



## DAFTAR PUSTAKA

- Alex, A., Brundha, M. P., & Prathap, L. (2020). Sanger Sequencing and Its Recent Advances-A Review. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 698-705.
- Alves, R. P. D. S., Andreata-Santos, R., de Freitas, C. L., Pereira, L. R., Fabris-Maeda, D. L. N., Rodrigues-Jesus, M. J., & Ferreira, L. C. D. S. (2020). Protective immunity to dengue virus induced by DNA vaccines encoding nonstructural proteins in a lethal challenge immunocompetent mouse model. *Frontiers in Medical Technology*, 6.
- Alves, A. M. B., Costa, S. M., & Pinto, P. B. A. (2021). Dengue Virus and Vaccines: How Can DNA Immunization Contribute to This Challenge?. *Frontiers in Medical Technology*, 13.
- Anasir, M. I., Ramanathan, B., & Poh, C. L. (2020). Structure-based design of antivirals against envelope glycoprotein of dengue virus. *Viruses*, 12(4), 367.
- Ando, S., Putnam, D., Pack, D. W., & Langer, R. (1999). PLGA microspheres containing plasmid DNA: preservation of supercoiled DNA via cryopreparation and carbohydrate stabilization. *Journal of Pharmaceutical Sciences*, 88(1), 126-130.
- Apirakaramwong, A., Pamonsinlapatham, P., Techapornkul, S., Opanasopit, P., Panomsuk, S., & Soksawatmaekhin, S. (2012). Mechanisms of Cellular Uptake with Chitosan/DNA Complex in Hepatoma Cell Line. In *Advanced Materials Research* (Vol. 506, pp. 485-488). Trans Tech Publications Ltd.
- Avérous, L., & Pollet, E. (2012). Biodegradable polymers. In Environmental silicate nano-biocomposites (pp. 13-39). Springer, London. Chicago.
- Balagurumoorthy, P., Adelstein, S. J., & Kassis, A. I. (2008). Method to eliminate linear DNA from mixture containing nicked circular, supercoiled, and linear plasmid DNA. *Analytical biochemistry*, 381(1), 172-174.
- Balashanmugam, M. V., Nagarethinam, S., Jagani, H., Josyula, V. R., Alrohaimi, A., & Udupa, N. (2014). Preparation and characterization of novel PBAE/PLGA polymer blend microparticles for DNA vaccine delivery. *The Scientific World Journal*, 2014.
- Bannunah, A. M., Villasaliu, D., Lord, J., & Stolnik, S. (2014). Mechanisms of Nanoparticle Internalization and Transport Across an Intestinal Epithelial Cell Model: Effect of Size and Surface Charge. *Molecular Pharmaceutics*, 11(12), 4363-4373. <https://doi.org/10.1021/mp500439c>
- Barrow, K. M., Perez-Campo, F. M., & Ward, C. M. (2006). Use of the cytomegalovirus promoter for transient and stable transgene expression in mouse embryonic stem cells. *Embryonic Stem Cell Protocols: Volume 1: Isolation and Characterization*, 283-294.
- Behura, S. K., & Severson, D. W. (2013). Codon usage bias: causative factors, quantification methods and genome-wide patterns: with emphasis on insect genomes. *Biological Reviews*, 88(1), 49-61.
- Benedik, M. (2019). Re: E coli DH5A on EMB agar and MacConkey agar characteristics?. Retrieved from: [https://www.researchgate.net/post/E\\_coli\\_DH5A\\_on\\_EMB\\_agar\\_and\\_Mac\\_Conkey\\_agar\\_characteristics/5d8cc2dbc7d8ab56f8333c9b/citation/download](https://www.researchgate.net/post/E_coli_DH5A_on_EMB_agar_and_Mac_Conkey_agar_characteristics/5d8cc2dbc7d8ab56f8333c9b/citation/download).



- Bivas-Benita, M., van Meijgaarden, K. E., Franken, K. L., Junginger, H. E., Borchard, G., Ottenhoff, T. H., & Geluk, A. (2004). Pulmonary delivery of chitosan-DNA nanoparticles enhances the immunogenicity of a DNA vaccine encoding HLA-A\* 0201-restricted T-cell epitopes of *Mycobacterium tuberculosis*. *Vaccine*, 22(13-14), 1609-1615.
- Bozkir, A., & Saka, O. M. (2004). Chitosan nanoparticles for plasmid DNA delivery: effect of chitosan molecular structure on formulation and release characteristics. *Drug Delivery*, 11(2), 107-112.
- Brewoo, J. N., Kinney, R. M., Powell, T. D., Arguello, J. J., Silengo, S. J., Partidos, C. D., ... & Osorio, J. E. (2012). Immunogenicity and efficacy of chimeric dengue vaccine (DENVAx) formulations in interferon-deficient AG129 mice. *Vaccine*, 30(8), 1513-1520.
- Carnes, A. E., Hodgson, C. P., & Williams, J. A. (2006). Inducible *Escherichia coli* fermentation for increased plasmid DNA production. *Biotechnology and applied biochemistry*, 45(3), 155-166.
- Carson, S., Miller, H. B., & Witherow, D. S. (2012). *Molecular biology techniques: A classroom laboratory manual*. Amsterdam: Elsevier /Academic Press.
- Cao, Y., Tan, Y. F., Wong, Y. S., Liew, M. W. J., & Venkatraman, S. (2019). Recent advances in chitosan-based carriers for gene delivery. *Marine drugs*, 17(6), 381.
- Catoiu, E. A., Phaneuf, P., Monk, J., & Palsson, B. O. (2023). Whole-genome sequences from wild-type and laboratory-evolved strains define the alleleome and establish its hallmarks. *Proceedings of the National Academy of Sciences*, 120(15), e2218835120.
- Centers for Disease Control and Prevention. (2011). *Dengue worldwide overview*. <https://www.ecdc.europa.eu/en/dengue-monthly>
- Chandrasekaran, A. R. (2021). Nuclease resistance of DNA nanostructures. *Nature Reviews Chemistry*, 5(4), 225-239.
- Chart, H., Smith, H. R., La Ragione, R. M., & Woodward, M. J. (2000). An investigation into the pathogenic properties of *Escherichia coli* strains BLR, BL21, DH5 $\alpha$  and EQ1. *Journal of applied microbiology*, 89(6), 1048-1058.
- Cinelli, R. A., Ferrari, A., Pellegrini, V., Tyagi, M., Giacca, M., & Beltram, F. (2000). The enhanced green fluorescent protein as a tool for the analysis of protein dynamics and localization: Local fluorescence study at the single-molecule level. *Photochemistry and Photobiology*, 71(6), 771-776.
- Clark, D. P., Pazdernik, N. J., & Mc Gehee, M. R. (2019). *Molecular biology (Third edition)*. London; San Diego, CA: Elsevier/Academic Press.
- Clogston, J. D., & Patri, A. K. (2011). Zeta potential measurement. *Characterization of nanoparticles intended for drug delivery*, 63-70.
- Cui, Z. (2005). DNA vaccine. *Advances in genetics*, 54, 257-289.
- De Paula, S. O., Lima, D. M., de Oliveira França, R. F., Gomes-Ruiz, A. C., & da Fonseca, B. A. L. (2008). A DNA vaccine candidate expressing dengue-3 virus prM and E proteins elicits neutralizing antibodies and protects mice against lethal challenge. *Archives of virology*, 153(12), 2215-2223.
- Del Solar, G., Giraldo, R., Ruiz-Echevarría, M. J., Espinosa, M., & Díaz-Orejas, R. (1998). Replication and control of circular bacterial plasmids. *Microbiology and molecular biology reviews*, 62(2), 434-464.



- Deng, S. Q., Yang, X., Wei, Y., Chen, J. T., Wang, X. J., & Peng, H. J. (2020). A review on dengue vaccine development. *Vaccines*, 8(1), 63.
- dos Santos, T., Varela, J., Lynch, I., Salvati, A., & Dawson, K. A. (2011). Effects of Transport Inhibitors on the Cellular Uptake of Carboxylated Polystyrene Nanoparticles in Different Cell Lines. *PLoS ONE*, 6(9), e24438. <https://doi.org/10.1371/journal.pone.0024438>.
- Ehrt, S., & Schnappinger, D. (2003). Isolation of plasmids from *E. coli* by alkaline lysis. *E. coli Plasmid Vectors: Methods and Applications*, 75-78.
- Engebrecht, J., Heilig, J. S., & Brent, R. (1998). Preparation of bacterial plasmid DNA. *Current protocols in immunology*, 27(1), 10-3.
- Fahimi, H., Sadeghizadeh, M., & Mohammadipour, M. (2016). In silico analysis of an envelope domain III-based multivalent fusion protein as a potential dengue vaccine candidate. *Clinical and Experimental Vaccine Research*, 5(1), 41-49.
- Fahimi, H., Sadeghizadeh, M., Hassan, Z. M., Auerswald, H., & Schreiber, M. (2018). Immunogenicity of a novel tetravalent dengue envelope protein domain III-based antigen in mice. *EXCLI journal*, 17, 1054.
- Fatima, K., & Syed, N. I. (2018). Dengvaxia controversy: impact on vaccine hesitancy. *Journal of global health*, 8(2).
- Faraji, R., Parsa, A., Torabi, B., & Withrow, T. (2006). Effects of kanamycin on the macromolecular composition of kanamycin sensitive *Escherichia coli* DH5 $\alpha$  strain. *Journal of Experimental Microbiology and Immunology (JEMI)* Vol, 9, 31-38.
- Faraji, H., Ramezani, M., Sadeghnia, H. R., Abnous, K., Soltani, F., & Mashkani, B. (2017). High-level expression of a biologically active staphylokinase in *Pichia pastoris*. *Preparative Biochemistry and Biotechnology*, 47(4), 379-387.
- Faurez, F., Dory, D., Le Moigne, V., Gravier, R., & Jestin, A. (2010). Biosafety of DNA vaccines: New generation of DNA vectors and current knowledge on the fate of plasmids after injection. *Vaccine*, 28(23), 3888-3895.
- Fraga, D., Meulia, T., & Fenster, S. (2014). Real-time PCR. *Current protocols essential laboratory techniques*, 8(1), 10-3.
- Franck, C. O., Fanslau, L., Bistrovic Popov, A., Tyagi, P., & Fruk, L. (2021). Biopolymer-based carriers for DNA vaccine design. *Angewandte Chemie International Edition*, 60(24), 13225-13243.
- Garaiova, Z., Strand, S. P., Reitan, N. K., Lélu, S., Størset, S. Ø., Berg, K., ... & Davies, C. D. L. (2012). Cellular uptake of DNA-chitosan nanoparticles: The role of clathrin-and caveolae-mediated pathways. *International journal of biological macromolecules*, 51(5), 1043-1051.
- Gibson, E. G., Oviatt, A. A., & Osheroff, N. (2020). Two-dimensional gel electrophoresis to resolve DNA topoisomers. *DNA Electrophoresis: Methods and Protocols*, 15-24.
- Giri, T. K., Choudhary, C., Alexander, A., Badwaik, H., & Tripathi, D. K. (2013). Prospects of pharmaceuticals and biopharmaceuticals loaded microparticles prepared by double emulsion technique for controlled delivery. *Saudi Pharmaceutical Journal*, 21(2), 125-141.
- Giri, D. K., Ghosh, R. C., Sonkusale, P. M. & Gumasta, P. (2022). *Escherichia coli* strain DH5alpha 16S ribosomal RNA gene. GenBank. Accession Number: ON911329.1. URL: <https://www.ncbi.nlm.nih.gov/nuccore/ON911329.1>.



- Goltermann, L., Good, L., & Bentin, T. (2013). Chaperonins fight aminoglycoside-induced protein misfolding and promote short-term tolerance in *Escherichia coli*. *Journal of Biological Chemistry*, 288(15), 10483-10489.
- Gomes-Cornélio, A. L., Rodrigues, E. M., Salles, L. P., Mestieri, L. B., Faria, G., Guerreiro-Tanomaru, J. M., & Tanomaru-Filho, M. (2017). Bioactivity of MTA Plus, Biodentine and an experimental calcium silicate-based cement on human osteoblast-like cells. *International endodontic journal*, 50(1), 39-47.
- Grzegorski, S. J., Chiari, E. F., Robbins, A., Kish, P. E., & Kahana, A. (2014). Natural variability of Kozak sequences correlates with function in a zebrafish model. *PLoS One*, 9(9), e108475.
- Hahn, J., Wickham, S. F., Shih, W. M., & Perrault, S. D. (2014). Addressing the instability of DNA nanostructures in tissue culture. *ACS nano*, 8(9), 8765-8775.
- Hanahan, D. (1983). Studies on transformation of *Escherichia coli* with plasmids. *Journal of molecular biology*, 166(4), 557-580.
- Hanahan, D. (1989). Biologically pure escherichia coli cell line which is a deoR-mutant and which is more transformation efficient with foreign plasmids than deoR+ escherichia coli cell lines, processes for obtaining these cell lines, methods of use (U.S. Patent No. 4,851,348). U.S. Patent and Trademark Office. <https://patents.google.com/patent/US4851348A/en>
- Hanahan, D., Jessee, J., & Bloom, F. R. (1991). Plasmid transformation of *Escherichia coli* and other bacteria. *Methods in enzymology*, 204, 63-113.
- He, H., Noor, E., Ramos-Parra, P. A., García-Valencia, L. E., Patterson, J. A., Díaz de la Garza, R. I., ... & Bar-Even, A. (2020). In vivo rate of formaldehyde condensation with tetrahydrofolate. *Metabolites*, 10(2), 65.
- Herrmann, J. E., Chen, S. C., Jones, D. H., Tinsley-Bown, A., Fynan, E. F., Greenberg, H. B., & Farrar, G. H. (1999). Immune responses and protection obtained by oral immunization with rotavirus VP4 and VP7 DNA vaccines encapsulated in microparticles. *Virology*, 259(1), 148-153.
- Holman, D. H., Wang, D., Raviprakash, K., Raja, N. U., Luo, M., Zhang, J., ... & Dong, J. Y. (2007). Two complex, adenovirus-based vaccines that together induce immune responses to all four dengue virus serotypes. *Clinical and Vaccine Immunology*, 14(2), 182-189.
- Hosokawa, N., Sasaki, T., Iemura, S. I., Natsume, T., Hara, T., & Mizushima, N. (2009). Atg101, a novel mammalian autophagy protein interacting with Atg13. *Autophagy*, 5(7), 973-979.
- Hu, Y. L., Qi, W., Han, F., Shao, J. Z., & Gao, J. Q. (2011). Toxicity evaluation of biodegradable chitosan nanoparticles using a zebrafish embryo model. *International journal of nanomedicine*, 3351-3359.
- Huang, M., Fong, C. W., Khor, E., & Lim, L. Y. (2005). Transfection efficiency of chitosan vectors: effect of polymer molecular weight and degree of deacetylation. *Journal of controlled release*, 106(3), 391-406.
- Huque, E. (2006). Shape Analysis and Measurement for the HeLa cell classification of cultured cells in high throughput screening. Institutionen für kommunikation och information.
- Idrees, S., & Ashfaq, U. A. (2012). A brief review on dengue molecular virology, diagnosis, treatment and prevalence in Pakistan. *Genetic Vaccines and Therapy*, 10(1), 1-10.



- Idris, F., Ting, D. H. R., & Alonso, S. (2021). An update on dengue vaccine development, challenges, and future perspectives. *Expert Opinion on Drug Discovery*, 16(1), 47-58.
- Illum, L., Jabbal-Gill, I., Hinchcliffe, M., Fisher, A. N., & Davis, S. S. (2001). Chitosan as a novel nasal delivery system for vaccines. *Advanced drug delivery reviews*, 51(1-3), 81-96.
- Iswanti, F. C., Nurulita, I., Djauzi, S., Sadikin, M., Witarto, A. B., & Yamazaki, T. (2019). Preparation, characterization, and evaluation of chitosan-based nanoparticles as CpG ODN carriers. *Biotechnology & Biotechnological Equipment*, 33(1), 390-396.
- Jiang, W., Ren, L., & Jin, N. (2007). HIV-1 DNA vaccine efficacy is enhanced by coadministration with plasmid encoding IFN- $\alpha$ . *Journal of virological methods*, 146(1-2), 266-273.
- Jones, D. H., Corris, S., McDonald, S., Clegg, J. C. S., & Farrar, G. H. (1997). Poly (DL-lactide-co-glycolide)-encapsulated plasmid DNA elicits systemic and mucosal antibody responses to encoded protein after oral administration. *Vaccine*, 15(8), 814-817.
- Kaksonen, M., & Roux, A. (2018). Mechanisms of clathrin-mediated endocytosis. *Nature reviews Molecular cell biology*, 19(5), 313-326.
- Käßer, L., Harnischfeger, J., Salzig, D., & Czermak, P. (2022). The effect of different insect cell culture media on the efficiency of protein production by Spodoptera frugiperda cells. *Electronic Journal of Biotechnology*, 56, 54-64.
- Katayama, H., Yamamoto, A., Mizushima, N., Yoshimori, T., & Miyawaki, A. (2007). GFP-like proteins stably accumulate in lysosomes. *Cell structure and function*, 0802040006-0802040006.
- Katzen, F., Becker, A., Ielmini, M. V., Oddo, C. G., & Ielpi, L. (1999). New mobilizable vectors suitable for gene replacement in gram-negative bacteria and their use in mapping of the 3' end of the *Xanthomonas campestris* pv. *campestris* gum operon. *Applied and environmental microbiology*, 65(1), 278-282.
- Kean, T., & Thanou, M. (2010). Biodegradation, biodistribution and toxicity of chitosan. *Advanced drug delivery reviews*, 62(1), 3-11.
- Khanmohammadi, M., Elmizadeh, H., & Ghasemi, K. (2015). Investigation of size and morphology of chitosan nanoparticles used in drug delivery system employing chemometric technique. *Iranian Journal of Pharmaceutical Research: IJPR*, 14(3), 665.
- Khatri, K., Goyal, A. K., Gupta, P. N., Mishra, N., & Vyas, S. P. (2008). Plasmid DNA loaded chitosan nanoparticles for nasal mucosal immunization against hepatitis B. *International Journal of Pharmaceutics*, 354(1-2), 235-241.
- Kim, M. Y., Van Dolleweerd, C., Copland, A., Paul, M. J., Hofmann, S., Webster, G. R., ... & Ma, J. K. (2017). Molecular engineering and plant expression of an immunoglobulin heavy chain scaffold for delivery of a dengue vaccine candidate. *Plant biotechnology journal*, 15(12), 1590-1601.
- Kohane, D.S. (2007), Microparticles and nanoparticles for drug delivery. *Biotechnology and Bioengineering*, 96: 203-209. <https://doi.org/10.1002/bit.21301>.
- Koontz, L. (2013). Explanatory chapter: Introducing exogenous DNA into cells. In *Methods in Enzymology* (Vol. 529, pp. 29-34). Academic Press.



- Köping-Höggård, M., Tubulekas, I., Guan, H., Edwards, K., Nilsson, M., Vårum, K. M., & Artursson, P. (2001). Chitosan as a nonviral gene delivery system. Structure–property relationships and characteristics compared with polyethylenimine in vitro and after lung administration in vivo. *Gene therapy*, 8(14), 1108-1121.
- Kou, L., Sun, J., Zhai, Y., & He, Z. (2013). The endocytosis and intracellular fate of nanomedicines: Implication for rational design. *Asian Journal of Pharmaceutical Sciences*, 8(1), 1-10.
- Kozak, M. (1989). The scanning model for translation: an update. *The Journal of cell biology*, 108(2), 229-241.
- Kudlacek, S. T., Metz, S., Thiono, D., Payne, A. M., Phan, T. T., Tian, S., & Kuhlman, B. (2021). Designed, highly expressing, thermostable dengue virus 2 envelope protein dimers elicit quaternary epitope antibodies. *Science advances*, 7(42), eabg4084.
- Kumari, A., Yadav, S. K., & Yadav, S. C. (2010). Biodegradable polymeric nanoparticles-based drug delivery systems. *Colloids and surfaces B: biointerfaces*, 75(1), 1-18.
- Kumari, P., & Gupta, A. (2021). Assays to assess the proliferative behavior of cancer cells. In *Protocol Handbook for Cancer Biology* (pp. 23-41). Academic Press.
- Kurita, K., Kaji, Y., Mori, T., & Nishiyama, Y. (2000). Enzymatic degradation of  $\beta$ -chitin: susceptibility and the influence of deacetylation. *Carbohydrate Polymers*, 42(1), 19–21. [https://doi.org/10.1016/S0144-8617\(99\)00127-7](https://doi.org/10.1016/S0144-8617(99)00127-7)
- Labruère, R., Sona, A. J., & Turos, E. (2019). Anti-methicillin-resistant *Staphylococcus aureus* nanoantibiotics. *Frontiers in pharmacology*, 10, 1121.
- Landry, J. J., Pyl, P. T., Rausch, T., Zichner, T., Tekkedil, M. M., Stütz, A. M., & Steinmetz, L. M. (2013). The genomic and transcriptomic landscape of a HeLa cell line. *G3: Genes, Genomes, Genetics*, 3(8), 1213-1224.
- Lauková, L., Konečná, B., Janovičová, L., Vlková, B., & Celec, P. (2020). Deoxyribonucleases and their applications in biomedicine. *Biomolecules*, 10(7), 1036.
- Li, L., & Petrovsky, N. (2016). Molecular mechanisms for enhanced DNA vaccine immunogenicity. *Expert review of vaccines*, 15(3), 313-329.
- Li, W., Liao, L. P., Song, N., Liu, Y. J., Ding, Y. L., Zhang, Y. Y., & Luo, C. (2022). Natural product 1, 2, 3, 4, 6-penta-O-galloyl- $\beta$ -D-glucopyranose is a reversible inhibitor of glyceraldehyde 3-phosphate dehydrogenase. *Acta Pharmacologica Sinica*, 43(2), 470-482.
- Lima, D. M., de Paula, S. O., de Oliveira França, R. F., Palma, P. V., Morais, F. R., Gomes-Ruiz, A. C., & da Fonseca, B. A. L. (2011). A DNA vaccine candidate encoding the structural prM/E proteins elicits a strong immune response and protects mice against dengue-4 virus infection. *Vaccine*, 29(4), 831-838.
- Liao, Y. T., Kuo, S. C., Lee, Y. T., Chen, C. P., Lin, S. W., Shen, L. J., ... & Chen, T. L. (2014). Sheltering effect and indirect pathogenesis of carbapenem-resistant *Acinetobacter baumannii* in polymicrobial infection. *Antimicrobial agents and chemotherapy*, 58(7), 3983-3990.
- Livak, K. J., & Schmittgen, T. D. (2001). Analysis of relative gene expression data using real-time quantitative PCR and the  $2^{-\Delta\Delta Ct}$  method. *Methods*, 25(4), 402-408.



- Lu, H., Dai, Y., Lv, L., & Zhao, H. (2014). Chitosan-graft-polyethylenimine/DNA nanoparticles as novel non-viral gene delivery vectors targeting osteoarthritis. *Plos one*, 9(1), e84703.
- MacLaughlin, F. C., Mumper, R. J., Wang, J., Tagliaferri, J. M., Gill, I., Hinchcliffe, M., & Rolland, A. P. (1998). Chitosan and depolymerized chitosan oligomers as condensing carriers for in vivo plasmid delivery. *Journal of controlled release*, 56(1-3), 259-272.
- Madanayake, P. M. W., Jayawardena, A. E. U., Wijekoon, S. L., Perera, N., & Wanigasuriya, J. K. P. (2021). Fluid requirement in adult dengue haemorrhagic fever patients during the critical phase of the illness: an observational study. *BMC infectious diseases*, 21(1), 1-9.
- Mao, H. Q., Roy, K., Troung-Le, V. L., Janes, K. A., Lin, K. Y., Wang, Y., & Leong, K. W. (2001). Chitosan-DNA nanoparticles as gene carriers: synthesis, characterization and transfection efficiency. *Journal of controlled release*, 70(3), 399-421.
- Mao, S., Sun, W., & Kissel, T. (2010). Chitosan-based formulations for delivery of DNA and siRNA. *Advanced drug delivery reviews*, 62(1), 12-27.
- Martina, B. E., Koraka, P., & Osterhaus, A. D. (2009). Dengue virus pathogenesis: an integrated view. *Clinical microbiology reviews*, 22(4), 564-581.
- Martinson, J. N., & Walk, S. T. (2020). Escherichia coli residency in the gut of healthy human adults. *EcoSal Plus*, 9(1), 10-1128.
- Masotti, A., Bordi, F., Ortaggi, G., Marino, F., & Palocci, C. (2008). A novel method to obtain chitosan/DNA nanospheres and a study of their release properties. *Nanotechnology*, 19(5), 055302.
- Maspi, N., Ghaffarifar, F., Sharifi, Z., & Dalimi, A. (2015). Cloning and constructing a plasmid encoding *Leishmania* eukaryotic initiation factor gene of *Leishmania* major fused with green fluorescent protein gene as a vaccine candidate. *West Indian Medical Journal*, 65, 256-259.
- Matica, A., Menghiu, G., & Ostafe, V. (2017a). Biodegradability of Chitosan Based Products. *New Frontiers in Chemistry*, 26(1), 75-86.
- Matica, A., Menghiu, G., & Ostafe, V. (2017b). Toxicity of Citosan Based Products. *New Frontiers in Chemistry*, 26(1), 65-74.
- Matoba, T., Koga, J. I., Nakano, K., Egashira, K., & Tsutsui, H. (2017). Nanoparticle-mediated drug delivery system for atherosclerotic cardiovascular disease. *Journal of cardiology*, 70(3), 206-211.
- Maulina, N. T. A, Kusumawati, A., & Umniyati, S. R. (2023). *Ekspresi Gen rE Virus Dengue pada Sel HeLa menggunakan Vektor pEGFP-N1* [Master's thesis]. Universitas Gadjah Mada.
- Mauro, V. P., & Chappell, S. A. (2014). A critical analysis of codon optimization in human therapeutics. *Trends in molecular medicine*, 20(11), 604-613.
- McCord, J. J., Engavale, M., Masoumzadeh, E., Villarreal, J., Mapp, B., Latham, M. P., & Sutton, R. B. (2022). Structural features of Dnase1L3 responsible for serum antigen clearance. *Communications Biology*, 5(1), 825.
- Metz, S. W., Thomas, A., Brackbill, A., Xianwen, Y., Stone, M., Horvath, K., ... & de Silva, A. M. (2018). Nanoparticle delivery of a tetravalent E protein subunit vaccine induces balanced, type-specific neutralizing antibodies to each dengue virus serotype. *PLoS neglected tropical diseases*, 12(9), e0006793.



- Milani, A., Bolhassani, A., Rouhollah, F., & Naseroleslami, M. (2021). Which one of the thermal approaches (heating DNA or cells) enhances the gene expression in mammalian cells?. *Biotechnology Letters*, 43(10), 1955-1966.
- Mosmann, T. (1983). Rapid colorimetric assay for cellular growth and survival: Application to proliferation and cytotoxicity assays. *Journal of Immunological Methods*, 65(1-2), 55–63. doi:10.1016/0022-1759(83)90303-4
- Mukhopadhyay, P., Bhattacharya, S., Nandy, A., Bhattacharyya, A., Mishra, R., & Kundu, P. P. (2015). Assessment of in vivo chronic toxicity of chitosan and its derivates used as oral insulin carriers. *Toxicology Research*, 4(2), 281-290.
- Murrell, S., Wu, S. C., & Butler, M. (2011). Review of dengue virus and the development of a vaccine. *Biotechnology advances*, 29(2), 239-247.
- Nakagawa, S., Niimura, Y., Gojobori, T., Tanaka, H., & Miura, K. I. (2008). Diversity of preferred nucleotide sequences around the translation initiation codon in eukaryote genomes. *Nucleic acids research*, 36(3), 861-871.
- Napirei, M., Ludwig, S., Mezrhab, J., Klöckl, T., & Mannherz, H. G. (2009). Murine serum nucleases—contrasting effects of plasmin and heparin on the activities of Dnase1 and Dnase1-like 3 (Dnase1l3). *The FEBS journal*, 276(4), 1059-1073.
- Nava-Arzaluz, M., Piñón-Segundo, E., Ganem-Rondero, A., & Lechuga-Ballesteros, D. (2012). Single emulsion-solvent evaporation technique and modifications for the preparation of pharmaceutical polymeric nanoparticles. *Recent patents on drug delivery & formulation*, 6(3), 209-223. Chicago
- Nazemi, P., & Razavi, M. (2017). Lipid-based nanobiomaterials. In *Nanobiomaterials Science, Development and Evaluation* (pp. 125-133). Woodhead Publishing.
- Nicoloff, H., & Andersson, D. I. (2016). Indirect resistance to several classes of antibiotics in cocultures with resistant bacteria expressing antibiotic-modifying or-degrading enzymes. *Journal of Antimicrobial Chemotherapy*, 71(1), 100-110.
- Nimesh, S., Thibault, M. M., Lavertu, M., & Buschmann, M. D. (2010). Enhanced gene delivery mediated by low molecular weight chitosan/DNA complexes: effect of pH and serum. *Molecular biotechnology*, 46, 182-196.
- Nikzad, S., Baradaran-Ghahfarokhi, M., & Nasri, P. (2014). Dose-response modeling using MTT assay: A short review. *Life Science Journal*, 11, 432-437.
- Nott, R. (2020). HeLa Cell Line. *Embryo Project Encyclopedia*. ISSN: 1940-5030 <http://embryo.asu.edu/handle/10776/13166>.
- Olopade, B. K., Oyawoye, O. M., Oranusi, S. U., Dorcas, Y., & Obafemi, E. A. O. Bacterial Growth Enhancement Value and Nutritional Quality of Compounded Milk Media from Commercial Milk Brands. *Applied Food Biotechnology*, 8(1), 31-37.
- Perera, R., & Kuhn, R. J. (2008). Structural proteomics of dengue virus. *Current opinion in microbiology*, 11(4), 369-377.
- Piliang, S. F. H., Kusumawati, A., & Umniyati, S. R. 2023. *Ekspresi Gen rE Virus Dengue pada Sel HeLa menggunakan Vektor pEGFP-C1* [Master's thesis]. Universitas Gadjah Mada.



- Poggianella, M., Slon Campos, J. L., Chan, K. R., Tan, H. C., Bestagno, M., Ooi, E. E., & Burrone, O. R. (2015). Dengue E protein domain III-based DNA immunisation induces strong antibody responses to all four viral serotypes. *PLoS neglected tropical diseases*, 9(7), e0003947.
- Prentki, P. (1992). Nucleotide sequence of the classical lacZ deletion ΔM15. *Gene*, 122(1), 231-232.
- Puigbò, P., Bravo, I. G., & Garcia-Vallve, S. (2008). CAIcal: a combined set of tools to assess codon usage adaptation. *Biology direct*, 3(1), 1-8.
- Pulix, M., Lukashchuk, V., Smith, D. C., & Dickson, A. J. (2021). Molecular characterization of HEK293 cells as emerging versatile cell factories. *Current opinion in biotechnology*, 71, 18-24.
- Qin, F., Xia, F., Chen, H., Cui, B., Feng, Y., Zhang, P., & Luo, M. (2021). A guide to nucleic acid vaccines in the prevention and treatment of infectious diseases and cancers: from basic principles to current applications. *Frontiers in cell and developmental biology*, 9, 633776.
- Radji, M. (2009). Vaksin DNA: Vaksin generasi keempat. *Majalah Ilmu Kefarmasian*, 6(1), 4.
- Rahayu, I. L., Kusumawati, A., & Martien, R. (2019). *Optimasi Formula Kandidat Vaksin DNA (env-Tm) Penyakit Jembrana Berbasis Kitosan dan Poly(D-L-Lactic Co-Glicolide Acid)* [Master's thesis]. Universitas Gadjah Mada.
- Rahimzadeh, M., Sadeghizadeh, M., Najafi, F., Arab, S., & Mobasher, H. (2016). Impact of heat shock step on bacterial transformation efficiency. *Molecular biology research communications*, 5(4), 257.
- Rapley, R. & J. Heptinstall. 1998. Protocol RNA Isolation and Characterization Protocols Volume 86 of the Series Methods in Molecular Biology. p. 65–68. In R. Rapley & D.L. Manning (eds.) *Methods in Molecular Biology*. Humana Press Inc., New Jersey.
- Ridenhour, B. J., & Top, E. M. (2016). Plasmid Driven Evolution of Bacteria. *Encyclopedia of Evolutionary Biology*. Academic Press.
- Redoni, M., Yacoub, S., Rivino, L., Giacobbe, D. R., Luzzati, R., & Di Bella, S. (2020). Dengue: status of current and under-development vaccines. *Reviews in Medical Virology*, 30(4), e2101.
- Ren, J., Karna, S., Lee, H. M., Yoo, S. M., & Na, D. (2019). Artificial transformation methodologies for improving the efficiency of plasmid DNA transformation and simplifying its use. *Applied microbiology and biotechnology*, 103, 9205-9215.
- Rodova, M., Jayini, R., Singasani, R., Chipp, E., & Islam, M. R. (2013). CMV promoter is repressed by p53 and activated by JNK pathway. *Plasmid*, 69(3), 223-230.
- Roth, C., Cantaert, T., Colas, C., Prot, M., Casadémont, I., Levillayer, L., ... & Sakuntabhai, A. (2019). A modified mRNA vaccine targeting immunodominant NS epitopes protects against dengue virus infection in HLA class I transgenic mice. *Frontiers in Immunology*, 10, 1424.
- Roy, K., Mao, H. Q., Huang, S. K., & Leong, K. W. (1999). Oral gene delivery with chitosan-DNA nanoparticles generates immunologic protection in a murine model of peanut allergy. *Nature medicine*, 5(4), 387-391.
- Sahay, G., Alakhova, D. Y., & Kabanov, A. V. (2010). Endocytosis of nanomedicines. *Journal of controlled release*, 145(3), 182-195.



- Sariyanti, M., Fitri, N., Febrianti, E., Kurniati, A., & Rizqoh, D. (2021). Perbandingan Tingkat Keparahan Infeksi Primer Virus Dengue Serotipe 1, 2, 3 dan 4 di Indonesia: Systematic Review. *JUMANTIK (Jurnal Ilmiah Penelitian Kesehatan)*, 6(1), 38-47.
- Sarker, M. M. R., Khan, F., & Mohamed, I. N. (2021). Dengue fever: therapeutic potential of Carica papaya L. Leaves. *Frontiers in Pharmacology*, 12.
- Sato, T., Ishii, T., & Okahata, Y. (2001). In vitro gene delivery mediated by chitosan. Effect of pH, serum, and molecular mass of chitosan on the transfection efficiency. *Biomaterials*, 22(15), 2075-2080.
- Scherer, W. F., Syverton, J. T., & Gey, G. O. (1953). Studies on the propagation in vitro of poliomyelitis viruses: IV. Viral multiplication in a stable strain of human malignant epithelial cells (strain HeLa) derived from an epidermoid carcinoma of the cervix. *The Journal of experimental medicine*, 97(5), 695-710.
- Seidler, N. W., & Seidler, N. W. (2013). Basic biology of GAPDH. *GAPDH: Biological Properties and Diversity*, 1-36.
- Silva, F., Queiroz, J. A., & Domingues, F. C. (2012). Evaluating metabolic stress and plasmid stability in plasmid DNA production by Escherichia coli. *Biotechnology advances*, 30(3), 691-708.
- Simon, S. (2020). Re: What is the expected morphology of Hela cells?. Retrieved from:  
[https://www.researchgate.net/post/What\\_is\\_the\\_expected\\_morphology\\_of\\_Hela\\_cells/5e2b4ecd4714b148e174f33/citation/download](https://www.researchgate.net/post/What_is_the_expected_morphology_of_Hela_cells/5e2b4ecd4714b148e174f33/citation/download).
- Simmons, M., Burgess, T., Lynch, J., & Putnak, R. (2010). Protection against dengue virus by non-replicating and live attenuated vaccines used together in a prime boost vaccination strategy. *Virology*, 396(2), 280-288.
- Singh, C. P., & Rai, A. (2018) Expression And Immunogenicity Studies Of A Replicase Based Recombinant Plasmid Containing HBsAg Gene. *Biotechnology International*, 11 (2): 33-37
- Shah, M. A. A., He, N., Li, Z., Ali, Z., & Zhang, L. (2014). Nanoparticles for DNA vaccine delivery. *Journal of biomedical nanotechnology*, 10(9), 2332-2349.
- Sumantran, V. N. (2011). Cellular chemosensitivity assays: an overview. *Cancer Cell Culture*, 219-236.
- Suschak, J. J., Williams, J. A., & Schmaljohn, C. S. (2017). Advancements in DNA vaccine vectors, non-mechanical delivery methods, and molecular adjuvants to increase immunogenicity. *Human vaccines & immunotherapeutics*, 13(12), 2837-2848.
- Srinivas, K. P. (2021). Recent developments in vaccines strategies against human viral pathogens. In *Recent Developments in Applied Microbiology and Biochemistry* (pp. 3-12). Academic Press.
- Stockert, J. C., Blázquez-Castro, A., Cañete, M., Horobin, R. W., & Villanueva, Á. (2012). MTT assay for cell viability: Intracellular localization of the formazan product is in lipid droplets. *Acta histochemica*, 114(8), 785-796.
- Susmiarsih, T. P. (2018). Kajian DNA Rekombinan pada Vaksin DNA dan Vaksin Subunit Protein. *Majalah Kesehatan Pharma Medika*, 10(2), 108-128.
- Tapola, N. S., Lyyra, M. L., Kolehmainen, R. M., Sarkkinen, E. S., & Schauss, A. G. (2008). Safety aspects and cholesterol-lowering efficacy of chitosan tablets. *Journal of the American College of Nutrition*, 27(1), 22-30.



- Taylor, R. G., Walker, D. C., & McInnes, R. R. (1993). *E. coli* host strains significantly affect the quality of small scale plasmid DNA preparations used for sequencing. *Nucleic acids research*, 21(7), 1677.
- Teste, M. A., Duquenne, M., François, J. M., & Parrou, J. L. (2009). Validation of reference genes for quantitative expression analysis by real-time RT-PCR in *Saccharomyces cerevisiae*. *BMC molecular biology*, 10(1), 1-15.
- Thanou, M., Florea, B. I., Geldof, M., Junginger, H. E., & Borchard, G. (2002). Quaternized chitosan oligomers as novel gene delivery vectors in epithelial cell lines. *Biomaterials*, 23(1), 153-159.
- Timilsena, Y. P., Akanbi, T. O., Khalid, N., Adhikari, B., & Barrow, C. J. (2019). Complex coacervation: Principles, mechanisms, and applications in microencapsulation. *International journal of biological macromolecules*, 121, 1276-1286.
- Touzain, F., Le Devendec, L., de Boisséson, C., Baron, S., Jouy, E., Perrin-Guyomard, A., Blanchard, Y., & Kempf, I. (2018). Characterization of plasmids harboring bla CTX-M and bla CMY genes in *E. coli* from French broilers. *PloS one*, 13(1), e0188768.
- Tüzmen, Ş., Baskın, Y., Nursal, A. F., Eraslan, S., Esemen, Y., Çalıbaşı, G., & Hızel, C. (2018). Techniques for nucleic acid engineering: The foundation of gene manipulation. In *Omics technologies and bio-engineering* (pp. 247-315). Academic Press.
- Uno, N., & Ross, T. M. (2018). Dengue virus and the host innate immune response. *Emerging microbes & infections*, 7(1), 1-11.
- Unsunnidhal, L., Ishak, J., & Kusumawati, A. (2019). Expression of gag-CA gene of Jembrana disease virus with cationic liposomes and chitosan nanoparticle delivery systems as DNA vaccine candidates. *Trop. Life Sci. Res*, 30(3), 15-36.
- Unsunnidhal, L., Wasito, R., Setyawan, E. M. N., Warsani, Z., & Kusumawati, A. (2021a). Potential of polylactic-co-glycolic acid (PLGA) for delivery Jembrana disease DNA vaccine Model (pEGFP-C1-tat). *Journal of Veterinary Science*, 22(6).
- Unsunnidhal, L., Wasito, R., Setyawan, E. M. N., & Kusumawati, A. (2021b). Potential of nanoparticles chitosan for delivery pcDNA3. 1-tat. In BIO Web of Conferences (Vol. 41, p. 07004). EDP Sciences.
- Vancevska, A., & Nikolic, A. (2013). Assessment of deoxyribonuclease activity in biological samples by a fluorescence detection-based method. *Laboratory Medicine*, 44(2), 125-128.
- Voltan, A. R., Quindos, G., Alarcón, K. P. M., Fusco-Almeida, A. M., Mendes-Giannini, M. J. S., & Chorilli, M. (2016). Fungal diseases: could nanostructured drug delivery systems be a novel paradigm for therapy?. *International Journal of Nanomedicine*, 11, 3715.
- Ward, C. M., & Stern, P. L. (2002). The human cytomegalovirus immediate-early promoter is transcriptionally active in undifferentiated mouse embryonic stem cells. *Stem cells*, 20(5), 472-475.
- Wilczewska, A. Z., Niemirowicz, K., Markiewicz, K. H., & Car, H. (2012). Nanoparticles as drug delivery systems. *Pharmacological reports*, 64(5), 1020-1037.



- Williams, J. A., Luke, J., Langtry, S., Anderson, S., Hodgson, C. P., & Carnes, A. E. (2009). Generic plasmid DNA production platform incorporating low metabolic burden seed-stock and fed-batch fermentation processes. *Biotechnology and bioengineering*, 103(6), 1129-1143.
- Winarti, L. (2015). Review Artikel: Penggunaan Formulasi Nanopartikel Kitosan Sebagai Sistem Penghantaran Gen Non Viral Untuk Terapi Gen. *STOMATOGNATIC-Jurnal Kedokteran Gigi*, 8(3), 142-150.
- Winters, M. A., Richter, J. D., Sagar, S. L., Lee, A. L., & Lander, R. J. (2003). Plasmid DNA purification by selective calcium silicate adsorption of closely related impurities. *Biotechnology progress*, 19(2), 440-447.
- Woodman, M. E. (2008). Direct PCR of intact bacteria (colony PCR). *Current protocols in microbiology*, 9(1), A-3D.
- Xie, Z., Zhang, Z., Cao, Z., Chen, M., Li, P., Liu, W., Qin, H., Zhao, X., Tao, Y., & Chen, Y. (2017). An external substrate-free blue/white screening system in *Escherichia coli*. *Applied microbiology and biotechnology*, 101, 3811-3820.
- Xing, L., Fan, Y. T., Zhou, T. J., Gong, J. H., Cui, L. H., Cho, K. H., ... & Cho, C. S. (2018). Chemical modification of chitosan for efficient vaccine delivery. *Molecules*, 23(2), 229.
- Yeates, C., Gillings, M. R., Davison, A. D., Altavilla, N., & Veal, D. A. (1998). Methods for microbial DNA extraction from soil for PCR amplification. *Biological procedures online*, 1, 40-47.
- Yokokawa, F. (2020). Recent progress on phenotype-based discovery of dengue inhibitors. *RSC Medicinal Chemistry*, 11(5), 541-551.
- Zagorovsky, K., Chou, L. Y., & Chan, W. C. (2016). Controlling DNA–nanoparticle serum interactions. *Proceedings of the National Academy of Sciences*, 113(48), 13600-13605.
- Zhang, Y., Chen, J., Zhang, Y., Pan, Y., Zhao, J., Ren, L., ... & Wang, J. (2007). A novel PEGylation of chitosan nanoparticles for gene delivery. *Biotechnology and applied biochemistry*, 46(4), 197-204.
- Zheng, Y., Zhao, W. M., Wang, H., Zhou, Y. B., Luan, Y., Qi, M., ... & Yang, X. (2007). Codon usage bias in *Chlamydia trachomatis* and the effect of codon modification in the MOMP gene on immune responses to vaccination. *Biochemistry and Cell Biology*, 85(2), 218-226.
- Zomosa-Signoret, V. C., Morales-González, K. R., Estrada-Rodríguez, A. E., Rivas-Estilla, A. M., Devèze-García, M. C., Galaviz-Aguilar, E., & Vidaltamayo, R. (2020). Alanine substitution inactivates cross-reacting epitopes in dengue virus recombinant envelope proteins. *Viruses*, 12(2), 208.