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DAFTAR PUSTAKA

Afianti, N. F., & Darmayati, Y. (2019). Pendekatan Culture Independent Untuk Analisis Komunitas Bakteri. *Oseana, 42*(1): 9-17. https://doi.org/10.14203/oseana.2017.

Ahmad, W., Coffman, L., Ray, R., Woldesenbet, S., Singh, G., & Khan, A. L. (2025). Flooding episodes and seed treatment influence the microbiome diversity and function in the soybean root and rhizosphere. *Science of the Total Environment, 982*: 1-13. https://doi.org/10.1016/j.scitotenv.2025.179554.

Alfiansyah, M. F. (2026). Diversitas Bakteri Endofit pada Daun Bawang Putih (*Allium sativum* L.) Terinfeksi Potyvirus Berdasarkan Metabarkoding [Master's thesis, Universitas Gadjah Mada]. https://etd.repository.ugm.ac.id/penelitian/detail/273868.

Allium sativum L. in GBIF Secretariat (2023). GBIF Backbone Taxonomy. Checklist dataset https://doi.org/10.15468/39omei. accessed via GBIF.org on 2026-06-11.

Amrulloh, R., Hidayah, B. N., & Ghazali, M. (2019). Analisis Karakter Morfologi dan Fisiologis Bawang Putih *Allium sativum* Var. Sangga Sembalun pada Dua Karakteristik Budidaya yang Berbeda di Sembalun Lombok Timur. BioWallacea, 5(1): 23-28. https://doi.org/10.29303/biowal.v5i1.105.

Artimová, R., Hleba, L., Javoreková, S., Maková, J., Medová, J., & Medo, J. (2022). Chloroplast Excluding Primers for Metagenomic Analysis of Bacteria in Plant Tissues. *Journal of Microbiology, Biotechnology and Food Sciences, 12*(3): 1-6. https://doi.org/10.55251/jmbfs.9650.

Aziz, I. R., Muthiadin, C., Fajrin Alir, R., Dhea Suryafly, F., Zul Amnah, A., Ainun Hermawan, I., Khalifah Mustami, M., & Mohan Upreti, B. (2021). Polyploidy Induction of Rutaceae through Bio-catharanthine Treatment. *Biota: Biologi dan Pendidikan Biologi*, *14*(1): 1-10. https://doi.org/10.20414/jb.v14i1.334.

Berg, G., Rybakova, D., Fischer, D., Cernava, T., Vergès, M. C. C., Charles, T., Chen, X., Cocolin, L., Eversole, K., Corral, G. H., Kazou, M., Kinkel, L., Lange, L., Lima, N., Loy, A., Macklin, J. A., Maguin, E., Mauchline, T., McClure, R., … Schloter, M. (2020). Microbiome definition re-visited: old concepts and new challenges. *In Microbiome, 8*(103): 1-22. https://doi.org/10.1186/s40168-020-00875-0.

Billa, A. T., Lestari, S. S., Daryono, B. S., & Subiastuti, A. S. (2022). Bio-Catharantin Effects on Phenotypic Traits and Chromosome Number of Shallots (*Allium Cepa* L. Var. *Ascalonicum* 'Tajuk'). *Sabrao Journal of Breeding and Genetics, 54*(2): 350-358. https://doi.org/10.54910/sabrao2022.54.2.11.

Bogaerts, B., van den Bossche, A., Verhaegen, B., Delbrassinne, L., Mattheus, W., Nouws, S., Godfroid, M., Hoffman, S., Roosens, N. H. C., de Keersmaecker, S. C. J., & Vanneste, K. (2024). Closing the gap: Oxford Nanopore Technologies R10 sequencing allows comparable results to Illumina sequencing for SNP-

UNIVERSITAS
GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

based outbreak investigation of bacterial pathogens. *Journal of Clinical Microbiology, 62*(5): 1-21. https://doi.org/10.1128/jcm.01576-23.

Buetas, E., Jordán-López, M., López-Roldán, A., D'Auria, G., Martínez-Priego, L., de Marco, G., Carda-Diéguez, M., & Mira, A. (2024). Full-length 16S rRNA gene sequencing by PacBio improves taxonomic resolution in human microbiome samples. *BMC Genomics, 25*(1): 1-13. https://doi.org/10.1186/s12864-024-10213-5.

Cahyo, A. N. (2025). Strategi Adaptasi Tanaman Karet dalam Menghadapi Cekaman Kekeringan: Sebuah Tinjauan Metode Seleksi Klon Karet Toleran Kekeringan. *Warta Perkaretan, 44*(2): 203-216. https://doi.org/10.22302/ppk.wp.v44i2.1263.

Carvalhais, L. C., Dennis, P. G., Badri, D. v., Tyson, G. W., Vivanco, J. M., & Schenk, P. M. (2013). Activation of the Jasmonic Acid Plant Defence Pathway Alters the Composition of Rhizosphere Bacterial Communities. *PLoS ONE, 8*(2): 1-5. https://doi.org/10.1371/journal.pone.0056457.

Chudzik, A., Bromke, M. A., Gamian, A., & Paściak, M. (2024). Comprehensive lipidomic analysis of the genus *Cutibacterium*. *American Society for Microbiology, 9*(5): 1-17. https://doi.org/10.1128/msphere.00054-24.

Chuvochina, M, Gerken, J, Frentrup, M, Sandikci, Y, Goldmann, R, Freese, H. M, Göker, M, Sikorski, J, Yarza, P, Quast, C, Peplies, J, Glöckner, FO., & Reimer, L. C. (2026). SILVA in 2026: a global core biodata resource for rRNA within the DSMZ digital diversity. *Nucleic Acids Research, 54*(1). https://doi.org/10.1093/nar/gkaf1247.

Chuvochina, M, Gerken, J, Frentrup, M, Sandikci, Y, Goldmann, R, Freese, H. M, Göker, M, Sikorski, J, Yarza, P, Quast, C, Peplies, J, Glöckner, FO., & Reimer, L. C. (2026). SILVA in 2026: a global core biodata resource for rRNA within the DSMZ digital diversity. *Nucleic Acids Research, 54*(D1). https://doi.org/10.1093/nar/gkaf1247.

Dedysh, S. N., Haupt, E. S., & Dunfield, P. F. (2016). Emended description of the family Beijerinckiaceae and transfer of the genera Chelatococcus and Camelimonas to the family Chelatococcaceae fam. nov. *International Journal of Systematic and Evolutionary Microbiology, 66*(8): 3177-3182. https://doi.org/10.1099/ijsem.0.001167.

Deepika, S., & Laxmi Sowmya, K. (2016). Bioindices of Bacterial Communities. *International Journal of Current Microbiology and Applied Sciences, 5*(12): 219-233. https://doi.org/10.20546/ijcmas.2016.512.024.

Dusenge, M. E., Duarte, A. G., & Way, D. A. (2019). Plant carbon metabolism and climate change: elevated CO2 and temperature impacts on photosynthesis, photorespiration and respiration. *In New Phytologist 221*(1): 32-49. https://doi.org/10.1111/nph.15283.

Fadila, L. Moh. A., & Putri, N. A. (2023). Analisis Perkembangan Ketahanan Pangan di Indonesia : Pendekatan Menggunakan Big Data dan Data Mining. *Seminar*

UNIVERSITAS GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Nasional Official Statistics, 2023(1): 247-256. https://doi.org/10.34123/semnasoffstat.v2023i1.1890.

Fajardo-Cavazos, P., Maughan, H., & Nicholson, W. L. (2016). Evolution in the Bacillaceae. *Microbiology Spectrum,* 1-38 https://doi.org/10.1128/microbiolspec.

Fajriyati, A. F., Anwar, S., & Kusmiyati, F. (2022). Aplikasi Ekstrak Daun Tapak Dara (*Catharanthus roseus* l.) Terhadap Pertumbuhan Dan Morfologi Tanaman Bawang Daun (*Allium fistulosum*. l). *Jurnal Ilmiah Pertanian*, *19*(1): 29-37. https://doi.org/10.31849/jip.v19i1.9445.

Febrianti, S., Sahidin, & Pusmarani, J. (2023). Penetapan Kadar Fenolik Total Dan Flavonoid Total Dari Ekstrak Akar Tapak Dara (*Catharanthus roseus*) Serta Uji Aktivitas Antioksidan Dengan Metode DPPH. *Jurnal Pharmacia Mandala Waluya*, *2*(6). https://doi.org/10.54883/jpmw.v2i6.84.

Fitriadi, M. Y. G., Novianti, T., & Rifin, A. (2023). Volatilitas Harga Bawang Putih Indonesia. *Jurnal Ekonomi Pertanian Dan Agribisnis, 7*(3): 1202-1210. https://doi.org/10.21776/ub.jepa.2023.007.03.25.

Grossi, C. E. M., Tani, A., Mori, I. C., Matsuura, T., & Ulloa, R. M. (2024). Plant growth-promoting abilities of *Methylobacterium* sp. 2A involve auxin-mediated regulation of the root architecture. *Plant Cell and Environment, 47*(12): 5343–5357. https://doi.org/10.1111/pce.15116.

Guo, Q., Zhou, Z., Zhang, L., Zhang, C., Chen, M., Wang, B., Lin, M., Wang, W., Zhang, W., & Li, X. (2020). *Skermanella pratensis* sp. nov., isolated from meadow soil, and emended description of the genus *Skermanella*. *International Journal of Systematic and Evolutionary Microbiology, 70*: 160-1609. https://doi.org/10.1099/ijsem.0.003944.

Guo, S., Pan, R., Zhang, Y., Gu, Q., Shen, Q., Yang, J., Huang, L., Shen, Z., & Li, R. (2025). Plant-microbe interactions influence plant performance via boosting beneficial root-endophytic bacteria. *Environmental Microbiome, 20*(18) 1-9. https://doi.org/10.1186/s40793-025-00680-y.

Han, D., Xin, Y. H., & Liu, Q. (2025). Diverse biofilm-forming Sphingomonadaceae represent twelve novel species isolated from glaciers on the Tibetan Plateau. *International Journal of Systematic and Evolutionary Microbiology, 75*(9): 1-14. https://doi.org/10.1099/ijsem.0.006913.

Hasanuzzaman, M., Bhuyan, M. H. M. B., Zulfiqar, F., Raza, A., Mohsin, S. M., al Mahmud, J., Fujita, M., & Fotopoulos, V. (2020). Reactive oxygen species and antioxidant defense in plants under abiotic stress: Revisiting the crucial role of a universal defense regulator. *In Antioxidants 9*(8): 1-52. https://doi.org/10.3390/antiox9080681.

Hasrianda, E. F., & Setiarto, R. H. B. (2022). Potensi Rekayasa Genetik Bawang Putih terhadap Kandungan Senyawa Komponen Bioaktif Allicin dan Kajian Sifat Fungsionalnya. *Jurnal Pangan*, *31*(2): 167-190. https://doi.org/10.33964/jp.v31i2.586.

UNIVERSITAS
GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
Winda Lutfiana Hafidz, Dr. Aprilia Sufi Subiastuti, S.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Hira, F. A., Islam, A., Mitra, K., Bithi, U. H., Ahmed, K. S., Islam, S., Abdullah, S. M., & Uddin, M. N. (2024). Comparative Analysis of Phytochemicals and Antioxidant Characterization Among Different Parts of Catharanthus roseus: In Vitro and In Silico Investigation. *Biochemistry Research International*, *2024*(1): 1-22. https://doi.org/10.1155/2024/1904029.

Huang, Y. (2019). Illumina-based Analysis of Endophytic Bacterial Diversity of four Allium species. *Scientific Reports*, *9*(1): 1-11. https://doi.org/10.1038/s41598-019-51707-7.

Idu, P. N., Chukwura, E. I., Okonkwo, I. F., Uba, B. O., & Oghonim, P. A. N. (2026). Microbial Diversity Metrics: An Insight into the Ecological Status of Different Water Resources in Anambra State Central Senatorial Zone, Nigeria. *IPS Interdisciplinary Journal of Biological Sciences*, *6*(1): 257-271. https://doi.org/10.54117/iijbs.v6i1.143.

Kharoliwal, S. & Shrivastava, S. 2025. A Rapid Assessment of Alpha Diversity by Use of Shannon Diversity IndexA Statistical Tool. *International Journal of Scientific Research in Science and Technology*, *12*(3): 1378-1384. https://doi.org/10.32628/IJSRST25123154.

Kumar, P., Dobriyal, M., Kale, A., Pandey, A. K., Tomar, R. S., & Thounaojam, E. (2022). Calculating forest species diversity with information-theory based indices using sentinel-2A sensor's of Mahavir Swami Wildlife Sanctuary. *PLoS ONE*, *17*(5): 1-17. https://doi.org/10.1371/journal.pone.0268018.

Kumar, S., Singh, B., & Singh, R. (2022). *Catharanthus roseus* (L.) G. Don: A review of its ethnobotany, phytochemistry, ethnopharmacology and toxicities. *In Journal of Ethnopharmacology*, *284*(114647): 1-44. https://doi.org/10.1016/j.jep.2021.114647.

Kumar, S., Singh, R. K., Charan Kumar, S., Banjare, U., Patel, A. K., Pandey, A., Akansha, & Singh, P. (2021). Estimation of Plant Growth Hormone (IAA) Production Ability by *Bradyrhizobium* Strains Isolated from Root Nodules of Pigeon Pea (*Cajanus Cajan*). *Plant Archives*, *21*(1): 1567-1570. https://doi.org/10.51470/plantarchives.2021.v21.s1.247.

Kvålseth, T. O. (2024). Diversity analysis: Richness versus evenness. *Ecology and Evolution*, *14*(9): 1-8. https://doi.org/10.1002/ece3.70275.

Kwon, H. do, & Song, H. G. (2014). Interactions between indole-3-acetic acid producing *Acinetobacter* sp. SW5 and growth of tomato plant. *Korean Journal of Microbiology*, *50*(4): 302-307. https://doi.org/10.7845/kjm.2014.4050.

Lee, J. Y., Shin, H., Yu, J., & Kong, H. G. (2025). Changes in the Structure of Strawberry Leaf Surface Bacterial and Fungal Communities by Plant Biostimulants. *Microorganisms*, *13*(11): 1-14. https://doi.org/10.3390/microorganisms13112461.

Lin, B., Hui, J., & Mao, H. (2021). Nanopore technology and its applications in gene sequencing. *In Biosensors 11*(7): 1-17. https://doi.org/10.3390/bios11070214.

UNIVERSITAS
GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
Winda Lutfiana Hafidz, Dr. Aprilia Sufi Subiastuti, S.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Liu, J., Gao, C. H., Hao, H., Yi, X. Y. dan Huang, R. M. 2017. *Nocardioides kandeliae* sp. nov., an endophytic actinomycete isolated from leaves of *Kandelia candel*. *International Journal of Systematic and Evolutionary Microbiology*, *67*: 3888-3893. https://doi.org/10.1099/ijsem.0.002218.

Lopez-Bellido, F. J., Lopez-Bellido, R. J., Muñoz-Romero, V., Fernandez-Garcia, P., & Lopez-Bellido, L. (2016). New phenological growth stages of garlic (*Allium sativum*). *Annals of Applied Biology*, *169*(3): 423-439. https://doi.org/10.1111/aab.12312.

Lu, N., Qiao, Y., Lu, Z., & Tu, J. (2023). Chimera: The spoiler in multiple displacement amplification. *Computational and Structural Biotechnology Journal*, *21*, 1688–1696. https://doi.org/10.1016/J.CSBJ.2023.02.034.

Lu, N., Qiao, Y., Lu, Z., & Tu, J. (2023). Chimera: The spoiler in multiple displacement amplification. *Computational and Structural Biotechnology Journal*, *21*, 1688–1696. https://doi.org/10.1016/J.CSBJ.2023.02.034.

Ma, T., Xue, H., Piao, C., Jiang, N., & Li, Y. (2023). Phylogenomic reappraisal of the family Rhizobiaceae at the genus and species levels, including the description of Ectorhizobium quercum gen. nov., sp. nov. Frontiers in Microbiology, 14: 1-15. https://doi.org/10.3389/fmicb.2023.1207256.

Maayer, P. de, Aliyu, H., & Cowan, D. A. (2019). Reorganising the order Bacillales through phylogenomics. *Systematic and Applied Microbiology*, *42*(2). https://doi.org/10.1016/j.syapm.2018.10.007.

Margareta, A. (2023). Wawasan Bioinformatika *Next Generation Sequencing* dalam Sampel Metagenomik Mikobioma Usus: Review. *Jurnal Medical Laboratory*, *2*(1): 41-57. https://doi.org/10.57213/medlab.v2i1.151.

Mittler, R., Zandalinas, S. I., Fichman, Y., & van Breusegem, F. (2022). Reactive oxygen species signalling in plant stress responses. *In Nature Reviews Molecular Cell Biology*, *23*(10): 663-679. https://doi.org/10.1038/s41580-022-00499-2.

Moschos, S., Kormas, K. A., & Karayanni, H. (2022). Prokaryotic diversity in marine and freshwater recirculating aquaculture systems. *In Reviews in Aquaculture*, *14*(4): 1861-1886. https://doi.org/10.1111/raq.12677.

Naranjo-Robayo, N, Harrison, TL, Esme, O, Menéndez, E, Kuzmanović, N, Peix, A, Young, JWP & diCenzo, GC 2026, 'Updated taxonomy of the family Rhizobiaceae with proposals for 8 novel genera and 32 novel combinations', *International Journal of Systematic and Evolutionary Microbiology*, *6*: 1-22, https://doi.org/10.1099/ijsem.0.007131.

Navgire, G. S., Goel, N., Sawhney, G., Sharma, M., Kaushik, P., Mohanta, Y. K., Mohanta, T. K., & Al-Harrasi, A. (2022). Analysis and Interpretation of metagenomics data: an approach. In Biological Procedures Online, 24(1) 1-22. https://doi.org/10.1186/s12575-022-00179-7.

Nditasari, A., Agustiyani, D., Noviana, Z., Nugroho, A. A., Purwaningsih, S., Dewi, T. K., Sutisna, E., & Antonius, S. (2023). Microbial community in garlic plants under different applications of organic fertilizer. *IOP Conference Series: Earth*

UNIVERSITAS GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
Winda Lutfiana Hafidz, Dr. Aprilia Sufi Subiastuti, S.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

and Environmental Science, 1162(1): 1-10. https://doi.org/10.1088/1755-1315/1162/1/012005.

Noviaranti, S. P., & Zainuddin, A. (2023). Seberapa Elastis Permintaan Bawang Putih Indonesia? Sebuah Analisis Regresi Linier Berganda. *Jurnal Ekonomi Pertanian Dan Agribisnis, 7*(3): 1022-1033. https://doi.org/10.21776/ub.jepa.2023.007.03.10.

Nurhayati, E., Salim, M., Syari, J. P. dan Irine, R. 2022. Cemaran Mikroba pada Suhu Dingin Dalam Kulkas Rumah Tangga. *Jurnal Vokasi Kesehatan*. 8(1): 59-63.

Papik, J., Folkmanova, M., Polivkova-Majorova, M., Suman, J., & Uhlik, O. (2020). The invisible life inside plants: Deciphering the riddles of endophytic bacterial diversity. *In Biotechnology Advances 44*: 1-21. https://doi.org/10.1016/j.biotechadv.2020.107614.

Parks, D. H., Chuvochina, M., Rinke, C., Mussig, A. J., Chaumeil, P. A., & Hugenholtz, P. (2022). GTDB: An ongoing census of bacterial and archaeal diversity through a phylogenetically consistent, rank normalized and complete genome-based taxonomy. *Nucleic Acids Research, 50*(1): 785-794. https://doi.org/10.1093/nar/gkab776.

Prasgi, H. C., Ariyanto, D. P., & Cahyani, V. R. (2025). Optimization of conventional plant surface sterilization procedure for isolation of phosphate solubilizing endophytic bacteria from wresah and peanut leaves. *IOP Conference Series: Earth and Environmental Science, 1490*(1): 1-8. https://doi.org/10.1088/1755-1315/1490/1/012025.

Putri, W. M., & Ahda, Y. (2022). Induksi Poliploid Pada Tanaman Labu Siam (*Sechium endule* (Jaqc.) Swartz) Dengan Pemberian Kolkisin. *Serambi Biologi, 7*(4): 326-330.

Qasim, S., Gul, S., Buriro, A. H., Shafiq, F., & Ismail, T. (2024). Biochar-based organic fertilizers: Influence on yield and concentration of antioxidants in the stigma of saffron and rhizosphere bacterial diversity of slightly saline and non-saline soils. *Saudi Journal of Biological Sciences, 31*(3). https://doi.org/10.1016/j.sjbs.2023.103922.

Qiu, Z., Li, N., Lu, X., Zheng, Z., Zhang, M., & Qiao, X. (2018). Characterization of microbial community structure and metabolic potential using Illumina MiSeq platform during the black garlic processing. *Food Research International, 106*: 428-438. https://doi.org/10.1016/j.foodres.2017.12.081.

Rosariastuti, R., Sutami, Sumani, & Hartati, S. (2022). Analysis of bacterial community from the rhizosphere of shallots (*Allium ascalonicum* L.) in Brebes, Central Java, using Next Generation Sequencing (NGS) approach. *IOP Conference Series: Earth and Environmental Science, 1114*(1): 1-9. https://doi.org/10.1088/1755-1315/1114/1/012065.

Sagala, A. A., Munar, A. dan Tharek, M. 2025. Pengaruh Perlakuan Priming Benih terhadap Perkecambahan Benih Kacang Hijau (*Vigna radiata* L.) pada Kondisi

UNIVERSITAS
GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
Winda Lutfiana Hafidz, Dr. Aprilia Sufi Subiastuti, S.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Laboratorium. *Jurnal Agrium*, *22*(1): 91-100. https://doi.org/10.29103/agrium.v22i1.21270.

Sarah, M., Sari, R. A. P., & Wati, D. R. (2023). Analisis Peramalan Jumlah Produksi dan Konsumsi Bawang Putih di Indonesia. *Sharia Agribusiness Journal, 3*(2): 107-124. https://doi.org/10.15408/saj.v3i2.35816.

Scholz, C. F. P., & Kilian, M. (2016). The natural history of cutaneous propionibacteria, and reclassification of selected species within the genus propionibacterium to the proposed novel genera acidipropionibacterium gen. Nov., cutibacterium gen. nov. and pseudopropionibacterium gen. nov. *International Journal of Systematic and Evolutionary Microbiology, 66*(11): 4422-4432. https://doi.org/10.1099/ijsem.0.001367.

Shahi, S. K., Zarei, K., Guseva, N. v., & Mangalam, A. K. (2019). Microbiota analysis using two-step pcr and next-generation 16s rRNA gene sequencing. *Journal of Visualized Experiments, 2019*(152). https://doi.org/10.3791/59980.

Shofiyah, I., & Sugiarti, T. (2020). Tren dan Faktor-Faktor yang Mempengaruhi Volume Impor Bawang Putih di Indonesia. *Agriscience, 1*(1): 151-165. https://doi.org/10.21107/agriscience.v1i1.8001.

Singh, M., Kumar, A., Singh, R., & Pandey, K. D. (2017). Endophytic bacteria: a new source of bioactive compounds. *In 3 Biotech, 7*(315): 1-4. https://doi.org/10.1007/s13205-017-0942-z.

Siregar, A., Kasim, N. N., & Farida, N. (2020). Isolasi dan Karakterisasi Biologi Bakteri Endofit, Filosfer dan Rizosfer dari Tanaman Sagu (*Metroxylon sagu*). *Prosiding Seminar Nasional Biotik 2020*. 335-340.

Skaperda, Z., Tekos, F., Vardakas, P., Nepka, C., & Kouretas, D. (2022). Reconceptualization of hormetic responses in the frame of redox toxicology. In International Journal of Molecular Sciences, 23(1): 1-12. https://doi.org/10.3390/ijms23010049.

Sprangers, K., Thys, S., van Dusschoten, D., & Beemster, G. T. S. (2020). Gibberellin Enhances the Anisotropy of Cell Expansion in the Growth Zone of the Maize Leaf. *Frontiers in Plant Science, 11*(1163): 1-13. https://doi.org/10.3389/fpls.2020.01163.

Sudermann, M. A., Foster, Z. S. L., Chang, J. H., & Grünwald, N. J. (2024). Metabarcoding for plant pathologists. *In Canadian Journal of Plant Pathology, 46*(2): 142-160. https://doi.org/10.1080/07060661.2023.2290041.

Sulaeman, D., Nurruhwati, I., Hasan, Z., & Hamdani, H. (2020). Spatial Distribution of Macrozoobenthos as Bioindicators of Organic Material Pollution in the Citanduy River, Cisayong, Tasikmalaya Region, West Java, Indonesia. *Asian Journal of Fisheries and Aquatic Research, 9*(1): 32-42. https://doi.org/10.9734/ajfar/2020/v9i130152.

Szoboszlay, M., White-Monsant, A., & Moe, L. A. (2016). The effect of root exudate 7,40- Dihydroxyflavone and naringenin on soil bacterial community structure. *PLoS ONE, 11*(1): 1-16. https://doi.org/10.1371/journal.pone.0146555.

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Thompson, L. R., Anderson, S. R., den Uyl, P. A., Patin, N. v., Lim, S. J., Sanderson, G., & Goodwin, K. D. (2022). Tourmaline: A containerized workflow for rapid and iterable amplicon sequence analysis using QIIME 2 and Snakemake. *GigaScience, 11*. https://doi.org/10.1093/gigascience/giac066.

Thompson, L. R., Anderson, S. R., den Uyl, P. A., Patin, N. v., Lim, S. J., Sanderson, G., & Goodwin, K. D. (2022). Tourmaline: A containerized workflow for rapid and iterable amplicon sequence analysis using QIIME 2 and Snakemake. *GigaScience, 11*. https://doi.org/10.1093/gigascience/giac066.

Thukral, A. K., Bhardwaj, R., Kumar, V., & Sharma, A. (2019). New indices regarding the dominance and diversity of communities, derived from sample variance and standard deviation. *Heliyon*, *5*(10): 1-17. https://doi.org/10.1016/j.heliyon.2019.e02606.

Trivedi, P., Leach, J. E., Tringe, S. G., Sa, T., & Singh, B. K. (2020). Plant–microbiome interactions: from community assembly to plant health. *In Nature Reviews Microbiology, 18*(11): 607-621. https://doi.org/10.1038/s41579-020-0412-1.

Verrananda M, I., Fitriani, V. Y., Febrina, L., & Rijai, L. (2016). Identifikasi Metabolit Sekunder dan Aktivitas Antioksidan Ekstrak Bunga Tapak Dara (*Catharanthus roseus*). *Prosiding Seminar Nasional Kefarmasian Ke-4*, 162-167. https://doi.org/10.25026/mpc.v4i1.176.

Vincent, C., Leisner, C. P., Locke, A. M., Pelech, E., Schmiege, S. C., Sharkey, T. D., Tejera-Nieves, M., Alade, D. O., Cardoso, A. A., Cho, A., de Silva, K., Dziedzic, N., Gill, A. R., Kaur, R., Lane, S. L., Michalczyk, G. Z., Singh, A., & Teshome, D. T. (2025). Importance of measuring and reporting environmental conditions across plant science subdisciplines. *In Plant physiology, 199*(2): 1-9. https://doi.org/10.1093/plphys/kiaf405.

Yastrebova, O. v., & Plotnikova, E. G. (2020). Philogenetic Diversity of Bacteria of the Family Micrococcaceae Isolated from Biotopes with Different Anthropogenic Impact. Вестник Пермского Университета. Серия «Биология»=Bulletin of Perm University. *Biology*, (4). https://doi.org/10.17072/1994-9952-2020-4-321-333.

Zahra, Z., & Erlina, L. (2023). Comparasion of Microbiome Composition in Acne Vulgaris Using Metagenomic Shotgun and 16s Rrna. *Contagion: Scientific Periodical Journal of Public Health and Coastal Health, 5*(3): 993-1007. https://doi.org/10.30829/contagion.v5i3.15393.

Zhang, T., Li, H., Ma, S., Cao, J., Liao, H., Huang, Q., & Chen, W. (2023). The newest Oxford Nanopore R10.4.1 full-length 16S rRNA sequencing enables the accurate resolution of species-level microbial community profiling. *Applied and Environmental Microbiology, 89*(10). https://doi.org/10.1128/aem.00605-23.

Zhao, Y., Wei, H. M., Yuan, J. L., Xu, L., & Sun, J. Q. (2023). A comprehensive genomic analysis provides insights on the high environmental adaptability of

UNIVERSITAS
GADJAH MADA
Profil Komunitas dan Keanekaragaman Bakteri Endofit Daun Bawang Putih (Allium sativum L.) Terinduksi Biocatharantine melalui Pendekatan Metabarkoding
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Acinetobacter strains. *Frontiers in Microbiology*, *14*: 1-18. https://doi.org/10.3389/fmicb.2023.1177951.

Zhao, Z., Hui, G., Yang, A., Zhang, G., & Hu, Y. (2022). Assessing tree species diversity in forest ecosystems: A new approach. *Frontiers in Ecology and Evolution*, *10*: 1-12. https://doi.org/10.3389/fevo.2022.971585.