

DAFTAR PUSTAKA

- Anderson, P. K., Cunningham, A. A., Patel, N. G., Morales, F. J., Epstein, P. R., & Daszak, P. (2004). Emerging infectious diseases of plants: Pathogen pollution, climate change, and agrotechnology drivers. *Trends in Ecology & Evolution*, 19(10), 535-544. <https://doi.org/10.1016/j.tree.2004.07.021>
- Apalowo, O.A., Adediji, A.O., Balogun, O.S., Fakolujo, T.I., Archibong, J.M., Izuogu, N.B., Abdelgawad, M.A., Ghoneim, M.M., Mustapha, S., Qashqari, F.S.I., Batiha, G.E., & Atiri, G.I.. (2022). Genetic Structure of Cucumber Mosaic Virus From Natural Hosts in Nigeria Reveals High Diversity and Occurrence of Putative Novel Recombinant Strains. *Front Microbiol.* 10;13:753054. doi: 10.3389/fmicb.2022.753054..
- Bonnet, J., Fraile, A., Sacristan, S., Malpica, J.M., & Garcia-Arenal, F. (2005). Role of recombination in the evolution of natural populations of Cucumber mosaic virus, a tripartite RNA plant virus. *Virology*, 332: 359-368. doi:10.1016/j.virol.2
- Bruckart, W.L. & Lorbeer, J.W. (1975). Cucumber mosaic virus in weed hosts near commercial fiels of lettuce and celery. *Phytopathology*, 66: 253-259
- Brunt, A.A., Kenten, R.H., Phillips, S., 1978. Symptomatically distinct strains of pepper veinal mottle virus from four West Africa solanaceous crops. *Ann. Appl. Biol.* 88, 115e119.
- Bujarski, J., Stenger, D. C., & Roossinck, M. J. (2019). *Cucumber mosaic virus: A model for RNA virus evolution*. *Annual Review of Virology*, 6 (1), 135-153. <https://doi.org/10.1146/annurev-virology-092818-015534>
- Chen, S., Gu, H., Wang, X., Chen, J., & Zhu, W. (2011). Multiplex RT-PCR detection of Cucumber mosaic virus subgroups and Tobamoviruses infecting Tomato using 18S rRNA as an internal control. *Acta Biochim Biophys Sin.*, 43(6):465-71. doi: 10.1093/abbs/gmr031.
- Choi, S. K., Yoon, J. Y., & Ryu, K. H. (2014). Development of a multiplex RT-PCR assay for the simultaneous detection of five viruses infecting pepper plants. *Journal of Virological Methods*, 203, 118-122. <https://doi.org/10.1016/j.jviromet.2014.02.013>
- Choi, M.K. (2023). Evaluation of the Weeds around *Capsicum annum* (CA) Cultivation Fields as Potential Habitats of CA-Infecting Viruses. *The Plant Pathology Journal*, 39(4):374-383. <https://doi.org/10.5423/PPJ.OA.04.2023.0066>
- Clark, D.P. Pazdernik, N.J., McGehee. (2019). *Molecular Biology, (Third Edition)*. Elsevier, USA. 1016 p. <https://doi.org/10.1016/C2015-0-06229-3>
- Damayanti, T.A. & Wiyono, S. (2015). Genetic diversity of Cucumber mosaic virus strain soybean from several areas. *Microbiology Indonesia*, 9 (1): 44-49. DOI: 10.5454/mi.9.1.6
- Damayanti TA, Alabi OJ, Rauf A, Naidu RA. (2010). The Occurrence of Bean common mosaic virus and Cucumber mosaic virus in Yardlong Beans in Indonesia. *Plant Dis.* 94(4):478. doi: 10.1094/PDIS-94-4-0478B. PMID: 30754487.

- De Blas C., Borja M.J., Saiz M., Romero J., 1994. Broad spectrum detection of *Cucumber mosaic virus* (CMV) using the Polymerase Chain Reaction. *Journal of Phytopathology* 141(3): 323–329. <https://doi.org/10.1111/j.1439-0434.1994.tb01476.x>
- Doolittle, S. P. (1916). A new infectious mosaic disease of cucurbits. *Journal of Agricultural Research*, 7(1), 6-16.
- Dusi, A. N., Marques, R. M., & Picoli, J. F. (2018). Epidemiology and management of cucumber mosaic virus in pepper and tomato in tropical regions. *Plant Pathology Journal*, 34(2), 209-218. <https://doi.org/10.5423/PPJ.OA.11.2017.0227>
- Edwardson, J. R., & Christie, R. G. (1991). *Cucumber Mosaic Virus*. In Handbook of Viruses Infecting Legumes. CRC Press.
- Fraile, A., & García-Arenal, F. (2010). The coevolution of plants and viruses: Resistance and pathogenicity. *Advances in Virus Research*, 76, 1-32. doi: 10.1016/S0065-3527(10)76001-2.
- Gallitelli, D. (2000). The ecology of Cucumber mosaic virus and sustainable agriculture. *Virus Research*, 273, 108-114. doi: 10.1016/s0168-1702(00)00184-2.
- Garcés, F., Zerbini, F. M., & Varsani, A. (2016). *Weed plants as viral reservoirs in agricultural ecosystems*. *Plant Pathology Journal*, 32(3), 194-203.
- García-Arenal, F., Fraile, A., & Malpica, J. M. (2001). Variability and genetic structure of plant virus populations. *Annual Review of Phytopathology*, 39 (1): 157-186. <https://doi.org/10.1146/annurev.phyto.39.1.157>
- Ghosh S, Kanakala S, Lebedev G, Kontsedalov S, Silverman D, Alon T, Mor N, Sela N, Luria N, Dombrovsky A, Mawassi M, Haviv S, Czosnek H, Ghanim M. (2019). Transmission of a New Polerovirus Infecting Pepper by the Whitefly *Bemisia tabaci*. *J Virol*. 93(15):e00488-19. doi: 10.1128/JVI.00488-19.
- Hančinský R, Mihálik D, Mrkvová M, Candresse T, Glasa M. (2020). Plant Viruses Infecting *Solanaceae* Family Members in the Cultivated and Wild Environments: A Review. *Plants*,. 25;9(5):667. doi: 10.3390/plants9050667.
- Hudson, R. R., Boos, D. D., & Kaplan, N. L. (1992). A statistical test for detecting geographic subdivision. *Molecular Biology and Evolution*, 9 (1): 138-151. <https://doi.org/10.1093/oxfordjournals.molbev.a040703>
- Hull, R. (2002). *Matthews' Plant Virology*. Academic Press.
- Hull R., (2009). Mechanical inoculation of plant viruses. *Current Protocols in Microbiology*, 13: 16B.6.1–16B.6.4. <https://doi.org/10.1002/9780471729259.mc16b06s13>
- International Committee of Taxonomy for Viruses (ICTV). (2023). Current ICTV Taxonomy Release. <https://ictv.global/taxonomy> (diakses pada 20 September 2024)
- Ishikawa, K., Matsuda, Y., & Shimizu, T. (2021). Host range studies of Cucumber mosaic virus using mechanical inoculation in *Nicotiana benthamiana*. *Plant Disease*, 105(9), 2208-2214. <https://doi.org/10.1094/PDIS-05-20-1094-RE>

- Jacquemond, M. (2012). Cucumber mosaik virus. *Advances in Virus Research*, 84, 439-504. <https://doi.org/10.1016/B978-0-12-394314-9.00013-0>
- Jo, Y., Choi, H., Kim, SM., Kim, S.L., Lee, B.C. & Cho, W.K. (2017). The pepper virome: natural co-infection of diverse viruses and their quasispecies. *BMC Genomics* 18, 453 <https://doi.org/10.1186/s12864-017-3838-8>
- Jones, R.A.C. (2009). Plant virus emergence and evolution: Origins, new encounter scenarios, factors driving emergence, effects of changing world conditions, and prospects for control. *Virus Research*, 141 (2), 113-130. <https://doi.org/10.1016/j.virusres.2008.07.028>
- Kang, B. C., Yeam, I., & Jahn, M. M. (2016). Genetics of plant virus resistance. *Annual Review of Phytopathology*, 43(1), 581-621. doi: 10.1146/annurev.phyto.43.011205.141140..
- Kementerian Pertanian. (2021). Laporan produksi cabai nasional 2021. Jakarta: Kementerian Pertanian Republik Indonesia.
- Kumar S, Nei M, Dudley J, Tamura K. (2008). MEGA: a biologist-centric software for evolutionary analysis of DNA and protein sequences. *Brief Bioinform.* 9(4):299-306. doi: 10.1093/bib/bbn017.
- Kumar, S., Stecher, G., Li, M., Knyaz, C., & Tamura, K. (2018). MEGA X: Molecular Evolutionary Genetics Analysis across computing platforms. *Molecular Biology and Evolution*, 35(6), 1547-1549. <https://doi.org/10.1093/molbev/msy096>
- Kumari, N., Sharma, V., Patel, P. & Sharma, P.N. (2023) Pepper mild mottle virus: a formidable foe of capsicum production—a review. *Front. Virol.* 3:1208853. doi: 10.3389/fviro.2023.1208853
- Kumari, R., Kumar, S., Singh, L., Hallan, V. (2016). Movement Protein of *Cucumber Mosaic Virus* Associates with Apoplastic Ascorbate Oxidase. *PLOS ONE* 11(9): e0163320. <https://doi.org/10.1371/journal.pone.0163320>
- LaTourrette, K., Garcia-Ruiz, H. (2022). Determinants of Virus Variation, Evolution, and Host Adaptation. *Pathogens*, 11 (9): 1039. doi: 10.3390/pathogens11091039.
- Lewsey M, Surette M, Robertson FC, Ziebell H, Choi SH, Ryu KH, Canto T, Palukaitis P, Payne T, Walsh JA, Carr JP. (2009). The role of the Cucumber mosaik virus 2b protein in viral movement and symptom induction. *Mol Plant Microbe Interact.* 22(6):642-54. doi: 10.1094/MPMI-22-6-0642.
- Martin DP, Varsani A, Roumagnac P, Botha G, Maslamoney S, Schwab T, Kelz Z, Kumar V, Murrell B. RDP5: a computer program for analyzing recombination in, and removing signals of recombination from, nucleotide sequence datasets. *Virus Evol.* 2020 Apr 12;7(1):veaa087. doi: 10.1093/ve/veaa087. PMID: 33936774; PMCID: PMC8062008.
- Mayo, M.A. & Ziegler-Graff, V. (1996). Molecular biology of luteoviruses. *Advances in virus Research*, 46: 413-460
- Miftakhurrohmah, Nyana, I.D.N., Damayanti, T.A. & Noveriza, R. (2017). Molecular Identification of Cucumber Mosaic Virus Infecting Patchouli (*Pogostemon cablin*). *Jurnal Litri* 23 (1): 11 -17

- Mochizuki, T., & Ohki, S. T. (2012). *Cucumber mosaic virus*: Viral genes as virulence determinants. *Molecular Plant Pathology*, 13(3), 217-225. <https://doi.org/10.1111/j.1364-3703.2011.00749.x>
- Morales, F. J., & Jones, P. G. (2004). The ecology and epidemiology of whitefly-transmitted viruses in Latin America. *Virus Research*, 100(1), 57–65. DOI: 10.1016/j.virusres.2003.12.014
- Moreno, A. B. & López-Moya, J. J. (2020). When viruses play team sports: mixed infections in plants. *Phytopathology*, 110: 29-48. <https://doi.org/10.1094/PHYTO-07-19-0250-FI>
- Moury, B, & Simon, V. (2011). dN/dS-based methods detect positive selection linked to trade-offs between different fitness traits in the coat protein of potato virus Y. *Mol Biol Evol.* 28 (9): 2707-17. doi: 10.1093/molbev/msr105.
- Muhire, B.M., Varsani, A., & Martin, D.P. (2014). SDT: A virus classification tool based on pairwise sequence alignment and identity calculation. *PLoS ONE*, 9(9), e108277. <https://doi.org/10.1371/journal.pone.0108277>
- Mullis, K., & Faloona, F. (1987). Specific synthesis of DNA in vitro via a polymerase-catalyzed chain reaction. *Methods in Enzymology*, 155, 335-350. [https://doi.org/10.1016/0076-6879\(87\)55023-6](https://doi.org/10.1016/0076-6879(87)55023-6)
- Nei, M. & Kumar, S. (2000). *Molecular Evolution and Phylogenetics*. Oxford University Press, New York. 352 p.
- Nelson, M.R., Wheeler, R.E., Zitter, T.A., (1982). Pepper mottle virus. In: Descriptions of Plant Viruses. CMI/AAB, Kew, England, p. 253.
- Okada R, Kiyota E, Sabanadzovic S, Moriyama H, Fukuhara T, Saha P. (2011). Bell pepper endornavirus: molecular and biological properties, and occurrence in the genus *Capsicum*. *J Gen Virol.*;92:2664–73.
- Pandawani, N.P., Javandira, C. & Hanum, F. (2018). Exploration and collection of cucumber mosaic virus isolates of horticultural plants from Bali. *International Research Journal of Engineering, IT & Scientific Research*, 4 (6): <https://doi.org/10.21744/irjeis.v4n6.340>
- Palukaitis, P., & García-Arenal, F. (2003). Cucumoviruses. *Advances in Virus Research*, 62, 241-323. [https://doi.org/10.1016/S0065-3527\(03\)62005-1](https://doi.org/10.1016/S0065-3527(03)62005-1)
- Palukaitis, P., Roossinck, M. J., Dietzgen, R. G., & Francki, R. I. B. (1992). Cucumber mosaic virus. *Advances in Virus Research*, 41, 281-348. doi: 10.1016/s0065-3527(08)60039-1.
- Pappu, H.R., Jones, R.A.C., & Jain, R.K. (2009). Global status of tospovirus epidemics in diverse cropping systems: Successes achieved and challenges ahead. *Virus Res.* 141:219-236.
- Perry, K.L., Zhang, L., Shintaku, M.H., Palukaitis, P. (1994). Mapping determinants in cucumber mosaic virus for transmission by *Aphis gossypii*. *Virology*. Dec;205(2):591-5. doi: 10.1006/viro.1994.1686. PMID: 7975263.
- Purnamawati, I., Damayanti, T.A. & Giyanto. (2019). Potensi Bakteri Agens Hayati untuk Menekan Infeksi Cucumber mosaik virus (CMV) pada Melon (*Cucumis melo* L.). *Agrovigor*. 12 (2): 94-101

- Rai, M., Ingle, A., Pandit, R., & Gupta, I. (2018). Detection of plant viruses by RT-PCR. In *Virus detection using technologies for plant improvement*. CRC Press.
- Roossinck, M.J. (2001). *Cucumber mosaic virus: A model for RNA virus evolution*. *Mol Plant Pathol*. 2(2):59-63. doi: 10.1046/j.1364-3703.2001.00058.x.
- Roossinck, M. J. (2002). Evolutionary history of Cucumber mosaic virus deduced by phylogenetic analyses. *Journal of Virology*, 76(7), 3382-3387. <https://doi.org/10.1128/JVI.76.7.3382-3387.2002>
- Roossinck, M. J. (2018). Evolutionary and ecological links between plant and fungal viruses. *New Phytol*. 221(1):86-92. doi: 10.1111/nph.15364.
- Rozas J, Ferrer-Mata A, Sánchez-DelBarrio JC, Guirao-Rico S, Librado P, Ramos-Onsins SE, Sánchez-Gracia A. (2017). DnaSP 6: DNA Sequence Polymorphism Analysis of Large Data Sets. *Mol Biol Evol*. 34 (12): 3299-3302. doi: 10.1093/molbev/msx248.
- Santosa, A.I. & Ertunc, F. (2021). Characterization of two Cucumber mosaic virus isolates infecting *Allium cepa* in Turkey. *Phytopathologia Mediterranea*, 60(1): 13-21. doi: 10.36253/phyto-11840
- Santosa, A. I., Al-Shahwan, I. M., Abdalla, O. A., Al-Saleh, M. A., & Amer, M. A. (2018). Characterization of a watermelon mosaic virus isolate inducing a severe disease in watermelon in Saudi Arabia. *Journal of Agricultural Science and Technology A*, 8(4), 220–229. <http://doi.org/10.17265/2161-6256/2018.04.005>
- Shingote P.R., Wasule, D.L., Parma, V.S., Holkar, S.K., Karkute, S.G., Parlawar, N.D., Senanayake, D.M.J.B. (2022) An Overview of Chili Leaf Curl Disease: Molecular Mechanisms, Impact, Challenges, and Disease Management Strategies in Indian Subcontinent. *Front Microbiol.*, 13:899512. doi: 10.3389/fmicb.2022.899512.
- Stobbe, A., & Roossinck, M,J. (2016). Plant Virus Diversity and Evolution. *Current Research Topics in Plant Virology*,. 22:197–215. doi: 10.1007/978-3-319-32919-2_8..
- Subekti, D., Hidayat, S.H., Nurhayati, E. & Sujiprihati, S. (2006) Cucumber Mosaic Virus and Chili Veinal Mottle Virus Infection on Growth and Yield Component of Chilli. *HAYATI Journal of Biosciences*, 13 (2): 53-57. [https://doi.org/10.1016/S1978-3019\(16\)30381-3](https://doi.org/10.1016/S1978-3019(16)30381-3)
- Takeshita, M., Suzuki, M., Kuwata, S. & Takanami, Y. (1998). Involvement of cucumber mosaic cucumovirus RNA2 and RNA3 in viral systemic spread in radish plant. *Arch Virol*. 143(6):1109-17. doi: 10.1007/s007050050359.
- Tamura, K, & Nei, M. (1993). Estimation of the number of nucleotide substitutions in the control region of mitochondrial DNA in humans and chimpanzees. *Mol Biol Evol*. 10(3):512-26. doi: 10.1093/oxfordjournals.molbev.a040023.
- Tamura, K., Peterson, D., Peterson, N., Stecher, G., Nei, M., & Kumar, S. (2011). MEGA5: molecular evolutionary genetics analysis using maximum likelihood, evolutionary distance, and maximum parsimony methods. *Mol Biol Evol*. 28 (10):2731-9. doi: 10.1093/molbev/msr121.

- Tamura, K., Stecher, G., Peterson, D., Filipksi, A., & Kumar, S. (2013). MEGA6: Molecular evolutionary genetics analysis version 6.0. *Molecular Biology and Evolution*, 30 (12), 2725-2729. <https://doi.org/10.1093/molbev/mst197>
- Tamura K, Stecher G, Kumar S. (2021). MEGA11: Molecular Evolutionary Genetics Analysis Version 11. *Mol Biol Evol.* 38(7):3022-3027. doi: 10.1093/molbev/msab120.
- Tatineni, S. & Hein, G.L. (2023). Plant Viruses of Agricultural Importance: Current and Future Perspectives of Virus Disease Management Strategies. *Phytopathology*, 113:117-141. <https://doi.org/10.1094/PHYTO-05-22-0167->
- Tomlinson, J.A., Carter, A.L., Dale, W.T., & Simpson, C.L. (1970). Weed plants as sources of cucumber mosaic virus. *Ann. Appl. Biol.*, 66: 11-16
- Uge, E., Sulandari, S., Hartono, S. & Somowiyarjo, S. (2019). Cucumber mosaic virus on black pepper in Yogyakarta and Bangka Belitung. *Jurnal Fitopatologi Indonesia*, 15 (1): 1-8. DOI: 10.14692/jfi.15.1.1
- Vanodhini, J., Rajendran, L., Raveendaran, M., Rajasree, V., Karthiyekan, G. (2020). Characterization of cucumber mosaic virus (CMV) subgroup IB infecting chili in Tamil Nadu, India. *3 Biotech.*, 10: 500. <https://doi.org/10.1007/s13205-020-02492-y>
- Veniari, N. K., Yuliadhi, K.A., Nyana, I.D.N. & Suastika, G. (2015). Detection of Cucumber Mosaic Virus (CMV) and Chilli Veinal Mottle Virus (ChiVMV) on Weed Commelina spp. in Cropping Chilli Pepper (Capsicum spp.) Through Serology and Molecular Test. *E-Jurnal Agroekoteknologi Tropika*, 4 (1): 45-52.
- Womdim, R.N., Swai, I.S., Chadha, M.L., Gebre Selassie, K., Marchoux, G., (2001). Occurrence of Chili veinal mottle virus in Solanum aethiopicum in Tanzania. *Plant Dis.* 85, 801
- Wright, S. (1943). Isolation by distance, *Genetics*, 28 (2): 114–138, <https://doi.org/10.1093/genetics/28.2.114>
- Zahra, H.A., Defitra, N.K., Probowati, W. & Santosa, A.I. (2024). First Report of cucumber mosaic virus in *Zinnia elegans* in Indonesia. *Australasian Plant Dis. Notes* 19, 27 (2024). <https://doi.org/10.1007/s13314-024-00551-4>
- Zitter, T.A., Hopkins, D.L. and Thomas, C.E. (1996) *Compendium of cucurbit diseases*. American Phytopathological Society Press, St. Paul. 87 p.
- Zitter T.A. & Murphy J.F. (2009). Cucumber mosaic virus. *The Plant Health Instructor*, DOI: 10.1094/PHI-I-2009-0518-01.