

DAFTAR PUSTAKA

- Afridi, M. S., Kumar, A., Javed, M. A., Dubey, A., de Medeiros, F. H. V., & Santoyo, G. (2024). "Harnessing root exudates for plant microbiome engineering and stress resistance in plants". *Microbiological Research*, 279(August 2023), 127564.
- Afrin, S., & Bhuiyan, M. N. I. (2023). "Antagonistic activity of *Bacillus amyloliquefaciens* subsp. *amyloliquefaciens* against multidrug resistant *Serratia rubidaea*". *Current Research in Microbial Sciences*, 5(November), 100206.
- Akhda, A. M. (2024). "Potensi Rhizobakteri Unggulan Sebagai Agen Biokontrol Dalam Penghambatan Patogen *Stemphylium vesicarium* Asal Tanah Tanaman Bawang Merah (*Allium ascalonicum* L.)". *Universitas Indonesia*, 2006469714.
- Amelia, N., & Sulistiyaning, T. H. (2021). "Kajian Pengaruh Penggunaan Biosurfaktan Rhamnolipida dan Surfaktin pada Proses Bioremediasi Tanah Tercemar Crude Oil". *Jurnal Teknik ITS*, 10(2).
- Arima, K., Kakinuma, A., & Tamura, G. (1968). "Surfactin, a crystalline peptidelipid surfactant produced by *Bacillus subtilis*: Isolation, characterization and its inhibition of fibrin clot formation". *Biochemical and Biophysical Research Communications*, 31(3), 488–494.
- Asrul, A. (2020). "Virulensi beberapa isolat *Pantoea ananatis* penyebab penyakit hawar daun bakteri (bacterial leaf blight) pada varietas bawang merah". *Agromix*, 11(2), 136–150.
- Asrul, A., & Umrah, U. (2019). "Host Range *Pantoea Ananatis* the Causal Agent of Bacterial Leaf Blight on *Allium* Spp". *Agroland: The Agricultural Sciences Journal*, 6(1), 27.
- Astriani, M., & Murtiyaningsih, H. (2018). "Pengukuran Indole- 3-Acetic Acid (IAA) pada *Bacillus* sp dengan Penambahan L-Tryptopan".

- Bioeduscience*, 2(2), 116. <https://doi.org/10.29405/j.bes/22116-1212233>
- Bais, H. P., Park, S. W., Weir, T. L., Callaway, R. M., & Vivanco, J. M. (2004). "How plants communicate using the underground information superhighway". *Trends in Plant Science*, 9(1), 26–32.
- Cahyani, I. S. (2022). "Potensi produksi tanaman bawang merah (*Allium cepa* L.) di dataran tinggi Desa Bonto Marannu Kecamatan Uluere Kabupaten Bantaeng". (Skripsi, hlm. 6–7).
- Choudhuri, S. (2014). "Sequence Alignment and Similarity Searching in Genomic Databases". *Bioinformatics for Beginners*, 133–155.
- Darsono, R. S. (2024). "Studi Aktivitas Biokontrol Mikroba Unggulan Untuk Pengendalian Penyakit Hawar Daun Bakteri *Pantoea* sp. di Tanaman Bawang Merah (*Allium ascalonicum* L.)". *Universitas Indonesia*, 2006469752.
- Demain, A. L., & Fang, A. (2000). "The natural functions of secondary metabolites". *Advances in Biochemical Engineering/Biotechnology*, 69, 1–39.
- Duffy, G. L. (2017). "Vegetable Crops Disease Update: Bacterial Bulb Rots of Onion". *Quality Progress*, 50(7), 47–49.
- Ekowati, C. N., Shintia, R., Umar, S., & Irawan, B. (2022). "The Potential of Soil Bacterial Isolates from Liwa Botanical Gardens, West Lampung as Phosphate Solubilizing Bacteria". *Jurnal Ilmiah Biologi Eksperimen Dan Keanekaragaman Hayati (J-BEKH)*, 9(1), 83–89.
- Eling, D., Kurniawan, R., & Muhimmah, I. (2014). "Karakteristik Primer pada Polymerase Chain Reaction(PCR) untuk Sekuensing DNA: Mini Review". *Seminar Informatika Medis 2014*, 93–102.
- Firmansyah, M. A., Musaddad, D., Liana, T., Mokhtar, M. S., & Yufdy, M. P.

- (2016). "Uji Adaptasi Bawang Merah di Lahan Gambut Pada Saat Musim Hujan di Kalimantan Tengah". *Jurnal Hortikultura*, 24(2), 114.
- Gusnadi, B., Advinda, L., Anhar, A., Eka Putri, I. L., & Chatri, M. (2023). "*Pseudomonas fluorescens* Sebagai Agen Biokontrol Pengendali Berbagai Penyakit Tanaman". *Serambi Biologi*, 8(2), 123–128.
- Haas, D., & Défago, G. (2005). "Biological control of soil-borne pathogens by fluorescent *Pseudomonas*". *Nature Reviews Microbiology*, 3(4), 307–319.
- Hossain, T. J. (2024). "Antimicrobial Assay Protocols-Strengths and Limitations". *Eur J Microbial Immunol*, 14(2), 1–35.
- Hussein, Z. M., Abedali, A. H., & Ahmead, A. S. (2019). "Improvement properties of self-healing concrete by using bacteria". *IOP Conference Series: Materials Science and Engineering*, 584, 012034.
- Ilmu, J., Fungus, M. Y., Hartati, S., Wiyono, S., Hidayat, S. H., & Sinaga, M. S. (2023). "Potency and Mechanism of Yeast-Like Fungus *Pseudozyma* in Controlling Anthracnose on Chili". *Jurnal ilmu dan teknologi pertanian*, 7(1), 8–16.
- Jayashantha, B. G. E. T. (2022). "Guidelines for Food Microbiological Calculations in Solid Culture Media". 1–14.
- Jourdan, E., Henry, G., Duby, F., Dommes, J., Barthélemy, J. P., Thonart, P., & Ongena, M. (2009). "Insights into the defense-related events occurring in plant cells following perception of surfactin-type lipopeptide from *Bacillus subtilis*". *Molecular Plant-Microbe Interactions*, 22(4), 456–468.
- Kaymak, H. C. (2010). "Potential of PGPR in Agricultural Innovations". 18, 45–79.
- Khaerun, A., & Gusnawaty, H. (2012). "Penggunaan *Bacillus* spp. sebagai

agens biokontrol untuk mengendalikan penyakit layu Fusarium pada tanaman cabai. *Jurnal Agroteknos*, 2(3), 182–189.

Koumoutsis, A., Chen, X. H., Henne, A., Liesegang, H., Hitzeroth, G., Franke, P., Vater, J., & Borriss, R. (2004). "Structural and Functional Characterization of Gene Clusters Directing Nonribosomal Synthesis of Bioactive Cyclic Lipopeptides in *Bacillus amyloliquefaciens* Strain FZB42". *Journal of Bacteriology*, 186(4), 1084–1096.

Kumar, S. V., Kumar, S. P., Rupesh, D., & Nitin, K. (2011). "*Allium cepa*: A traditional medicinal herb and its health benefits". *Journal of Chemical and Pharmaceutical Research*, 3(1), 675–684.

Lahlali, R., Ezrari, S., Radouane, N., Kenfaoui, J., & Esmaeel, Q. (2022). "Biological Control of Plant Pathogens : A Global Perspective". *Journal of Microorganisms*. 10, 1–33. <https://doi.org/>

Laraswati Rini , Ramdan Evan, K. U. (2021). "Identifikasi Penyebab Penyakit Hawar Daun Bakteri Pada Kombinasi Pola Tanam System of Rice Intensification (SRI) dan Jajar Legowo". *BioResources*, 15(2), 302–311.

Larosa, S. F., Kusdiyantini, E., Raharjo, B., & Sarjiya, A. (2013). "Kemampuan Isolat Bakteri Penghasil *Indole Acetic Acid* (Iaa) Dari Tanah Gambut Sampit Kalimantan Tengah". *Jurnal Biologi*, 2(3), 41–54.

Lee, J., Kim, S., Jung, H., Kyoung, B., Jeong, K., Ho, A. H., & Lee, S. (2023). "Exploiting Bacterial *Genera* as Biocontrol Agents: Mechanisms , Interactions and Applications in Sustainable Agriculture". *Journal of Plant Biology*, 66(6), 485–498.

Liu, J., Li, W., Zhu, X., Zhao, H., Lu, Y., Zhang, C., & Lu, Z. (2019). "Surfactin effectively inhibits *Staphylococcus aureus* adhesion and biofilm formation on surfaces". *Applied Microbiology and Biotechnology*,

- 103(11), 4565–4574. <https://doi.org/10.1007/s00253-019-09808-w>
- Liu, T., Zheng, Y., Wang, L., Wang, X., & Wang, H. (2025). "Optimizing surfactin yield in *Bacillus velezensis* BN to enhance biocontrol efficacy and rhizosphere colonization". *Frontiers in Microbiol. Microbiology*.
- Malu, P., Kristianti, D., Siahaan, P., & Tangapo, A. M. (2023). "Karakterisasi Dan Uji Produksi IAA Bakteri Rizosfer Dari Tanaman Putri Malu (*Mimosa Pudica* L.) Dwina". *Jurnal Ilmu Alam dan Lingkungan*, 14(2), 29–37.
- Manurung, G. P. (2022). "Pengaruh interval penyiraman terhadap pertumbuhan tiga bawang merah komersial (*Allium ascalonicum*)". *Kultivasi*, 21(1), 24–32.
- Moldovan, C., Frumuzachi, O., Babotă, M., Barros, L., Mocan, A., Carradori, S., & Crişan, G. (2022). "Therapeutic Uses and Pharmacological Properties of Shallot (*Allium ascalonicum*)". *Frontiers in Nutrition*, 9(July).
- Mollah, A., Ashan, M. A., & Khatimah, A. H. (2022). "Uji Kualitas dan Kuantitas DNA Porang (*Amorphophallus Muelleri* Blume) pada Beberapa Kawasan di Sulawesi Selatan". *Jurnal Agritechno*, 15(01), 1–7.
- Morohoshi, T., Nakamura, Y., Yamazaki, G., Ishida, A., Kato, N., & Ikeda, T. (2007). "The plant pathogen *Pantoea ananatis* produces N-acylhomoserine lactone and causes center rot disease of onion by quorum sensing". *Journal of Bacteriology*, 189(22), 8333–8338.
- Nova, B., Supri, E., & Sartika, D. (2024). "Bacterial bioactive metabolites: A review on antimicrobial potential and applications / Metabolit bioaktif bakteri: Tinjauan tentang potensi antimikroba dan aplikasinya". *Review Article*, 399–410.
- Pantigoso, H. A., Manter, D. K., Fonte, S. J., & Vivanco, J. M. (2023). "Root

exudate-derived compounds stimulate the phosphorus solubilizing ability of bacteria". *Scientific Reports*, 13(1), 1–12.

Patel, S., & Gupta, R. S. (2020). "A phylogenomic and comparative genomic framework for resolving the polyphyly of the genus *Bacillus*: Proposal for six new genera of *Bacillus* species, *Peribacillus* gen. nov., *Cytobacillus* gen. nov., *Mesobacillus* gen. nov., *Neobacillus* gen. nov., *Metabacillus* gen. nov. and *Alkalihalobacillus* gen. nov". *International Journal of Systematic and Evolutionary Microbiology*, 70(1), 406–438.

Patten, C. L., & Glick, B. R. (2002). "Role of *Pseudomonas putida* indoleacetic acid in development of the host plant root system". *Applied and Environmental Microbiology*, 68(8), 3795–3801.

Quadri, L. E. N., Weinreb, P. H., Lei, M., Nakano, M. M., Zuber, P., & Walsh, C. T. (1998). "Characterization of Sfp, a *Bacillus subtilis* Phosphopantetheinyl Transferase for Peptidyl Carrier Protein Domains in Peptide Synthetases". 2960(97), 1585–1595.

Rafanomezantsoa, P., El-hasan, A., & Voegelé, R. T. (2025). "Potential of *Bacillus halotolerans* in Mitigating Biotic and Abiotic Stresses". *A Comprehensive Review*.

Resti, Z., Habazar, T., & Putra, D. P. (2013). "Skrining dan identifikasi isolat bakteri endofit untuk mengendalikan penyakit hawar daun bakteri pada bawang merah". 13, 167–170.

Rinawati. (2024). "*Analisis Kinerja Perdagangan Bawang Merah* (Volume 14)". Pusat Data dan Sistem Informasi Pertanian Sekretariat Jendral Kementrian Pertanian.

Riseh, R. S., Fathi, F., Vazvani, M. G., & Tarkka, M. T. (2025). "Plant Colonization by Biocontrol Bacteria and Improved Plant Health: A Review". *Frontiers in Bioscience*, 30(1), 1–21.

Setiaji, A., Annisa, R. R. R., & Rahmandhias, D. T. (2023). "Bakteri *Bacillus*

- Sebagai Agen Kontrol Hayati dan Biostimulan Tanaman". *Rekayasa*, 16(1), 96–106.
- Shahid, I., Han, J., Hanooq, S., Malik, K. A., Borchers, C. H., & Mehnaz, S. (2021). "Profiling of Metabolites of *Bacillus* spp. and Their Application in Sustainable Plant Growth Promotion and Biocontrol". *Frontiers in Sustainable Food Systems*, 5(February), 1–14.
- Shida, O., Takagi, H., Kadowaki, K., & Komagata, K. (1996). "Proposal for two new genera, *Brevibacillus* gen. nov. and *Aneurinibacillus* gen. nov". *International Journal of Systematic Bacteriology*, 46(4), 939–946.
- Tangapo, A. M. (2020). "Potensi Bakteri Endofit Ubi Jalar (*Ipomoea batatas* L.) dalam Menghasilkan Hormon Indole Acetic Acid (IAA) dengan Penambahan L-triptofan". *Jurnal Bios Logos*, 10(1), 21.
- Tirang, P. (2024). Optimasi konsentrasi primer dan suhu annealing untuk deteksi gen PKS-I pada bakteri asosiasi mangrove *Avicennia*: Optimization of primer concentration and annealing temperature for detection of. *Jurnal Pasir Laut*, 8(2), 123–129.
- Tran, C., Cock, I. E., Chen, X., & Feng, Y. (2022). "Antimicrobial *Bacillus*: Metabolites and Their Mode of Action". *Antibiotics*, 11(1).
- Usuda, Y., Nishio, Y., Nonaka, G., & Hara, Y. (2022). "Microbial Production Potential of *Pantoea ananatis*: From Amino Acids to Secondary Metabolites". *Microorganisms*, 10(6), 1–14.
- Verma, P., Yadav, A. N., Kumar, V., Singh, D. P., & Saxena, A. K. (2017). "Beneficial plant-microbes interactions: Biodiversity of microbes from diverse extreme environments and its impact for crop improvement". *Plant-Microbe Interactions in Agro-Ecological Perspectives*, 2, 543–580.
- Wangiyana, S. A. G. I. (2022). "Aplikasi BLAST NCBI Dalam Pencarian Type Reference Sekuen RBCL *Gyrinops versteegii*". *Jurnal Ilmiah*

Sangkareang Mataram, 9(1), 19–24.

Weller-Stuart, T., De Maayer, P., & Coutinho, T. (2017). "*Pantoea ananatis*: genomic insights into a versatile pathogen". *Molecular Plant Pathology*, 18(9), 1191–1198.

Yang, G., Zhang, Y., Lee, N. K., Cozad, M. A., & Kearney, S. E. (2017). "Cyanobacterial Sfp-type phosphopantetheinyl transferases functionalize carrier proteins of diverse biosynthetic pathways". In *Scientific Reports* (Issue September). Springer US.

Yang, Y., Jiang, X.-T., & Zhang, T. (2014). "Evaluation of a hybrid approach using UBLAST and BLASTX for metagenomic sequences annotation of specific functional genes". *PLoS ONE*, 9(10).

Yanti, Y., Hamid, H., Nurbailis, & Khairul, U. (2023). "Seminar Nasional LPPM UMMAT Sebaran Penyakit Hawar Daun Bakteri Oleh *Pantoea Ananatis* Pada Bawang Merah Di Sumatera Barat", 903–907.

Yanti, Y., & Nilisma, M. (2019). "Karakterisasi Kemampuan Biokontrol Bakteri Endofit *Indigenos* untuk Pengendalian *Ralstonia syzygii subsp. indonesiensis* pada Cabai". 3(1), 13–21.

Yin, W., Wang, Y., Liu, L., & He, J. (2019). "Biofilms: The microbial "protective clothing" in extreme environments". *International Journal of Molecular Sciences*, 20(14).

Yulmira Yanti, Hasmiandy Hamid, & Nurbailis. (2023). "Distribusi Penyakit Hawar Daun Bakteri Pada Tanaman Bawang Merah Di Sumatera". *Seminar Nasional Pariwisata Dan Kewirausahaan (SNPK)*, 2, 759–764.