

DAFTAR PUSTAKA

- Afzal, I., Shinawari, Z . K., Sikandar, S., Shahzad, S. (2019). Plant beneficial endophytic bacteria: Mechanisms, diversity, host range and genetic determinants. *Microbiological Research*, 221: 36-49. <https://doi.org/10.1016/j.micres.2019.02.001>
- Ahemad, M. & Kibret, M. (2014). Mechanisms and applications of plant growth promoting rhizobacteria: current perspective. *J King Saud Univ Sci*, 26: 11-20.
- Ambawade, M. S., Pathade, G. R. (2015). Production of Indole Acetic Acid (IAA) by *Stenotrophomonas maltophilia* BE25 isolated from roots of banana (*Musa* spp.). *Intl J Sci Res*, 4(1): 2644-2650.
- Ampou, E. E., Triyulianti, I., Nugroho, S. C. (2015). Bakteri Asosiasi Pada Karang *Scleractinia* Kaitannya Dengan Fenomena La-Nina Di Pulau Bunaken. *Jurnal Kelautan Nasional*, 10(2): 55-63.
- Anggara, B. S., Yuliani, Lisdinana, L. (2014). Isolasi dan Karakterisasi Bakteri Endofit Penghasil Hormon *Indole Acetic Acid* dari Akar Tanaman Ubi Jalar. *LenteraBio*, 3(3): 160-167.
- Anugrah, F. A., Fanany, R., Putra, S. A., Masita, R., Safitri, D. Y. (2021). Indole acetic acid (IAA) hormone production by endophytic bacteria isolate from *Cinchona* plant (*Cinchona ledgerina* Moens.) root. *AIP Conf. Proc.* 2353 (1): 030082. doi.org/10.1063/5.0052923
- Arisandi, P. (2002). Mangrove hilang, pencemaran pantaipun datang. www.ekoton.or.id, diakses tanggal 7 September 2023.
- Ariwulan, D. R. (2013). *Metode Penyimpanan Mikroba*. <http://nightray13-kuro.blogspot.com/2013/01/bioteknologireviewtugas.html>. Diakses tanggal 25 Juni 2024.
- Astriani, M. dan Murtyaningsih, H. (2018). Pengukuran *Indole-3-Acetic Acid* (IAA) pada *Bacillus* sp. dengan Penambahan L-Tryptofan. *Bioeduscience*, 2(2): 116-121. doi.org/10.29405/j.bes/22116-1212233
- Audipudi, A. V., Chakicherla, B., Bhore, S. (2017). *Bacterial Endophytes as Biofertilizers and Biocontrol Agents for Sustainable Agriculture: in Biotechnology for Sustainability*. 1st Edition. pp 223-247. Malaysia: AIMST University.

- Baez, S. (2020). Mangrove Protections Can Provide Conservation Wins. <https://www.pewtrusts.org/en/research-and-analysis>. Diakses pada 9 September 2023.
- Bhardwaj, D., Ansari, M. W., Sahoo, R. K. 2014. Biofertilizers function as key player in sustainable agriculture by improving soil fertility, plant tolerance and crop productivity. *Microbial Cell Factories*, 13(66). <https://doi.org/10.1186/1475-2859-13-66>
- Blaauw-Jansen, G. (1959). The influence of red and far-red light on growth and phototropism of the Avena seedling. *Acta Botan. Neerl.* 8: 1-39.
- Bowers, A. K. & Zhao, Y. (2006). *Chapter Eleven - Recent Advances in Auxin Biosynthesis and Conjugation*. Recent Advances in Phytochemistry, Elsevier, 40, 271-285, ISSN 0079-9920, ISBN 9780080451251, [https://doi.org/10.1016/S0079-9920\(06\)80045-6](https://doi.org/10.1016/S0079-9920(06)80045-6).
- Brooks, G. F., Jawetz, E., Melnick, J. L., Adelberg, E. A. (2013). *Jawetz, Melnick & Adelberg's Medical Microbiology. Climate Change 2013 - The Physical Science Basis (Vol. 53)*. <http://doi.org/10.1017/CBO9781107415324.004>
- Cappucino, J. C. & Sherman, N. (1992). "*Microbiology: A Laboratory Manual*" 3rd Edition. New York: Benjamin/Cumming Pub. Co.
- Cronquist, A. (1981). *An Integrated System of Classification of Flowering Plants*. New York: Columbia University Press, 477.
- Dedolph, R. R., Naqvi, S. M., Gordon, S. A. (1966). Role of Indole-3-acetic Acid in Modification of Geotropic Responses in Clinosant Rotated Avena Seedlings. *Plant Physiology*, 41: 897-902.
- Devivilla, S., Stephen, J., Lekshmi, M., Kumar, S. H., Nayak, B. B. (2019). Evaluation of modified Zobell marine agar for differential isolation of histamine-forming bacteria from fresh fish. *Journal of Microbiological Methods*, 163 (105649). doi-org/10.1016/j.mimet.2019.105649.
- Djamaluddin, Rignolda. (2018). *Mangrove - Biologi, Ekologi, Rehabilitasi, dan Konservasi*. Unsrat Press, Manado. ISBN 978-602-0752-28-0.
- Duca, D., Lorv, J., Patten, C. L., Rose, D., & Glick, B. R. (2014). Indole-3-acetic acid in plant-microbe interactions. *Antonie van Leeuwenhoek*, 106(1): 85-125.
- Dupont, B. (2014). Mangrove (*Sonneratia* sp.). https://commons.wikimedia.org/wiki/File:Mangrove_%28Sonneratia_sp.%29_%2815849524361%29.jpg. Diakses pada 9 September 2023.

- Epstein, A. E., Ilic, N., Cohen, J. D., Cooke, T. J. (2002). The Biosynthetic Pathway for Indole-3-Acetic Acid Changes During Tomato Fruit Development. *Plant Growth Regulation*, 38: 15-20. doi.org/10.1023/A:1020985715478.
- 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 Biologi*, 6(1): 38-48.
- Gang, S., Sharma, S., Saraf, M., Buck, M., and Schumacher, J. (2019). Analysis of Indole-3-acetic Acid (IAA) Production in *Klebsiella* by LC-MS/MS and the Salkowski Method. *Bio Protocol*, 9(9): e3230. doi: 10.21769/BioProtoc.3230
- Garrison, A. & Huigens, R. (2016). Eradicating Bacterial Biofilms with Natural Products and Their Inspired Analogues that Operate Thkasar Unique Mechanisms. *Current topics in medicinal chemistry*, 17. 10.2174/1568026617666161214150959.
- Glick, B. R., Patten, C. L., Holguin, G., & Penrose, D. M. (2014). Biochemical and Genetic Mechanisms Used by Plant Growth Promoting Bacteria. Imperial College Press.
- Glickmann, E. & Dessaux, Y. (1995). A Critical Examination of the Specificity of the Salkowski Reagent for Indolic Compounds Produced by Phytopathogenic Bacteria. *Applied and Environmental Microbiology*, 61(2): 793-796. doi: 10.1128/aem.61.2.793-796.1995.
- Gomes, I. P., Matos, A. D. M., Nietsche, S., Xavier, A. A., Costa, M. R., Gomes, W. S., Pereira, M. C. T. (2017). Auxin Production by Endophytic Bacteria Isolated from Banana Trees. *Brazilian Archives of Biology and Technology*, 60: e17160484. http://dx.doi.org/10.1590/1678-4324-2017160484.
- Gowtham, H. G., Brijesh, S. H., Murali, M., Shilpa, N., Prasad, M., Aiyaz, M., Amrutesh, K. N., Niranjana, S. R. (2020). Induction of Dkasart Tolerance in Tomato upon the Application of ACC Deaminase Producing Plant Growth Promoting Rhizobacterium *Bacillus subtilis* Rhizo SF 48. *Mirobiological Research*, 234: 126422. doi: 10.1016/j.micres.2020.126422. PMID: 32058314.
- Hair, Jr., Joseph, F., et al. (2011). *Multivariate Data Analysis. Fifth Edition*. New Jersey: PrenticeHall, Inc.

- Hasiani, V. V., Ahmad, I., Rijai, L. (2015). Isolasi Jamur Endofit dan Produksi Metabolit Sekunder Antioksidan dari Daun Pacar (*Lawsonia inermis* L.). *Jurnal Sains dan Kesehatan*, 1(4): 146-153.
- Herlina, L., Pukan, K. K., Mustikaningtyas, D. (2016). Kajian Bakteri Endofit Penghasil IAA (*Indole Acetic Acid*) untuk Pertumbuhan Tanaman. *Saintekrol*, 14(1): 51-58.
- Herlina, L., Pukan, K. K., Mustikaningtyas, D. (2017). The endophytic bacteria producing IAA (*Indole Acetic Acid*) in *Arachis hypogea*. *Cell Biology & Development*, 1(1): 31-35.
- Hidayatullah, F., Rahayu, Y. S., Lisdiana, L. (2017). Produksi Hormon IAA oleh Bakteri Endofit dari Akar Tanaman Ubi Jalar (*Ipomoea batatas*) dalam Media Limbah Cair Tahu. *LenteraBio*, 6(3): 80-85.
- Howes, J., Bakewell, D., Noor, Y. R. (2003). *Panduan Studi Burung Pantai*. Bogor: Wetlands International-Indonesia Programme.
- Huda, K., Budiharjo, A., Raharjo, B. (2014). Bioprospeksi Rhizobakteri Penghasil IAA (*Indole Acetic Acid*) dari Tanaman Jagung (*Zea mays* L.) di Area Pertanian Semi Organik Desa Batur, Kec. Getasan, Kab. Semarang. *Jurnal Biologi*, 3(3): 42-52.
- Huyyirnah & Fitriyani. (2020). Metode Penyimpanan Bakteri *Vibrio alginolyticus* dan *Vibrio harveyi* Dalam Media TSB (*Tryptic Soy Broth*) dan Gliserol. *Integrated Lab Journal*, 8(2): 91-101.
- Kasi, Y. S., Posangi, J., Wowor, M., Bara, R. (2015). Uji Efek Antibakteri Jamur Endofit Daun Mangrove *Avicennia marina* Terhadap Bakteri Uji *Staphylococcus aureus* dan *Shigella dysenteriae*. *E-journal Biomedik*, 3(1): 112-117.
- Khairnar, S. O., Solanki, B. V., Junwei, L. (2013). Mangrove Ecosystem – Its Threat and Conservation. *Journal of Water Supply Research and Technology-AQUA*. Diakses pada 1 Agustus 2023, dari https://aquafind.com/articles/Mangrove_Ecosystems.php.
- Khan, A. L., Waqas, M., Kang, S. M., Al-Harrasi, A., Hussain, J., Al-Rawahi, A., ... & Lee, I. J. (2016). Bacterial endophyte *Sphingomonas* sp. LK11 produces gibberellins and IAA and promotes tomato plant growth. *Journal of Microbiology*, 54(10): 852-857.
- Kholida, F.T. dan Zulaika, E. (2015). Potensi Azotobacter sebagai Penghasil Hormon IAA (*Indole-3-Acetic Acid*). *Jurnal Sains dan Seni ITS*, 4(2): 2337-3250.

- Kovacs, K. (2009). Applications of mössbauer spectroscopy in plant physiology. *Member of HAS Consultants: 2–7.*
- Krisdianto, A., Saptiningsih, E., Nurchayati, Y., Setiari, N. (2020). Pertumbuhan Plantlet Anggrek *Phalaenopsis amabilis* (L.) Blume Pada Tahap Subkultur Dengan Perlakuan Jenis Media Dan Konsentrasi Pepton Berbeda. *Metamorfosa: Journal of Biological Sciences*, 7(2): 182-190. DOI: 10.24843/metamorfosa.2020.v07.i02.p06.
- 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.
- Lasibani, S. M. & Kamal, E. (2010). Pola Penyebaran Pertumbuhan Propagul Mangrove Rhizophoraceae di Kawasan Pesisir Sumatera Barat. *J. Mangrove Pesisir*. X(1): 33-38.
- Liu, Y., Morelli, M., Koskimäki, J., Qin, S., Zhu, Y. H., Zhang, X. (2022). Editorial: Role of endophytic bacteria in improving plant stress resistance. *Frontiers in Plant Science*. 13. 10.3389/fpls.2022.1106701.
- Luo, S. L., Xu, T. Y., Chen, L., Chen, J. L., Rao, C., Xiao, X., Wan, Y., Zeng, G. M., Long, F., Liu C. B., Liu, Y. T. (2012). Endophyte-assisted promotion of biomass production and metal-uptake of energy crop sweet sorghum by plant-growth-promoting endophyte *Bacillus* sp. SLS18. *Appl. Microbiol. Biotechnol*, 93: 1745-1753.
- Mahmoud, S. N. & Al-Ani, N. K. (2016). Effect of Different Sterilization Methods on Contamination and Viability of Nodal Segments of *Cestrum nocturnum* L. *International Journal of Research Studies in Biosciences (IJRSB)*, 4(1): 4-9.
- Mahmudah, R., Baharuddin, M., Sappewali. (2016). Identifikasi Isolat Bakteri dari Sumber Air Panas Lejja, Kabupaten Soppeng. *Al-Kimia*, 4(1): 31-42.
- Martin, N. C., Pirie, A. A., Ford, L. V., Callaghan, C. L., McTurk, K., Lucy, D., Scrimger, D. G. (2006). The use of phosphate buffered saline for the recovery of cells and spermatozoa from swabs. *Sci Justice*, 46(3): 179-184. doi: 10.1016/S1355-0306(06)71591-X.
- Mawarti, I., Fibriarti, B. L., Zul, D., Roza, R. M., Martina, A., Linda, T. M. (2017). Seleksi Isolat Aktinomisetes Asal Tanah Gambut Desa Rimbo Panjang Kabupaten Kampar dalam Menghasilkan Hormon IAA (*Indole Acetic Acid*). *Jurnal Riau Biologia*, 2(1): 47-54.
- McSteen, P. (2010). Auxin and monocot development. *ColdSpring. Harb. Perspect. Biol.* 2: 1-27.

- Mubarok, F. (2019). Foto: Ini Ragam Produksi Mangrove Si Api-Api. <https://www.mongabay.co.id/foto-ini-ragam-produksi-mangrove-si-api-api/>. Diakses pada 9 September 2023.
- Murthi, R. S., Lisnawita, Oemry, S. (2015). Potensi Bakteri Endofit dalam Meningkatkan Pertumbuhan Tanaman Tembakau yang Terinfeksi Nematoda Puru Akar (*Meloidogyne* spp.). *Jurnal Agroekoteknologi*, 4(1): 1881-1889.
- Nadha, H. K., Salwan, R., Kasana, R. C., Anand, M., Sood, A. (2012). Identification and elimination of bacterial contamination during *in vitro* propagation of *Guadua angustifolia* Kunth. *Pharmacognosy Magazine*, 8(30): 93-97. doi: 10.4103/0973-1296.96547
- National Center for Biotechnology Information. (2023). PubChem Compound Summary for CID 802, Indole-3-acetic acid. Diakses pada 9 Oktober 2023 dari <https://pubchem.ncbi.nlm.nih.gov/compound/Indole-3-acetic-acid>.
- Neliyati, N., Lizawati, L., and Zulkarnain, Z. (2019). The Evaluation of Sterilization Protocol for Sprout Explants in Oil Palm *Elaeis guineensis* Jacq. Tissue Culture. *Journal of Physics: Conference Series*, 1402: 1-6.
- Pandey, P. K., Yadav, S. K., Singh, A., Sarma, B. K., Mishra, A., Singh, H. B. (2012). Cross-species alleviation of biotic and abiotic stresses by the endophyte *Pseudomonas aeruginosa* PW09. *J Phytopathol*, 160(10): 532-539.
- Pandya, N. D. & Desai, P. V. (2014). Screening and Characterization of GA₃ Producing *Pseudomonas monteilii* and Its Impact on Plant Growth Promotion. *Int. J. Curr. Microbiol. App. Sci*, 3(5): 110-115.
- Park, S., Kim, A. L., Hong, Y. K., Shin, J. H., Joo, S. H. (2021). A highly efficient auxin-producing bacterial strain and its effect on plant growth. *J. Genet. Eng. Biotechnol*, 19(1):179. doi: 10.1186/s43141-021-00252-w.
- 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, p. 3795-3801. DOI: 10.1128/AEM.68.8.3795-3801.2002.
- Pavlo, A., Leonid, O., Iryna, Z., Natalia, K., Maria, P. A. (2011). Endophytic bacteria enhancing growth and disease resistance of potato (*Solanum tuberosum* L.), *Biological Control*, 56(1): 43-49. ISSN 1049-9644. <https://doi.org/10.1016/j.biocontrol.2010.09.014>.

- Phillips, K. A., Skirpan, A. L., Liu, X., Christensen, A., Slewinski, T. L., Hudson, C. (2011). Vanishing tassel2 encodes a grass-specific tryptophan aminotransferase required for vegetative and reproductive development in maize. *Plant Cell*, 23: 550-56.
- Primavera, J. H., Friess, D. A., Lavieren, H. V., Lee, S. Y. (2019). The Mangrove Ecosystem. *World Seas: An Environmental Evaluation*, 3(1): 1-34.
- Retnowati, Y., Sembiring, L., Moeljoprawiro, S., Djohan, T. S., Soetarto, E. S. (2017). Diversity of Antibiotic-Producing Actinomycetes in Mangrove Forest of Torosiaje, Gorontalo, Indonesia. *Biodiversitas*, 18(3): 1453-1461.
- Sagita, D., Suharti, N., Azizah, N. (2017). Isolasi Bakteri Endofit dari Daun Sirih (*Piper betle* L.) Sebagai Antibakteri Terhadap *Escherichia coli* dan *Staphylococcus aureus*. *Jurnal Ipteks Terapan*, 11(1): 65-74. <https://doi.org/10.22216/jit.2017.v11i1.459>
- Setiadi, D. R., Supriatna, I., Agil, M. (2014). Validasi Kit *Enzyme-Linked Immunosorbent Assay* Komersial untuk Analisis Hormon Estradiol dan Progesteron Darah Kambing Kacang. *Jurnal Veteriner*, 15(4): 446-453.
- Setiani, Mulyani, R., Syahrudin. (2020). Uji Viabilitas Bakteri *Aeromonas hydrophila* dengan Metode Penyimpanan Beku Pada Media TSB dan Gliserol. *Lutjanus*, 25(2): 41-48.
- Setiawan, H. (2013). Status Ekologi Hutan Mangrove pada Berbagai Tingkat Ketebalan. *Jurnal Penelitian Kehutanan Wallacea*, 2(2): 104-120.
- Shylla, A., Shivaprakash, M. K., Shashidhar, H. E., Vishwakarma, P., Sudradhar, M. (2016). Production of Phytohormones by Endophytic Bacteria Isolated from Aerobic Rice. *Journal of Pure and Applied Microbiology*, 10(3): 2127-2133.
- Soesanto, L. (2015). Metabolit Sekunder Agensia Pengendali Hayati; Terobosan Baru Pengendalian Organisme Pengganggu Tanaman Perkebunan. Diunduh dari <https://www.researchgate.net/profile/Loekas-Soesanto/publication/278261729>. Diakses pada 30 Juni 2024.
- Spaepen, S., Vanderleyden, J., & Remans, R. (2014). Indole-3-acetic acid in microbial and microorganism-plant signaling. *FEMS Microbiology Reviews*, 38(4): 472-496.
- Sufyani, F. dan Sukesu. (2005). Pengaruh Ion Pengganggu Al (III) dan Fe (III) pada Penentuan Zn (II) dengan Alizarin Red S (ARS) secara Spektrofotometri. Jurusan Kimia Fakultas Matematika dan Ilmu Pengetahuan Alam Institut Teknologi Sepuluh Nopember Surabaya.

- Susilawati, L. dan Purnomo, E. S. (2016). Viabilitas Sel Bakteri Dengan *Cryoprotectant Agents* Berbeda (Sebagai Acuan Dalam Preservasi *Culture Collection* di Laboratorium Mikrobiologi). *Biogenesis*, 4(1): 34-40.
- Sztein, A. E., Cohen, J. D., Cooke, T. J. (2000). Evolutionary Patterns in the Auxin Metabolism of Green Plants. *International Journal of Plant Sciences*, 161(6): 849–859. <https://doi.org/10.1086/317566>.
- Tamošiūnė, I., Baniulis, D., Stanys, V. (2017). Role of Endophytic Bacteria in Stress Tolerance of Agricultural Plants: Diversity of Microorganisms and Molecular Mechanisms. 10.1007/978-981-10-4059-7_1.
- Tan, R. (2012). Checking up on special plants at Pulau Semakau. <https://wildshores.blogspot.com/2012/02/checking-up-on-special-plants-at-pulau.html#.VHJcOfmSzf>. Diakses pada 9 September 2023.
- Tan, R. X. dan Zou, W. X. (2001). Endophyte: A Rich Source of Functional Metabolites. *Nat. Prod. Rep.* 18: 448-459.
- Tsavkelova, E. A., Klimova, S. Y., Cherdyntseva, T. A., & Netrusov, A. I. (2016). Microbial producers of plant growth stimulators and their practical use: A review. *Applied Biochemistry and Microbiology*, 52(5): 467-475.
- Widiasti, M., Putra, I., Duniaji, A. Darmayanti, L. P. (2020). Analisis Potensi Beberapa Larutan Pengencer Pada Uji Antibakteri Teh Temu Putih (*Curcuma zedoaria* (Berg.) Roscoe) Terhadap *Escherichia coli*. *Scientific Journal of Food Technology*, 6(2): 117-125.
- Widowati, T., Nuriyanah, Sukiman, H. (2013). Potency of Endophyte Bacterium Isolated from *Shorea selanica* on Producing IAA Hormone and Supporting the Growth of Soybean. *Annales Bogoriensis*, 17(2): 35-41.
- Wulandari, E., Putranto, W. S., Gumilar, J., Suryaningsih, L., Pratama, A., Anggani, T. K. (2022). Kecepatan Pertumbuhan Spesifik Bakteri Asam Laktat dengan Ekstrak Kacang Merah (*Phaseolus vulgaris* L.) sebagai Studi Awal Produksi Flavored Yogurt. *Jurnal Agripet*, 22(1): 72-78.
- Yamaguchi, I., Cohen, J. D., Culler, A. H., Quint, M., Slovin, J. P., Nakajima, M., Yamaguchi, S., Sakakibara, H., Kuroha, T., Hirai, N., Yokota, T., Ohta, T., Kobayashi, Y., Mori, H., Sakagami, Y. (2010). 4.02 - *Plant Hormones*. Comprehensive Natural Products II, Elsevier, Pages 9-125, ISBN 9780080453828, <https://doi.org/10.1016/B978-008045382-8.00092-7>.
- Zaghloul, R., Abou-Aly, H., Tewfike, T., Ashry, N. (2016). Isolation and Characterization of Endophytic Bacteria Isolated from Legumes and

Non-Legumes Plants in Egypt. *Journal of Pure and Applied Microbiology*, 10(1): 277-290.

Zulfah, N. & Susilowati, I. O. (2020). Review Article: Endophytic Bacteria as Indole Acetic Acid (IAA) Producer and Biocontrol Agents in Plants. *BIOMA*, 16(2): 60-67. doi: 10.21009/Bioma16(2).3.