

DAFTAR PUSTAKA

- Abbafati, C. *et al.* (2020) “Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019,” *The Lancet*, 396(10258). doi: 10.1016/S0140-6736(20)30925-9.
- Al-Ansari, M. *et al.* (2020) “Optimization of medium components for the production of antimicrobial and anticancer secondary metabolites from *Streptomyces* sp. AS11 isolated from the marine environment,” *Journal of King Saud University - Science*, 32(3). doi: 10.1016/j.jksus.2020.02.005.
- Apsari, P. P., Budiarti, S. dan Wahyudi, A. T. (2019) “Actinomycetes of rhizosphere soil producing antibacterial compounds against urinary tract infection bacteria,” *Biodiversitas*, 20(5). doi: 10.13057/biodiv/d200504.
- Arenz, S. dan Wilson, D. N. (2016) “Bacterial protein synthesis as a target for antibiotic inhibition,” *Cold Spring Harbor Perspectives in Medicine*, 6(9). doi: 10.1101/cshperspect.a025361.
- Ashurst, J. V. dan Dawson, A. (2021) *Klebsiella Pneumonia*, *StatPearls*. Treasure Island (FL): StatPearls. Tersedia pada: <https://www.ncbi.nlm.nih.gov/books/NBK519004/>.
- Bahar, M. *et al.* (2020) “Potential of Actinomycetes to Inhibit the Biofilm Formation of *Escherichia coli* ATCC 25922,” *Indonesian Journal of Biotechnology and Biodiversity*, 4(1). doi: 10.47007/ijobb.v4i1.58.
- Bahar, M. dan Zulfa, F. (2018) “Potention of Antibacterial Isolat Actinomycetes to Proteolytic and Amilolytic Activity *Escherichia Coli* ATTC 25922,” *Jurnal Teknologi Laboratorium*, 7(1). doi: 10.29238/teknolabjournal.v7i1.101.
- Balouiri, M., Sadiki, M. dan Ibsouda, S. K. (2016) “Methods for in vitro evaluating antimicrobial activity: A review,” *Journal of Pharmaceutical Analysis*. doi: 10.1016/j.jpha.2015.11.005.
- Barka, E. A. *et al.* (2016) “Taxonomy, Physiology, and Natural Products of Actinobacteria,” *Microbiology and Molecular Biology Reviews*, 80(1). doi: 10.1128/mmbr.00019-15.
- Bauman, R. W. (2018) *Microbiology with Diseases by Body System, Fifth Edition*. Fifth. Pearson.
- Behzadnia, A. *et al.* (2020) “Exploitation of Ultrasound Technique for Enhancement of Microbial Metabolites Production,” *Molecules (Basel, Switzerland)*. doi: 10.3390/molecules25225473.
- Bengoechea, J. A. dan Sa Pessoa, J. (2019) “*Klebsiella pneumoniae* infection biology: Living to counteract host defences,” *FEMS Microbiology Reviews*. doi: 10.1093/femsre/fuy043.

- Benhadj, M. *et al.* (2019) "Screening of rare actinomycetes isolated from natural wetland ecosystem (Fetzara Lake, northeastern Algeria) for hydrolytic enzymes and antimicrobial activities," *Journal of King Saud University - Science*, 31(4). doi: 10.1016/j.jksus.2018.03.008.
- Brunton, L. L., Hilal-Dandan, R. dan Knollmann, B. C. (2018) *Goodman & Gilman's The Pharmacological Basis of Therapeutics*. Thirteenth. McGraw-Hill.
- BS, N. *et al.* (2020) "Isolation of plant growth promoting actinobacteria from the rhizosphere of finger millet and cowpea," *Journal of Pharmacognosy and Phytochemistry*, 9(6). doi: 10.22271/phyto.2020.v9.i6p.13097.
- Budhathoki, S. dan Shrestha, A. (2020) "Screening of Actinomycetes from Soil for Antibacterial Activity," *Nepal Journal of Biotechnology*, 8(3). doi: 10.3126/njb.v8i3.33664.
- Charousová, I. *et al.* (2019) "Antimicrobial activity of actinomycetes and characterization of actinomycin-producing strain KRG-1 isolated from Karoo, South Africa," *Brazilian Journal of Pharmaceutical Sciences*, 55. doi: 10.1590/s2175-97902019000217249.
- Davis, W. W. dan Stout, T. R. (1971) "Disc plate method of microbiological antibiotic assay. I. Factors influencing variability and error.," *Applied microbiology*, 22(4). doi: 10.1128/aem.22.4.659-665.1971.
- Demissie, B. W. *et al.* (2021) "Acute lower respiratory tract infections and associated factors among under-five children visiting Wolaita Sodo University Teaching and Referral Hospital, Wolaita Sodo, Ethiopia," *BMC Pediatrics*, 21(1). doi: 10.1186/s12887-021-02888-6.
- Dong, N. *et al.* (2018) "Genome analysis of clinical multilocus sequence Type 11 *Klebsiella Pneumoniae* from China," *Microbial Genomics*, 4(2). doi: 10.1099/mgen.0.000149.
- Downling, A. M., O'Dwyer, J. dan Adley, C. (2017) "Antibiotics: mode of action and mechanisms of resistance.," *Nursing standard (Royal College of Nursing (Great Britain) : 1987)*, 25(42).
- Duijkeren, E. van *et al.* (2017) "Mechanisms of Bacterial Resistance to Antimicrobial Agents," *Microbiology Spectrum*, 6(2).
- Effah, C. Y. *et al.* (2020) "Klebsiella pneumoniae: An increasing threat to public health," *Annals of Clinical Microbiology and Antimicrobials*. doi: 10.1186/s12941-019-0343-8.
- Etebu, E. dan Ibemologi, A. (2016) "Antibiotics: Classification and mechanisms of action with emphasis on molecular perspectives," *International Journal of Applied Microbiology and Biotechnology Research*, 4(January 2016).
- Fernández-Villa, D., Aguilar, M. R. dan Rojo, L. (2019) "Folic acid antagonists: Antimicrobial and immunomodulating mechanisms and applications," *International Journal of Molecular Sciences*. doi: 10.3390/ijms20204996.

- Ferreira, R. L. *et al.* (2019) "High prevalence of multidrug-resistant klebsiella pneumoniae harboring several virulence and β -lactamase encoding genes in a brazilian intensive care unit," *Frontiers in Microbiology*, 10(JAN). doi: 10.3389/fmicb.2018.03198.
- Gkouvatsos, K., Papanikolaou, G. dan Pantopoulos, K. (2012) "Regulation of iron transport and the role of transferrin," *Biochimica et Biophysica Acta - General Subjects*. doi: 10.1016/j.bbagen.2011.10.013.
- Goodfellow, M. *et al.* (2012) *Bergey's Manual of Systematic Bacteriology Volume 5: The Actinobacteria*. Second. New York: Springer.
- Grimont, P. A. D. dan Grimont, F. (2015) "Klebsiella," in *Bergey's Manual of Systematics of Archaea and Bacteria*.
- Haryati, S. D., Darmawati, S. dan Wilson, W. (2017) "Perbandingan Efek Ekstrak Buah Alpukat (*Persea americana* Mill) Terhadap Pertumbuhan Bakteri *Pseudomonas aeruginosa* dengan Metode Disk dan Sumuran," *Prosiding Seminar Nasional Publikasi Hasil-Hasil Penelitian dan Pengabdian Masyarakat Universitas Muhammadiyah Semarang*, (September).
- Hasan, T. H. dan Al-Harmoosh, R. A. (2020) "Mechanisms of antibiotics resistance in bacteria," *Systematic Reviews in Pharmacy*, 11(6). doi: 10.31838/srp.2020.6.118.
- Hinkelmann, K. dan Kempthorne, O. (2008) "Completely Randomized Design," in *Design and Analysis of Experiments, Volume 1*. John Wiley & Sons.
- Holden, V. I. *et al.* (2016) "Klebsiella pneumoniae siderophores induce inflammation, bacterial dissemination, and HIF-1 α stabilization during pneumonia," *mBio*, 7(5). doi: 10.1128/mBio.01397-16.
- Horak, I. *et al.* (2019) "Microbial metabolomics: essential definitions and the importance of cultivation conditions for utilizing *Bacillus* species as bionematicides," *Journal of Applied Microbiology*. doi: 10.1111/jam.14218.
- Jadon, P. *et al.* (2019) "Optimization of various physiochemical parameters to enhance production of secondary metabolite from soil actinomycetes against dermatophytes," *Environment Conservation Journal*, 20(1&2).
- Jakubiec-Krzysiak, K. *et al.* (2018) "Secondary metabolites of actinomycetes and their antibacterial, antifungal and antiviral properties," *Polish Journal of Microbiology*. doi: 10.21307/pjm-2018-048.
- Joseph, L. *et al.* (2021) "From klebsiella pneumoniae colonization to dissemination: An overview of studies implementing murine models," *Microorganisms*, 9(6). doi: 10.3390/microorganisms9061282.
- Kamel, F. H. dan Jarjes, S. F. (2015) *Essential Bacteriology and Immunology*.
- Kang, H. K. dan Park, Y. (2015) "Glycopeptide antibiotics: Structure and mechanisms of action," *Journal of Bacteriology and Virology*. doi:

10.4167/jbv.2015.45.2.67.

- El Karkouri, A., Assou, S. A. dan El Hassouni, M. (2019) "Isolation and screening of actinomycetes producing antimicrobial substances from an extreme moroccan biotope," *Pan African Medical Journal*, 33. doi: 10.11604/pamj.2019.33.329.19018.
- Katzung, B. dan Trevor, A. J. (2021) *Basic & Clinical Pharmacology*. 15th ed. Diedit oleh T. W. Vanderah. McGraw-Hill.
- Khattab, A. I., Babiker, E. H. dan Saeed, H. A. (2016) "Streptomyces: isolation, optimization of culture conditions and extraction of secondary metabolites," *International Current Pharmaceutical Journal*, 5(3). doi: 10.3329/icpj.v5i3.26695.
- Kumar, K. S. *et al.* (2012) "Screening, isolation, taxonomy and fermentation of an antibiotic producer *Streptomyces xinghaiensis* from soil capable of acting against linezolid resistant strains," *Indian Journal of Experimental Biology*, 50(10).
- Kumar, R. R. dan Jadeja, V. J. (2016) "Isolation of Actinomycetes: A Complete Approach," *International Journal of Current Microbiology and Applied Sciences*, 5(5). doi: 10.20546/ijcmas.2016.505.062.
- Lenchenko, E. *et al.* (2020) "Morphological and adhesive properties of *Klebsiella pneumoniae* biofilms," *Veterinary World*, 13(1). doi: 10.14202/vetworld.2020.197-200.
- Li, B. *et al.* (2014) "Molecular pathogenesis of *Klebsiella pneumoniae*," *Future Microbiology*. doi: 10.2217/fmb.14.48.
- Li, Q. *et al.* (2016) "Morphological Identification of Actinobacteria," in *Actinobacteria - Basics and Biotechnological Applications*. doi: 10.5772/61461.
- Madigan, M. T. *et al.* (2019) *Brock Biology of Microorganism, Thirteenth Edition*. 15 ed. San Francisco: Pearson.
- March, C. *et al.* (2013) "Role of Bacterial Surface Structures on the Interaction of *Klebsiella pneumoniae* with Phagocytes," *PLoS ONE*, 8(2). doi: 10.1371/journal.pone.0056847.
- Martin, R. M. dan Bachman, M. A. (2018) "Colonization, infection, and the accessory genome of *Klebsiella pneumoniae*," *Frontiers in Cellular and Infection Microbiology*. doi: 10.3389/fcimb.2018.00004.
- Mast, Y. dan Stegmann, E. (2019) "Actinomycetes: The antibiotics producers," *Antibiotics*. doi: 10.3390/antibiotics8030105.
- Mohan, Y. S. Y. V. J. *et al.* (2014) "Isolation, Screening and Characterization of Actinomycetes from Marine Sediments for their Potential to Produce Antifungal Agents," *International Journal of Life Sciences Biotechnology and Pharma Research*, 3(4).

- Mohseni, M. *et al.* (2013) "Screening of antibacterial producing actinomycetes from sediments of the caspian sea.," *International journal of molecular and cellular medicine*, 2(2).
- Moubareck, C. A. (2020) "Polymyxins and bacterial membranes: A review of antibacterial activity and mechanisms of resistance," *Membranes*. doi: 10.3390/membranes10080181.
- Munita, J. M. dan Arias, C. A. (2016) "Mechanisms of antibiotic resistance," in *Virulence Mechanisms of Bacterial Pathogens*. doi: 10.1128/9781555819286.ch17.
- Murray, P. R., Rosenthal, K. S. dan Pfaller, M. A. (2021) *Medical Microbiology*. Ninth. Elsevier.
- Navon-Venezia, S., Kondratyeva, K. dan Carattoli, A. (2017) "Klebsiella pneumoniae: A major worldwide source and shuttle for antibiotic resistance," *FEMS Microbiology Reviews*. doi: 10.1093/femsre/fux013.
- Opoku-Temeng, C., Kobayashi, S. D. dan DeLeo, F. R. (2019) "Klebsiella pneumoniae capsule polysaccharide as a target for therapeutics and vaccines," *Computational and Structural Biotechnology Journal*. doi: 10.1016/j.csbj.2019.09.011.
- Pan, Y. J. *et al.* (2015) "Genetic analysis of capsular polysaccharide synthesis gene clusters in 79 capsular types of Klebsiella spp.," *Scientific Reports*, 5. doi: 10.1038/srep15573.
- Peterson, E. dan Kaur, P. (2018) "Antibiotic resistance mechanisms in bacteria: Relationships between resistance determinants of antibiotic producers, environmental bacteria, and clinical pathogens," *Frontiers in Microbiology*, 9(NOV). doi: 10.3389/fmicb.2018.02928.
- Poirel, L., Jayol, A. dan Nordmanna, P. (2017) "Polymyxins: Antibacterial activity, susceptibility testing, and resistance mechanisms encoded by plasmids or chromosomes," *Clinical Microbiology Reviews*. doi: 10.1128/CMR.00064-16.
- Procop, G. W. *et al.* (2017) *Koneman's Color Atlas and Textbook of Diagnostic Microbiology*. Seventh. Philadelphia: Wolters Kluwer.
- Rajnisz, A. *et al.* (2016) "Characterization and optimization of biosynthesis of bioactive secondary metabolites produced by streptomyces sp. 8812," *Polish Journal of Microbiology*, 65(1). doi: 10.5604/17331331.1197275.
- Riedel, S. *et al.* (2019) *Jawetz, Melnick, & Adelberg's Medical Microbiology*. Twenty eig. McGraw-Hill.
- Sabtu, N., Enoch, D. A. dan Brown, N. M. (2015) "Antibiotic resistance: What, why, where, when and how?," *British Medical Bulletin*. doi: 10.1093/bmb/ldv041.
- Salkind, N. J. (2010) *Encyclopedia of Research Design*. Diedit oleh B. B. Frey dan

- K. R. Teasdale. California: SAGE Publications.
- Santos, J. A. dan Lamers, M. H. (2020) “Novel antibiotics targeting bacterial replicative dna polymerases,” *Antibiotics*. doi: 10.3390/antibiotics9110776.
- Sapkota, A. *et al.* (2020) “Isolation, Characterization, and Screening of Antimicrobial-Producing Actinomycetes from Soil Samples,” *International Journal of Microbiology*, 2020. doi: 10.1155/2020/2716584.
- Selim, M. S. M., Abdelhamid, S. A. dan Mohamed, S. S. (2021) “Secondary metabolites and biodiversity of actinomycetes,” *Journal of Genetic Engineering and Biotechnology*. doi: 10.1186/s43141-021-00156-9.
- De Simeis, D. dan Serra, S. (2021) “Actinomycetes: A never-ending source of bioactive compounds—an overview on antibiotics production,” *Antibiotics*. doi: 10.3390/antibiotics10050483.
- Sulistiyanto, W. N. dan Trimulyono, G. (2019) “Isolation and Antibacterial Activities of Actinomycetes from Rhizosphere Plant Cane (*Saccharum officinarum*) on *Escherichia coli* and *Staphylococcus aureus*,” *BIOEDUKASI*. doi: 10.19184/bioedu.v17i1.13199.
- Suresh, A. B., Rosani, A. dan Wadhwa, R. (2021) *Rifampin*. Treasure Island (FL): StatPearls.
- Talaro, K. P. dan Chess, B. (2018) *Foundations in Microbiology*. Tenth. New York: McGraw-Hill.
- Tortora, G. J., Funke, B. R. dan Case, C. L. (2019) *Microbiology: An Introduction*. Thirteenth. Boston: Pearson.
- Toutenburg, H. dan Shalabh (2009) *Statistical Analysis of Designed Experiments*. Third. New York: Springer.
- Tripathi, N. dan Sapra, A. (2021) *Gram Staining*. Treasure Island: StatPearls.
- Tsani Ariandi, M. Z. *et al.* (2021) “Effectiveness of Metabolite Substance Filtrates of Actinomycetes isolates from Kebun Raya Bogor against the growth of *Escherichia coli*, *Pseudomonas aeruginosa* and *Salmonella typhi*: In Vitro study,” *Jurnal Biologi Tropis*, 21(1). doi: 10.29303/jbt.v21i1.2466.
- WHO (2014) “Antimicrobial resistance. Global report on surveillance,” *World Health Organization*, 61(3). doi: 10.1007/s13312-014-0374-3.
- Wiley, J. M., Sherwood, L. M. dan Woolverton, C. J. (2014) *Prescott’s Microbiology, Ninth Edition*. Ninth. New York: McGraw-Hill.
- Wu, M. dan Li, X. (2015) “*Klebsiella pneumoniae* and *Pseudomonas aeruginosa*,” in Tang, Y.-W. *et al.* (ed.) *Molecular Medical Microbiology, Volume 3*. Second. London: Elsevier.
- Wulandari, W. dan Rahayu, T. (2015) “Aktivitas Antibakteri Isolat Actinomycetes dari Sampel Pasir Gunung Merapi dengan Lama Fermentasi yang Berbeda terhadap bakteri *Escherichia coli* multiresisten antibiotik,” *Bioeksperimen: Jurnal Penelitian Biologi*, 1(2).

- Yu, Z. *et al.* (2015) “Antibacterial mechanisms of polymyxin and bacterial resistance,” *BioMed Research International*. doi: 10.1155/2015/679109.
- Yun, T. Y. *et al.* (2018) “Optimization of fermentation conditions through response surface methodology for enhanced antibacterial metabolite production by *Streptomyces* sp. 1-14 from cassava rhizosphere,” *PLoS ONE*, 13(11). doi: 10.1371/journal.pone.0206497.
- Zadeh, F. M., Zarei, H. dan Jahromy, S. H. (2021) “Type 1 and 3 fimbriae phenotype and genotype as suitable markers for uropathogenic bacterial pathogenesis via attachment, cell surface hydrophobicity, and biofilm formation in catheter-associated urinary tract infections (CAUTIs),” *Iranian Journal of Basic Medical Sciences*, 24(8).