DAFTAR PUSTAKA

Adane, M dan Adeladlew, T. (2016). Review on cloning vector and expression vector. *International Journal of Veterinary Sciences and Animal Husbandry*. 1(5): 14-19.

Agus, R., Purnamasari, W.O.S., Parura, R.D., Silang, F., & Massi, M.N. (2022). Short Communication: Cloning, production and responses of the sMTL-13 protein (13 kDa lectin secretion) Mycobacterium tuberculosis against Interleukin 6. Biodiversitas. 23(12): 6208-6212. DOI: 10.13057/biodiv/d231215.

Agus, R., Sjafaraenan, Samara, Y., & Massi, M.N. (2024). Cloning and Production of Antigen 85A Mycobacterium tuberculosis for Diagnostic Latent Tuberculosis: a Preliminary Study. Journal of Biosciences. 31(2): 374-381. DOI:10.4308/hjb.31.2.374-381. https://doi.org/10.4308/hjb.31.2.374-381.

Aisyah dan Mulyaoni, Y. 2024. Peran Kloning Gen Dalam Pengembangan Vaksin Rekombinan untuk Pencegahan Penyakit pada Ikan. *Jurnal Biosense*. 7(2): 303-317. https://doi.org/10.36526/biosense.v7i02.4717.

Ananda, A.A.R., Alioes, Y., Endrinaldi., Adrial., Elmatris., Nursyafi, F.S., et al. (2025). Isolation of AnsB Gene Fragment Encoding L-Asparaginase 2 Enzyme from Serratia plymuthica UBCF_13 and It's In- Silico Domain Characteristic. Bioma. 14(10: 106-120. https://doi.org/10.26877/bioma.v14i1.1493

Anggreni, L.D., Dewi, N.M.R.K., Mahardika, I.G.N.K., & Putra, I.G.N.N. (2024). Optimasi Konsentrasi Isopropyl -β-D- Thiogalactopyranosid (IPTG) Sebagai Pemicu Ekspresi Gen Bovine Lactoferrine (bLf). Buletin Veteriner Udayana. 16(6): 1778-1785. https://doi.org/10.24843/bulvet.2024.v16.i06.p22

Ardandi, R.Y., Nurhaliza, S., Poty, P.M., Sha, N.P., Himayani, R., dan Rahmanisa, S. (2024). Penerapan DNA Rekombinan Dalam Terapi Gen: Vaksin DNA SARS-CoV-2 dan Terapi Kanker. *Medula*. 14(5): 1-6. https://doi.org/10.53089/medula.v14i5.930.

Aulia, S.L., Suwignyo, R.A., & Hasmeda, M. (2021). Optimasi Suhu Annealing untuk Amplifikasi DNA Padi Hasil Persilangan Varietas Tahan Terendam dengan Metode Polymerase Chain Reaction. Sainmatika. 18(1): 44-54. DOI 10.31851/sainmatika.v18i1.5805

Badalyan, M., Aloyan, T., Amirkhanyan, T., Dilanyan, V., & Melikyan, A. (2023). Efficacy of genetic transformation of E.coli field and reference (ATCC 8739) strains at different concentrations of CaCl2 for creation of Gene libraries. BIO Web of Conferences, 71: 1-7. https://doi.org/10.1051/bioconf/20237101082

Dewantoro, D., Sulistyaningsih, E., & Dewi, R. (2023). Optimasi Transformasi Gen CIDR1α-PfEMP1 pada Eschericia coli BL21(DE3) dengan Metode Heat-shock. Jurnal Sains dan Teknologi. 12(1): 95-101. https://doi.org/10.23887/jstundiksha.v12i1.53704

Fanila, S.A., Dhanti, K.R., Kurniawan. & Mulyanto, A. (2025). Optimasi Konsentrasi Primer dan Suhu Annealing untuk Deteksi Gen mecA pada Bakteri Methicillin-Resistant Staphylococcus aureus (MRSA) dari Rumah Sakit. Jurnal Analis Kesehatan. 14(1): 16-24. https://doi.org/10.26630/jak.v14i1.5063.

Fazlollahi, M.R., Goudarzi, A., Nourizadeh, M., Alizadeh, Z., Tajik, S., Badalzadeh, M., et al. (2024). Complications of the Bacillus Calmette-Guerin vaccine as an early warning sign of inborn errors of immunity: a report of 197 patients. Frontiers in Immunology. 15:1-8. https://doi.org/10.3389/fimmu.2024.1477499.

Gcebe, N., Hlokwe, T. M., Bouw, A., Michel, A., dan Rutten, V.P.M.G. (2024). The Presence of esat-6 and cfp10 and Other Gene Orthologs of the RD 1 Region in Non-Tuberculous Mycobacteria, Mycolicibacteria, Mycobacteroides and Mycolicibacter as Possible Impediments for the Diagnosis of (Animal) Tuberculosis. *Microorganisms*. 12(1151): 1-20. https://doi.org/10.3390/microorganisms12061151.

Green, M. R., & Sambrook, J. (2019). Polymerase Chain Reaction. Cold Spring Harbpr Protocols. 436-456. doi:10.1101/pdb.top095109

Guo, Y., Liu, K., Yang, X. *et al.* Multi-omics-based characterization of the influences of *Mycobacterium tuberculosis* virulence factors EsxB and PPE68 on host cells. *Arch Microbiol* 205, 230 (2023). https://doi.org/10.1007/s00203-023-03576-y

Hazarika, G., Dutta, R., Saikia, D.P., Malakar, D., Hazorika, M., & Bora, M. (2024). A comprehensive exploration of restriction enzymes and their applications in molecular biology: A review. *World Journal of Advanced Research and Reviews*.21(01): 2399-2404. https://doi.org/10.30574/wjarr.2024.21.1.0269

Huang, X. H, Wang, Y, Wu. L.Y., Jiang, Y.L., Ma, L.Y., Shi, X.F., Wang, X., Zheng, M.M., Tang, L., Lou, Y. L., dan Xie, D.L. (2025). mTORC2 is crucial for regulating the recombinant Mycobacterium tuberculosis CFP-10 protein-induced phagocytosis in macrophages. *BMC Immunology.* 26(26): 1-15. https://doi.org/10.1186/s12865-025-00715-6.

Ilmi, A.N., Pujiyanti, A.S., & Amirullah, (2025). Desain Primer Secara in Silico untuk Amplifikasi Gen TGF- β1 dan TNF- α pada Mencit Mus Musculus Sebagai Kandidat Primer dalam Uji qRT-PCR. BioWallacea. 12(1): 118-128. https://orcid.org/0009-0001-3985-2863

Indrawati, A., Kurnia, R.S., Mayasari, N.L.P.I. (2019). Deteksi Gen Penyandi Resistensi ampC dan mcr-1 pada Escherichia coli penyebab Colibacillosis Unggas di Sukabumi. Jurnal Veteriner. 20(4): 495-503. http://ojs.unud.ac.id/index.php/jvet

Jayakrishnan, A., Rosli, W.R.W., Tahir, A.R.M.T., Razak, F.S.A.R., Kee, P.E.., Ng, H.S., et.al. (2024). Evolving Paradigms of Recombinant Protein Production in Pharmaceutical Industry: A Rigorous Review. *Multidisciplinary Digital Publishing Institute*. 6(1): 1-24. https://doi.org/10.3390/sci6010009

Kalscheuer R., Palacios, A., Anso, I., Cifuente, J., Anguita, J., Jacobs, W.R., et al. The Mycobacterium tuberculosis capsule: a cell structure with key implications in pathogenesis. Biochemical Journal. 476: 1995-2016. https://doi.org/10.1042/BCJ20190324.

Karaynir, A., Bozdogan, B., & Dogan, H. S. (2023). Environmental DNAtransformation resulted in an active phage in Escherichia coli. Plos ONE. 18(10): 1-15. https://doi.org/10.1371/journal.pone.0292933

Karolina, M. E., Lipinwati., Nuriyah., Siregar, M.I.T., Hestinigtyas, M. (2024). Skrining Mycobacterium Tuberculosis Dengan Pengecatan Zhiel Neelsen Pada Pelajar Pondok Pesantren Nurul Iman di Kota Jambi. (2024). *Medic*. 7(1):27-33.

Kathryn, C., Rahlwes., Beatriz, R.S., Dias., Priscila, C., Campos, Arguedas, S.A., dan Shiloh, M.U. (2023). Pathogenicity and virulence of Mycobacterium tuberculosis. *Virulence*. 14(1):1-30. https://doi.org/10.1080/21505594.2022.215044.

Kazi, T.A., Acharya, A., Bidhan, C.M., Mandal, S., Arukha, A.P., Nayak, S., dan Biswas, S.R. (2022). Plasmid-Based Gene Expression System for Lactic Acid Bacteria: A Review. Microorganisms. 10(1132): 1-10. https://doi.org/10.3390/microorganisms10061132.

Kombo, J. (2025). Polymerase Chain Reaction (PCR): Principle, Requirements, Types and Application. Lifeline Health Science. 3(1): 98-105.

Lawrence, A. (2024). Bacillus Calmette-Guérin (BCG) Revaccination and Protection Against Tuberculosis: A Systematic Review. *Cureus*. 16(3): 1-11. DOI: 10.7759/cureus.56643.

Lin, Y., Liang, Z., Cai, X., Luo, Y., Wu, B., Feng, Y., Cai, Z., Liang, X., dan Tan, S. (2024). Dynamic changes of respiratory microbiota associated with treatment outcome in drug sensitive and drug-resistant pulmonary tuberculosis. *Annals of Clinical Microbiology and Antimicrobials*. 23(83): 1-10. https://doi.org/10.1186/s12941-024-00742-y.

Malakar, B., Chauhan, K., Sanyal, P., Naz, S., Kalam, H., Vivek-Ananth, R.P, et.al. (2023). Phosphorylation of CFP10 modulates *Mycobacterium tuberculosis* virulence. American Society for Microbiology. 14(5): 1-29. https://doi.org/10.1128/mbio.01232-23

McDonald, C., Taylor, D., & Linacre, A. (2024). PCRinForensic Science: A Critical Review. Genes. 15(4): 1-22. https://doi.org/10.3390/genes15040438

Meisya, D.Y., & Ahda, Y. (2025). Desain Gen EDNRB Ekson 6 dan Optimasi PCR untuk Analisis Mutasi Gen Pada Hirchsprung's FDisease. *Biogenerasi, Jurnal Pendidikan Biologi*. 10(2): 1668 – 1675.

Mohammadnabi, N., Shamseddin, J., Emadi, M., Bodaghi, A, B., Varseh, M., Rezaei, M., Dastranj, M., Farahani, A. (2024). Mycobacterium tuberculosis: The Mechanism of Pathogenicity, Immune Responses, and Diagnostic Challenges. *Journal of Clinical Laboratory Analysis* 38(23): 1 – 16. https://doi.org/10.1002/jcla.25122.

Nora, L. C., Westmann, C.A., Santana, L.M., Alves, L.F., Monteiro, L.M.O., Guazzaroni, M.E., et.al. (2018). The art of vector engineering: towards the construction of next-generation genetic tools. *Microbial Biotechnology*. 12(1): 125-147. https://doi.org/10.1111/1751-7915.13318

Patigu, R.F., Wijayanti, P., Sebastian, A., & Purwesti. Y.A. (2021). Optimization of heat shock temperature and time on the transformation of pRGEB32 into Escherichia coli DH5α. Jurnal Biologi Tropis. 21(3): 632-640. http://dx.doi.org/10.29303/jbt.v21i3.2811

Putro, N.K.D.D., Dhimyaty, A., Tabina, S., Zahrah, A., Miftahurrahman, M., Prayogi, D. et al., (2024). Analisis Perbandingan Kualitas dan Kuantitas DNA Hasil Ekstraksi Dengan Dua Metode Yang Berbeda, Prosiding Seminar Nasional Kusuma III. 2:448-454.

Safitri, T.A., Patty, D.N.J., & Saraswati, H. (2018). Gen L1 HPV 16 dan 18 Sebagai Dasar Dalam Desain Primer Untuk Deteksi Kanker Leher Rahim Dengan In-House Multiplex PCR, Indonesian Journal of Biotechnology and Biodiversity. 2(2): 67-71.

Safitri, W, dan Surarso, B. (2023). Patogenesis dan Diagnosis Tuberculosis Laring. *Prosiding Journal Unair*. 39-50.

Saputra, F., Indra, A.I.N., Djuminar, A., Merdekawati, F., & Nurhayati, B. (2024). Konsentrasi dan kemurnian ekstraksi DNA metode sonikasi dan spin column pada sampel dahak penderita tuberculosis. Current Biomedicine. 2(2): 84-82.

Saraswati, H., Seprianto., Wahyuni, F.D. (2019). Desain Primer Secara In Silico untuk Amplifikasi Gen cryIII dari Bacillus thuringiensis Isolat Lokal. Indonesian Journal of Biotechnology and Biodiversity. 3(1): 33-38.

Septiani, F., Pohan, S. D., Ginting. H., Sinurat. L. N., Sinaga. M. T., dan Pangaribuan. W. K. (2025). Analisis Faktor Risiko Yang Berkontribusi Terhadap Kejadian Tuberkulosis Paru di Masyarakat: Studi Epidemiologis Dan Implikasinya Dalam Pencegahan. *Polygon : Jurnal Ilmu Komputer dan Ilmu Pengetahuan Alam.* 3(2): 32-43. https://doi.org/10.62383/polygon.v3i2.451.

Shi, J., Oger, P.M., Cao, P., & Zhang, L. (2023). Thermostable DNA ligases from hyperthermophiles in biotechnology. Frontiers in Microbiology. 14: 1-9. https://doi.org/10.3389/fmicb.2023.1198784

Shi, K., Bohl, T.E., Park, J., Zasada, A., Malik, S., Banerjee,S., et al. (2018). T4 DNA ligase structure reveals a prototypical ATP-dependent ligase with a unique mode of sliding clamp interaction. Nucleic Acids Research. 46 (19): 10474-10488. https://doi.org/10.1093/nar/gky776

Susmiarsih, T. P. (2018). Study of Recombinant DNA in DNA Vaccines and Protein Subunit Vaccines. Majalah Kesehatan PharmaMedika. 10(2): 2655-2396.

Vu, A., Glassman, I., Campbell, G., Yeganyan, S., Nguyen, J., Shin, A., Venketaraman, V. (2024). Host Cell Death and Modulation of Immune Response against Mycobacterium tuberculosis Infection. *International Journal of Molecular Sciences*. 25(6255).1-20. https://doi.org/10.3390/ijms25116255.

White, S.B., Person, C., Medintz, I.L., & Goldman, E.R. (2018). Restriction Enzymes as a Target for DNA-Based Sensing and Structural Rearrangement. ACS Omega. 3: 495-502. http://dx.doi.org/10.1021/acsomega.7b01333

Yang, Y., Yu, Q., Wang, M., Zhao, R., Liu, H., Xun, L., et al. (2022). Escherichia coli BW25113 Competent Cells Prepared Using a Simple Chemical Method have Unmatched Transformation and Cloning Efficiencies. Frontiers in Microbiology. 13: 1-12. https://doi.org/10.3389/fmicb.2022.838698

Zhu, N., Sun, S., Leng, F., Fan, W., Chen, J., Ma, J., et al. (2022). Identification of Key Genes during Ca2+-Induced Genetic Transformation in Escherichia coli by Combining Multi-Omics and Gene Knockout Techniques. Applied and Enviromental Microbiology. 88(21): 1-14. https://doi.org/10.1128/aem.00587-22

Zhu, Z.Y., Zhang, D., Wang, H.B., Xiao, J.Z., Qiu, Y.F., Yan, D., et. al. (2014). Expression and serological diagnosis of Mycobacterium tuberculosis CFP-10 and Rv2626c proteins. Genetics and Molecular Research. 13(3): 7399-7406. Structure and function of the complex formed by the tuberculosis virulence factors CFP-10 and ESAT-6. *The Embo Journal.* 24(14): 2491-2498.

Zhuang, L., Yang, L., Li, L., Ye, Z., dan Gong, W. (2023). *Mycobacterium tuberculosis:* immune response, biomarkers, and therapeutic intervention. *Medcomm Wiley.* 1 – 33. https://doi.org/10.1002/mco2.419.