

DAFTAR PUSTAKA

- Abdullah MT, Hakim BA. 2011. "Physical Environment and Microbe Rate of Indoor Air of Makassar Haji Public Hospital, South Sulawesi". <https://www.neliti.com/id/publications/39605/lingkungan-fisik-dan-angka-kuman-udara-ruangan-di-rumah-sakit-umum-haji-makassar>
- Akinkunmi EO, Adesunkanmi AR, Lamikanra A. 2014. "Pattern of Pathogens from Surgical Wound Infections in a Nigerian Hospital and Their Antimicrobial Susceptibility Profiles". *African Health Sciences*; 14 (4): 802-809. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4370057/>
- Amanullah S. 2015. Ventilator-Associated Pneumonia Overview of Nosocomial Pneumonias. **Medscape**. <https://emedicine.medscape.com/article/304836-overview#a1>
- Ananda T et al. 2022. "Nosocomial Infection and Role of Nanotechnology". *Bioengineering* 9, 51. <https://www.mdpi.com/journal/bioengineering>
- Anjali J. 2006. "The Impact of the Environment on Infections in Healthcare Facilities". [https://www.healthdesign.org/system/files/Joseph The Impact of Environment 2006.pdf](https://www.healthdesign.org/system/files/Joseph%20The%20Impact%20of%20Environment%202006.pdf).
- Apurba SS and Sandhya B. 2021. *Essentials of Medical Microbiology*. Third Edition. Chapter 3.2: General Bacteriology: Morphology and Physiology of Bacteria. Jaypee Brother Medical Publisher. New Dehly and London.
- Asif et al. 2018. Microbial Quality Assesment of Indoor Air in a Large Hospital Building During Winter and Spring Season. *Building and Enviroment*; 135: 68-73. <https://doi.org/10.1016/j.buildenv.2018.03.010>.
- Awosika SA, Olajubu FA, Amusa NA. 2012. "Microbiological Assessment of Indoor Air of a Teaching Hospital in Nigeria". *Asian Pasific Journal of Tropical Biomedicine*.
- Balm MND, Jureen R, Teo C, Yeoh AEJ, Lin RTP, Dancer SJ, et al. Hot and steamy: outbreak of *Bacillus cereus* in Singapore associated with construction work and laundry practices. *Journal of Hospital Infection*. 2012 Aug 1;81(4):224–30. <https://doi.org/10.1016/J.JHIN.2012.04.022>
- Bianco A. et al. 2020. Characterization of *Bacillus cereus* Group Isolates From Human Bacteremia by Whole-Genome Sequencing. *Front. Microbiol.* 11:599524. doi: 10.3389/fmicb.2020.599524.
- Bocchi M, Perna A, Cianni L, Vitiello R, Greco T, Maccauro G, Perisano C. 2020. A rare case of *Bacillus megaterium* soft tissues infection. *Acta Biomed.* p2020012; 91. 10.23750/abm.v91i14-S.10849.

- Boix-Palop L, Nicolás C, Xercavins M, Riera M, Prim N, Freixas N, et al. *Bacillus* species pseudo-outbreak: construction works and collateral damage. *Journal of Hospital Infection*. 2017 Jan 1;95(1):118–22. <https://doi.org/10.1016/J.JHIN.2016.10.013>
- Boyke Bunk, Arne Schulz, Simon Stammen, Richard Münch, Martin J. Warren, Dieter Jahn & Rebekka Biedendieck (2010) A short story about a big magic bug, *Bioengineered Bugs*, 1:2, 85-91, DOI: 10.4161/bbug.1.2.11101.
- Cabo Verde S, Almeida SM, Matos J, Guerreiro D, Meneses M, Faria T, et al. Microbiological assessment of indoor air quality at different hospital sites. *Res Microbiol*. 2015 Sep 1;166(7):557–63. <https://doi.org/10.1016/j.resmic.2015.03.004>
- Cabo Verde S, Almeida SM, Matos J, Guerreiro D, Meneses M, Faria T, et al. Microbiological assessment of indoor air quality at different hospital sites. *Res Microbiol*. 2015 Sep 1;166(7):557–63. <https://doi.org/10.1016/j.resmic.2015.03.004>
- CDC. 2017. Modes of Transmission of Airborne Diseases. <https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/air.html>
- CDC. 2021. The Impact of COVID-19 on Healthcare-Associated Infections in 2020: A Summary of Data Reported to the National Healthcare Safety Network. <https://doi.org/10.1017/ice.2021.362>
- Chang CY, Tseng L, Yang LS. Microbial Air Contamination in An Intensive Care Unit. *International Journal of Public Health Science (IJPHS)*. 2015;4(3):145–51. <https://ijphs.iaescore.com/index.php/IJPHS/article/view/4725>
- Chauveaux D. 2015. Preventing Surgical Site Infection: Measures other than Antibiotics. *Orthopaedics and Traumatology: Surgery and Research*; 101: S77-S83. Elsevier Masson SAS. <http://dx.doi.org/10.1016/j.otsr.2014.07.028>
- Chen, X., Wang, L., Zhou, J. *et al.* *Exiguobacterium* sp. A1b/GX59 isolated from a patient with community-acquired pneumonia and bacteremia: genomic characterization and literature review. *BMC Infect Dis* **17**, 508 (2017). <https://doi.org/10.1186/s12879-017-2616-1>
- Chirca I. 2019. The Hospital Environment and its Microbial Burden: Challenges and Solutions. *Future Microbiol*; 14(12): 1007-1010. <https://www.futuremedicine.com/doi/epdf/10.2217/fmb-2019-0140?src=getfr>
- Christine Y, James WS, David CA. 2015. *Bacillus* and Other Aerobic Endospore-Forming Bacteria. *Manual of Clinical Microbiology*. 11th Edition, Volume 1. ASM Press, Wahingtong DC.
- Collins CH et al., 2004. *Collins and Lyne's Microbiological Methods*. Eight Edition. Arnold Publisher. New York.

- Cowan MK, Smith H, Lusk J. 2022. Microbiology Fundamentals: a Clinical Approach, Fourth Edition. McGraw Hill LLC. New York.p621-622.
- Cowan MK, Smith H, Lusk J. Microbiology Fundamentals: a Clinical Approach, Fourth Edition. McGraw Hill LLC. New York.p621-622. 2022. 621–622 p. 2022.
- Creamer E, Shore AC, Deasy EC, Galvin S, Dolan A, Walley N, et al. Air and surface contamination patterns of methicillin-resistant Staphylococcus aureus on eight acute hospital wards. Journal of Hospital Infection. 2014;86(3):201–8. <https://doi.org/10.1016/j.jhin.2013.12.005>
- Crisafulli E, Aredano I, Valzano I, Burgazzi B, Andrani F, Chetta A. Pleuritis with pleural effusion due to a Bacillus megaterium infection. Respir Case Rep. 2018 Nov 28;7(1):e00381. doi: 10.1002/rcr2.381. PMID: 30510763; PMCID: PMC6260906.
- Dehdashti A et al. 2013. "Survey of Bioaerosol Type and Concentration in the Ambient Air of Hospital in Damghan, Iran. Occupational Medicine Quarterly Journal; 4(3): 41-51.
- Dehdashti A, Sahranavard N, Rostami R, Barkhordari A, Banayi Z. Survey of bioaerosols type and concentration in the ambient air of hospitals in Damghan, Iran. Occupational Medicine Quarterly Journal. 2012; <https://www.researchgate.net/publication/261286848>
- Department of Veterinary Disease Biology. 2011. Faculty of Health and Medical Sciences - University of Copenhagen Denmark.
- Despotovic A, Milosevic B, Milosevic I, ... NMA journal of, 2020 undefined. Hospital-acquired infections in the adult intensive care unit—Epidemiology, antimicrobial resistance patterns, and risk factors for acquisition and mortality. Elsevier [Internet]. [cited 2023 May 31]; Available from: <https://www.sciencedirect.com/science/article/pii/S0196655320300365>
- Despotovic A, Milosevic B, Milosevic I, ... NMA journal of, 2020 undefined. Hospital-acquired infections in the adult intensive care unit—Epidemiology, antimicrobial resistance patterns, and risk factors for acquisition and mortality. Elsevier [Internet]. [cited 2023 May 31]; Available from: <https://www.sciencedirect.com/science/article/pii/S0196655320300365>
- Dingle TC, Butler-Wu SM. 2013. "MALDI-TOF Mass Spectrometry for Microorganism Identification". Clinical Lab Medicine; 33: 589-609. <https://www.semanticscholar.org/paper/Maldi-tof-mass-spectrometry-for-microorganism-Dingle-Butler-Wu/09845188ffee63b752f44324b011ac0db334620a>
- Duncan KO, Smith TL. Primary cutaneous infection with Bacillus megaterium mimicking cutaneous anthrax. J Am Acad Dermatol. 2011 Aug;65(2):e60-e61. doi: 10.1016/j.jaad.2011.02.024. PMID: 21763557.

- Eames I, Tang JW, Wilson P. 2009. "Airborne Transmission of Disease in Hospital". The Royal Society Publishing; 6: s697-s702. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2843953/>
- Ehling-Schulz M, Lereclus D, Koehler TM. 2019. The *Bacillus cereus* group: *Bacillus* species with pathogenic potential. *Microbiol Spectrum* 7(3):GPP3-0032-2018. doi:10.1128/microbiolspec.GPP3-0032-2018.
- Ehling-Schulz M, Lereclus D, Koehler TM. The *Bacillus cereus* Group: *Bacillus* Species with Pathogenic Potential. 2019; Available from: <https://journals.asm.org/journal/spectrum>
- EL-Sharkawy MF, Noweir MEH. 2014. Indoor Air Quality Levels in a University Hospital in the Eastern Province of Saudi Arabia. *Journal of Family and Community Medicine*; 21: 39-47. DOI:[10.4103/2230-8229.128778](https://doi.org/10.4103/2230-8229.128778)
- Eltwisy, H.O.; Twisy, H.O.;Hafez, M.H.R.; Sayed, I.M.;El-Mokhtar, M.A. 2022. Clinical Infections, Antibiotic Resistance, and Pathogenesis of *Staphylococcus haemolyticus* Microorganisms. 2022,10,1130. <https://doi.org/10.3390/microorganisms10061130>.
- Fernandes K, Silva B, Botelho Miguel C, Rocha R, Oliveira Júnior DE, Araujo MC, et al. Molecular analysis of the prevalence of *Acinetobacter baumannii* in hospitals and the surrounding environments: a cross-sectional study. *Bioscience Journal* [Internet]. 2023 Jan 27 [cited 2023 Jun 20];39:e39019–e39019. Available from: <https://seer.ufu.br/index.php/biosciencejournal/article/view/63071>
- Ghanizadeh F, Godini H. 2018. A review A review of the chemical and biological pollutants in indoor air in hospitals and assessing their effects on the health of patients, staff and visitors. *Reviews on Environmental Health*, <https://doi.org/10.1515/reveh-2018-0011>
- Glasset B, Herbin S, Granier SA, Cavalié L, Lafeuille E, Gué Rin C, et al. *Bacillus cereus*, a serious cause of nosocomial infections: Epidemiologic and genetic survey. 2018; Available from: <https://doi.org/10.1371/journal.pone.0194346>
- Guo FP, Fan HW, Liu ZY, Yang QW, Li YJ, Li TS. Brain Abscess Caused by *Bacillus megaterium* in an Adult Patient. *Chin Med J (Engl)*. 2015 Jun 5;128(11):1552-4. doi: 10.4103/0366-6999.157697. PMID: 26021516; PMCID: PMC4733773.
- Haas, Charles N, Joan BR, Charles PG. 2014. *Quantitative Microbial Risk Assessment*. 2nd Edition. New Jersey, US: Willey Blackwell.
- Haddadin Y, Annamaraju P, Regunath H. 2022. "Central Line Associated Blood Stream Infections". StatPearls Publishing LCC . <https://www.ncbi.nlm.nih.gov/books/NBK430891/>.
- Han, G., Zhang, J., Luo, Z., Lu, B., Zhang, P., Yong, K., Wang, Y., Luo, Y., Yang, Z., Ren, M., Cao, S., & Yao, X. (2023). *Characteristics of a novel temperate bacteriophage against Staphylococcus arlettae (vB_SarS_BM31)*. 26, 327–341. <https://doi.org/10.1007/s10123-022-00292-3>

- Haque M, Sartelli M, Judi M, Abu Bakar M. 2018. "HealthCare-Associated Infections – an Overview". Dovepress. *Infection and Drug Resistance*; 11: 2321-2333. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6245375/>
- He C et al. 2017. Particle and bioaerosol characteristics in a paediatric intensive care unit. *Environmental International*; 107: 89-99. <http://dx.doi.org/10.1016/j.envint.2017.06.020>
- Howard A, O'Donoghue M, Feeney A, and Sleator RD. 2012. *Acinetobacter baumannii*. *Virulence*, 3:3, 243-250, DOI: 10.4161/viru.19700.
- Huo TY, Chiang-Ni C, Teng SH. 2019. "Current Status of MALDI-TOF Mass Spectrometry in Clinical Microbiology. *Journal of Food and Drug Analysis*; 27: 404-414.
- Irene PD. Avoiding Hospital Aquired Infection will be Posible with FLEXPOL. *Biomedical*. <https://inspirabiotech.com/2018/04/03/avoiding-hospital-acquired-infections-will-be-possible-with-flexpol/?lang=en>
- ISO 14644-1. 2015. "*Cleanroom and Associated Controlled Enviroments*" Part 1: Classification of Air Cleanliness by Particle Concerntation. Second Edition.
- Jaffal AA et al. 1997. "Hospital airborne Microbial Pollution in a Desert Country". *Environment International*; 23: 167-172. <https://www.sciencedirect.com/science/article/pii/S0160412097000032>
- John LB. 2021. "Catheter-Related Urinary Infection (UTI). Medscape.** <https://emedicine.medscape.com/article/2040035-overview#a1>
- Karigoudar RM *et al.* 2020. Comparison of Active an Pasive Methods of Air Sampling to Evaluate the Microbial Contamnination of Air in Operating Theaters. *Journal of Pure and Applied Microbiology*; 14 (4): 2691-2697. <https://microbiologyjournal.org/comparison-of-active-and-passive-methods-of-air-sampling-to-evaluate-the-microbial-contamination-of-air-in-operation-theaters/>
- Karigoudar RM, Wavare SM, Kakhandki L, Bagali S, Kumar IH. Comparison of active and passive methods of air sampling to evaluate the microbial contamination of air in operation theaters. *J Pure Appl Microbiol*. 2020 Dec 1;14(4):2691–7. <https://doi.org/10.22207/JPAM.14.4.47>
- Kemenkes RI. 2004. "*Keputusan Menteri Kesehatan Republik Indonesia Nomor 1204/MENKES/SK/X/2004 Tentang Persyaratan Kesehatan Lingkungan Rumah Sakit*. Indonesia. <https://persi.or.id/wp-content/uploads/2020/11/kmk12042004.pdf>
- Kementrian Kesehatan RI. Direktorat Jendral Nina Upaya Kesehatan. 2012. *Pedoman Teknis Ruang Perawatan Intensif Rumah Sakit*. <https://rsudkoesma.id/wp-content/uploads/PPI/Persyaratan%20Ruang%20Rawat%20Intensif.pdf>.

- Kozajda A, Ježak K, Kapsa A. Airborne *Staphylococcus aureus* in different environments-a review. Available from: <https://doi.org/10.1007/s11356-019-06557-1>
- Kumar P, Kausar MA, Singh AB, Singh B. 2021. Biological Contaminants in the Indoor Air Environment and Their Impacts on Human Health. Springer Nature; Air Quality, Atmosphere and Health, doi:10.1007/s11869-021-00978-z.
- Kumar P, Kausar MA, Singh AB, Singh R. Biological contaminants in the indoor air environment and their impacts on human health. Vol. 14, Air Quality, Atmosphere and Health. Springer Science and Business Media B.V.; 2021. p. 1723–36. <https://doi.org/10.1007/s11869-021-00978-z>
- Lavecchia, A., Chiara, M., de Virgilio, C., Manzari, C., Monno, R., de Carlo, A., Pazzani, C., Horner, D., Pesole, G., & Placido, A. (2019). *microorganisms Staphylococcus arlettae Genomics: Novel Insights on Candidate Antibiotic Resistance and Virulence Genes in an Emerging Opportunistic Pathogen*. 7,
- Letchford E, Bench S. 2018. "Ventilator-Associated Pneumonia and Suction: A Review of the Literature". *Br J Nurs*; 27 (1): 13-18. <https://pubmed.ncbi.nlm.nih.gov/29323990/>
- Madigan MT, Bender KS, Buckley DH, Sattley WM, and Stahl DA. 2021. Brock Biology Of Microorganisms. 6th Edition. Pearson Education Limited Inc. U.S.
- Mahon CR, Lehman DC, and Manuselis G. 2015. Text Book of Diagnostic Microbiology. 5th Edition. Chapter 21;p 484-485. Saunders Elseviers. ISBN: 978-0-323-08989-0.
- Makki, A.R.; Sharma, S.; Duggirala, A.; Prashanth, K.; Garg, P.; Das, T. Phenotypic and genotypic characterization of coagulase-negative staphylococci (CoNS) other than *Staphylococcus epidermidis* isolated from ocular infections. *Investig. Ophthalmol. Vis. Sci.* 2011, 52, 9018–9022.
- Manulang SH. 2021. Pencegahan Pengendalian Infeksi Terkait Pembedahan. *Perdalin Pusat*; 8: 143-148.
- Mirzaei R et al. 2014. Quantitative and Qualitative Evaluation of Bio-Aerosol in Surgery Rooms and Emergency Department of Educational Hospital. *Jundishapur J Microbiol*; 7(10). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4295311/pdf/jjm-07-11688.pdf>
- Mizuno, S., Fujikawa, T., Uemura, S. *et al.* Nosocomial meningitis caused by *Staphylococcus haemolyticus* in a child with neutropenia in the absence of intracranial devices: a case report. *BMC Infect Dis* 23, 95 (2023). <https://doi.org/10.1186/s12879-023-08059-5>.
- Monegro AF, Muppidi V, Regunath H, 2022. "Hospital Acquires Infection". StatPearls Publishing LCC. <https://www.ncbi.nlm.nih.gov/books/NBK441857/>.

- Monegro AF, Muppidi V, Regunath H. Hospital Acquired Infections. Cambridge Handbook of Psychology, Health and Medicine, Second Edition [Internet]. 2023 Feb 12 [cited 2023 May 31];736–8. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK441857/>
- Napoli C, Marcotrigano V, Montagna MT. 2012. Air Sampling Procedures to Evaluate Microbial Contamination: a Comparison Between Active and Passive Methods in Operating Theatres. BMC Public Health; 12: 594. <http://www.biomedcentral.com/1471-2458/12/594>
- Napoli C, Marcotrigano V, Montagna MT. Air sampling procedures to evaluate microbial contamination: A comparison between active and passive methods in operating theatres. BMC Public Health. 2012;12(1). <https://doi.org/10.1186/1471-2458-12-594>
- Nimer NA, Al-Saa'da RJ and Abuelaish O, 2016. Accuracy of the Vitek 2 System for a Rapid and Direct Identification and Susceptibility Testing of Gram-Negative Rods and Gram-Positive Cocci in Blood Samples. Eastern Mediterranean Health Journal. Vol 22 p193-200.
- Osario, EF, Ighosewe OU, and Ajakpovi OD. 2008. "Hospital Indoor Airborne Microflora in Private and Government Owned Hospitals in Benin City, Nigeria". Jurnal of Medical Sciences 3 (1): 34-38.
- Pantoja LDM, Ferreira R, and Nunes ABA. 2016. "Investigation of Fungal Volatile Organic Compounds in Hospital Air". Atmospheric Pollution Research; 7: 659-663. <https://doi.org/10.1016/j.apr.2016.02.011>
- Papazian L, Klompas M, Luyt CE, 2020. "Ventilator-Associated Pneumonia in Adults: A Narrative Review". Intensive Care Med.;46(5):888-906. <https://pubmed.ncbi.nlm.nih.gov/32157357/>
- Parhusip. 2005. "Faktor-Faktor yang Mempengaruhi Terjadinya Infeksi Nosokomial Serta Pengendaliannya di BHG. UPF. Paru RS Dr. Pirngadi Medan. Indonesia. <https://repository.usu.ac.id/bitstream/handle/123456789/3455/paru-parhusip4.pdf?sequence=1&isAllowed=y>
- Pasquarella C, Vitali P, Sacconi E, Manotti P, Boccuni C, Ugolotti M, et al. Microbial air monitoring in operating theatres: Experience at the University Hospital of Parma. Journal of Hospital Infection. 2012 May;81(1):50–7. <https://doi.org/10.1016/j.jhin.2012.01.007>
- Patel R. 2014. "MALDI-TOF MS for The Diagnosis of Infection Diseases". Clinical Chemistry; 61(1): 100-11. <https://pubmed.ncbi.nlm.nih.gov/25278500/>
- Permenkes RI. 2017." *Peraturan Menteri Kesehatan Republik Indonesia Nomor 27 Tahun 2017 tentang Pedoman Pencegahan dan Pengendalian Infeksi di Fasilitas Pelayanan Kesehatan*". Indonesia. [http://hukor.kemkes.go.id/uploads/produk_hukum/PMK No. 27 ttg Pedoman Pencegahan dan Pengendalian Infeksi di FASYANKES .pdf](http://hukor.kemkes.go.id/uploads/produk_hukum/PMK_No._27_ttg_Pedoman_Pencegahan_dan_Pengendalian_Infeksi_di_FASYANKES_.pdf).

- Permenkes RI. 2019. *Peraturan Menteri Kesehatan Republik Indonesia Nomor 7 Tahun 2019 Tentang Kesehatan Lingkungan Rumah Sakit*. Indonesia. [http://hukor.kemkes.go.id/uploads/produk_hukum/PMK No 7 Th 2019 ttg Kesehatan Lingkungan Rumah Sakit.pdf](http://hukor.kemkes.go.id/uploads/produk_hukum/PMK_No_7_Th_2019_ttg_Kesehatan_Lingkungan_Rumah_Sakit.pdf).
- Pitt TL, Malnick H, Shah J, Chattaway MA, Keys CJ, Cooke FJ, Shah HN. Characterisation of *Exiguobacterium aurantiacum* isolates from blood cultures of six patients. *Clin Microbiol Infect*. 2007 Sep;13(9):946-8. doi: 10.1111/j.1469-0691.2007.01779.x. Epub 2007 Jul 20. PMID: 17645563.
- Rajesh B and Rattan LI, 2008. *Essential of Medical Microbiology*. Forth Edition. Jaypee Brother Medical Publisher. New Dehly and London.
- Riedel S, Morse SA, Mietzner T, Miller S et al. 2019. *Jawetz, Melnick and Adelberg's Medical Microbiology*. 28th Edition. McGraw-Hill Education. New York.
- Riedel S, Morse SA, Mietzner T, Miller S. *Jawetz, Melnick and Adelberg's Medical Microbiology*. . 28th Edition. New York. : McGraw-Hill Education. ; 2019.
- Robert JK and Kara R. 2020. *Bacteria: Additional Information*. Britannica.
- Saadoun I, Jaradat ZW, Tayyar IA Al, Nasser Z EI, Ababneh Q. Airborne methicillin-resistant *Staphylococcus aureus* in the indoor environment of King Abdullah University Hospital, Jordan. *Indoor and Built Environment*. 2015 May 22;24(3):315–23. <https://doi.org/10.1177/1420326X14526604>
- Sattar SA. 2016. Indoor Air as a Vehicle for Human Patogen: Introduction, Objectives, and Expectation of Outcome. *American Journal of Infection Control* ; 44: S95-S101. Elsevier Inc. <http://dx.doi.org/10.1016/j.ajic.2016.06.010>.
- Sattar SA. Indoor air as a vehicle for human pathogens: Introduction, objectives, and expectation of outcome. Vol. 44, *American Journal of Infection Control*. Mosby Inc.; 2016. p. S95–101. <https://doi.org/10.1016/j.ajic.2016.06.010>
- Sexton T, Clarke P, O'Neill E, Dillane T, Humphreys H. Environmental reservoirs of methicillin-resistant *Staphylococcus aureus* in isolation rooms: correlation with patient isolates and implications for hospital hygiene. *Journal of Hospital Infection*. 2006 Feb 1;62(2):187–94. <https://doi.org/10.1016/J.JHIN.2005.07.017>
- Shajahan A, Culp CH, Williamson B. 2019. Effects of Indoor Environment Parameters Related to Building HVAC System on Patients Medical Outcomes:A Review of Scientific Research on Hospital Buildings. DOI: 10.1111/ina.12531
- Shimose LA, Doi Y, Bonomo RA, De Pascale D, Viau RA, Cleary T, et al. Contamination of ambient air with *Acinetobacter baumannii* on consecutive inpatient days. *J Clin Microbiol*. 2015 Jul 1;53(7):2346–8. <https://doi.org/10.1128/JCM.00198-15>

- Siddiqui AH, Koirala J. Methicillin-Resistant *Staphylococcus aureus*. Vulvar Disease: Breaking the Myths [Internet]. 2023 Apr 2 [cited 2023 Jun 19];301–2. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482221/>
- Sikora A, Zahra F. 2022. Nosocomial Infection Books. Stat Pearls Publishing LLC. <https://www.ncbi.nlm.nih.gov/books/NBK559312/>
- Singhal N et al. 2015. “MALDI-TOF Mass Spectrometry: an Emerging Technology for Microbial Identification and Diagnosis”. *Frontiers in Microbiology*; 6:791
- Stephen H. Gillespie, Kathleen B. Bamford. 2012. *Medical Microbiology and Infection at a Glance*, Fourth Edition. John Wiley & Sons, Ltd. Published 2012 by John Wiley & Sons, Ltd.
- Stewart S et al. 2021.” Epidemiology of Healthcare-Associated Infection Reported from a Hospital-wide Incidence Study: Considerations for Infection Prevention and Control Planning”. UK. *Jurnal of Hospital Infection*. <https://doi.org/10.1016/j.jhin.2021.03.031>
- Sudharsanam S, Swaminathan A, Srikanth P. 2012. Characterization of indoor bioaerosols from a hospital ward in a tropical setting. *African Health Sci.*; 12 (2): 217-225. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3462539/#_ffn_sectitle
- Syahruli. 2021. “Apa itu *Cleanroom?*”. ISO Center Indonesia. <https://isoindonesiacenter.com/apa-itu-cleanroom/>
- Tolabi Z et al. 2019. The investigation of Type and Concentration of Bio-aerosols in the Air of Surgical Rooms: A Case Study in Shariati Hospital, Karaj. *MethodsX*; 6: 641-650. DOI: [10.1016/j.mex.2019.03.016](https://doi.org/10.1016/j.mex.2019.03.016)
- Tormo-Molina R, Gonzalo-Garijo MA, Fernández_Rodríguez S, and Silva-Palacios I. 2012. “Monitoring The Occurrence of Indoor Fungi in a Hospital”. Spain. *Revista Iberoamericana de Micología*; 29(4): 227-234. <https://www.reviberoammicol.com/2012-29/227234.pdf>
- Tortora GJ, Funke BR, Case CI, 2021. *Micribiology in Introduction*. 13th edition. Pearson Education Limited. United Kingdom.
- Turnbull PCB. *Bacillus*. 1996. In: Baron S, editor. *Medical Microbiology*. 4th edition. Galveston (TX): University of Texas Medical Branch at Galveston; Chapter 15.
- Verde, Sandra Cabo et al. 2015. “Microbiological Assessment of Indoor Air Quality at Different Hospital Sites”. *Research in Microbiology* 166 (7): 557-63.
- Waltz PK, Zuckerbraun BS. 2017. “Surgical Site Infection and Associated Operative Characteristics”. *Surgical Incection*; 18(4): 447-450. <https://pubmed.ncbi.nlm.nih.gov/28448197/>
- Weber DJ, Anderson D, Rutala WA. 2012. “The Role of The Surface Environment in Healthcare -Associated Infection”. *Current Opinion Infection Diseases*; 26(4): 338-44. <https://pubmed.ncbi.nlm.nih.gov/23743816/>

- Weiner-Lastinger MPH LM, Pattabiraman V, Konnor MPH RY, Patel MPH PR, Wong MPH E, Xu MPH SY, et al. The impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infections in 2020: A summary of data reported to the National Healthcare Safety Network. Available from: <https://doi.org/10.1017/ice.2021.362>
- Weiner-Lastinger MPH LM, Pattabiraman V, Konnor MPH RY, Patel MPH PR, Wong MPH E, Xu MPH SY, et al. The impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infections in 2020: A summary of data reported to the National Healthcare Safety Network. Available from: <https://doi.org/10.1017/ice.2021.362>
- Werner G, Parisi A, Bianco A, Capozzi L, Monno MR, Sambro L Del, et al. Characterization of *Bacillus cereus* Group Isolates From Human Bacteremia by Whole-Genome Sequencing. 2021; Available from: www.frontiersin.org
- Whitman WB et al. *Bergey's Manual of Systematic Bacteriology*. 2nd Edition. Volume 3. The Firmicutes. Springer Dordrecht Heidelberg. London-New York. . 2009.
- Whitman WB et al., 2009. *Bergey's Manual of Systematic Bacteriology*. 2nd Edition. Volume 3. The Firmicutes. Springer Dordrecht Heidelberg. London-New York.
- WHO. 2002. *WHO | Prevention of hospital-acquired infections: A practical guide. 2nd edition.* [online] Available at: http://www.who.int/csr/resources/publications/drugresist/WHO_CDS_CSR_EPH_2002_12/en/
- WHO. 2018. "Global guidelines for the prevention of surgical site infection, 2nd ed.". <https://www.who.int/publications/i/item/global-guidelines-for-the-prevention-of-surgical-site-infection-2nd-ed>.
- Willey J, Sandman K, Wood D. 2020. *Prescott's Microbiology*. 11th Edition. McGraw-Hill Education. New York.
- Willey J, Sandman K, Wood D. *Prescott's Microbiology*. . Vol. 11th Edition. New York.: McGraw-Hill Education; 2020.
- Wisudawan B O. Analisis risiko dan model dinamis polusi bioaerosol pada rsup.dr.wahidin sudirohusodo makassar. 2020 Aug 26; <http://repository.unhas.ac.id/id/eprint/831/>
- Wisudawan B O. Analisis risiko dan model dinamis polusi bioaerosol pada rsup.dr.wahidin sudirohusodo makassar. 2020 Aug 26; <http://repository.unhas.ac.id/id/eprint/831/>
- Yu H, Taniguchi M, Uesaka K, Wischart A, Pootanakit K, Nishitani Y, Murakami Y, Ishimori K, Miyazaki K, Kitahara K. 2019. Complete genome sequence of *Staphylococcus arlettae* strain P2, isolated from a laboratory environment. *Microbiol Resour Announc* 8:e00696-19. <https://doi.org/10.1128/MRA.00696-19>.

Yuan F, Qiu W, Xia Y, Chen Q, Li J, Liang J, et al. Contamination of drug-resistant *Acinetobacter baumannii* and its antibiotic resistance genes in the dust on the return vent filters of air-conditioners in hospital wards. 2022 [cited 2023 Jun 20]; Available from: <https://doi.org/10.21203/rs.3.rs-1774903/v1>

Zhai Y, Li X, Wang T, Wang B, Li C, Zeng G. A review on airborne microorganisms in particulate matters: Composition, characteristics and influence factors. Vol. 113, *Environment International*. Elsevier Ltd; 2018. p. 74–90. <https://doi.org/10.1016/j.envint.2018.01.007>

Zhai Y, Li X, Wang T, Wang B, Li C, Zeng G. A review on airborne microorganisms in particulate matters: Composition, characteristics and influence factors. Vol. 113, *Environment International*. Elsevier Ltd; 2018. p. 74–90. <https://doi.org/10.1016/j.envint.2018.01.007>

Lampiran 2 Surat Permohonan Etik Penelitian



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR



Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed.PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

LAMPIRAN 5

SURAT PERSETUJUAN **NOMOR : 28305/UN4.6.8/TP.02.02/2022**

Yang bertanda tangan di bawah ini :

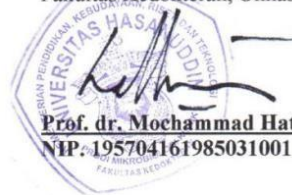
Nama : Prof. dr. Mochammad Hatta, Ph.D., Sp.MK(K)
NIP : 195704161985031001
Jabatan : Ketua Program Studi Spesialis Mikrobiologi Klinik, Fakultas Kedokteran Unhas

Menerangkan bahwa yang bersangkutan dibawah ini

Nama : dr. Prajayanti Palulun
Nomor Pokok : C195201002
Program Pendidikan : Sp1
Program Studi : Mikrobiologi Klinik
Judul Penelitian : Identifikasi Bakteri Aerob di Udara pada Ruang Bedah Sentral, ICU dan NICU dan Ruang Bersalin di RSUD Dr. M. Haulussy Ambon Menggunakan *Matrix-Assited Laser Desorption Ionization-Time of Flight Mass Spectrometry* (MALDI TOF MS)


Menyetujui kepada yang bersangkutan diatas untuk meminta Permohonan Persetujuan Etik Penelitian Menggunakan Subyek Manusia di Fakultas Kedokteran Universitas Hasanuddin.

Makassar, 05 Desember 2022
Ketua Program Studi Spesialis Mikrobiologi Klinik
Fakultas Kedokteran, Unhas



Prof. dr. Mochammad Hatta, Ph.D., Sp.MK(K)
NIP: 195704161985031001

Lampiran 3 Etik Penelitian


KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPIN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
 Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
 JL. PERintis KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
 Contact Person: dr. Agus Salim Bukhari, M.Med,PhD, Sp.GK, TESP, 081241850858, 0411 5780103, Fax : 0411 581431

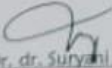
Keputusan Protokol Amandemen
No.88/UN4.6.4.5.31/PP36/2023


Nomor Protokol : UH22120773


Judul Protokol :
 Identifikasi Bakteri Aerob di Udara pada Ruangan Bedah Sentral, ICU, dan Ruang Bersalin RS Stella Maris Makassar Menggunakan Matrix-Assisted Laser Desorption Ionization-Time Of Flight Mass Spectrometry (MALDI-TOF MS)

Nama Peneliti	: dr. Prajayanti Palulun					
Institusi	: Mikrobiologi					
Review Protokol Amandemen Ya <input checked="" type="checkbox"/> Tidak <input type="checkbox"/>	Tanggal review sebelumnya 2 Januari 2023					
Tanggal Fullboard	-					
Keputusan	<input checked="" type="checkbox"/>	Disetujui				
	<input type="checkbox"/>	Disetujui dengan Modifikasi amandemen dan informed consent				
	<input type="checkbox"/>	Dihentikan, sambil menunggu informasi lanjut (3)				
	<input type="checkbox"/>	Butuh informasi lanjut, tetap berjalan dengan protokol sebelumnya (4)				
	<input type="checkbox"/>	Ditolak, bisa lanjut dengan persetujuan sebelumnya (5)				
Tempat Penelitian :	RS Stella Maris Makassar					
No. Versi Protokol	01					
No. Versi Informed Consent	-					
No.	Nama Reviewer	Keputusan				
		1	2	3	4	5
1		<input checked="" type="checkbox"/>				



Makassar, 6 Februari 2023

Ketua

 Prof. Dr. dr. Suryani As'ad, M.Sc, Sp.GK, (K)
 NIP 19600504 1986 01 2 002



Sekretaris

 dr. Agus Salim Bukhari, M.Med,PhD,Sp.GK(K)
 NIP 197008021 1999 03 1 001

Lampiran 4 Surat Izin Penelitian RS Stella Maris

 RS. Stella Maris	Jl. Somba Opu No.273 Makassar 90111 - Indonesia	Telp +62 411 854341 +62 411 871391 +62 411 873348	Call center 061 393 888 100 https://rsstellamaris.com
	SURAT KETERANGAN ----- Nomor : 3866.DIR.SM.DIKLAT.KET.EX.X.2023		
Pimpinan RS. Stella Maris Makassar menerangkan bahwa :			
Nama Lengkap Tempat / Tgl. Lahir NIM Asal Pendidikan	: dr. Prajayanti Palulun : Ambon, 18 September 1989 : C195201002 : Universitas Hasanuddin Makassar		
Telah melaksanakan penelitian di RS. Stella Maris dalam rangka penyusunan Tesis yang dimulai pada tanggal 07 Februari 2023 s/d Selesai dengan judul :			
"Identifikasi Bakteri Aerob di Udara pada Ruangan Bedah Sentral, ICU, dan Ruang Bersalin RS. Stella Maris Makassar Menggunakan Matrix-Assisted Laser Desorption Ionization-Time Of Flight Mass Spectrometry (MALDI-TOF MS)"			
Demikian surat keterangan ini di buat untuk dipergunakan sebagaimana fungsinya.			
	Makassar, 12 Oktober 2023 Direksi RS. Stella Maris,  dr. Teoroci Luisa Nunuhitu, M.Kes Direktur		
Cc Arsip			

Lampiran 5 Biodata Peneliti Utama

A. Data Pribadi

Nama : Prajayanti Palulun
Tempat, Tgl Lahir : Ambon, 18 September 1989
Alamat : Jl.Biring Romang Lr.2 NO.27/Makassar
Kewarganegaraan : Warga Negara Indonesia
Status : Menikah
Suami : Rio Talama SE, Ak., M.Si., CA
Anak : Jananta Kamaloloan Tallamma
Dean Kamelolan Tallamma

B. Riwayat Pendidikan

1. Tamat SMA tahun 2006 di SMA Kristen Barana'- Toraja Utara
2. Sarjana (S1) Kedokteran tahun 2009 di Universitas Hasanuddin
3. Profesi Dokter tahun 2011 di Universitas Hasanuddin

C. Pekerjaan dan Riwayat Pekerjaan

Jenis pekerjaan : Mahasiswa PPDS Mikrobiologi Klinik
NIM : C195201002
Pangkat/Jabatan : -

Riwayat Pekerjaan:

1. Dokter Umum PTT Kementerian Kesehatan RI di Provinsi Maluku di Puskesmas Taniwel, Kabupaten Seram Bagian Barat periode Juli 2013 - Juni 2015
2. Dokter Umum PTT Kementerian Kesehatan RI di Provinsi Maluku di Puskesmas WAAI, Kabupaten Maluku Tengah periode Agustus 2015-Juli 2017.
3. Dokter Umum di RSKD Provinsi Maluku
4. Dokter Umum di Laboratorium Klinik Prodia Ambon

D. Tulisan pada Konferensi Ilmiah Nasional

1. Palulun P et al., 2020. Additional Extraction Step Before GeneXpert® MTB/Rif will Increase its Sensitivity to Detect *Mycobacterium tuberculosis*

from Pleural Effusion. → ALAMANDA (Malang, Makassar and Denpasar)
PAMKI Regional Trigonum 2020.

2. Palulun P et al., 2022. Urinary Tract Infection Post Ureteroscopy, Percutaneous Nephrolithotomy (PNCL), and Insertion of DJ Stent. → KONAS PAMKI 2022.