

DAFTAR PUSTAKA

- Affifah, Affifah., *et al.* 2017. Resistensi Klebsiella sp. Terhadap Meropenem di RSUD Prof. Dr. Margono Soekarjo Purwokerto. *Scripta Biologica*. Vol. 4, no. 2, pp. 135-137. Available at: <https://journal.bio.unsoed.ac.id/index.php/scribio/article/view/378/pdf>
- Alcántar-Curiel, M.D., Ledezma-Escalante, C.A., Jarillo-Quijada, M.D., *et al.* (2018). Association of Antibiotic Resistance, Cell Adherence, and Biofilm Production with the Endemicity of Nosocomial *Klebsiella pneumoniae*. *BioMed Research International*. Vol. 2018. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6174813/>
- Anderl, J.N., Franklin, MJ., Stewart, PS. (2001). Role of Antibiotic Penetration Limitation in *Klebsiella pneumoniae* Biofilm Resistance to Ampicillin and Ciprofloxacin. *Antimicrobial Agents and Chemotherapy*. Vol. 44, pp. 1818-1824. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC89967/>
- Anwar, H., Oasgupta, M.K., Costerton, J.W. (1990). Testing the Susceptibility of Bacteria in Biofilms to Antibacterial Agents. *Antimicrobial Agents and Chemotherapy*. Vol.34, pp. 2043-2046. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC171995/>
- Bachmann, S.P., Vande Walle K., Ramage G., *et al.* (2002). In Vitro Activity of Casofungin Against *Candida albicans* biofilms. *Antimicrobial Agents and Chemotherapy*. Vol. 46, no.11, pp. 3591-3596. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC128731/>
- Bei Li, Yuling Zhao, Changting Liu. (2014). Molecular pathogenesis of *Klebsiella pneumoniae*. *Future Microbioly*. Vol. 9, no. 9, pp. 1071-1081.
- Blenkinsopp, S. A., Khoury, A.E., Costerton, J.W. (1992). Electrical enhancement of biocide efficacy against *Pseudomonas aeruginosa* biofilms. *Appl. Environ. Microbiol.* 58:3770-3773.
- Chew, K.L., Lin, R.T.P., Teo, J.W.P. (2017). *Klebsiella pneumoniae* in Singapore: Hypervirulent Infections and the Carbapenemase Threat. *Cellular and Infection Microbiology Journal*. Vol. 7, pp. 515. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5732907/>
- Chhibber, S., Bansal, S., Kaur, S. (2015). Disrupting the Mixed-Species Biofilm of *Klebsiella pneumoniae* B5055 and *Pseudomonas aeruginosa* PAO Using Bacteriophages Alone or in Combination with Xylitol. *Microbiology*. Vol. 161, pp. 1369-1377.

- Costerton J.W., Ellis B., Lam, K., *et al.* (1994). Mechanism of Electrical Enhancement of Efficacy of Antibiotics in Killing Biofilm Bacteria. *Antimicrobial Agents and Chemotherapy*. Vol. 38, no. 12, pp. 2803-2809. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC188289/>
- Costerton J.W., Stewart P.S., Greenberg E.P. (1999). Bacterial biofilms: A Common Cause of Persistent Infections. *Science*. Vol. 284, pp. 1318-1322
- Costerton, J.W., Cheng, K.J., Geesey, G.G., Ladd, T.I., Nickel, J.C., Oasgupta, M., *et al.* (1987). Bacterial Biofilms in Nature and Disease. *Annu Rev Microbiol*. Vol. 41, pp. 435-464.
- Dalynn.com. 2020. [online] Available at: http://www.dalynn.com/dyn/ck_assets/files/tech/TM53.pdf
- Darouiche, R.O. (2004). Treatment of infections associated with surgical implants. *The New England Journal of Medicine*. Vol. 350, pp. 1422-1429.
- Del Pozo, JL., Patel, R. (2007). The challenge of treating biofilm-associated bacterial infections. *Clinical Pharmacology and Therapeutics*. Vol. 82, pp. 204-209. Available at: <https://ascpt.onlinelibrary.wiley.com/doi/abs/10.1038/sj.clpt.6100247>
- Dharma, Surya. (2008). Pengolahan dan Analisis Data Penelitian. *Direktorat Tenaga Kependidikan Direktorat Jenderal Peningkatan Mutu Pendidikan dan Tenaga Kependidikan Departemen Pendidikan Nasional*. Available at: <https://teguhsasmitosdp1.files.wordpress.com/2010/06/31-kode-05-b5-pengolahan-dan-analisis-data-penelitian.pdf>
- Di Domenico, E.G., Farulla, I., Prignano, G., *et al.* (2017). Biofilm is a Major Virulence Determinant in Bacterial Colonization of Chronic Skin Ulcers Independently from the Multidrug Resistant Phenotype. *International Journal of Molecular Sciences*. Vol 18, no. 5, pp. 1077. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5454986/>
- El-Ganiny, A.M., Shaker, G.H., Aboelazm, A.A., El-Dash, H.A. (2017). Prevention of Bacterial Biofilm Formation on Soft Contact Lenses Using Natural Compounds. *Journal of Ophthalmic Inflammation and Infection*. Vol. 7, pp. 11-17. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5395510/>
- Fux, C.A., Costerton, J.W., Stewart, P.S., Stoodley, P. (2005). Survival Strategies of Infectious Biofilms. *Trends in Microbiology*. Vol. 13, pp. 34-40.
- Gharrah, M.M., Mostafa, A., Barwa, R.F. (2017). Association between Virulence Factors and Extended Spectrum Beta-Lactamase Producing *Klebsiella pneumoniae* Compared to Nonproducing Isolates. *Interdisciplinary*

Perspectives on Infectious Diseases. Vol. 2017. Available at: <https://www.hindawi.com/journals/repid/2017/7279830/>

Gopalakrishnan P.N., Goel N., Banerjee S. (2017). Saline irrigation for the management of skin extravasation injury in neonates. *Cochrane Database of Systematic Reviews*. No. 7., pp. 1-26

Harapan, I.K., Tahlulending, A., Tumbol, M.V.L. (2018). Karakteristik Resistensi *Klebsiella pneumoniae* Yang Resisten Carbapenem Pada Beberapa Rumah Sakit Di Indonesia Dan Pemeriksaan Laboratorium. *PROSIDING Seminar Nasional Tahun 2018*. Vol. 1, no. 3, pp. 636-650. Available at: <https://ejurnal.poltekkes-manado.ac.id/index.php/prosiding2018/article/view/480>

Hari, P., Kacharaju, K.R., Anumala, N., Pathakota, K.R., Avula, J. (2018). Application of Bioelectric Effect to Reduce the Antibiotic Resistance of Subgingival Plaque Biofilm: An *in vitro* study. *Journal of Indian Society Periodontology*. Vol. 22, no. 2, pp. 133-139. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5939021/>

Høiby, N., Bjarnsholt, T., Givskov, M. (2010). Antibiotic Resistance of Bacterial Biofilms. *International Journal of Antimicrobial Agents*. Vol. 35, pp. 322–332.

Høiby, N., Ciofu, O., Johansen, H.K. (2011). The Clinical Impact of Bacterial Biofilms. *International Journal of Oral Science*. Vol. 3, no. 2, pp. 55-65. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3469878/>

Infante V.V., Cano A.M., Medina Valdovinos H., Macías A.E., Alvarez J.A. (2012) Saline solution as culture media from a viewpoint of nosocomial bacteraemia. *Rev Invest Clin*. Vol. 64, no.2, pp.120-125.

Jamal, M., Ahmad, W., Andleeb, S., et al. (2018). Bacterial Biofilm and Associated Infections. *Journal of the Chinese Medical Association*. Vol. 81, pp. 7-11. Available at: <https://www.sciencedirect.com/science/article/pii/S1726490117302587?via%3Dhub>

John. G.T., Donale, C.L. (2007). Biofilms: architects of disease.In: Connie R.M., Donald C.L., George M., editors. *Textbook of diagnostic microbiology*. 3rd ed. Saunders. Pp. 884-895.

Kalanuria, A. A., Ziai, W., Mirski, M. (2014). Ventilator-associated pneumonia in the ICU. *Critical Care (London, England)*. Vol 18, no. 2, pp. 208. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4056625/>

Kanno E., Tanno H., Suzuki A., Kamimatsuno R., Tachi M.. Reconsideration of iodine

- in wound irrigation: the effects on *Pseudomonas aeruginosa* biofilm formation. *J Wound Care.* Vol., 25, no. 6, pp. 335-339.
- Khoury, A.E., K.Lam,B.D.Elis, Costerton, J.W. (1992). Prevention and control of bacterial infections associated with medical devices. *Am. Soc.Artif.Intern.Org.J.38:M174-M178.*
- Kim, Y.W., Subramanian S., Gerasopoulos, K., *et al.* (2015). Effect of Electrical Energy on the Efficacy of Biofilm Treatment Using the Bioelectric Rffect. *Biofilms and Microbiomes.* Vol. 1, pp. 1-8. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5515217/>
- Kuhn, D.M., George T., Chandra J., *et al.* (2002). Antifungal Susceptibility of *Candida sp.* Biofilms: Unique Efficacy of Amphotericin B Lipid Formulation and Echinocandins. *Antimicrobial Agents and Chemotherapy.* Vol. 46, pp. 1773-1780. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC127206/>
- Lam, J., Chan R., Lam K., Costerton, J.W. (1980). Production of Mucoid Microcolonies by *Pseudomonas aeruginosa* Within Infected Lungs in Cystic Fibrosis. *Infection and Immunity.* Vol. 28, pp. 546-556. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC550970/>
- Lewis, Kim. (2001). Riddle of Biofilm Resistance. *Antimicrobial Agents and Chemotherapy.* Vol. 45, pp. 999-1007. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC90417/>
- Liu, W., Brown, Michael R.W., Elliot, Thomas S.J. (1997). Mechanism of Bactericidal Activity of Low Amperage Electric Current (DC). *Journal of Antimicrobial Chemotherapy.* Vol. 39, pp. 687-695. Available at: <https://academic.oup.com/jac/article/39/6/687/667300>
- Lusyati, S., Harahap, F., Hulzebos, C.V., Sauer, PJ. Modification in the Infusion System that Reduced Septicaemia in Newborn Infants. *Journal of Tropical Pediatrics.* Vol. 56, no. 2, pp. 132-133. Available at: <https://academic.oup.com/tropej/article/56/2/132/1729467>
- Macías, A.E., de Leon S.P., Huertas M., Maravilla E., Romero C., Montoya T.G., Muñoz J.M., Lopez-Vidal Y. (2008). Endemic Infusate Contamination and Related bateremia. Vol. 36, no. 1, pp. 48-53
- Macías A.E., Bruckner D.A., Hindler J.A., Muñoz J.M., Medina H., Hernández I., Guerrero F.J. (2000). Parenteral infusions as culture media from a viewpoint of nosocomial bateremia. *Rev Invest Clin.* Vol. 52, no. 1, pp. 39-43
- Magill, S. S., Edwards J. R., Bamberg W., Beldavs Z. G., Dumyati G., Kainer M. A.,

- et al.* (2014). Multistate point-prevalence survey of health care-associated infections. *The New England journal of medicine*. 370, 1198-208. Available at: <https://www.nejm.org/doi/full/10.1056/nejmoa1306801>
- Martin, R. M., & Bachman, M. A. (2018). Colonization, Infection, and the Accessory Genome of *Klebsiella pneumoniae*. *Frontiers in cellular and infection microbiology*, 8, 4. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5786545/>
- Matsunaga, T., Nakasono, S., Masuda, S. (1992) Electrochemical sterilization of bacteria absorbed on granular activated carbon. *FEMS Microbiol Lett*. Vol. 72, no.255, pp. 9.
- Mueller TC1, Loos M, Haller B, Mihaljevic AL, Nitsche U, Wilhelm D, Friess H, Kleeff J, Bader FG. (2014). Intra-operative wound irrigation to reduce surgical site infections after abdominal surgery: a systematic review and meta-analysis. *Langenbecks Arch Surg*. Vol. 400, no.2, pp. 167-181.
- Murphy, C.N., Clegg, S. (2012). *Klebsiella pneumoniae* and Type 3 Fimbriae: Nosocomial Infection, Regulation and Biofilm Formation. *Future Microbiology*. Vol. 7, no. 8, pp. 991-1002.
- Navon-Venezia, S., Kondratyeva, K., Carattoli. (2017). *Klebsiella pneumoniae*: a Major Worldwide Source and Shuttle for Antibiotic Resistance. *FEMS Microbiology Review*. Vol. 9, pp. 1071-1081. Available at: <https://academic.oup.com/femsre/article/41/3/252/3830265>
- Nickel, J.C., Mclean, R. (1998). Bacterial Biofilms in Urology. *Infection Urology*. Vol. 11, no. 6, pp. 169-175.
- Pooi Yin, Chung. (2016). The Emerging Problems of *Klebsiella pneumoniae* infections: Carbapenem Resistance and Biofilm Formation. *FEMS Microbiology Letter*. Vol. 363.
- Romling, U., Kjelleberg, S., Normark, S., Nyman, L., Uhlin, BE., Akerlund, B. (2014). Microbial biofilm formation: a need to act. *Journal of Internal Medicine*. Vol. 276, no. 2, pp. 98–110. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/joim.12242>
- Santoro, C., Arbizzani, C., Erable, B., Ieropulos, I. (2017). Microbial Fuel Cells: From Fundamentals to Applications: A review. *Journal of Power Sources*. Vol. 356, pp. 225-244. Available at: <https://www.sciencedirect.com/science/article/pii/S0378775317304159>
- Sandvik, E.L., McLeod, B.R., Parker, A.E., Stewart, P.S. (2013). Direct Electric

- Current Treatment under Physiologic Saline Conditions Kills *Staphylococcus epidermidis* Biofilms via Electrolytic Generation of Hypochlorous Acid. *PLOS One*. Vol. 8, no. 2. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0055118>
- Setiawan, A., Julius St, M., Siwindarto, P. (2013). Perancangan Dan Pembuatan Pembangkit Medan Listrik DC Pulsa Dengan Pengaturan Frekuensi Untuk Proses Antibakteri Methicillin-Resistant *Staphylococcus aureus* (MRSA) Secara In Vitro. Available at: <http://elektro.studentjournal.ub.ac.id/index.php/teub/article/view/30>
- Schmidt K., Estes C., McLaren A., Spangehl M.J. (2018). Chlorhexidine Antiseptic Irrigation Eradicates *Staphylococcus epidermidis* From Biofilm: An In Vitro Study. *Clin Orthop Relat Res*. Vol. 476, no. 3, pp. 648-653
- Sharma, A.M., Yadav, S. (2008). Biofilms: Microbes and Disease. *The Brazilian Journal of Infectious Diseases*. Vol. 12, no. 6, pp. 526-530. Available at: https://www.researchgate.net/publication/24202291_Biofilms_Microbes_and_disease
- Stoodley, P., Lappin-Scott, H., DeBeer, D. (1997). Influence of Electric Fields and pH on Biofilm Structure as Related to the Bioelectric Effect. *Antimicrobial Agents and Chemotherapy*. Vol. 41, pp. 1876-1879. Available at: https://www.researchgate.net/publication/13918894_Influence_of_electric_fields_and_pH_on_biofilm_structure_as_related_to_the_bioelectric_effect
- Surgers, L., Boyd, A., Girard, P.M., Arlet, G., Decré, D. (2019). Biofilm Formation by ESBL-Producing Strains of *Escherichia coli* and *Klebsiella pneumoniae*. *International Journal of Medical Microbiology*. Vol. 309, pp. 13-18. Available at: <https://hal.sorbonne-universite.fr/hal-01990024/document>
- Szymanski, CM., Schnaar, RL., Aebi, M. (2017). Bacterial and Viral Infections. 3rd edition. *Cold Spring Harbor (NY)*: Cold Spring Harbor Laboratory Press; 2015-2017. Chapter 42. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK453060/>
- Wellman, N., Fortun, S., Mc Leod, B. R. (1996). Bacterial Biofilms and the Bioelectric Effect. *Antimicrobial Agents and Chemotherapy*. Vol. 40, no. 9, pp. 2012-2014. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC163464/>
- Yan Q, Zhou M, Liu W. (2016). Hypervirulent *Klebsiella pneumoniae* Induced Ventilator-Associated Pneumonia in Mechanically Ventilated Patients in China. *European Journal of Clinical Microbiology and Infectious Disease*. Vol. 35, no. 3, pp. 387-396.