



DAFTAR PUSTAKA

- Ahmad, Z. and Poh, C. L. 2019. The conserved molecular determinants of virulence in dengue virus. *International Journal of Medical Sciences*, 16(3): 355–365.
- Alagarasu, K., Patil, J. A., Kakade, M. B., More, A. M., Yogesh, B., Newase, P., Jadhav, S. M., Parashar, D., Kaur, H., Gupta, N., Vijay, N., Narayan, J. and Shah, P. S. 2021. Serotype and genotype diversity of dengue viruses circulating in India: a multi-centre retrospective study involving the Virus Research Diagnostic Laboratory Network in 2018. *International Journal of Infectious Diseases*. Elsevier Ltd, 111: 242–252.
- Aryati, A., Wraharnala, B. J., Yohan, B., Fanny, M., Hakim, F. K. N., Sunari, E. P., Zuroidah, N., Wardhani, P., Santoso, M. S., Husada, D., Rohman, A., Tarmizi, S. N., Sievers, J. T. O. and Tedjo Sasmono, R. 2020. Dengue virus serotype 4 is responsible for the outbreak of dengue in East Java City of Jember, Indonesia', *Viruses*, 12(9): 913
- Balmaseda, A., Standish, K., Mercado, J. C., Matute, J. C., Tellez, Y., Saborío, S., Hammond, S. N., Nuñez, A., Avilés, W., Henn, M. R., Holmes, E. C., Gordon, A., Coloma, J., Kuan, G. and Harris, E. 2010. Trends in patterns of dengue transmission over 4 years in a pediatric cohort study in Nicaragua. *Journal of Infectious Diseases*, 201(1): 5–14.
- Bashyam, H. S., Green, S., Rothman, A. L. and Alerts, E. 2006. Heterologous Viral Serotypes Their Response to Variant Epitopes of Quantitative and Qualitative Differences in T Cells. *The Journal of Immunology*, 176: 2817–2824.
- Campos, J. L. S., Poggianella, M., Marchese, S., Mossenta, M., Rana, J., Arnoldi, F., Bestagno, M. and Burrone, O. R. 2017. DNA-immunisation with dengue virus E protein domains I / II , but not domain III , enhances Zika , West Nile and Yellow Fever virus infection. *PLoS Neglected Tropical Diseases*, 12(7): 1–19.
- Chaudhry, S., Swaminathan, S. and Khanna, N. 2006. Viral genetics as a basis of dengue pathogenesis. *Dengue Bulletin*, 30: 121–132.
- Cologna, R., Armstrong, P. M. and Rico-Hesse, R. 2005. Selection for Virulent Dengue Viruses Occurs in Humans and Mosquitoes', *Journal of Virology*, 79(2): 853–859.
- Dewi, B. E., Naiggolan, L., Putri, D. H., Rachmayanti, N., Albar, S., Indriastuti, N. T., Sjamsuridzal, W. and Sudiro, T. M. 2014. Characterization of dengue virus serotype 4 infection in Jakarta, indonesia', *Southeast Asian Journal of Tropical Medicine and Public Health*, 45(1): 53–61.
- Dowd, K. A., DeMaso, C. R. and Pierson, T. C. 2015. Genotypic differences in dengue virus neutralization are explained by a single amino acid mutation that modulates virus breathing', *MBio*, 6(6): e01559-15
- Endy, T. P., Anderson, K. B., Nisalak, A., Yoon, I. K., Green, S., Rothman, A. L., Thomas, S. J., Jarman, R. G., Libraty, D. H. and Gibbons, R. V. 2011. Determinants of inapparent and symptomatic dengue infection in a



prospective study of primary school children in Kamphaeng Phet, Thailand', *PLoS Neglected Tropical Diseases*, 5(3): e975

Fahri, S., Yohan, B., Trimarsanto, H., Sayono, S., Hadisaputro, S., Dharmana, E., Syafruddin, D. and Sasmono, R. T. 2013. Molecular Surveillance of Dengue in Semarang, Indonesia Revealed the Circulation of an Old Genotype of Dengue Virus Serotype-1. *PLoS Neglected Tropical Diseases*. Public Library of Science, 7(8): e2354

Fajarani, R., Martini and Adi, M. S. 2020. Gambaran Variasi Serotipe Virus Dengue Pada Pasien Infeksi Dengue Di Kota Semarang Tahun 2019', *Jurnal Kesehatan Masyarakat*, 8(1): 169–176.

Galichotte, E. N., Baric, T. J., Nivarthi, U., Delacruz, M. J., Graham, R., Widman, D. G., Yount, B. L., Durbin, A. P., Whitehead, S. S., de Silva, A. M. and Baric, R. S. 2018. Genetic Variation between Dengue Virus Type 4 Strains Impacts Human Antibody Binding and Neutralization', *Cell Reports*. Elsevier Company., 25(5): 1214–1224.

Gromowski, G. D., Roehrig, J. T., Diamond, M. S., Lee, J. C., Pitcher, T. J. and Barrett, A. D. T. 2010. Mutations of an antibody binding energy hot spot on domain III of the dengue 2 envelope glycoprotein exploited for neutralization escape. *Virology*. Elsevier B.V., 407(2): 237–246d

Gubler, D. J. 2017. Dengue and dengue hemorrhagic fever. *Handbook of Zoonoses, Second Edition, Section B: Viral Zoonoses*, 11(3): 89–99.

Guzman, M. G., Alvarez, M. and Halstead, S. B. 2013. Secondary infection as a risk factor for dengue hemorrhagic fever / dengue shock syndrome: an historical perspective and role of antibody-dependent enhancement of infection. *Arch Virol*, 158: 1445–1459.

Guzman, M. G. and Harris, E. 2015. Dengue. *The Lancet*, 385(9966): 453–465.

Halstead, S. B. 2014. Dengue Antibody-Dependent Enhancement: Knowns and Unknowns. in *Microbiology Spectrum*: 249–271.

Hang, V. T. T., Holmes, E. C., Veasna, D., Quy, N. T., Hien, T. T., Quail, M., Churcher, C., Parkhill, J., Cardosa, J., Farrar, J., Wills, B., Lennon, N. J., Birren, B. W., Buchy, P., Henn, M. R. and Simmons, C. P. 2010. Emergence of the Asian 1 genotype of dengue Virus serotype 2 in viet Nam: in vivo fitness advantage and lineage replacement in South-East Asia. *PLoS Neglected Tropical Diseases*, 4(7): e757

Harapan, H., Michie, A., Mudatsir, M., Sasmono, R. T. and Imrie, A. 2019. Epidemiology of dengue hemorrhagic fever in Indonesia: Analysis of five decades data from the National Disease Surveillance. *BMC Research Notes*. BioMed Central, 12(1): 4–9.

Harapan, H., Michie, A., Yohan, B., Shu, P. Y., Mudatsir, M., Sasmono, R. T. and Imrie, A. 2019. Dengue viruses circulating in Indonesia: A systematic review and phylogenetic analysis of data from five decades', *Reviews in Medical Virology*. 29(4): 1–17.

Hernández-garcía, E., Lourdes, M. De, David, R. E., Pérez-ramírez, G., Navarrete-espinosa, J., Díaz-badillo, Á., Domínguez-de-la-cruz, E., Moreno-galeana, M. and Brito-carreón, C. A. 2020. Infection , Genetics and Evolution Epidemiological implications of the genetic diversi fi



cation of dengue virus (DENV) serotypes and genotypes in Mexico. *Infection, Genetics and Evolution*. Elsevier, 84: 104391.

- Hussain-Alkhateeb, L., Kroeger, A., Olliaro, P., Rocklö V, J., Sewe, M. O., Tejeda, G., Benitez, D., Gill, B., Hakim, S. L., Gomes Carvalho, R., Bowman, L. and Petzold, M. 2018. Early warning and response system (EWARS) for dengue outbreaks: Recent advancements towards widespread applications in critical settings. 13(5): e0196811.
- Jansen, C. C. and Beebe, N. W. 2010. The dengue vector *Aedes aegypti*: what comes next. *Microbes and Infection*. Elsevier Masson SAS, 12(4): 272–279.
- de Jesus, J. G., Dutra, K. R., Sales, F. C. da S., Claro, I. M., Terzian, A. C., Candido, D. da S., Hill, S. C., Thézé, J., Torres, C., D'agostini, T. L., Felix, A. C., Negri Reis, A. F., Alcantara, L. C. J., de Abreu, A. L., Croda, J. H. R., de Oliveira, W. K., de Filipis, A. M. B., Camis, M. D. C. R. D. S., Romano, C. M., Loman, N. J., Pybus, O. G., Sabino, E. C., Nogueira, M. L. and Faria, N. R. 2020. Genomic detection of a virus lineage replacement event of dengue virus serotype 2 in Brazil, 2019. *Memorias do Instituto Oswaldo Cruz*, 115(4): 2–7.
- Kementerian Kesehatan RI. 2017. Demam Berdarah Dengue Indonesia: Pedoman Pencegahan dan Pengendalian Demam Berdarah di Indonesia. Dirjen P2P Kementerian Kesehatan RI.
- Kementerian Kesehatan RI. 2018. InfoDatin: Situasi Demam Berdarah Dengue 2017. Dirjen P2P Kementerian Kesehatan RI.
- Kementerian Kesehatan RI. 2021. Strategi Nasional Penanggulangan Dengue 2021-2025. Direktorat Jendral Pencegahan dan Pengendalian Penyakit.
- Khandia, R., Munjal, A., Dhama, K., Karthik, K., Tiwari, R., Malik, Y. S., Singh, R. K. and Chaicumpa, W. 2018. Modulation of Dengue/Zika Virus Pathogenicity by Antibody-dependent Enhancement and Strategies to Protect Against Enhancement in Zika Virus Infection. *Frontiers in Immunology*. 9: 597.
- Konstantina Vasileiou, Julie Barnett, Susan Thorpe and Terry Young. 2018. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*. BMC Medical Research Methodology, 18(1): 1–18.
- Kotaki, T., Yamanaka, A., Mulyatno, K. C., Churrotin, S., Sucipto, T. H., Labiqah, A., Ahwanah, N. L. F., Soegijanto, S., Kameoka, M. and Konishi, E. 2016. Divergence of the dengue virus type 2 Cosmopolitan genotype associated with two predominant serotype shifts between 1 and 2 in Surabaya, Indonesia, 2008-2014. *Infection, Genetics and Evolution*. Elsevier B.V., 37: 88–93.
- Kotaki, T., Yamanaka, A., Mulyatno, K. C., Churrotin, S., Labiqah, A., Sucipto, T. H., Soegijanto, S., Kameoka, M. and Konishi, E. 2014. Continuous dengue type 1 virus genotype shifts followed by co-circulation, clade shifts and subsequent disappearance in Surabaya, Indonesia, 2008-2013. *Infection, Genetics and Evolution*. Elsevier B.V., 28: 48–54.



- Kulkarni, A., Sangar, V., Kothari, S., Mehta, S., Dahake, R., Mukherjee, S., Chowdhary, A. and Deshmukh, R. A. 2014. Research Article Construction of Envelope Domain III Based Recombinant Tetravalent Dengue Vaccine. *Int. J. Pharm. Sci. Rev. Res.*, 26(09): 44–49.
- Lambrechts, L., Fansiri, T., Pongsiri, A., Thaisomboonsuk, B., Klungthong, C., Richardson, J. H., Ponlawat, A., Jarman, R. G. and Scott, T. W. 2012. Dengue-1 Virus Clade Replacement in Thailand Associated with Enhanced Mosquito Transmission. *Journal of Virology*, 86(3): 1853–1861.
- Lanciotti, R. S., Gubler, D. J. and Trent, D. W. 1997. Molecular evolution and phylogeny of dengue-4 viruses. *Journal of General Virology*, 78: 2279–2286.
- Lanciotti RS, Calisher CH, Gubler DJ, Chang GJ and Vorndam AV 1992. Rapid detection and typing of dengue viruses from clinical samples by using reverse transcriptase-polymerase chain reaction. *Journal of Clinical Microbiology*, 30(3): 545–551.
- Leitmeyer, K. C., Vaughn, D. W., Watts, D. M., Salas, R., Villalobos, I., de Chacon, Ramos, C. and Rico-Hesse, R. 1999. Dengue Virus Structural Differences That Correlate with Pathogenesis. *Journal of Virology*, 73(6): 4738–4747.
- Mackenzie, J. S., Gubler, D. J. and Petersen, L. R. 2004. Emerging flaviviruses: The spread and resurgence of japanese encephalitis, west nile and dengue viruses. *Nature Medicine*, 10(12S): S98–S109.
- Megawati, D., Masyeni, S., Yohan, B., Lestarini, A., Hayati, R. F., Meutiawati, F., Suryana, K., Widarsa, T., Budiyasa, D. G., Budiyasa, N., Myint, K. S. A. and Sasmono, R. T. 2017. Dengue in Bali: Clinical characteristics and genetic diversity of circulating dengue viruses. *PLoS Neglected Tropical Diseases*, 11(5): 1–15.
- Montoya, M., Gresh, L., Mercado, J. C., Williams, K. L., Vargas, M. J., Gutierrez, G., Kuan, G., Gordon, A., Balmaseda, A. and Harris, E. 2013. Symptomatic Versus Inapparent Outcome in Repeat Dengue Virus Infections Is Influenced by the Time Interval between Infections and Study Year. *PLoS Neglected Tropical Diseases*, 7(8): 1–10.
- Muthumani, K., Sowdhamini, R., Medigeshi, G. R., Roy, R., Pattabiraman, C., Krishna, S. and Sreekumar, E. 2022. Immune profile and responses of a novel dengue DNA vaccine encoding an EDIII-NS1 consensus design based on Indo-African sequences'. *Molecular Therapy*, 30(5): 2058–2077.
- Nguyen, N. M., Duong, B. T., Azam, M., Phuong, T. T., Park, H., Thuy, P. T. B. and Yeo, S. J. 2019. Diagnostic performance of dengue virus envelope domain III in acute dengue infection. *International Journal of Molecular Sciences*, 20: 3464.
- Niu, C., Huang, Y., Wang, M., Huang, D., Li, J., Huang, S., Yang, F., Wan, C. and Zhang, R. 2020. Differences in the Transmission of Dengue Fever by Different Serotypes of Dengue Virus. *Vector-Borne and Zoonotic Diseases*, 20(2): 143–150.
- OhAinle, M., Balmaseda, A., Macalalad, A. R., Tellez, Y., Zody, M. C., Saborio,



- S., Nunez, A., Lennon, N. J., Birren, B. W., Gordon, A., Henn, M. R. and Harris, E. 2011. Dynamics of dengue disease severity determined by the interplay between viral genetics and serotype-specific immunity. *Science translational medicine*, 3(114), p. 114-128.
- Ong, S. H., Yip, J. T., Chen, Y. L., Liu, W., Harun, S., Lystianingsih, E., Heriyanto, B., Beckett, C. G., Mitchell, W. P., Hibberd, M. L., Suwandon, A., Vasudevan, S. G. and Schreiber, M. J. 2008. Periodic re-emergence of endemic strains with strong epidemic potential-A proposed explanation for the 2004 Indonesian dengue epidemic. *Infection, Genetics and Evolution*, 8(2): 191–204.
- Parameswaran, P., Charlebois, P., Tellez, Y., Nunez, A., Ryan, E. M., Malboeuf, C. M., Levin, J. Z., Lennon, N. J., Balmaseda, A., Harris, E. and Henn, M. R. 2012. Genome-Wide Patterns of Intrahuman Dengue Virus Diversity Reveal Associations with Viral Phylogenetic Clade and Interhost Diversity', *Journal of Virology*, 86(16): 8546–8558.
- Prajapati, S., Napit, R., Bastola, A., Rauniyar, R., Shrestha, S., Lamsal, M., Adhikari, A., Bhandari, P., Yadav, S. R. and Manandhar, K. Das. 2020. Molecular phylogeny and distribution of dengue virus serotypes circulating in Nepal in 2017. *PLoS ONE*, 15(7): 1–17.
- Quintero-Gil, D. C., Ospina, M., Osorio-Benitez, J. E. and Martinez-Gutierrez, M. 2014. Differential replication of dengue virus serotypes 2 and 3 in coinfections of C6/36 cells and Aedes aegypti mosquitoes. *Journal of Infection in Developing Countries*, 8(7): 876–884.
- Recker, M., Blyuss, K. B., Simmons, C. P., Hien, T. T., Wills, B., Farrar, J. and Gupta, S. 2009. Immunological serotype interactions and their effect on the epidemiological pattern of dengue. *Proceedings of the Royal Society B: Biological Sciences*, 276(1667): 2541–2548.
- Rothman, A. L. 2009. Vector Dynamics and Transmission of Dengue Virus: Implications for Dengue Surveillance and Prevention Strategies. *Current Topics in Microbiology and Immunology*, 338(1): 115–128.
- Salje, H., Lessler, J., Endy, T. P., Curriero, F. C., Gibbons, R. V., Nisalak, A., Nimmannitya, S., Kalayanarooj, S., Jarman, R. G., Thomas, S. J., Burke, D. S. and Cummings, D. A. T. 2012. Revealing the microscale spatial signature of dengue transmission and immunity in an urban population', *Proceedings of the National Academy of Sciences of the United States of America*, 109(24): 9535–9538.
- Sankaradoss, A., Jagtap, S., Nazir, J., Moula, S. E., Modak, A., Fialho, J., Iyer, M., Shastry, J. S., Dias, M., Gadepalli, R., Aggarwal, A., Vedpathak, M., Agrawal, S., Pandit, A., Nisheetha, A., Kumar, A., Bordoloi, M., Sha, M., Shelar, B., Balachandra, S. S., Damodar, T., Masika, M. M., Mwaura, P., Anzala, O., Muthumani, K., Sowdhamini, R., Medigeshi, G. R., Roy, R., Pattabiraman, C., Krishna, S. and Sreekumar, E. 2022. Immune profile and responses of a novel dengue DNA vaccine encoding an EDIII-NS1 consensus design based on Indo-African sequences. *Molecular Therapy*, 30(5): 2058–2077.
- Sasmono, R. T., Wahid, I., Trimarsanto, H., Yohan, B., Wahyuni, S., Hertanto,



- M., Yusuf, I., Mubin, H., Ganda, I. J., Latief, R., Bifani, P. J., Shi, P. Y. and Schreiber, M. J. 2015. Genomic analysis and growth characteristic of dengue viruses from Makassar, Indonesia. *Infection, Genetics and Evolution*. Elsevier B.V., 32: 165–177.
- Shrivastava, S., Tiraki, D., Diwan, A., Lalwani, S. K., Modak, M., Mishra, A. C. and Arankalle, V. A. 2018. Co-circulation of all the four dengue virus serotypes and detection of a novel clade of DENV-4 (genotype I) virus in Pune, India during 2016 season. *PLoS ONE*, 13(2): 1–19.
- Sim, S. and Hibberd, M. L. 2016. Genomic approaches for understanding dengue: Insights from the virus, vector, and host', *Genome Biology*. Genome Biology, 17(1): 1–15.
- Soo, K. M., Khalid, B., Ching, S. M. and Chee, H. Y. 2016. Meta-analysis of dengue severity during infection by different dengue virus serotypes in primary and secondary infections. *PLoS ONE*, 11(5): 4–14.
- Suppiah, J., Ching, S. M., Amin-Nordin, S., Mat-Nor, L. A., Ahmad-Najimudin, N. A., Low, G. K. K., Abdul-Wahid, M. Z., Thayan, R. and Chee, H. Y. 2018. Clinical manifestations of dengue in relation to dengue serotype and genotype in Malaysia: A retrospective observational study. *PLoS Neglected Tropical Diseases*, 12(9): 1–20.
- Torres, M. C., Martins Karl, A. L., Müller Pereira da Silva, M., Dardenne, L. E. and Bispo de Filippis, A. M. 2021. In Silico Analysis of Dengue Virus Serotype 2 Mutations Detected at the Intrahost Level in Patients with Different Clinical Outcomes. *Microbiology Spectrum*, 9(2): e00256-21.
- Uzcategui, N. Y., Comach, G., Camacho, D., Salcedo, M., Cabello de Quintana, M., Jimenez, M., Sierra, G., Cuello de Uzcategui, R., James, W. S., Turner, S., Holmes, E. C. and Gould, E. A. 2003. Molecular epidemiology of dengue virus type 3 in Venezuela. *Journal of General Virology*, 84(6): 1569–1575.
- Van Der Vries, E., Anber, J., Van Der Linden, A., Wu, Y., Maaskant, J., Stadhouders, R., Van Beek, R., Rimmelzwaan, G., Osterhaus, A., Boucher, C. and Schutten, M. 2013. Molecular assays for quantitative and qualitative detection of influenza virus and oseltamivir resistance mutations. *Journal of Molecular Diagnostics*. American Society for Investigative Pathology, 15(3): 347–354.
- Wahala, W. M. P. B., Donaldson, E. F., Alwis, R. De, Accavitti-loper, M. A., Ralph, S. and Silva, A. M. De 2010. Natural Strain Variation and Antibody Neutralization of Dengue Serotype 3 Viruses. *PLoS Pathogens*, 6(3): 1–10.
- Wang, W. H., Urbina, A. N., Chang, M. R., Assavalapsakul, W., Lu, P. L., Chen, Y. H. and Wang, S. F. 2020. Dengue hemorrhagic fever – A systemic literature review of current perspectives on pathogenesis, prevention and control. *Journal of Microbiology, Immunology and Infection*. Elsevier Taiwan LLC, 53(6): 963–978.
- Wardhani, P., Aryati, A., Yohan, B., Trimarsanto, H., Setianingsih, T. Y., Puspitasari, D., Arfijanto, M. V., Bramantono, B., Suharto, S. and Sasmono, R. T. 2017. Clinical and virological characteristics of dengue



- in Surabaya, Indonesia. *PLoS ONE*, 12(6): e0178443.
- WHO. 2009. *Dengue Guidelines for Diagnosis, Treatment, Prevention and Control, WHO*.
- Yamanaka, A., Mulyatno, K. C., Susilowati, H., Hendrianto, E., Ginting, A. P., Sary, D. D., Rantam, F. A., Soegijanto, S. and Konishi, E. 2011. Displacement of the predominant dengue virus from type 2 to type 1 with a subsequent genotype shift from IV to I in Surabaya, Indonesia 2008–2010. *PLoS ONE*, 6(11): 1–8.
- Yamashita, A., Sasaki, T., Kurosu, T., Yasunaga, T. and Ikuta, K. 2013. Origin and distribution of divergent dengue virus: Novel database construction and phylogenetic analyses', *Future Virology*, 8(11): 1061–1083.
- Yohan, B., Wardhani, P., Trimarsanto, H., Aryati, A. and Sasmono, R. T. 2018. Genomic analysis of dengue virus serotype 1 (DENV-1) genotypes from Surabaya, Indonesia. *Virus Genes*. Springer US, 54(3): 461–465.
- Young, E., Carnahan, R. H., Andrade, D. V., Harris, E., Crowe, J. E., Baric, R. S., Young, E., Carnahan, R. H., Andrade, D. V., Kose, N., Nargi, R. S. and Fritch, E. J. 2020. Article Identification of Dengue Virus Serotype 3 Specific Antigenic Sites Targeted by Neutralizing Human Antibodies II Article Identification of Dengue Virus Serotype 3 Specific Antigenic Sites Targeted by Neutralizing Human Antibodies. *Cell Host and Microbe*. Elsevier Inc., 27(5): 710-724.e7.
- Zhang, L., Zhao, L., Zhang, Z., Hong, W., Wang, J., Qiu, S., Yang, H., Gan, M., Sun, J., Zhao, Jingxian, Wang, Y., Zhao, Jincun and Zhang, F. 2021. Biosafety and Health Genetic and pathogenicity diversity of dengue virus type 2 strains circulating in Guangdong , China', *PLoS Pathogens*, 3: 333–342.
- Zou, C., Huang, C., Zhang, J., Wu, Q., Ni, X., Sun, J. and Dai, J. 2019 .Virulence difference of five type I dengue viruses and the intrinsic molecular mechanism', *PLoS Neglected Tropical Diseases*, 13(3): e0007202.