



## DAFTAR PUSTAKA

- Abdallah, M. S., Mustapha, T., Gambo, A., dan Ishaq, S. 2016. Biochemical identification and cultural characterization of some gram negative bacteria obtained from fecal or diarrhoeal samples. *Journal of Microbiology* 5(1): 31-34.
- Adiguna, P., dan Santoso, O. 2017. Pengaruh ekstrak daun serai (*Cymbopogon citratus*) pada berbagai konsentrasi terhadap viabilitas bakteri *Streptococcus mutans*. *Jurnal Kedokteran Diponegoro* 6(4): 1543-1550.
- Afzal, I., Shinwari, Z. K., Sikandar, S., dan Shahzad, S. 2019. Plant beneficial endophytic bacteria: Mechanisms, diversity, host range and genetic determinants. *Microbiological Research* 221: 36-49.
- Apetroaie-Constantin, C., Saheen, R., Andrup, L., Smidt, L., Rita, H., dan Salkinoja-Salonen, M. 2008. Environment driven cereulide production by emetic strains of *Bacillus cereus*. *International Journal of Food Microbiology* 127: 60-67.
- Aranda, F. J., Teruel, J. A., dan Ortiz, A. 2005. Further aspects on the haemolytic activity of the antibiotic lipopeptide iturin A. *Biochim Biophys Acta* 1713:51–56.
- Astuti, P., Wahyono, dan Nababan, O. A. 2014. Antimicrobial and cytotoxic activities of endophytic fungi isolated from *Piper crocatum* Ruiz & Pav. *Asian Pacific Journal of Tropical Biomedicine* 4: S592-S596.
- Bae, M., Chung, B., Oh, K. B., Shin, J., Oh, D. C. 2015. Hormaomycins B and C: new antibiotic cyclic depsipeptides from a marine mudflat-derived *Streptomyces* sp. *Mar Drugs* 13:5187–5200.
- Balouiri, M., Sadiki, M., dan Ibsouda, S. K. 2016. Methods for in vitro evaluating antimicrobial activity: A review. *Journal of Pharmaceutical Analysis* 6: 71-79.
- Bariyyah, S. K., Prajitno, A., dan Yuniarti, A. 2019. Phytochemical screening and antimicrobial activity of roselle (*Hibiscus sabdariffa* L.) flower extract against *Aeromonas hydrophila*. *The Journal of Experimental Life Science* 9(2): 65-69.
- Castillo, U. F., Strobel, G. A., Ford, E. J., Hess, W. M., Porter, H., Jensen, J. B., Albert, H., Robinson, R., Condon, M. A., dan Teplow, D. B. 2002. Munumbicins, wide-spectrum antibiotics produced by *Streptomyces* NRRL 30562, endophytic on *Kennedia nigriscans*. *Microbiology* 148:2675–2685.
- Cesur, S., dan Demiroz, A. P. 2013. Antibiotics and the mechanisms of resistance to antibiotics. *Medical Journal of Islamic World Academy of Sciences* 21(4): 138-142.
- Dalimarta, S. 2003. *Atlas Tumbuhan Obat Indonesia Jilid III*. Puspa Swara Anggota IKAPI, Jakarta.



- Das, K., Tiwari, R. K. S., dan Shrivastava, D. K. 2010. Techniques for evaluation of medicinal plant products as antimicrobial agents: Current methods and future trends. *Journal of Medicinal Plants Research* 4(2): 104-111.
- Desriani, K. D. E., Rivai, A., Hasanah, N., Amrinola, W., Triratna, L., dan Sukma, A. 2013. Potential endophytic bacteria for increasing paddy var rojolele productivity. *International Journal on Advanced Science Engineering and Information Technology* 3(1): 76-78.
- Duhan, P., Bansal, P., dan Rani, S. 2020. Isolation, identification and characterization of endophytic bacteria from medicinal plant *Tinospora cordifolia*. *South African Journal of Botany*: 1-7.
- Egra, S., Mardhiana, Rofin, M., Adiwena, M., Jannah, N., Kuspradini, H., dan Mitsunaga, T. 2019. Aktivitas antimikroba ekstrak bakau (*Rhizophora mucronata*) dalam menghambat pertumbuhan *Ralstonia solanacearum* penyebab penyakit layu. *AGROVIGOR* 12(1): 26-31.
- Espinasse, S., Gohar, M., Lereclus, D., dan Sanchis, V. 2002. An ABC transporter from *Bacillus thuringiensis* is essential for betaexotoxin I production. *Journal of Bacteriology* 184:5848–5854.
- Fallo, G., dan Sine, Y. 2016. Isolasi dan uji biokimia bakteri selulolitik asal saluran pencernaan rayap pekerja (*Macrotermes* spp.). *Jurnal Pendidikan Biologi* 1(2): 27-29.
- Fjaervik, E., dan Zotchev S. B. 2005. Biosynthesis of the polyene macrolide antibiotic nystatin in *Streptomyces noursei*. *Application Microbiology Biotechnology* 67:436–443.
- Franco-Duarte, R., Cernakova, L., Kadam, S., Kaushik, K. S., Salehi, B., Bevilacqua, A., Corbo, M. R., Antolak, H., Dybka-Stepien, K., Leszczewicz, M., Tintino, S. R., Souza, V. C. A., Sharifi-Rad, J., Coutinho, H. D. M., Martins, N., dan Rodrigues, C. F. 2019. Advances in chemical and biological methods to identify microorganisms—from past to present. *Microorganisms* 7(130): 1-32.
- Franklin, T. J. & Snow, G. A. 2005. *Biochemistry and Molecular Biology of Antimicrobial Drug Action*. Springer Science & Business Media Inc. New York.
- Fuzzati, N., Sutarjadi, Dyatmiko, W., Rahman, A., Hostettman, K. 1995. Phenylpropane derivatives from roots of *Cosmos caudatus*. *Phytocemistry* 39(2): 409-412.
- Gharib, A. A., El-Hamid, M. I., El-Aziz, N. K., Yonan, E. Y., dan Allam, M. O. 2020. *Bacillus cereus*: Phatogenicity, viability, and adaptation. *Advances in Animal and Veterinary Sciences* 8(1): 34-40.



Gu, H. J., Sun, Q. L., Luo, J. C., Zhang, J., dan Sun, L. 2019. A first study of the virulence potential of a *Bacillus subtilis* isolate from deep-sea hydrothermal vent. *Frontiers in Cellular and Infection Microbiology* 9: 2235-2988.

Gulaydin, O., Ekin, I. H., Ozturk, C., Ilhan, Z., dan Ogun, E. 2019. Comparison of some bacterial identification methods. *Turkish Journal of Veterinary Research* 3(1): 9-12.

Hadwan, M. H. 2018. Simple spectrophotometric assay for measuring catalase activity in biological tissues. *BMC Biochemistry* 19:7.

Haidar, Z. 2016. Si Cantik Rosella: Bunga Cantik Berjuta Khasiat. Edumania, Jakarta.

Hidayanto, F., Ardi, D. S., Ilmi, M. Z., Sutopo, I. G., Religia, A. M., Millah, F. N., Sari, Y. N., Zakiyya, A. N., dan Afifah, Y. N. 2015. Tanaman herbal sebagai tanaman hias dan tanaman obat. *Jurnal Inovasi dan Kewirausahaan* 4(1): 1-4.

Hossain, S., Urbi, Z., Karuniawati, H., Mohiuddin, R. B., Moh Qrimida, A., Allzrag, A. M. M., Ming, L.C., Pagano, E., dan Capasso, R. 2021. *Andrographis paniculata* (Burm. f.) Wall. Ex Nees: An updated review of phytochemistry, antimicrobial pharmacology, and clinical safety and efficacy. *Life* 11(348).

Inuwa, A. B., Maryam, Y. A., Arzai, A. H., Hafsat, Y. B., Kawo, A. H., Usman, A. U., Ama, S. J., dan Ibrahim, K. H. 2017. Distribution of culturable endophytic bacteria in lemon grass (*Cymbopogon citratus*). *Bayero Journal of Pure and Applied Sciences* 10(1): 95-98.

Jain, C., Khatana, S., dan Vijayvergia, R. 2019. Bioactivity of secondary metabolites of various plants. *International Journal of Pharmaceutical Sciences and Research* 10(2): 494-504.

Joshi, R. 2018. A review of *Fusarium oxysporum* on its plant interaction and industrial use. *Journal of Medicinal Plants Studies* 6(3): 112-115.

Kabir, M. A., Hussain, M. A., dan Ahmad, Z. 2012. *Candida albicans*: A model organism for studying fungal pathogens. *International Scholarly Research Network Microbiology* 5: 1-15.

Kebede, T., Gadisa, E., dan Tufa, A. 2021. Antimicrobial activities evaluation and phytochemical screening of some selected medicinal plants: A possible alternative in the treatment of multidrug-resistant microbes. *PLoS ONE* 16(3): 1-16.

Kim, Y. S., Kotnala, B., Kim, Y. H., dan Jeon, Y. 2016. Biological characteristics of *Paenibacillus polymyxa* GBR-1 involved in root rot of stored Korean ginseng. *Journal of Ginseng Research* 40: 453-461.

Kumar, A., dan Singh, V. K. 2019. *Microbial Endophytes Prospects for Sustainable Agriculture*. Elsevier Science, India.



Kumar, A., Droby, S., Singh, V. K., Singh, S. K., dan White, J. F. 2020. Entry, Colonization, and Distribution of Endophytic Microorganisms in Plants. Woodhead Publishing, United Kingdom.

Li, H., Li, L., Chi, Y., Tian, Q., Zhou, T., Han, C., Zhu, Y., dan Zhou, Y. 2020. Development of a standardized gram stain procedure for bacteria and inflammatory cells using an automated staining instrument. *Microbiology Open* 9(9): 1-10.

Madigan, MT, Martinko, JM, Parker, J. 2003. *Biology of Microorganisms* 10<sup>th</sup> Edition. Prentice-Hall Inc, New Jersey.

Margino, S. 2008. Produksi metabolit sekunder (antibiotik) oleh isolat jamur endofit Indonesia. *Majalah Farmasi Indonesia*, 19: 86-94.

Mark, N., Greenwald, R. A., Hillen, W., dan Nelson, M. L. 2001. *Tetracyclin in Biology, Chemistry and Medicine*. Birkhauser Verlag, Basel Switzerland.

Mohamad, O. A. A., Li, L., Ma, J. B., Hatab, S., Xu, L., Guo, J. W., Rasulov, B. A., Liu, Y. H., Hedlund, B. P., dan Li, W. J. 2018. Evaluation of the antimicrobial activity of endophytic bacterial populations from Chinese traditional medicinal plant licorice and characterization of the bioactive secondary metabolites produced by *Bacillus atrophaeus* against *Verticillium dahliae*. *Frontiers in Microbiology* 9: 1-14.

Myo, E. M., Maung, C. E. H., Mya, K. M., dan Khai, A. A. 2020. Characterization of bacterial endophytes from Myanmar medicinal plants for antimicrobial activity against human and plant pathogens. *Brazilian Journal of Pharmaceutical Sciences* 56: 1-8.

Napitupulu, H., Rumengan, I., Wulur, S., Ginting, E., Rimper, J., dan Toloh, B. 2019. *Bacillus* sp. sebagai agensi pengurai dalam pemeliharaan *Brachionus rotundiformis* yang menggunakan ikan mentah sebagai sumber nutrisi. *Jurnal Ilmiah Platax* 7(1): 158-169.

Nugroho, E. C. 2009. Potensi Daya Antibakteri Isolat *Lactobacillus* dari Tempoyak *Escherichia coli*. Seminar Hasil Penelitian & Pengabdian kepada Masyarakat. Unila.

Ooi, M. F., Foo, H. L., Loh, T. C., Mohamad, R., Rahim, R. A., dan Ariff, A. 2021. A refined medium to enhance the antimicrobial activity of post biotic produced by *Lactiplantibacillus plantarum* RS5. *Scientific Reports* 11: 7617.

Pangastuti, A. 2006. Definisi spesies prokaryota berdasarkan urutan basa gen penyandi 16S rRNA dan gen penyandi protein. *Biodiversitas* 7(3): 292-296.



- Pinchuka, I. V., Bressollier, P., Sorokulova, I. B., Verneuil, B., Urdaci, M. C. 2002. Amicoumacin antibiotic production and genetic diversity of *Bacillus subtilis* strains isolated from different habitats. *Research of Microbiology* 153:269–276.
- Poonawala, H., dan Peaper, D. 2017. Bacterial identification using 16S rRNA gene sequencing in a University Teaching Hospital. *Open Forum Infectious Diseases* 4(1): 1-6.
- Purwanto, U. M. S., Pasaribu, F. H., dan Bintang, M. 2014. Isolasi bakteri endofit dari tanaman sirih hijau (*Piper betle* L.) dan potensinya sebagai penghasil senyawa antibakteri. *Current Biochemistry* 1(1): 51-57.
- Puspita, P. J., Safithri, M., dan Sugiharti, N. P. 2018. Antibacterial activities of sirih merah (*Piper crocatum*) leaf extracts. *Current Biochemistry* 5(3): 1-10.
- Putri, D. H., Rahayu, R., Sahara, D., Nurhelmi, dan Violita. 2019. Antimicrobial activities of extract of andalas endophytic bacterial fermentation products in overcoming oral cavity infection. *EKSAKTA* 20(2): 1-5.
- Rabbee, M. F., Ali, M. S., Choi, J., Hwang, B. S., Jeong, S. C., dan Baek, K. 2019. *Bacillus velezensis*: A valuable member of bioactive molecules within plant microbiomes. *Molecules* 24: 1-13.
- Ramirez, V., Martinez, J., Bustillos-Cristales, M. R., Cataneda-Antonio, D., Munive, J., dan Baez, A. *Bacillus cereus* MH778713 elicits tomato plant protection against *Fusarium oxysporum*. *Journal Application Microbiology* 132: 470-482.
- Rat, A., Naranjo, H. D., Krigas, N., Grigoriadou, K., Maloupa, E., Alonso, A. V., Schneider, C., Papageorgiou, V. P., Assimopoulou, A. N., Tsafantakis, N., Fokialakis, N., dan Willems, A. 2021. Endophytic bacteria from the roots of the medicinal plant alkanna tinctoria tausch (*Boraginaceae*): Exploration of plant growth promoting properties and potential role in the production of plant secondary metabolites. *Frontiers in Microbiology* 12(633488): 1-14.
- Reinhold-Hurek, B., dan Hurek, T. 2011. Living inside plants: bacterial endophytes. *Current Opinion Plant Biology* 14:435–443.
- Reygaert, W. C. 2018. An overview of the antimicrobial resistance mechanisms of bacteria. *AIMS Microbiology*, 4(3): 482–501.
- Sansinenea, E., dan Ortiz, A. 2011. Secondary metabolites of soil *Bacillus* spp. *Biotechnol Lett* 33:1523–1538.
- Santoso, B. M. 2007. *Sereh Wangi Bertanam dan Penyulingan*, Cetakan ke 10. Kanisius, Yogyakarta.



Schlievert, P. M., Kilgore, S. H., Seo, K. S., dan Leung, D. Y. M. 2019. Glycerol monolaurate contributes to the antimicrobial and anti-inflammatory activity of human milk. *Scientific Reports* 9(1): 1-9.

Shoaib, M., Hammad, M., Bhutta, Z. A., dan Muzammil, I. 2020. A mini-review on commonly used biochemical tests for identification of bacteria. *International Journal of Research Publications* 54(1): 1-6.

Sinurat, C. T. J., Sinuraya, M., dan Sitepu, F. E. T. 2020. Growth response of two kenikir (*Cosmos caudatus* Kunth.) plant varieties on gamma ray irradiation. *Jurnal Agroekoteknologi* 8(3): 146-149.

Sriwinahyu, P. A., Sedijani, P., dan Zulkifli, L. 2020. Antimicrobial activity of pomegranatum's endophytic bacteria against pathogenic microbes. *Jurnal Biologi Tropis* 20(3): 446-451.

Stein, T. 2005. *Bacillus subtilis* antibiotics: structures, syntheses and specific functions. *Mol Microbiol* 56:845–857.

Sudarwati, T. P. L. 2018. Aktivitas antibakteri daun pepaya (*Carica papaya*) menggunakan pelarut etanol terhadap bakteri *Bacillus subtilis*. *Journal of Pharmacy and Science* 3(2): 13-16.

Tamehiro, N., Okamot-Hosova, Y., Okamoto, S., Ubukata, M., Hamada, M., dan Naganawa, H. 2002 Bacilsocin, a novel phospholipid antibiotic produced by *Bacillus subtilis* 168. *Antimicrob Agents Chemother* 46:315–320.

Tjitosoepomo. 1988. *Taksonomi Tumbuhan Spermatophita*. UGM Press, Yogyakarta.

Toledo, L. G., Ramos, M. A. S., Sposito, L., Castilho, E. M., Pvan, F. R., Lopes, E. O., Silva, I. C., Zocolo, G. J., Ribeiro, P. R. V., Oda, F. B., Pereira, J. A. S., Santos, A. G., Bauab, T. M., dan Almeida, M. T. G. 2020. Profiling the *Cymbopogon nardus* ethanol extract and its antifungal potential against *Candida* species with different patterns of resistance. *Journal of the Brazilian Chemical Society* 31(9): 1926-1938.

Tsui, C., Kong, E. F., dan Jabra-Rizk, M. A. 2016. Pathogenesis of *Candida albicans* biofilm. *Pathogens and Disease* 74(4): 1-13.

Ulrich, K., Kube M., Becker, R., Schneck, V., dan Ulrich, A. 2021. Genomic analysis of the endophytic *Stenotrophomonas* strain 169 reveals features related to plant-growth promotion and stress tolerance. *Frontiers in Microbiology* 12: 1-14.

Vaou, N., Stavropoulou, E., Voidarou, C., Tsigalou, C., dan Bezirtzoglou, E. 2021. Towards advances in medicinal plant antimicrobial activity: A review study on challenges and future perspectives. *Microorganisms* 9(2041): 1-28.

Velmurugan, S., Anokhe, A., dan Kalia, V. 2021. Biochemical characterisation of starch hydrolysing bacteria. *AgriCos* 2: 63-65.



- Wahyuni, D. 2016. Toksisitas Ekstrak Tanaman sebagai Bahan Dasar Biopesisida Baru Pembasmi Larva Nyamuk *Aedes aegypti* L. (Ekstrak Daun Sirih, Ekstrak Biji Pepaya, dan Ekstrak Biji Srikaya) Berdasarkan Hasil Penelitian. Media Nusa Creative, Malang.
- Waluyo, L. 2004. Mikrobiologi Umum. UMM Press, Malang.
- Wang, Y., Dai, Z., Zhang, Z., Zhu, L., Zhang, H., Huang, H., dan Jiang, L. 2021. Draft genome sequence of a multidrug-resistant *Stenotrophomonas* sp. B1-1 strain isolated from radiation-polluted soil and its pathogenic potential. Journal of Global Antimicrobial Resistance 24: 121-123.
- Wu, W., Chen, W., Liu, S., Wu, J., Zhu, Y., Qin, L., dan Zhu, B. 2021. Beneficial relationships between endophytic bacteria and medicinal plants. Frontiers in Plant Science 12(646146): 1-13.
- Wulandari, D., dan Purwaningsih, D. 2019. Identifikasi dan karakterisasi bakteri amilolitik pada umbi *Colocasia esculenta* L. secara morfologi, biokimia, dan molekuler. Jurnal Bioteknologi dan Biosains Indonesia 6(2): 247-258.
- Yassir, M., dan Asnah. 2018. Pemanfaatan jenis tumbuhan obat tradisional di Desa Batu Hamparan Kabupaten Aceh Tenggara. Jurnal Biotik 6(1): 17-34.
- Yudharaj, P., Shankar, M., Sowjanya, R., Sireesha, B., Naik, E. A., Proyadarshini, R. J. 2016. Importance and uses of medicinal plants – an overview. International Journal of Preclinical and Pharmaceutical Research 7(2): 67-73.
- Zhang, J. H., Yang, R., Wang, T. Y., Dong, W. H., Wang, F., dan Wang, L. 2012. A simple and practical method that prepares high molecular weight DNA ladders. Molecular Medicine Reports 6: 1211-1213
- Zhao, L., Xu, Y., Lai, X., Shan, C., Deng, Z., dan Ji, Y. 2015. Screening and characterization of endophytic *Bacillus* and *Paenibacillus* strains from medicinal plant *Lonicera japonica* for use as potential plant growth promoters. Brazilian Journal of Microbiology 46(4).
- Zhou, X., dan Li, Y. 2015. Atlas of Oral Microbiology from Healthy Microflora to Disease. Elsevier Inc., China.
- Zinniel, D. K., Lambrecht, P., Harris, N. B., Feng, Z., Kuczmarski, D., Higley, P., Ishimaru, C. A., Arunakumari, A., Barletta, R. G., dan Vidaver, A. K. 2002. Isolation and characterization of endophytic colonizing bacteria from agronomic crops and prairie plants. American Society for Microbiology 68(5): 2198-2208.