DAFTAR PUSTAKA

Al-Ansari, M. M., H. Benabdelkamel, R. H. AlMalki, A. M. A. Rahman, E. Alnahmi, A. Masood, S. Ilavenil & K. C. Choi. 2021. Effective removal of heavy metals from industrial effluent wastewater by a multi metal and drug-resistant *Pseudomonas aeruginosa* strain RA-14 using integrated sequencing batch reactor. Environmental Research 199: 1 – 8.

Ali, H., E. Khan, & I. Ilahi. 2019. Environmental chemistry and ecotoxicology of hazardous heavy metals: environmental persistence, toxicity, and bioaccumulation. Journal of Chemistry 1: 1 – 14.

Al-Joda, B. M. S., & A. H. Jasim. 2021. Biochemical testing revision for identification several kinds of bacteria. Journal of University of Babylon for Pure and Applied Sciences 29: 168 - 176.

Breed, E. S., E. G. D. Murray, & N. R. Smith, N. R. 1957. Bergey's manual of determinative bacteriology 7th Edition. Waverly Press, Inc., USA.

Chhibber, S., D. Nag, & S. Bansal. 2013. Inhibiting biofilm formation by *Klebsiella pneumoniae* B5055 using an iron antagonizing molecule and a bacteriophage. BMC microbiology 13: 1 – 8.

De-Alencar, F. L. S., J. A. Navoni, & V. S. do Amaral. 2017. The use of bacterial bioremediation of metals in aquatic environments in the twenty-first century: a systematic review. Environmental Science and Pollution Research 24: 16545 - 16559.

DeBritto, S., T. D. Gajbar, P. Satapute, L. Sundaram, R. Y. Lakshmikantha, S. Jogaiah, & S. I. Ito. 2020. Isolation and characterization of nutrient dependent pyocyanin from *Pseudomonas aeruginosa* and its dye and agrochemical properties. Sci. Rep. 10: 1 – 12.

Haroun, A. A., K. K Kamaluddeen, I. Alhaji, Y. Magaji, & E. E. Oaikhena. 2017. Evaluation of heavy metal tolerance level (MIC) and bioremediation potentials of *Pseudomonas aeruginosa* isolated from Makera-Kakuri industrial drain in Kaduna, Nigeria. Eur. J. Exp. Biol. 7: 1 – 4.

Haque, M. M., M. K. Mosharaf, M. A. Haque, M. Z. H. Tanvir, & M. K. Alam. 2021. Biofilm formation, production of matrix compounds and biosorption of copper, nickel and lead by different bacterial strains. Front Microbiol. 12: 1 – 19.

Huang, G., J. He, X. Zhang, M. Feng, Y. Tan, C. Lv, C., H. Huang, & Z. Jin. 2021. Applications of Lambert-Beer law in the preparation and performance evaluation of graphene modified asphalt. Construction and Building Materials 273: 1 – 15.

Irawati, W., N. P. Ompusunggu, D. N. Susilowati, & T. Yuwono. 2019. Molecular and physiological characterization of indigenous copper-resistant bacteria from Cikapundung River, West Java, Indonesia. Biodiversitas 20: 344 - 349.

Jenal, U., A. Reinders, & C. Lori. 2017. Cyclic di-GMP: second messenger extraordinaire. Nat. Rev. Microbiol. 15: 271 - 284.

Kang, W., J. Zheng, J. Bao, Z. Wang, Y. Zheng, Ji-Zheng He, & Hang-Wei Hu. Characterization of the copper resistance mechanism and bioremediation potential of an *Acinetobacter calcoaceticus* strain isolated from copper mine sludge. ESPR 27: 7922 - 7933.

Kubra, K. T., M. S. Salman, M. N. Hasan, A. Islam, M. M. Hasan, & M. R. Awual. 2021. Utilizing an alternative composite material for effective copper (II) ion capturing from wastewater. J. Mol. Liq. 336: 1 – 11.

Kumari, S., S. Mahapatra, & S. Das. 2017. Ca-alginate as a support matrix for Pb (II) biosorption with immobilized biofilm associated extracellular polymeric substances of *Pseudomonas* aeruginosa N6P6. Chem. Eng. J. 328: 556 - 566.

Kurniawan, T. A., W. Lo, M. H. D. Othman, H. H. Goh, & K. K. Chong. 2022. Biosorption of heavy metals from aqueous solutions using activated sludge, *Aeromasss hydrophyla*, and *Branhamella* spp based on modeling with GEOCHEM. Environ. Res. 214: 1 – 11.

Kurniawan, A., L. Ni'matus Salamah, A. A. Amin, A. T. Yanuar, Z. Pramudia, Y. A. D Susanti, M. A. Damaika, W. A. Lestari, Y. R. P. Guspinta, P. D. Jayati, D. Tamalasari, & A. Rizkymaris. 2022. Biofilm untuk biomonitoring dan biosorpsi logam berat. Universitas Brawijaya Press, Malang.

Lee, J. S., Y.M. Bae, A. Han, & S. Y. Lee. 2016. Development of Congo red broth method for the detection of biofilm-forming or slime-producing *Staphylococcus* sp. LWT 73: 707–714.

Lin, H., C. Wang, H. Zhao, G. Chen, & X. Chen. 2020. A subcellular level study of copper speciation reveals the synergistic mechanism of microbial cells and EPS involved in copper binding in bacterial biofilms. EPJ 263: 1 – 10.

Mabungela, N., N. D. Shooto, F. Mtunzi, & E. B. Naidoo, E. B. 2022. The adsorption of copper, lead metal ions, and methylene blue dye from aqueous solution by pure and treated fennel seeds. Adsorp. Sci. Technol. 2022: 1.

Malhotra, N., T. R. Ger, B. Uapipatanakul, J. C. Huang, K. H. C. Chen, & C. D. Hsiao. 2020. Review of copper and copper nanoparticle toxicity in fish. Nanomaterials 10: 1 – 28.

Malik, G., R. Arora, R. Chaturvedi, & M. S. Paul. 2021. Implementation of genetic engineering and novel omics approaches to enhance bioremediation: a focused review. BECT. 108: 443 – 450.

Mathivanan, K., C. J. Uthaya, M. Thangavel, V. Annadurai, R. Rajendran, & A. Gurusamy. 2020. Optimization, compositional analysis, and characterization of exopolysaccharides produced by multi-metal resistant *Bacillus cereus* KMS3-1. Carbohydr. Polym. 227: 1 – 10.

Mekonnen, E., A. Kebede, A. Nigussie, G. Kebede, & M. Tafesse. 2021. Isolation and characterization of urease-producing soil bacteria. Int. J. Microbiol. 2021: 1 – 11.

Moritania, R., I. Effendi, & F. Feliatra, F. 2019. Isolation and antagonism of bacteria test of biota in the mangrove ecosystem Kayu Ara River Siak Regency. AJOAS 2: 190 - 196.

O'May, C. Y., K. Sanderson, L. F. Roddam, S. M. Kirov, & D. W. Reid. 2009. Iron-binding compounds impair *Pseudomonas aeruginosa* biofilm formation, especially under anaerobic conditions. J. Med. Microbiol. 58: 765 - 773.

Pitts, B., M. A. Hamilton, N. Zelver, & P. S. Stewart. 2003. A microtiter-plate screening method for biofilm disinfection and removal. J. Microbiol. Methods. 54: 269 - 276.

Prasgi, H. C., & T. A. J. Puspitasari. 2022. Isolasi dan karakterisasi bakteri amilolitik *Bacillus* sp. dari tanah rhizosfer Desa Tegalwaton Kabupaten Semarang. BIOGENESIS 5: 63 - 72.

Pugazhendhi, A., K. Ranganathan, & T. Kaliannan. 2018. Biosorptive removal of copper (II) by *Bacillus cereus* isolated from contaminated soil of electroplating industry in India. Water Air Soil Poll. 229: 1 - 9.

Purbowati, R. 2018. Hubungan biofilm dengan infeksi: implikasi pada kesehatan masyarakat dan strategi mengontrolnya. JIKW 5: 1 - 14.

Reyes-Jara, A., N. Cordero, J. Aguirre, M. Troncoso, & G. Figueroa. 2016. Antibacterial effect of copper on microorganisms isolated from bovine mastitis. Front Microbiol. 7: 1 – 10.

Rosier, B. T., E. M. Moya-Gonzalvez, P. Corell-Escuin, & A. Mira, A. 2020. Isolation and characterization of nitrate-reducing bacteria as potential probiotics for oral and systemic health. Front Microbiol. 11: 1 – 19.

RoyChowdhury, A., R. Datta, & D. Sarkar. 2018. Heavy metal pollution and remediation. Curr. Green Chem. 1: 359 - 373.

Sandulachi, E., V. Bulgaru, A. Ghendov-Moşanu, & R. Sturza. 2021. Controlling the risk of *Bacillus* in food using berries. NFS 12: 557 – 577.

Sandikar, B. M. 2017. Effect of $FeCl_3$ on Antifungal activity of *Pseudomonas* and *Bacillus* species against *Fusarium* and *Pythium*. Advances in Life Science and Human Welfare 1: 1 – 4.

Sharma, P., D. Dutta, A. Udayan, A. K. Nadda, S. S. Lam, & S. Kumar. 2022. Role of microbes in bioaccumulation of heavy metals in municipal solid waste: Impacts on plant and human being. EPJ 305: 1 – 15.

Sharma, P., & S. Kumar. 2021. Bioremediation of heavy metals from industrial effluents by endophytes and their metabolic activity: Recent advances. Bioresour. Technol. 339: 1 – 10.

Sinha, S., S. K. Mukherjee. 2009. *Pseudomonas aeruginosa* KUCd1, a possible candidate for cadmium bioremediation. Braz. J. Microbiol. 40: 655 – 662.

Srivastava, M., Srivastava, A., & Pandey, S. K. (2020). Suitability of graphene monolayer as sensor for carcinogenic heavy metals in water: a DFT investigation. JASS 517: 279 – 296.

Susanti, R. A., D. Mustikaningtyas, & F. A. Sasi. 2014. Analisis kadar logam berat pada sungai di Jawa Tengah. JST 12: 35 – 40.

Swayambhu, G., M. Bruno, A. M. Gulick, & B. A. Pfeifer. 2021. Siderophore natural products as pharmaceutical agents. COBIOT 69: 242 - 251.

Wahyudi, D., & E. S. Soetarto. 2021. Pembentukan biofilm *Pseudomonas aeruginosa* pada beberapa media cair. Jurnal Farmasi 10: 35 - 40.

Wang, P., Y. Yuan, K. Xu, H. Zhong, Y. Yang, S. Jin, Y. Ke, & X. Qi. 2021. Biological applications of copper-containing materials. Bioact. Mater. 6: 916 - 927.

Wenderoth, D. F., P. Rosenbrock, W. R. Abraham, D. H. Pieper, & M. G. Höfle. 2003. Bacterial community dynamics during biostimulation and bioaugmentation experiments aiming at chlorobenzene degradation in groundwater. Microb. Ecol. 46: 161 - 176.

Whitby, H., J. T. Hollibaugh, & C. M. Van Den Berg. 2017. Chemical speciation of copper in a salt marsh estuary and bioavailability to Thaumarchaeota. Front. Mar. Sci. 4: 1 – 15.

Wijesinghe, G., A. Dilhari, B. Gayani, N. Kottegoda, L. Samaranayake, & M. Weerasekera. 2019. Influence of laboratory culture media on in vitro growth, adhesion, and biofilm formation of *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Medical Principles and Practice 28: 28 - 35.

Wu, P., N. R. Rane, C. Xing, S. M. Patil, H. S. Roh, B. H. Jeon, & X. Li. 2022. Integrative chemical and omics analyses reveal copper biosorption and tolerance mechanisms of *Bacillus cereus* strain T6. J. Hazard. Mater. 435: 1 – 12.

Xie, L., Z. Huang, H. Meng, Z. Fan, X. Shi, & J. Xie. 2022. Role of genistein on the yield, structure and immunomodulatory activity of Monascus exopolysaccharides. Food & Function 13: 1393 - 1407.

Yin, W., Y. Wang, L. Liu, & J. He. 2019. Biofilms: the microbial “protective clothing” in extreme environments. IJMS 20: 1 – 18.

Yu, Z., & W. W. Mohn.2002). Bioaugmentation with the resin acid-degrading bacterium *Zoogloea resiniphila* DhA-35 to counteract pH stress in an aerated lagoon treating pulp and paper mill effluent. Water Res. 36(11), 2793-2801.

Zhan, X., K. Zhang, C. Wang, Q. Fan, X. Tang, X. Zhang, K. Wang, F. Yang, & H. Liang. 2024. A c-di-GMP signaling module controls responses to iron in *Pseudomonas aeruginosa*. Nat. Commun. 15: 1 – 15.