

DAFTAR PUSTAKA

- Aghapour, Z., P. Gholizadeh, K. Ganbarov, A.Z. Bialvaei, S.S. Mahmood, A. Tanomand, M. Yousefi, M. Asgharzadeh, B. Yousefi, and H.S. Kafil. 2019. Molecular mechanisms related to colistin resistance in Enterobacteriaceae. *Infection and Drug Resistance* 12: 965-975.
- Alam, K., A. Mazumder, S. Sikdar, Y. Zhao, J. Hao, C. Song, Y. Wang, R. Sarkar, S. Islam, Y. Zhang, and A. Li. 2022. *Streptomyces*: The biofactory of secondary metabolites. *Front. Microbiol* 13: 968053.
- Anggita, D., S. Nuraisyah, dan E.P. Wiriansya. 2022. Mekanisme kerja antibiotik. *UMI Medical Journal* 7(1): 46-58.
- Baquero, F., A.P. Tedim and T.M. Coque. 2013. Antibiotic resistance shaping multi-level population biology of bacteria. *Frontiers in Microbiology* 4(15).
- Biutifasari, V. 2018. Extended spectrum Beta-lactamase (ESBL). *Oceana Biomedicina Journal* 1(1): 1-11.
- Cane, D.E., X. He, S. Kobayashi, S. Omura, and H. Ikeda. 2006. Geosmin biosynthesis in *Streptomyces avermitilis*. Molecular cloning, expression, and mechanistic study of the germacradienol/geosmin synthase. *J. Antibiot* 59(8): 471-479.
- Charousova, I., S. Javorekova and J. Wink. 2015. Isolation and characterization of *Streptomyces rishiriensis* (VY31) with antibiotic activity against various pathogenic microorganisms. *Journal of Microbiology, Biotechnology, and Food Sciences* 4(1): 23-27.
- Doi, Y., J. Wachino, and Y. Arakawa. 2016. Aminoglycoside resistance: The emergence of acquired 16S ribosomal RNA methyltransferases. *Infect Dis Clin North Am* 30(2): 523-537.
- Donaliazarti. 2022. Mekanisme resistensi terhadap antimikroba. *Collaborative Medical Journal (CMJ)* 5(3): 37-45.
- Donato, J.J., L.A. Moe, B.J. Converse, K.D. Smart, F.C. Berklein, P.S. McManus and J. Handelsman. 2010. Metagenomic analysis of apple orchard soil reveals antibiotic resistance genes encoding predicted bifunctional proteins. *Applied and Environmental Microbiology* 76(13): 4396-4401.
- Evaggelopoulou, E.N. and V.F. Samanidou. 2013. Development and validation of an HPLC method for the determination of six penicillin and three amphenicol antibiotics in gilthead seabream (*Sparus aurata*) tissue according to the European Union decision 2002/657/EC. *Food Chemistry* 136: 1322-1329.
- Furlan, J.P.R., R.D.S. Rosa, M.S. Ramos, R. Lopes, L.D.R.D. Santos, E.A. Savazzi and E.G. Stehling. 2024. Convergence of *mcr-1* and broad-spectrum β -lactamase genes in *Escherichia coli* strains from the environmental sector. *Environmental Pollution* 362: 124937.
- Gelalcha, B.D., R.I. Mohamed, A.E. Gelgie and O.K. Dego. 2024. Molecular epidemiology of extended-spectrum beta-lactamase-producing-*Klebsiella* species in East Tennessee dairy cattle farms. *Front. Microbiol* 15: 1439363.
- Goredema, N., T. Ndwora, R. Shoko, and E. Ngadze. 2020. Morphological and molecular characterization of *Streptomyces* spp. which suppress pathogenic fungi. *African Crop Science Journal* 28(4): 555-566.

- Guo, H., S. Xue, M. Nasir, J. Lv and J. Gu. 2018. Role of bentonite on the mobility of antibiotic resistance genes, and microbial community in oxytetracycline and cadmium contaminated soil. *Front. Microbiol* 9:2722.
- Gyraite, G., M. Katarzyte, R.P. Espinosa, G. Kalvaitiene, and E. Lastauskiene. 2024. Microbiome and resistome studies of the Lithuanian Baltic Sea Coast and the curonian lagoon waters and sediments. *Antibiotics* 12(1013).
- Hasani, A., A. Kariminik, and K. Issazadeh. 2014. *Streptomyces*: Characteristics and their antimicrobial activities. *International Journal of Advanced Biological and Biomedical Research* 2(1): 63-75.
- Helmidanora, R., S. Jubaidah, dan F.A.A. Isalukal. 2023. Formulasi *film forming spray* dari kloramfenikol untuk luka. *Jurnal Ilmiah Ibnu Sina* 8(2): 327-337.
- Ikhmiukor, O.O., S.S.R. Souza, I.J. Akintayo, M.M. Marcovici, A. Workman, I.W. Martin, and C.P. Andam. 2023. Phylogenetic lineages and antimicrobial resistance determinants of clinical *Klebsiella oxytoca* spanning local to globe scales. *Microbiology spectrum* 11(5).
- Islam, T., M.A. Haque, H.R. Barai, A. Istiaq and J. Kim. 2024. Antibiotic resistance in plant pathogenic bacteria: Recent data and environmental impact of unchecked use and the potential of biocontrol agents as an eco-friendly alternative. *Plants* 13: 1135.
- Ismail, S., B. Jiang, Z. Nasimi, M. Inam-ul-Haq, N. Yamamoto, A.D. Ofori, N. Khan, M. Arshad, K. Abbas, and A. Zheng. 2020. Investigation of *Streptomyces scabies* causing potato scab by various detection techniques, its pathogenicity and determination of host-disease resistance in potato germplasm. *Pathogens* 9(760): 1-26.
- Jian, Z., L. Zeng, T. Xu, S. Sun, S. Yan, L. Yang, Y. Huang, J. Jia, and T. Dou. 2021. Antibiotic resistance genes in bacteria: occurrence, spread, and control. *Journal of Basic Microbiology* 61: 1049-1070.
- Jones. S.E. and M.A. Elliot. 2018. Exploring the regulation of *Streptomyces* growth and development. *Current Opinion in Microbiology* 42: 25-30.
- Komaki, H. 2022. Resolution of housekeeping gene sequences used in MLSA for the genus *Streptomyces* and reclassification of *Streptomyces anthocyanicus* and *Streptomyces tricolor* as heterotypic synonyms of *Streptomyces violaceoruber*. *International Journal of Systematic and Evolutionary Microbiology* 72.
- Kwak, J. and K.E. Kendrick. 1996. Bald mutants of *Streptomyces griseus* that prematurely undergo key events of sporulation. *Journal of Bacteriology* 178(15): 4643-4650.
- Laskaris, P. and A.D. Karagouni. 2021. *Streptomyces*, Greek habits and novel pharmaceuticals: A promising challenge. *Microbiology Research* 12: 840-846.
- Le, K.D., N.H. Yu, A.R. Park, D. Park, C. Kim, and J. Kim. 2022. *Streptomyces* sp. AN090126 as a biocontrol agent against bacterial and fungal plant diseases. *Microorganisms* 10 (791).
- Magiorakos, A.P., A. Srinivasan, R.B. Carey, Y. Carmeli, M.E. Falagas, C.G. Giske, S. Harbarth, J.F. Hindler, G. Kahlmeter, B. Olsson-Liljequist, D.L. Paterson, L.B. Rice, J. Stelling, M.J. Struelens, A. Vatopoulos, J.T. Weber and D.L. Monnet. 2011. Multidrug-resistant, extensively drug-resistant and pandrug-resistant bacteria: an international expert proposal for interim standard definitions for acquired resistance. *Clin Microbiol Infect* 18: 268–281.

- Mak, S., Y. Xu and J.R. Nodwell. 2014. The expression of antibiotic resistance genes in antibiotic-producing bacteria. *Molecular Microbiology* 93(3): 391-402.
- Meintanis, C., K.I. Chalkou, K.A. Kormas, D.S. Lymperopoulou, E.A. Katsifas and A.D. Karagouni. 2009. The use of *trpB* gene in resolving phylogenetic diversity within the group of *Streptomyces*. *Current Trends in Microbiology* 5: 37-46.
- Merrick, M.J. 1976. A morphological and genetic mapping study of bald colony mutants of *Streptomyces coelicolor*. *Journal of General Microbiology* 96: 299-315.
- Milawarni, M., H. Pisestyani, dan D.W. Lukman. 2022. Gambaran *Escherichia coli* resisten antibiotik asal tangan pemerah, ambing sapi, susu serta air di peternakan sapi perah Kecamatan Cendana, Enrekang, Sulawesi Selatan. *Livestock and Animal Research* 20(3): 267-274.
- Mshana, S.E, C. Sindato, M.I. Matee, and L.E.G. Mboera. 2021. Antimicrobial use and resistance in agriculture and food production systems in Africa: A systematic review. *Antibiotics* 10 (976).
- Murray, C.J.L *et al.* 2022. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet* 399: 629-655.
- Nandina, R.Q., S. Pujiyanto, Wijanarka, dan Fahrurrozi. 2019. Skrining aktivitas antibakteri dan identifikasi molekuler berdasarkan gen 16S rRNA isolate aktinomiset asal Pulau Enggano dan Bali. *Berkala Bioteknologi* 2(2).
- Nieta, R.S.D.L., S. Antoraz, J.F. Alzate, R.I. Santamaria, and M. Diaz. 2020. Antibiotic production and antibiotic resistance: The two side of AbrB1/B2, a two-component system of *Streptomyces coelicolor*. *Front. Microbiol* 11: 587750.
- O'Neill, J. 2014. Antimicrobial resistance: tackling a crisis for the health and wealth of nations. *Review on Antimicrobial Resistance*.
- Ogawara, H. 2016. Self-resistance in *Streptomyces*, with special reference to β -Lactam antibiotics. *Molecules* 21(205).
- Petinaki, E. and C. Papagiannitsis. 2018. Resistance of Staphylococci to macrolides-lincosamides-streptogramins B (MLSB): epidemiology and mechanisms of resistance. *IntechOpen* 75192: 117-133.
- Prasetya, D. dan M.F. Abadi. 2022. Isolasi dan identifikasi *Streptomyces* sp. pada kolam tanah di Desa Tenggur Tulungagung Jawa Timur. *Meditory* 10(1): 1-7.
- Rice, L.B. 2012. Mechanisms of resistance and clinical relevance of resistance to β -Lactams, glycopeptides, and fluoroquinolones. *Mayo Clin Proc* 87(2): 198-208.
- Rintala, H., A. Nevalainen, E. Ronka and M. Suutari. 2001. PCR primer targeting the 16S rRNA gene for the specific detection of streptomyces. *Molecular and Cellular Probes* 15: 337-347.
- Rong, X. and Y. Huang. 2014. Chapter 11- Multi-locus sequence analysis: Taking prokaryotic systematics to the next level. *Methods in Microbiology* 41: 221-251.
- Salam, M.A., M.Y. Al-Amin, M.T. Salam, J.S. Pawar, N. Akhter, A.A. Rabaan, and M.A.A. Alqumber. 2023. Antimicrobial resistance: A growing serious threat for global public health. *Healthcare* 11: 1946.
- Sayeed, M.A., M. Arman, I. Jahan and M.A.M. Mondol. 2025. Comprehensive review of a particularly intriguing bacterial genus, *Streptomyces*: Traits and antimicrobial potential. *Journal of Health Science and Medical Research*: 1-20.
- Schwarz, S., C. Kehrenberg, B. Doublet, and A. Cloeckart. 2004. Molecular basis of bacterial resistance to chloramphenicol and florfenicol. *FEMS Microbiology Reviews* 28: 519-542.

- Shepherdson, E.M.F., C.R. Baglio, and M.A. Elliot. 2023. *Streptomyces* behavior and competition in the natural environment. *Current Opinion in Microbiology* 71: 102257.
- Stogios, P.J. and A. Savchenko. 2019. Molecular mechanism of vancomycin resistance. *Protein Science* 29: 654-669.
- Su, W., W. Wang, L. Li, M. Zhang, H. Xu, C. Fu, X. Pang, and M. Wang. 2024. Mechanism of tigecycline resistance in gram-negative bacteria: A narrative review. *Engineering Microbiology* 4: 100165.
- Taddei, A., M.J. Rodriguez, E. Marquez-Vilchez and C. Castelli. 2006. Isolation and identification of *Streptomyces* spp. from Venezuelan soils: Morphological and biochemical studies. *Microbiology Research* 161: 222-231.
- Tao, S., H. Chen, N. Li, T. Wang, and W. Liang. 2022. The spread of antibiotic resistance genes in vivo model. *Canadian Journal of Infectious Diseases and Medical Microbiology*.
- Thanner, S., D. Drissner, and F. Walsh. 2016. Antimicrobial resistance in agriculture. *mBio* 7(2): 1-7.
- Vurukonda, S.S.K.P., D. Giovanardi, and E. Stefani. 2018. Plant growth promoting and biocontrol activity of *Streptomyces* spp. as endophytes. *International Journal of Molecular Science* 19: 952.
- Wang, L., D. Liu, Y. Lv, L. Cui, Y. Li, H. Song, Y. Hao, J. Shen, Y. Wang, and T.R. Walsh. 2020. Novel plasmid-mediated tet(X5) gene conferring resistance to tigecycline, eravacycline, and omadacycline in a clinical *Acinetobacter baumannii* isolate. *Antimicrob Agents Chemother* 64(1).
- Wichmann, F., N. Udikovic-Kolic, S. Andrew and J. Handelsman. 2014. Diverse antibiotic resistance genes in dairy cow manure. *mBio* 5(2).
- Yaghoubi, S., A.O. Zekiy, M. Krutova, M. Gholami, E. Kouhsari, M. Sholeh, Z. Ghafouri, and F. Maleki. 2022. Tigecycline antibacterial activity, clinical effectiveness, and mechanisms and epidemiology of resistance: narrative review. *European Journal of Clinical Microbiology & Infectious Diseases* 41: 1003-1002.
- Yushchuk, O., E. Binda and F. Marinelli. 2020. Glycopeptide antibiotic resistance genes: Distribution and function in the producer Actinomycetes. *Front. Microbiol* 11: 1173.
- Zalewska M., A. Błazejewska, A. Czapko and M. Popowska. 2021. Antibiotics and antibiotic resistance genes in animal manure consequences of its application in agriculture. *Front. Microbiol* 12:610656.
- Zhang, X.Y., L.J. Ding, and M.Z. Fan. 2009. Resistance patterns and detection of aac(3)-IV gene in apramycin-resistant *Escherichia coli* isolated from farm animals and farm workers in northeastern of China. *Research in Veterinary* 87: 449-454.
- Zhuang, M., Y. Achmon, Y. Cao, X. Liang, L. Chen, H. Wang, B.A. Siame and K.Y. Leung. 2021. Distribution of antibiotic resistance genes in the environment. *Environmental Pollution* 285: 117402.