

DAFTAR PUSTAKA

- Abdulkadir, W.S., Muntasir, Harun, A.I., Tenda, P.E. Makkasau, dan Saksosno, R.Y. 2022. *Antibiotik dan Resistensi Antibiotik*. Rizmedia Pustaka Indonesia, Makassar.
- Abramova, A., Berendonk, T.U., dan Palme, J.B. 2022. A Global Baseline for Qpcr-Determined Antimicrobial Resistance Gene Prevalence Across Environments. *Environment International*. 178(1):1-63.
- Acharya, D., Kuddus, M., dan Patel, S. 2022. Computational Genomics and Structural Bioinformatics in Microbial Science. *Frontiers in genetics*.13(8):50-59.
- Adhitama, W., Puspitasari, I., dan Laksanawati, I.S. 2019. Evaluasi Luaran Klinis Terapi Antibiotika pada Pasien Anak Rawat Inap Dengan Infeksi Saluran Kemih di RSUP Dr. Sardjito Yogyakarta. *Majalah Farmaseutik*. 17(2):166-174.
- Aleksandrova, E.V., Wu, K.J.Y., Tresco, B.I.C., Syroegin, E.A., Killeavy, E.E., Balasanyants, S.M., Svetlov, M.S., Gregory, S.T., Atkinson, G.C., Myers, A.G., dan Polikanov, Y.S. 2024. Structural Basis of Cfr-Mediated Antimicrobial Resistance and Mechanisms to Evade It. *Nature Chemical Biology*. 20(7):867-876.
- Amarasiri, M., Sano, D., dan Suzuki, S. 2020. Understanding Human Health Risks Caused by Antibiotic Resistant Bacteria (ARB) and Antibiotic Resistance Genes (ARG) in Water Environments: Current Knowledge and Questions to be Answered. *Critical Reviews in Environmental Science and Technology*. 50(19):2016-2059.
- Armillei, Maria K., Ivan B. Lomakin, dan James Q. 2024. Scientific Rationale and Clinical Basis for Clindamycin Use in the Treatment of Dermatologic Disease. *Antibiotics*. 13(3): 270-277.
- Ayobami, O., Brinkwirth, S., Eckmanns, T., dan Markwart R. 2022. Antibiotic Resistance in Hospital-Acquired ESKAPE-E Infections in Low- and Lower-Middle-Income Countries: a Systematic Review and Meta-Analysis. *Emerging Microbes & Infections*. 11(1):443–451.
- Aziz, K.E. dan Abdulrahman, Z.F.A. 2021. Detection of Tetracycline tet(k) Gene in Clinical *Staphylococcus aureus* Isolates. *Earth and Environmental Science*. 761(1):1-7.
- Boeckel, T.P.V., Pires, J., Silvester, R., Zhao, C., Song, J., Criscuolo, N., Gilbert, M., Bonhoeffer, S., dan Laxminarayan, R. 2019. Global Trends in Antimicrobial Resistance in Animals in Low and Middle Income Countries. *Science*. 365:(6459):19-44.

- Cabot, G., Kim, K., Mark, B.L., Oliver, A., dan Khajehpour, M. 2023. Biochemical Insights into Imipenem Collateral Susceptibility Driven by ampc Mutations Conferring Ceftolozane/Tazobactam Resistance in Pseudomonas aeruginosa. *Antimicrobial Agents and Chemotherapy*. 67(2):14-22.
- Calle, R.D.X., Silva, P.F., Tomé, L.M.R., Sousa, T.J., dan Santos, L.T.S. 2022. Hybrid Genomic Analysis of *Salmonella enterica* Serovar Enteritidis SE3 Isolated from Polluted Soil in Brazil. *Microorganisms*. 11(1):111-120.
- Candradewi, S.A. 2021. Analisis Metagenomik Bakteri Rhizosfer Tumbuhan Bengkal (*Nauclea orientalis L.*). *Skripsi*. Fakultas Matematika Dan Ilmu Pengetahuan Alam. Universitas Sriwijaya, Palembang. 44 hal.
- Chuanchuen, R., Narasaki, C.T., dan Schweizer, H.P. 2002. The MexJK efflux pump of *Pseudomonas aeruginosa* requires OprM for antibiotic efflux but not for efflux of triclosan. *Journal of Bacteriology*. 184(18): 5036-5044.
- Commans, F. 2024. Whole-Genome Sequence and Resistance Determinants of Four *Elizabethkingia* Anophelis Clinical Isolates Collected in Hanoi, Vietnam. *Scientific Reports*. 14(1):7241-7250.
- Crossley, B.M., Bai, J., Glaser, A., Maes, R., dan Porter, E. 2020. Guidelines for Sanger Sequencing and Molecular Assay Monitoring. *Journal of Veterinary Diagnostic Investigation*. 32(6):767-775.
- Cudkowicz, N. A. dan Schuldiner, S. 2019. Deletion of The Major *Escherichia coli* Multidrug Transporter AcrB Reveals Transporter Plasticity and Redundancy in Bacterial Cells. *PloS one*. 14(6): 1-13.
- Cui, L., Isii, T., Fukuda, M., Ochiai, T., Neoh, H.M., Camargo, I.L.B.D.C., Watanabe, Y., Shoji, M., Hishinuma, T., dan Hiramatsu, K. 2010. An RpoB Mutation Confers Dual Heteroresistance to Daptomycin and Vancomycin in *Staphylococcus aureus*. *Antimicrobial Agents and Chemotherapy*. 54(12): 5222-5233.
- Depardieu, F. 2001. Mutation in 23S rRNA responsible for resistance to 16-membered macrolides and streptogramins in *Streptococcus pneumoniae*. *Antimicrob Agents Chemother*. 45(1):319-323.
- Dinas Lingkungan Hidup Kabupaten Banyumas. 2009. *Laporan Status Lingkungan Hidup Daerah Kabupaten Banyumas Tahun 2009*. Pemerintah Kabupaten Banyumas, Banyumas. 208 hal.
- Diyasti, F., dan Lizarmi, E. 2022. Kajian Penggunaan Antibiotik pada Komoditas Perkebunan. *Agroscript*. 3(2):99-112.
- Dong, P., Cui, Q., Fang, T., Huang, Y., dan Wang, H. 2019. Occurrence of Antibiotic Resistance Genes and Bacterial Pathogens in Water and Sediment in Urban Recreational Water. *Journal of Environmental Sciences*. 77(1):65-74.

- Fabre, L., Ntreh, A.T., Yazidi, A., Leus, I. V., Weeks, J.W., Bhattacharyya, S., Ruickoldt, J., Rouiller, I., Zgurskaya, H.I., dan Sygusch, J. 2021. A “Drug Sweeping” State of the TriABC Triclosan Efflux Pump from *Pseudomonas aeruginosa*. *Structure*. 29(3): 261-274.
- Fadrian, 2023. *Antibiotik, Infeksi dan Resistensi*. Andalas University Press, Padang.
- Fahmi, A.G. 2022. Pengembangan Komposit Besi Oksida/Karbon Aktif sebagai Adsorben Residu Antibiotik pada Air Limbah Rumah Sakit. *Disertasi*. Ilmu Pengelolaan Sumber Daya Alam dan Lingkungan. Institut Pertanian Bogor, Bogor. 94 hal.
- Fiori, N. 2019. Pengaruh Debit dan Kedalaman Aliran Sungai terhadap Sebaran Bahan Pencemar Air Buangan pada Aliran Sungai Deli. *Skripsi*. Fakultas Teknik. Universitas Sumatera Utara, Medan. 84 hal.
- Freeman, C.D., Hansen, T., Urbauer, R., Wilkinson, B.J., Singh, V.K., dan Hines, K. M. 2024. Defective *pgsA* Contributes to Increased Membrane Fluidity and Cell Wall Thickening in *S. Aureus* with High-Level Daptomycin Resistance. *BioRxiv*. 4(11):53-64.
- Frendorf, P.O., Lauritsen, I., Sekowska, A., Danchin, A., dan Nørholm, M.H.H. 2019. Mutations in the Global Transcription Factor CRP/CAP: Insights from Experimental Evolution and Deep Sequencing. *Computational and structural biotechnology journal*. 17(1):730-736.
- Fritz, L., Wienhold, S., Hackl, S., dan Bach, T. 2022. Total Synthesis of Pulvomycin D. *Chemistry*. 28(3):40-64.
- Frosini, S.M., Bond, R., McCarthy, A.J., Feudi, C., Schwarz, S., Lindsay, J.A., dan Loeffler, A. 2020. Genes on The Move: in vitro Transduction of Antimicrobial Resistance Genes Between Human and Canine Staphylococcal Pathogens. *Microorganisms*. 8(12): 20-31.
- Galimand, M., Gerbaud, G., dan Courvalin, P. 2000. Spectinomycin resistance in *Neisseria* spp. due to mutations in 16S rRNA. *Antimicrobial agents and chemotherapy*. 44(5):1365-1366.
- Gomes, R.P., Oliveira, T.R., Rodrigues, A.B., Ferreira, L.M., Vieira, J.D.G, dan Carneiro, L.C. 2023. Occurrence of Antibiotic Resistance Genes, Antibiotics-Resistant and Multi-Resistant Bacteria and Their Correlations in One River in Central-Western Brazil. *Water*. 15(4):747-755.
- Grady, R. dan Hayes, F. 2003. Broad-Spectrum Protein Toxin-Antitoxin System Specified by a Multidrug-Resistant, Clinical Isolate of *Enterococcus faecium*. *Molecular Microbiology*. 47(5): 1419-1432.
- Guan, W. dan Chen, Y.B. 2012. Advances in multidrug resistance transporter Bmr of *Bacillus subtilis* and transcriptional regulation mechanism of its gene bmr. *Microbiology China*. 39(2):246-253.

- Hachmann, A.B. 2011. Reduction in Membrane Phosphatidylglycerol Content Leads to Daptomycin Resistance in *Bacillus subtilis*. *Antimicrob Agents Chemother.* 55(9): 4326-4337
- Hamidi, Z. dan Kamulyan, B. 2022. Studi Hubungan antara Penggunaan Lahan dan Kualitas Air Sungai di Kabupaten Sleman. *Jurnal Ilmiah Indonesia.* 7(9):2541-2548.
- Hanna, N., Tamhankar, A.J., dan Lundborg, C.S. 2023. Antibiotic Concentrations and Antibiotic Resistance in Aquatic Environments of the Western Pacific and South-East Asia regions: a Systematic Review and Probabilistic Environmental Hazard Assessment. *Lancet Planet Health.* 7:45-54.
- Hartono, D.A., Setyorini, dan Karimah, S.A. 2021. Model Komputasi BLAST pada Lingkungan Hidup. *E-Proceeding of Engineering.* 8(1):908-916.
- Hauteas, I., Messakh, J.J., dan Tamelan, P.G. 2021. Kajian Debit Aliran Kali Liliba Kota Kupang, di Daerah Semi-Arid Menggunakan Alat Apung dan Alat Flow Meter. *Jurnal Batakarang.* 2(2):20-29.
- He, Y., Yuan, Q., Mathieu, J., Stadler, L., Senehi, N., dan Sun, R. 2020. Antibiotic Resistance Genes from Livestock Waste. *NPJ Clean Water.* 3(1):1-11.
- Huseby, D. L., Brandis, G., Alzrigat, L. P., dan Hughes, D. 2020. Antibiotic Resistance by High-level Intrinsic Supression of a Frameshift Mutation in An Essential Gene. *Microbiology.* 117(6):3185-3191.
- Inda, J.S., Lund, D., Parras, M., Johnning, A., Bengtsson, J., dan Kristiansson, E. 2023. Latent Antibiotic Resistance Genes are Abundant, Diverse, and Mobile in Human, Animal, and Environmental Microbiomes. *Microbiome.* 11(44):1-16.
- Jack, D.L. 2000. Broad-Specificity Multidrug Efflux Pump Requiring a Pair of Homologous SMR-Type Proteins. *Journal of Bacteriology.* 182(8):2311-2313
- Jayol, A. 2015. Heteroresistance to Colistin in *Klebsiella pneumoniae* Associated with Alterations in the PhoPQ Regulatory System. *Antimicrob Agents Chemother.* 59(5):2780-2784.
- Joseph, T.A. dan Peer, I. 2021. An Introduction to Whole-Metagenome Shotgun Sequencing Studies. *Methods in Molecular Biology.* 2243(1):107-122.
- Katzung, B. G. 2017. *Basic and Clinical Pharmacology 14th Edition.* McGraw Hill, San Francisco.
- Kementerian Kesehatan Republik Indonesia. 2013. *Pedoman Umum Penggunaan Antibiotik.* Kementerian Kesehatan Republik Indonesia, Jakarta. 114 hal.

- Kementerian Pertanian Republik Indonesia. 2021. *Pedoman Umum Penggunaan Antibiotik di Bidang Peternakan dan Kesehatan Hewan*. Direktorat Jenderal Peternakan dan Kesehatan Hewan, Jakarta. 37 hal.
- Kementerian Pertanian Republik Indonesia. 2019. *Indeks Obat Hewan Indonesia*. Direktorat Jenderal Peternakan dan Kesehatan Hewan, Jakarta. 613 hal.
- Khan, R., Kong, H.G., Jung, Y.H., Choi, J., Baek, K.Y., Hwang, E.C., dan Lee, S.W. 2016. Triclosan Resistome from Metagenome Reveals Diverse Enoyl Acyl Carrier Protein Reductases and Selective Enrichment of Triclosan Resistance Genes. *Scientific reports*. 6(1): 1-13.
- Kilicaslan, G.Ç., Kaygusuz, Ö., Önder, İ.D.İ.L., dan Darcan, C. 2021. Investigation of the Role of cyaA/crp Genes of Escherichia coli in Metal Stress. *Adiyaman University Journal of Science*. 11(1): 1-22.
- Kim, C., Pongpanich, M., dan Porntaveetus, T. 2024. Unraveling Metagenomics Through Long-Read Sequencing: a Comprehensive Review. *Journal of Translational Medicine*. 22(1):111-120.
- Kim, H.B., Wang, M., Park, C.H., Kim, E.C., Jacoby, G.A., dan Hooper, D.C. 2009. oqxAB Encoding a Multidrug Efflux Pump in Human Clinical Isolates of Enterobacteriaceae. *Antimicrobial Agents and Chemotherapy*. 53(8):3582-3584.
- Kim, R.S., Nonaka, L., dan Suzuki, S. 2004. Occurrence of tetracycline resistance genes tet(M) and tet(S) in bacteria from marine aquaculture sites, FEMS Microbiology Letters, Volume 237, Issue 1, August 2004, Pages 147-156
- Kim, S.K. 2016. Inhibition Of Bacillus Anthracis Metallo-B-Lactamase By Compounds With Hydroxamic Acid Functionality. *Journal Of Enzyme Inhibition and Medicinal Chemistry*. 31(4):132-137.
- Kobylka, J., Kuth, M.S., Müller, R.T., Geertsma, E.R., dan Pos, K.M. 2020. AcrB: a mean, keen, drug efflux machine. *Annals of the New York Academy of Sciences*. 1459(1):38-68.
- Kulik, K., Lenart, A.B., dan Wyrzykowska, K. 2023. Impact of Antibiotic Pollution on the Bacterial Population within Surface Water with Special Focus on Mountain Rivers. *Water*.15(5):975-982.
- Kurniawan, I. dan Mariadi, P.D. 2019. Analisis Potensi Cemaran Sisa Penggunaan Antibiotik di Perairan Umum : Studi Kasus Badan Sungai Musi Kota Palembang. *Jurnal Ilmiah Matematika dan Ilmu Pengetahuan Alam*. 16(2):110-121.
- Li, X.Z. 2002. SmeC, an Outer Membrane Multidrug Efflux Protein of Stenotrophomonas maltophilia. *Antimicrob Agents Chemother* 46(2):333-343.

- Li, J., Zhang, H., dan Ning, J. 2019. The nature and epidemiology of OqxAB, a multidrug efflux pump. *Antimicrob Resist Infect Control.* 8(44):1-13.
- Liu, B., Yi, L., Li, J., Wang, Y., Mao, C., dan Wang, Y. 2020. Autoinducer-2 Influences Tetracycline Resistance in Streptococcus by Regulating the Tet(M) Gene Via Transposon Tn916. *Research in Veterinary Science.* 128:269-274.
- Liu, S., Fang, R., Zhang, Y., Chen, L., Huang, N., Yu, K., Zhou, C., Cao, J., dan Zhou, T. 2021. Characterization of Resistance Mechanisms of Enterobacter cloacae Complex Co-resistant to Carbapenem and Colistin. *BMC microbiology.* 21(1): 1-10.
- Liu, Y., Xiao, M., Cheng, J.W., dan Xu, H.P. 2017. Moraxella catarrhalis Macrolide-Resistant Isolates Are Highly Concentrated in Two MLST Clonal Complexes -CCN10 and CC363. *Frontier Microbiology.* 8(1):201-210.
- Liu, Y., Cai, D., Wu, Q., Ding, P., Shen, L., dan Yang, J. 2023. Occurrence, Fate, and Risk Assessment of Antibiotics in Typical Pharmaceutical Manufactories and Receiving Water Bodies from Different Regions. *PLoS ONE.* 18(1):1-18.
- Lee, J.Y. dan Ko, K.S. 2014. Mutations and expression of PmrAB and PhoPQ related with colistin resistance in *Pseudomonas aeruginosa* clinical isolates. *Diagnostic Microbiology and Infectious Disease.* 78(3): 271-276.
- Levani, Leeds, J. A., Sachdeva, M., Mullin, S., Dzink-Fox, J., dan LaMarche, M. J. 2012. Mechanism of Action of and Mechanism of Reduced Susceptibility to The Novel Anti-Clostridium difficile Compound LFF571. *Antimicrobial Agents and Chemotherapy.* 56(8): 4463-4465.
- Levani, Y. dan Prastyo, A.D. 2020. Demam Tifoid : Manifestasi Klinis, Pilihan Terapi dan Pandangan dalam Islam. *Al-Iqra Medical Journal.* 3(1):10-16.
- Lorusso, A.B., Carrara, J.A., Barroso, C.D.N., Tuon, F.F., dan Faoro, H. 2022. Role of Efflux Pumps on Antimicrobial Resistance in *Pseudomonas aeruginosa*. *International Journal of Molecular Sciences.* 23(24): 1-10.
- Luthje, P. 2007. Identification and Characterization of Nine Novel Types of Small Staphylococcal Plasmids Carrying the Lincosamide Nucleotidyltransferase Gene lnu(A). *Antimicrob Chemother Journal.* 59(4):600-606.
- Macfarlane, E.L. 2000. Role of *Pseudomonas aeruginosa* PhoP-phoQ in resistance to antimicrobial cationic peptides and aminoglycosides. *Microbiology.* 146(10):2543-2554.

- Manson, J. M., Hancock, L. E., dan Gilmore, M. S. 2010. Mechanism of chromosomal transfer of *Enterococcus faecalis* pathogenicity island, capsule, antimicrobial resistance, and other traits. *Proceedings of the National Academy of Sciences of the United States of America*. 107(27):12269-12274.
- Muntasir, Abdulkadir, W.S., Harun, A.I., Tenda, P.E., Makkasau, Mulyadi, dan Saksosno, R.Y. 2021. *Antibiotik dan Resistensi Antibiotik*. Rizmedia Pustaka Indonesia, Yogyakarta.
- Musumeci, R., Calaresu, E., Gerosa, J., Oggioni, D., Bramati, S., Morelli, P., Mura, I., Piana, A., Are, B.M., dan Cocuzza, C.E. 2016. Resistance to Linezolid in *Staphylococcus* spp. Clinical Isolates Associated With Ribosomal Binding Site Modifications: Novel Mutation in Domain V of 23S rRNA. *New Microbiol.* 39(4): 269-273.
- Muurinen, J., Muziasari, W.I., Hultman, J., Parnanen, K., Narita, V., Lyra, C., Fadhillah, L.N. Hadi, P., dan Virta, M.P.J. 2022. Antibiotic Resistomes and Microbiomes in the Surface Water along the Code River in Indonesia Reflect Drainage Basin Anthropogenic Activities. *Environmental Science and Technology*. 56(1):14994–15006.
- Michaelis, C. dan Grohmann, E. 2023. Horizontal Gene Transfer of Antibiotic Resistance Genes in Biofilms. *Antibiotics*. 12(328):1-31.
- Mima, T. 2009. Gene Cloning and Characteristics of the RND-Type Multidrug Efflux Pump Muxabc-OpmB Possessing Two RND Components in *Pseudomonas aeruginosa*. *Microbiology*. 155(11):3509-3517.
- Mustafa, G.R. Li, C., Zhao, S., Jin, L., He, X., dan Shabbir, M.Z. 2021. Metagenomic Analysis Revealed a Wide Distribution of Antibiotic Resistance Genes and Biosynthesis of Antibiotics in the Gut of Giant Pandas. *BMC Microbiology*. 21(15):1-18.
- Nadgir, C.A. dan Biswas, D.A. 2023. Antibiotic Resistance and Its Impact on Disease Management. *Cureus*. 15(4):1-5.
- Nadzifah, N., Sjofjan, O., dan Djunaidi, I.H. 2019. Kajian Residu Antibiotik pada Karkas Broiler dari Beberapa Kemitraan di Kabupaten Blitar. *Jurnal Ternak Tropika*. 20(2):165-171.
- Nishino, K. dan Yamaguchi, A. 2004. Role of Histone-like Protein H-NS in Multidrug Resistance of *Escherichia coli*. *Journal of Bacteriology*. 186(5):1423-1429.
- Nurlianti, M., Eviliyanto, dan Veriansyah, I. 2022. Analisis Pemanfaatan Sungai Sambas sebagai Sarana Obyek Wisata di Kabupaten Sambas. *Geo Khatulistiwa*. 2(3): 2808-2974.

- O'connor, M. dan Dahlberg, A.E. 2002. Isolation of Spectinomycin Resistance Mutations in The 16S rRNA of *Salmonella enterica* serovar Typhimurium and Expression in *Escherichia coli* and *Salmonella*. *Current Microbiology*. 45(1): 429-0433.
- Obana, N., Takada, H., Crowe-McAuliffe, C., Iwamoto, M., Egorov, A.A., Wu, K.J.Y., dan Chiba, S. 2023. Genome-Encoded ABCF Factors Implicated in Intrinsic Antibiotic Resistance in Gram-Positive Bacteria: VmlR2, Ard1 and CplR. *Nucleic Acids Research*. 51(9):4536-4554
- Pancu, D.F., Scurtu, A., Macasoi, I.G., Marti, D., Mioc, M., Soica, C., Coricovac, D., Horhat, D., Poenaru, M., dan Dehelean, C. 2021. Antibiotics: Conventional Therapy and Natural Compounds with Antibacterial Activity-A Pharmaco-Toxicological Screening. *Antibiotics*. 10(4):401-411.
- Pang, Z., Raudonis, R., Glick, B.R., Lin, T.J., dan Cheng, Z. 2019. Antibiotic resistance in *Pseudomonas aeruginosa*: mechanisms and alternative therapeutic strategies. *Biotechnology Advances*. 37(1): 177-192.
- Pawlowski, A., Wang, W., dan Koteva, K.A. Diverse Intrinsic Antibiotic Resistome From a Cave Bacterium. *Nature Community*. 7(1):1-8.
- Peraturan Menteri Kesehatan Republik Indonesia Nomor 28 Tahun 2021 tentang Pedoman Penggunaan Antibiotik*. 2021. Kementerian Kesehatan Republik Indonesia, Jakarta.
- Pijoh, J.E.E., Pandaleng, H.M.F., dan Ottay, R.I. 2021. Gambaran Kandungan Antibiotik pada Sedimen Kawasan Pesisir Teluk Manado. *Jurnal Kedokteran Komunitas dan Tropik*. 9(2):341-345.
- Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor 102 Tahun 2018 tentang Tata Cara Perizinan Pembuangan Air Limbah melalui Pelayanan Perizinan Berusaha Terintegrasi secara Elektronik*. 2018. Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia, Jakarta.
- Purwanto, 2019. Komparasi Nilai Ekonomi Air Irigasi dari Daerah Aliran Sungai Berhutan dan Tidak Berhutan. *Jurnal Ilmu Lingkungan*. 17(1):23-31.
- Quddus, S., Liaqat, Z., Azam, S., Haq, M.U., dan Ahmad, S. 2023. Identification of Efflux Pump Mutations in *Pseudomonas aeruginosa* from Clinical Samples. *Antibiotics*. 12(3):486-495.
- Ram, B. dan Kumar, M. 2020. Correlation appraisal of antibiotic resistance with fecal, metal and microplastic contamination in a tropical Indian river, lakes and sewage. *npj Clean Water*. 3(3):1-12.
- Raini, M. 2015. Kajian Pestisida Berbahan Aktif Antibiotika. *Media Litbangkes*. 25(1):33-42.

- Ren, Z. dan Luo, W. 2022. Metagenomic Analysis Reveals the Diversity and Distribution of Antibiotic Resistance Genes in Thermokarst Lakes of the Yellow River Source Area. *Environmental Pollution*. 313:102-120.
- Roberts M.C. 2005. Update on acquired tetracycline resistance genes. *FEMS microbiology letters*. 245(2):195-203.
- Putri, P.A., Chatri, M., dan Advinda, L. 2023. Karakteristik Saponin Senyawa Metabolit Sekunder pada Tumbuhan. *Jurnal Serambi Biologi*. 8(2):252-256.
- Sabrin, A., Gioe, B. W., Gupta, A., dan Grove, A. 2019. An EmrB Multidrug Efflux Pump in Burkholderia Thailandensis with Unexpected Roles in Antibiotic Resistance. *The Journal of biological chemistry*. 294(6):1891-1903.
- Salam, M.A., Al-Amin, M.Y., Salam, M.T., Pawar, J.S., Akhter, N., Rabaan, A.A., dan Alqumber, M.A.A. 2023. Antimicrobial Resistance: A Growing Serious Threat for Global Public Health. *Healthcare 2023*. 11(1946):1-20.
- Sari, R.A., Palupi, M.F., Ambarwati, Khomariyah, S., Rusmiati, E., Indrishanty, N., Fanani, F.A., Ariyani, N., Nurhidayah, Indriyana, dan Jannah, A.M. 2022. Pengkajian Mutu Antibiotik Golongan (Fluoro)Kuinolon di Delapan Provinsi di Indonesia Tahun 2022. *Buletin Pengujian Mutu Obat Hewan No. 31 Tahun 2022*. 25 hal.
- Sawa, T., Kooguchi, K., dan Moriyama, K. 2020. Molecular Diversity of Extended-Spectrum B-Lactamases and Carbapenemases, and Antimicrobial Resistance. *Jurnal Intensive Care*. 8(1):13-20.
- Sergiev, P.V., Lesnyak, D.V., Burakovskiy, D.E., Svetlov, M., Kolb, V.A., Serebryakova, M.V., Demina, I.A., Govorun, V.M., Dontsova, O.A. dan Bogdanov, A.A. 2012. Non-stressful Death of 23S rRNA Mutant G2061C Defective in Puromycin Reaction. *Journal of Molecular Biology*. 416(5): 656-667.
- Setiabudy, R. 2019. *Farmakologi dan Terapi*. Badan Penerbit FKUI, Jakarta. 932 hal.
- Shaaly, A. 2013. Undecaprenyl Pyrophosphate Phosphatase Confers Low-Level Resistance to Bacitracin in Enterococcus Faecalis. *Journal Antimicrob Chemother*. 68(7):1583-1593
- Shcherbakov, D., Akbergenov, R., Matt, T., Sander, P., Andersson, D.I., dan Böttger, E.C. 2010. Directed Mutagenesis of Mycobacterium Smegmatis 16S rrna to Reconstruct The in Vivo Evolution of Aminoglycoside Resistance in Mycobacterium Tuberculosis. *Molecular Microbiology*. 77(4):830-840.
- Siahaan, S., Herman, M.J., dan Fitri, N. 2022. Antimicrobial Resistance Situation in Indonesia: A Challenge of Multisector and Global Coordination. *Journal of Tropical Medicine*. 27(8):33-40.

- Silva, J.F., Oliveira, B.F.R., Vigoder, F.M., Muricy, G., dan Dobson, A.D.W. 2021 Peeling the Layers Away: The Genomic Characterization of *Bacillus Pumilus* 64-1, an Isolate with Antimicrobial Activity from the Marine Sponge *Plakina Cyanorosea*. *Frontier Microbiology*. 11(1):1-8.
- Singh, H. 2016. ATP-Dependent Substrate Transport by the ABC Transporter Msba is Proton-Coupled. *Nature Community*. 7(1):1-7.
- Shi, Z., Chen, L., Li, B., Zhu, B., dan Lyu, N. 2022. Comparative Analysis of Different Fecal DNA Extraction Methods. *Chinese journal of biotechnology*. 38(9):3542–3550.
- Smith, J.T. dan Andam, C.P. 2021. Extensive Horizontal Gene Transfer within and between Species of Coagulase-Negative Staphylococcus. *Genome Biology and Evolution*. 13(9):1-9.
- Smith, P. dan Ruxton, G.D. 2020. Effective Use of the McNemar Test. *Behavioral Ecology and Sociobiology*. 74(133):20-19.
- Sofro, M.A.U., Suryoputro, A., dan Anies, P. 2022. Implementasi dan Dampak Antimicrobial Stewardship Program pada Fasilitas Kesehatan di Berbagai Negara. *Jurnal Ilmu Kesehatan Masyarakat*. 11(6):544-564.
- Srinivasan, V.B., Vaidyanathan, V., Mondal, A., dan Rajamohan, G. 2012. Role of The Two Component Signal Transduction System CpxAR in Conferring Cefepime and Chloramphenicol Resistance in *Klebsiella pneumoniae* NTUH-K2044. *PLoS One*. 7(4): 1-15.
- Stojković, V., Ulate, M.F., dan Villeda, H.F., 2019. Cfr(B), Cfr(C), and a New Cfr-Like Gene, Cfr(E), in *Clostridium difficile* Strains Recovered across Latin America. *Antimicrobial Agents and Chemotherapy*. 64(1):19-28.
- Susalam, M.K. 2023. Analisis Metagenom Bakteri Asal Ikan Budu sebagai Kandidat Probiotik Konsorsium dan Aplikasinya terhadap Kinerja Pertumbuhan dan Kualitas Daging Broiler. *Tesis*. Fakultas Peternakan. Universitas Andalas, Padang. 166 hal.
- Syafriana, V., Hamida, F., Sukamto, A.R., dan Aliya, L.S. 2020. Resistensi *Escherichia coli* dari Air Danau ISTN Jakarta Terhadap Antibiotik Amoksisisilin, Tetrasiklin, Kloramfenikol, dan Siprofloksasin. *Sainstech Farma*. 13(2):92-98.
- Takahata, S., Ida, T., Hiraishi, T., Sakakibara, S., Maebashi, K., Terada, S., dan Tomono, K. 2010. Molecular Mechanisms of Fosfomycin Resistance in Clinical Isolates of *Escherichia coli*. *International Journal of Antimicrobial Agents*. 35(4):333-337.

- Terrier, C., Nordmann, P., dan Freret, C. 2023. Impact of Acquired Broad Spectrum β -Lactamases on Susceptibility to Novel Combinations Made of β -Lactams (Aztreonam, Cefepime, Meropenem, and Imipenem) and Novel β -Lactamase Inhibitors in *Escherichia coli* and *Pseudomonas aeruginosa*. *Antimicrobial Agents and Chemotherapy*. 67(7):33-42.
- Tien, Z., Nieke, K., dan Agus, S. 2019. The Self-Purification Ability in the Rivers of Banjarmasin. *Journal of Ecological Engineering*. 20(2):177-182.
- Turner, A.K., Yasir, M., Bastkowski, S., Telatin, A., Page, A.J., Charles, I.G., dan Webber, M.A. 2020. A Genome-Wide Analysis of *Escherichia coli* Responses to Fosfomycin Using Tradis-Xpress Reveals Novel Roles for Phosphonate Degradation and Phosphate Transport Systems. *The Journal of Antimicrobial Chemotherapy*. 75(11):3144-3151.
- Vestweber, P. K., Wächter, J., Planz, V., Jung, N., dan Windbergs, M. 2024. The Interplay of *Pseudomonas Aeruginosa* and *Staphylococcus Aureus* in Dual-Species Biofilms Impacts Development, Antibiotic Resistance and Virulence of Biofilms in Vitro Wound Infection Models. *PloS One*. 19(5):1-7.
- Wang, T., Kunze, C., dan Dunlop, M.J. 2019. Salicylate Increases Fitness Cost Associated with MarA-Mediated Antibiotic Resistance. *Biophysical Journal*. 117(3):563-571.
- Wang, Z., Kong, L.C., Jia, B.Y., Liu, S.M., Jiang, X.Y., dan Ma, H.X. 2017. Aminoglycoside Susceptibility of *Pasteurella multocida* Isolates from Bovine Respiratory Infections in China and Mutations in Ribosomal Protein S5 Associated with High-Level Induced Spectinomycin Resistance. *The Journal of Veterinary Medical Science*. 79(10):1678-1681.
- Wong, J.L.C., Romano, M., Kerry, L.E. 2019. OmpK36-Mediated Carbapenem Resistance Attenuates ST258 *Klebsiella pneumoniae* in Vivo. *Nature Communication*. 10(1):39-57.
- Xu, H., Miao, V., Kwong, W., Xia, R., dan Davies, J. 2011. Identification of a Novel Fosfomycin Resistance Gene (fosA2) in *Enterobacter cloacae* from the Salmon River, Canada. *Microbiology*. 52(4): 427-429.
- Yan, Y., Yao, X., Li, H., Zhou, Z., Huang, W., Stratton, C.W., Lu, C.D., dan Tang, Y.W. 2014. A Novel *Pseudomonas aeruginosa* Strain with an oprd Mutation in Relation to a Nosocomial Respiratory Infection Outbreak in an Intensive Care Unit. *Journal of Clinical Microbiology*. 52(12): 4388-4390.

- Yoshida, K. 2004. *Bacillus Subtilis Lmra* is a Repressor of the *lmrab* and *yxagh* Operons: Identification of its Binding Site and Functional Analysis of *lmrb* and *yxagh*. *Journal Bacteriology*. 186(17):5640-5648.
- Yuan, J., Chow, D. C., Huang, W., dan Palzkill, T. 2011. Identification of a B-Lactamase Inhibitory Protein Variant that is a Potent Inhibitor of *Staphylococcus* PC1 B-Lactamase. *Journal of molecular biology*. 406(5):730-744.
- Zemmour, A., Dali, Y.R., Maatallah, M., Ouahrani, S.N., Rahmani, B., Benhamouche, N., Farsi, H.M., dan Giske, C.G. 2021. High-Risk Clones of Extended-Spectrum B-Lactamase-Producing *Klebsiella Pneumoniae* Isolated From the University Hospital Establishment of Oran, Algeria (2011-2012). *Plos One*. 16(7):25-48.
- Zhang, L., Chen, F., Zeng, Z., Xu, M., Sun, F., Yang, L., dan Bi, X. 2021. Advances in Metagenomics and Its Application in Environmental Microorganisms. *Frontiers in Microbiology*. 12:1-15.
- Zhang, L., Li, X.Z., dan Poole, K. 2001. SmeDEF multidrug efflux pump contributes to intrinsic multidrug resistance in *Stenotrophomonas maltophilia*. *Antimicrobial agents and chemotherapy*. 45(12):3497-3503.
- Zhuang, M., Achmon, Y., Cao, Y., Liang, X., Chen, L., Wang, H. 2021. Distribution of Antibiotic Resistance Genes in the Environment. *Environ Pollut*. 28(5):117-402.
- Zubaidah, T., Hamzani, S., dan Arifin. 2021. Pencemaran dan Penentuan Titik *Self-Purification Sungai* di Kabupaten Banjar. *Al-Ard Jurnal Teknik Lingkungan*. 7(1):18-24.