M. A. A., Barakat, K., & Sandai, D. (2023). The Anticancer Potential of *Psidium guajava* (Guava) Extracts. *Life*, 13(2), 346. <https://doi.org/10.3390/life13020346>
- Lulamba, T., Green, E., & Serepa-Dlamini, M. (2021). Photorhabdus sp. ETL Antimicrobial Properties and Characterization of Its Secondary Metabolites by Gas Chromatography–Mass Spectrometry. *Life*, 11. <https://doi.org/10.3390/life11080787>.
- Luyen, N. D., Huong, L. M., Ha, N. T. T., Tra, N. T., Anh, L. T. T., Tuyen, N. V., Posta, K., Son, N. T., & Pham-The, H. (2023). Chemical Profile and Biological Activities of Fungal Strains Isolated from *Piper nigrum* Roots: Experimental and Computational Approaches. *Chemistry &*

biodiversity, 20(2), e202200456.
<https://doi.org/10.1002/cbdv.202200456>

- Mahyarudin, M., & Riza, H. (2017). Identifikasi Bakteri Endofit Daun Pegagan (*Centella asiatica*) berdasarkan Penanda Gen 16 S rRNA pada *Escherichia coli*. *Jurnal Kesehatan Khatulistiwa*, 3(1), 386-404.
- Marín-Navarro, J., & Polaina, J. (2011). Glucoamylases: structural and biotechnological aspects. *Applied microbiology and biotechnology*, 89(5), 1267–1273. <https://doi.org/10.1007/s00253-010-3034-0>.
- Marsaoli, F., Matinahoru, J. M., & Leiwakabessy, C. (2019). Isolasi, seleksi, dan uji antagonis bakteri endofit diisolasi dari salawaku (*Falcataria mollucana*) dalam menekan pertumbuhan cendawan patogen *Cercospora* spp. *Agrologia*, 8(2), 360679.
- Martinez-Klimova, E., Rodríguez-Peña, K., & Sánchez, S. (2017). Endophytes as sources of antibiotics. *Biochemical pharmacology*, 134, 1–17. <https://doi.org/10.1016/j.bcp.2016.10.010>
- Masfufah, P. A., & Jayuska, A. (2019). Aktivitas Antibakteri dari Isolat Bakteri Endofit B. E2 Daun Tanaman Sukun (*Artocarpus altilis*) terhadap *S. typhimurium* dan *S. aureus*. *Jurnal Kimia Khatulistiwa*, 8(1), 79-85.
- Masson, P., & Mukhametgalieva, A. (2023). Partial Reversible Inhibition of Enzymes and Its Metabolic and Pharmaco-Toxicological Implications. *International Journal of Molecular Sciences*, 24. <https://doi.org/10.3390/ijms241612973>.
- Mishra, S., Ahmad, S., Kumar, N., & Sharma, B. K. (2013). *Annona muricata* (the cancer killer): a review. *Glob. J. Pharm. Res*, 2(1), 1613-1618.
- Mishra, S., Priyanka, & Sharma, S. (2022). Metabolomic Insights Into Endophyte-Derived Bioactive Compounds. *Frontiers in microbiology*, 13, 835931. <https://doi.org/10.3389/fmicb.2022.835931>
- Mo, X., Rao, D., Kaur, K., Hassan, R., Abdel-Samea, A., Farhan, S., Bräse, S., & Hashem, H. (2024). Indole Derivatives: A Versatile Scaffold in Modern Drug Discovery—An Updated Review on Their Multifaceted Therapeutic Applications (2020–2024). *Molecules*, 29. <https://doi.org/10.3390/molecules29194770>.
- Moghadamtousi, S. Z., Fadaeinasab, M., Nikzad, S., Mohan, G., Ali, H. M., & Kadir, H. A. (2015). *Annona muricata* (Annonaceae): A Review of Its Traditional Uses, Isolated Acetogenins and Biological Activities. *International journal of molecular sciences*, 16(7), 15625–15658. <https://doi.org/10.3390/ijms160715625>.
- Munir, S., Liu, Z. W., Tariq, T., Rabail, R., Kowalczewski, P. Ł., Lewandowicz, J., Blecharczyk, A., Abid, M., Inam-Ur-Raheem, M., & Aadil, R. M. (2022).

- Delving into the Therapeutic Potential of *Carica papaya* Leaf against Thrombocytopenia. *Molecules* (Basel, Switzerland), 27(9), 2760. <https://doi.org/10.3390/molecules27092760>
- Murni, S. W., Buliandari, A. A., dan Kusumawati, M. D. (2015). Glucoamylase Enzyme Production by *Aspergillus niger* Fermentation and Cassava Starch as Substrate. In *Seminar Nasional Teknik Kimia "Kejuangan"* (pp. 15-1).
- Naiola, E. (2006). Karakterisasi Enzim Kasar Glukoamilase dari *Saccharomycopsis* sp. *Berita Biologi*, 8(3), 187-192.
- Natali, F., Siculella, L., Salvati, S., & Gnani, G. V. (2007). Oleic acid is a potent inhibitor of fatty acid and cholesterol synthesis in C6 glioma cells. *Journal of lipid research*, 48(9), 1966–1975. <https://doi.org/10.1194/jlr.M700051-JLR200>
- Nurfajriah, S., Inggraini, M., & Ilsan, N. A. 2021. Identifikasi Molekuler dan Uji Aktivitas Inhibitor Alfa Glukosidase dari Bakteri Endofit Daun Afrika (*Vernonia amygdalina*). *Chimica et Natura Acta*, 9(3): 107-112.
- Nuruwe, C., Matinahoru, J. M., & Hadijah, M. H. (2020). Isolasi dan Identifikasi Bakteri Endofit Beberapa Jenis Pohon Berhabitat Basah. *Jurnal Budidaya Pertanian*, 16(1), 65-70. <https://doi.org/10.30598/jbdp.2020.16.1.65>
- Ojo, O. A., Ibrahim, H. S., Rotimi, D. E., Ogunlakin, A. D., & Ojo, A. B. (2023). Diabetes melitus: From molecular mechanism to pathophysiology and pharmacology. *Medicine in Novel Technology and Devices*, 19, 100247. <https://doi.org/10.1016/j.medntd.2023.100247>.
- Oktavia, N., & Pujiyanto, S. (2018). Isolasi dan uji antagonisme bakteri endofit tapak dara (*Catharanthus Roseus*, L.) terhadap bakteri *Escherichia coli* dan *Staphylococcus aureus*. *Berkala Bioteknologi*, 1(1), 9-12.
- Oktora, S. I., & Butar, D. B. (2022). Determinants of diabetes melitus prevalence in Indonesia. *Jurnal Kesehatan Masyarakat*, 18(2), 266-273. <https://doi.org/10.15294/kemas.v18i2.31880>
- Pakaya, M. S., Akuba, J., Papeo, D. R. P., Makkulawu, A., & Puspitadewi, A. A. (2022). Isolasi dan Karakterisasi Bakteri Endofit dari Akar Pare (*Momordica charantia* L.). *Journal Syifa Sciences and Clinical Research*, 4(1), 301-309.
- Pan, G., Lu, Y., Wei, Z., Li, Y., Li, L., & Pan, X. (2024). A review on the in vitro and in vivo screening of α -glucosidase inhibitors. *Heliyon*, 10(18), e37467. <https://doi.org/10.1016/j.heliyon.2024.e37467>
- Pandey, P. K., Samanta, R., & Yadav, R. N. S. (2019). Inside the plant: addressing bacterial endophytes in biotic stress alleviation. *Archives of*

- microbiology*, 201(4), 415–429. <https://doi.org/10.1007/s00203-019-01642-y>
- Parveen, G., Ansari, W. A., Kumar, N., & Jaiswal, D. K. (2026). Harnessing secondary metabolites of endophytic microbes: a next-generation biopesticide for crop disease management. *Frontiers in microbiology*, 16, 1705702. <https://doi.org/10.3389/fmicb.2025.1705702>
- Pelczar, M. J., & Chan, E.S.C. (2008). *Dasar-dasar Mikrobiologi*. Jakarta: UI Press.
- Pimentel, M. R., Molina, G., Dionísio, A. P., Maróstica Junior, M. R., & Pastore, G. M. (2011). The use of endophytes to obtain bioactive compounds and their application in biotransformation process. *Biotechnology research international*, 2011, 576286. <https://doi.org/10.4061/2011/576286>
- Pinudya, A. S., Soedarmo, S. P. K., & Kismartini, K. (2025). Analisis Faktor Internal dan Eksternal Proses Pengelolaan KHDTK Wanadipa Berbasis Peran serta Masyarakat dalam Fungsi Simpanan Karbon. *Jurnal Ilmu Lingkungan*, 23(4), 1004-1012.
- Poznyak, A., Grechko, A. V., Poggio, P., Myasoedova, V. A., Alfieri, V., & Orekhov, A. N. (2020). The Diabetes Melitus-Atherosclerosis Connection: The Role of Lipid and Glucose Metabolism and Chronic Inflammation. *International journal of molecular sciences*, 21(5), 1835. <https://doi.org/10.3390/ijms21051835>
- Pratama, Y., Sarjono, P. R., & Mulyani, N. S. (2015). Skrining metabolit sekunder bakteri endofit yang berfungsi sebagai antidiabetes dari daun mimba (*Azadirachta indica*). *Jurnal Kimia Sains dan Aplikasi*, 18(2), 73-8.
- Pratiwi, R. H. (2019). The Role of Endophytic Microorganisms in Healthcare. *Jurnal Ilmiah Matematika dan Ilmu Pengetahuan Alam*, 16(1), 21-32. <https://doi.org/10.31851/sainmatika.v16i1.2695>
- Pulungan, A. S. S., & Tumangger, D. E. (2018). Isolasi dan karakterisasi bakteri endofit penghasil enzim katalase dari daun buasbuas (*Premna pubescens* Blume). *BIOLINK (Jurnal Biologi Lingkungan Industri Kesehatan)*, 5(1), 71-80. <https://doi.org/10.31289/biolink.v5i1.1665>
- Purbowatiningrum, Mulyani, N. S., Rahman, I. A., Ismiyarto, Ngadiwiyan, dan Prasetya, N. B. A. (2020). Isolasi Bakteri Endofit dari Daun Sirsak dan Uji Aktivitas Antioksidan Metabolit Sekundernya. *Jurnal Penelitian Saintek*, 28(1), 14-23.
- Putri, R. D. W., & Herdyastuti, N. (2021). Potensi Senyawa Antioksidan yang Dihasilkan Bakteri Endofit pada Daun Jambu Biji (*Psidium Guajava* L.). *UNESA Journal of Chemistry*, 10(1), 55-63.

- Qomaliyah, E. N. (2022). Etnofarmakologi dan Potensi Bioaktivitas Daun dan Buah Sirsak (*Annona muricata*): Artikel Review. *BIOCITY Journal of Pharmacy Bioscience and Clinical Community*, 1(1), 39-58. <https://doi.org/10.30812/biocity.v1i1.2488>
- Rahma, N dan Handayani, D. (2026). Artikel Review: Bakteri Endofit sebagai Sumber Senyawa Antimikroba. *Jurnal Biogenerasi*, 11(1), 14-18.
- Rahmiati, R., & Mumpuni, M. (2017). Eksplorasi bakteri asam laktat kandidat probiotik dan potensinya dalam menghambat bakteri patogen. *Elkawanie: Journal of Islamic Science and Technology*, 3(2), 141-150. <https://doi.org/10.22373/ekw.v3i2.1870>
- Ranganathan, N., & Mahalingam, G. (2019). Secondary metabolite as therapeutic agent from endophytic fungi *Alternaria longipes* strain VITN14G of mangrove plant *Avicennia officinalis*. *Journal of cellular biochemistry*, 120(3), 4021–4031. <https://doi.org/10.1002/jcb.27686>.
- Rasouli, H., Ghazvini, S., Adibi, H., & Khodarahmi, R. (2017). Differential α -amylase/ α -glucosidase inhibitory activities of plant-derived phenolic compounds: a virtual screening perspective for the treatment of obesity and diabetes. *Food & function*, 8 5, 1942-1954. <https://doi.org/10.1039/c7fo00220c>.
- Resdiani, R. (2019). Aktivitas Inhibitor α -Amilase yang Diproduksi oleh Bakteri Endofit dari Tanaman Sirsak (*Annona muricata* L.). *Berkala Bioteknologi*, 2(1), 47-53.
- Rilievo, G., Fabrello, J., Roverso, M., Bogialli, S., & Matozzo, V. (2021). Effects of the Fragrance Galaxolide on the Biomarker Responses of the Clam *Ruditapes philippinarum*. *Journal of Marine Science and Engineering*, 9, 509. <https://doi.org/10.3390/jmse9050509>.
- Risna, Y. K., Sri-Harimurti, S. H., Wihandoyo, W., & Widodo, W. (2022). Kurva pertumbuhan isolat bakteri asam laktat dari saluran pencernaan itik lokal asal aceh. *Jurnal Peternakan Indonesia (Indonesian Journal of Animal Science)*, 24(1), 1-7.
- Rizqiyah, N., Zulkifli, L., & Ramdani, A. (2022). Isolation of endophytic bacteria from the roots of *Gliricidia sepium* and their ability as IAA-producing bacteria and phosphate solubilizers. *Jurnal Biologi Tropis*, 22(3), 723-731. <https://doi.org/10.29303/jbt.v22i3.3790>.
- Rossi, M. C., Nicolucci, A., Ozzello, A., Gentile, S., Aglialoro, A., Chiambretti, A., Baccetti, F., Gentile, F. M., Romeo, F., Lucisano, G., Giorda, C. B., & HYPOS-1 Study Group of AMD (2019). Impact of severe and symptomatic hypoglycemia on quality of life and fear of hypoglycemia in type 1 and type 2 diabetes. Results of the Hypos-1 observational study. *Nutrition, metabolism, and cardiovascular diseases : NMCD*, 29(7), 736–743. <https://doi.org/10.1016/j.numecd.2019.04.009>

- Rustini, R., Ismed, F., & Nabila, G. S. (2022). Uji Aktivitas Antibakteri Ekstrak Bakteri Endofit dan Identifikasi Bakteri yang Diisolasi dari Kulit Jeruk Nipis (*Citrus aurantifolia* Swingle). *Jurnal Sains Farmasi & Klinis*, 9(1), 42-49.
- Ryan, R. P., Germaine, K., Franks, A., Ryan, D. J., & Dowling, D. N. (2008). Bacterial endophytes: recent developments and applications. *FEMS microbiology letters*, 278(1), 1–9. <https://doi.org/10.1111/j.1574-6968.2007.00918.x>
- Saeed, N., El-Demerdash, E., Abdel-Rahman, H., Algandaby, M., Al-Abbasi, F., & Abdel-Naim, A. (2012). Anti-inflammatory activity of methyl palmitate and ethyl palmitate in different experimental rat models.. *Toxicology and applied pharmacology*, 264 1, 84-93 .
<https://doi.org/10.1016/j.taap.2012.07.020>.
- Sagita, P. (2021). Pengaruh pemberian daun sirsak (*annona muricata*) terhadap penyakit diabetes melitus. *Jurnal Medika Hutama*, 3(01 Oktober), 1265-1272.
- Sahu, A. K., Kar, B. R., Sahu, S. K. Acharya, P. P., Harichandan, P. S. S. (2019). Isolation, characterization of endophytic bacteria from *Psidium guajava* plant and screening of their antibiotic activities. *International Journal for Research in Applied Science and Engineering Technology*, 7(1), 1-13.
<https://doi.org/10.22214/ijraset.2019.1061>
- Saleem, M., Tanvir, M., Akhtar, M. F., Iqbal, M., & Saleem, A. (2019). Antidiabetic Potential of *Mangifera indica* L. cv. Anwar Ratol Leaves: Medicinal Application of Food Wastes. *Medicina (Kaunas, Lithuania)*, 55(7), 353.
<https://doi.org/10.3390/medicina55070353>
- Salehi, B., Ata, A., V Anil Kumar, N., Sharopov, F., Ramírez-Alarcón, K., Ruiz-Ortega, A., Abdulmajid Ayatollahi, S., Tsouh Fokou, P. V., Kobarfard, F., Amiruddin Zakaria, Z., Iriti, M., Taheri, Y., Martorell, M., Sureda, A., Setzer, W. N., Durazzo, A., Lucarini, M., Santini, A., Capasso, R., Ostrander, E. A., ... Sharifi-Rad, J. (2019). Antidiabetic Potential of Medicinal Plants and Their Active Components. *Biomolecules*, 9(10), 551. <https://doi.org/10.3390/biom9100551>
- Sanatang & Purnama, T. (2023). Uji Skrining Fitokimia Ekstrak Supernatan dari Bakteri Endofit Kulit Pisang. *Bioma: Jurnal Biologi Makassar*, 8(1), 44-50.
- Santa-María, C., López-Enríquez, S., Montserrat-de la Paz, S., Geniz, I., Reyes-Quiroz, M. E., Moreno, M., Palomares, F., Sobrino, F., & Alba, G. (2023). Update on Anti-Inflammatory Molecular Mechanisms Induced by Oleic Acid. *Nutrients*, 15(1), 224.
<https://doi.org/10.3390/nu15010224>

- Sarjono, P. R., Mahardika, H. D. R., Mulyani, N. S., Ngawidyana, Prasetyawibowo, N. B. A., Ismiyarto. (2020). Aktivitas antidiabetes metabolit sekunder bakteri endofit asal kulit kayu manis. *Jurnal Penelitian Saintek*, 25 (2): 143- 156. <https://doi.org/10.21831/jps.v25i2.32892>
- Sauer, J., Sigurskjold, B. W., Christensen, U., Frandsen, T. P., Mirgorodskaya, E., Harrison, M., Roepstorff, P., & Svensson, B. (2000). Glucoamylase: structure/function relationships, and protein engineering. *Biochimica et biophysica acta*, 1543(2), 275–293. [https://doi.org/10.1016/s0167-4838\(00\)00232-6](https://doi.org/10.1016/s0167-4838(00)00232-6).
- Septiana, E., Bustanussalam, B., & Simanjuntak, P. (2019). Aktivitas penghambatan α -glukosidase dan peredaman radikal bebas ekstrak kapang endofit yang diisolasi dari rimpang kunyit. *Media Penelitian dan Pengembangan Kesehatan*, 29(3), 189-196.
- Shaaban, M., Ghaly, M., & Fahmi, S. (2021). Antibacterial activities of hexadecanoic acid methyl ester and green-synthesized silver nanoparticles against multidrug-resistant bacteria. *Journal of Basic Microbiology*, 61, 557 - 568. <https://doi.org/10.1002/jobm.202100061>.
- Shari, A., & Novitsasari, L. D. (2026). Pengaruh Ekstrak Daun Mangga (*Mangifera indica*. L) terhadap Fungsi Sperma. *Indonesian Journal of Health Science*, 6(1): 36-45.
- Sharma, A., Bachheti, A., Sharma, P., Bachheti, R. K., & Husen, A. (2020). Phytochemistry, pharmacological activities, nanoparticle fabrication, commercial products and waste utilization of *Carica papaya* L.: A comprehensive review. *Current Research in Biotechnology*, 2, 145-160. <https://doi.org/10.1016/j.crbiot.2020.11.001>
- Siala, R. , Chobba, I. B. , Vallaey, T. , Triki, M. A. , Jrad, M. , Cheffi, M. , Ayedi, I. , Elleuch, A. , Nems, A. , Cerqueira, F. , Gdoura, R. , Drira, N. , & Gharsallah, N. (2016). Analysis of the Cultivable Endophytic Bacterial Diversity in the Date Palm (*Phoenix dactylifera* L.) and Evaluation of Its Antagonistic Potential against Pathogenic Fusarium Species that Cause Date Palm Bayound Disease. *Journal of Applied & Environmental Microbiology*, 4(5), 93-104.
- Sidorov, R. A., Zhukov, A. V., Pchelkin, V. P., & Tsydendambaev, V. D. (2014). Palmitic acid in higher plant lipids. *Palmitic Acid: Occurrence, Biochemistry and Health Effects*. NOVA Publishers, New York, 125-144.
- Singh, M., Kumar, A., Singh, R., & Pandey, K. D. (2017). Endophytic bacteria: a new source of bioactive compounds. 3 *Biotech*, 7(5), 315. <https://doi.org/10.1007/s13205-017-0942-z>
- Singh, R., Sinha, A., & Ken, D. S. (2023). Occurrence of phthalates in the environment, their toxicity, and treatment technologies. In *Persistent*

- Pollutants in Water and Advanced Treatment Technology* (pp. 97-131). Singapore: Springer Nature Singapore.
- Stone, J.K., Bacon, C.W. dan White, J.F.Jr. (2000). An overview of endphytic microbes: endophytism. *Microbial endophytes*. New York: Marcel Dekker, Inc: 3-29.
- Strobel G. A. (2003). Endophytes as sources of bioactive products. *Microbes and infection*, 5(6), 535–544. [https://doi.org/10.1016/s1286-4579\(03\)00073-x](https://doi.org/10.1016/s1286-4579(03)00073-x)
- Su, C. H., Hsu, C. H., & Ng, L. T. (2013). Inhibitory potential of fatty acids on key enzymes related to type 2 diabetes. *BioFactors (Oxford, England)*, 39(4), 415–421. <https://doi.org/10.1002/biof.1082>
- Sukhikh, S., Babich, O., Prosekov, A., Kalashnikova, O., Noskova, S., Bakhtiyarova, A., Krol, O., Tsvetkova, E., & Ivanova, S. (2023). Antidiabetic Properties of Plant Secondary Metabolites. *Metabolites*, 13(4), 513. <https://doi.org/10.3390/metabol13040513>
- Sulistiyani, T. R., Kusumawati, D. I. 2019. Keragaman bakteri endofit penghasil L-asparaginase bebas L-glutaminase. *J Kefarmasian Indonesia* 9 (1): 28-39. <https://doi.org/10.22435/jki.v9i1.1302>
- Sun, B., Sun, J., Li, Q., Wang, Y., Wang, E., Jin, H., Hua, H., Jin, Q., & Li, X. (2023). Studi tentang Pengaruh Asam Oleat terhadap Diferensiasi Lipogenik Sel Satelit Otot Rangka pada Sapi Yanbian dan Mekanisme Terkait. *Hewan* , 13 (23), 3618. <https://doi.org/10.3390/ani13233618>
- Suryaningsih, V., Ferniah, R. S., & Kusdiyantini, E. (2018). Karakteristik morfologi, biokimia, dan molekuler isolat khamir IK-2 hasil isolasi dari jus buah sirsak (*Annona muricata* L.). *Jurnal Akademika Biologi*, 7(1), 18-25.
- Szymańska, S., Płociniczak, T., Piotrowska-Seget, Z., Złoch, M., Ruppel, S., & Hryniewicz, K. (2016). Metabolic potential and community structure of endophytic and rhizosphere bacteria associated with the roots of the halophyte *Aster tripolium* L. *Microbiological research*, 182, 68–79. <https://doi.org/10.1016/j.micres.2015.09.007>
- Tousif, M. I., Nazir, M., Saleem, M., Tauseef, S., Shafiq, N., Hassan, L., Hussian, H., Montesano, D., Naviglio, D., Zengin, G., & Ahmad, I. (2022). *Psidium guajava* L. An Incalculable but Underexplored Food Crop: Its Phytochemistry, Ethnopharmacology, and Industrial Applications. *Molecules (Basel, Switzerland)*, 27(20), 7016. <https://doi.org/10.3390/molecules27207016>
- Trivedi, P., Leach, J. E., Tringe, S. G., Sa, T., & Singh, B. K. (2020). Plant-microbiome interactions: from community assembly to plant

- health. *Nature reviews. Microbiology*, 18(11), 607–621.
<https://doi.org/10.1038/s41579-020-0412-1>
- Usman, D., Supriyadi, A., & Kusdiyantini, E. (2015). Fermentasi kopi robusta (*Coffea canephora*) menggunakan isolat bakteri asam laktat dari feces luwak dengan perlakuan lama waktu inkubasi. *Jurnal Akademika Biologi*, 4(3), 31-40.
- Verma, S. K., Kharwar, R. N., Gond, S. K., Kingsley, K. L., White, J. F. (2019). Exploring endophytic communities of plants: methods for assessing diversity, effects on host development and potential biotechnological applications. In: VermaSK, White JrJF. (eds.) *Seed Endophytes*. Springer International Publishing. https://doi.org/10.1007/978-3-030-10504-4_4
- Wandira, F. A. A. (2023). Morfologi dan anatomi tanaman mangga (*Mangifera indica* L.). *Universitas Negeri Jakarta Repository*.
- Wang, X., Zhang, C., & Bao, N. (2023). Molecular mechanism of palmitic acid and its derivatives in tumor progression. *Frontiers in Oncology*, 13. <https://doi.org/10.3389/fonc.2023.1224125>.
- Wayllace, N. M., Martín, M., Busi, M. V., & Gomez-Casati, D. F. (2023). Microbial glucoamylases: structural and functional properties and biotechnological uses. *World journal of microbiology & biotechnology*, 39(11), 293. <https://doi.org/10.1007/s11274-023-03731-z>
- Wélé, A., Zhang, Y., Caux, C., Brouard, J. P., Pousset, J. L., & Bodo, B. (2004). Annomuricatin C, a novel cyclohexapeptide from the seeds of *Annona muricata*. *Comptes Rendus. Chimie*, 7(10-11), 981-988. <https://doi.org/10.1016/j.crci.2003.12.022>
- Wolswinkel, P., dan Rengel, Z. (2024). Long-distance nutrient transport in plants and movement into developing grains.. , 91-113.
- Wongsanao, T., Leemingsawat, W., Panapisal, V., & Kritpet, T. (2021). Thermoregulatory effects of guava leaf extract-menthol toner application for post-exercise use. *Pharmaceutical biology*, 59(1), 854–859. <https://doi.org/10.1080/13880209.2021.1942925>
- Xu, K., Li, X. Q., Zhao, D. L., & Zhang, P. (2021). Antifungal Secondary Metabolites Produced by the Fungal Endophytes: Chemical Diversity and Potential Use in the Development of Biopesticides. *Frontiers in microbiology*, 12, 689527. <https://doi.org/10.3389/fmicb.2021.689527>
- Zhang, S., Wang, Y., Han, L., Fu, X., Wang, S., Li, W., & Han, W. (2021). Targeting N-Terminal Human Maltase-Glucoamylase to Unravel Possible Inhibitors Using Molecular Docking, Molecular Dynamics Simulations, and Adaptive Steered Molecular Dynamics

- Simulations. *Frontiers in Chemistry*, 9. <https://doi.org/10.3389/fchem.2021.711242>.
- Zhang, Y., Gao, X., Yin, G., & Bennett, J. (2026). The Volatilomes of *Penicillium crustosum* G10 and *Penicillium solitum* SA. *Mycobiology*, 54, 89 - 99. <https://doi.org/10.1080/12298093.2025.2609411>.
- Zin, N. M., Baba, M. S., Zainal-Abidin, A. H., Latip, J., Mazlan, N. W., & Edrada-Ebel, R. (2017). Gancidin W, a potential low-toxicity antimalarial agent isolated from an endophytic *Streptomyces* SUK10. *Drug design, development and therapy*, 11, 351–363. <https://doi.org/10.2147/DDDT.S121283>
- Zulfah, N. (2020). Review Artikel: Bakteri Endofit Sebagai Penghasil Iaa (Indole Acetic Acid) dan Agen Biokontrol Pada Tanaman. *Bioma*, 16(2), 60-67.
- Zulfarina, Z., Rosiana, Y., Ayudia, D., & Darmawati, D. (2022). Isolasi Bakteri Endofit dari Tanaman Laban (*Vitex Pubescens* Vahl) sebagai Antibakteri. *JST (Jurnal Sains dan Teknologi)*, 11(1), 85-92. <https://doi.org/10.23887/jstundiksha.v1i1.42781>