

DAFTAR PUSTAKA

- Abdullah, A.B. 2014. Addressing ethical remedies and trust deficit. *Science, Technology, Environment and Ethic*. International Institute of Advanced Islamic Studies (IAIS) Malaysia.
- Apritasari, U. 2017. Deteksi Protein Hemagglutinin Virus Influenza H5 dan H3 Pada Ikan Zebra (*Danio rerio*) Menggunakan Teknik Imunohistokimia (Tesis). Fakultas Kedokteran Hewan. Universitas Airlangga. Surabaya.
- Artois, J., Ippoliti, C., Conte, A., Dhingra, M.S., Alfonso, P., Tahawy, A.E., Elbestawy, A., Ellakany, H.F. and Gilbert, M. (2018) Avian Influenza A (H5N1) Outbreaks in Different Poultry Farm Types in Egypt: The Effect of Vaccination, Closing Status and Farm Size. *BMC Veterinary Research*, 14, 187. <https://doi.org/10.1186/s12917-018-1519-8>
- Axelrod, H.R. 1982. *Tropical Fish* (TFH publication Inc., 1982). Departemen Budidaya Perairan. Fakultas Perikanan dan Ilmu Kelautan. Institut Pertanian Bogor.
- Bardiya, N. and Bae, J. H. 2005. Influenza vaccines: recent advances in production technologies. *Appl. Microbiol. Biotechnol.* 67, 299–305.
- Bouvier, N.M. and Palese P. 2008. The biology of influenza viruses. *Vaccine* 26 (4) :D49–D53
- Brugman. S. 2012. The Zebrafish As A Model To Study Intestinal Inflammation. *Developmental and Comparative Immunology* 64 : 82-92.
- Carolyn, N., D. Major., J.M. Wood and J.S. Robertson. 2005. Generation of influenza vaccine viruses on Vero cells by reverse genetics: an H5N1 candidate vaccine strain produced under a quality system. *Elsevier Vaccine* 23 : 2943–2952.
- Center for Disease Control and Prevention (CDC). 2016. Seasonal Influenza, more Information. <http://www.cdc.gov/flu/about/qa/disease.htm>. Diakses pada 15 April 2018.
- Center for Disease Control and Prevention (CDC). 2016. Cell-Based Flu Vaccines. <https://www.cdc.gov/flu/protect/vaccine/cell-based.htm>. Diakses tanggal 15 April 2018
- Chengjun, L., Z. Bu, and H. Chen. 2014. Avian influenza vaccines against H5N1 'bird flu'. Elsevier.
- Dharmayanti, N.L.P.I dan I. Risa. 2016. Efikasi Vaksin Inaktif Bivalen Avian Influenza Virus Subtipe H5N1 (Clade 2.1.3. dan Clade 2.3.2) di Indonesia. *Jurnal Biologi Indonesia* 11 (2): 169-176.

- Domenech J., Dauphin G., Rushton J., McGrane J., Lubroth J. and Tripodi A. 2009.. Experiences with vaccination in countries endemically infected with highly pathogenic avian influenza: the food and agriculture organization perspective. *Rev Sci Tec* 28:293–305
- Dormitzer, P. R. 2015. Rapid production of synthetic influenza vaccines. *Curr. Top. Microbiol. Immunol.* 386, 237–273.
- Eissa, A.E and Zaki, M.M. 2012. Detection Of Avian Influenza (H5N1) In Some Fish and Shellfish From Different Aquatic Habitats Across Some Egyptian Provinces. *Life Science Journal* 9(3) : 2702-2712.
- Eko, A.S., W. Asmara dan M. H. Wibowo. 2015. Phylogenetic Molecular and Antigenic Structure Analysis of Avian Influenza Virus of Subtype H5N1 Lampung Isolate Collected in 2008-2013. *Jurnal Kedokteran Hewan* Vol. 9 No. 1.
- Elena, A.G., Richard J., Webby., J. Humberd., Jon., P. Seiler and R.G. Webster. 2006. Immunization with Reverse-Genetics–Produced H5N1 Influenza Vaccine Protects Ferrets. *JID* :194 Engelhardt, O.G. Many ways to make an influenza virus—Review of influenza virus reverse genetics methods. *Influenza Other Respir. Viruses* 2013, 7, 249–256.
- Ernawati, R., Rahardjo, A.P., Sianita,N., Rahmahani, J., Rantam, F.A., Tjajahningsih, W. dan Suwarno. 2004. Petunjuk Pratikum Pemeriksaan Virologik dan Serologik Laboratorium Virologi dan Imunologi Bagian Mikrobiologi Veteriner. Fakultas Kedokteran Hewan. Universitas Airlangga. Surabaya.
- Fries, L. F., Smith, G. E. and Glenn, G. M. A. 2013. Recombinant Virus like Particle Influenza A (H7N9) vaccine. *N. Engl. J. Med.* 369, 2564–2566.
- Gabor, K.A., Goody, M.F., Mowel, W.K., Breitbach, M.E., Gratacap, R.L., Witten, P.E., and Kim, C.H. 2014. Influenza A Virus Infection In Zebrafish Recapitulates Mammalian Infection and Sensitivity To Anti-Influenza Drug Treatment. *Disease Models & Mechanisms* 7: 1227-1237.
- Genzel, Y., M. Fischer, and U. Reichl. 2006. Serum-free influenza virus production avoiding washing steps and medium exchange in large-scale microcarrier culture. *Vaccine* 24:3261–3272.
- Goody.M.F, Sullivan.C and Kim.C.H. 2014. Studying The Immune Response To Human Viral Infection Using Zebrafish. *National Institute Health* 46(1): 84-95.
- Groth, M., Lange, J., Kanrai, P., Pleschka, S., Scholtissek, C., Krumbholz, A., Platzer, M., Sauerbei, A. and Zell, R. 2014. The Genome Of An Avian Influenza Virus From A Pilot Whale : Relation To Influenza Viruses Of Gulls and Marine Mamals. *Infection, Genetics and Evolution* 24. Elsevier : 183-186.

- Halperin, S., B. Smith, T. Mabrouk, M. Germain, P. Tre´panier, T. Hassell, J. Treanor, R. Gauthier, and E. Mills. 2002. Safety and immunogenicity of a trivalent, inactivated, mammalian cell culture-derived influenza vaccine in healthy adults, seniors, and children. *Vaccine* 20:1240–1247.
- Hewajuli, D.A dan N.L.P.I. Dharmayanti. 2008. Karakterisasi dan Identifikasi Virus Avian Influenza (AI). *Wartazoa*. 18 (2).
- Hoffmann, E and Webster, R.G. 2000. Unidirectional rna polymerase i-polymerase ii transcription system for the generation of influenza a virus from eight plasmids. *J. Gen. Virol* 81 : 2843–2847.
- Honhold, N., McLeod, A. and Satyajit. S. 2008. Biosecurity for highly pathogenic avian influenza: issues and options. Food and Agriculture Organization of the United Nations.
- Horimoto, T., and Y. Kawaoka. 2005. Influenza: lessons from past pandemics, warnings from current incidents. *Nat. Rev. Microbiol.* 3:591–600.
- Horimoto, T. and Kawaoka, Y. 2006. Strategies for developing vaccines against H5N1 influenza A viruses. *Trends Mol. Med.* 12, 506–514
- Horimoto, T. and Kawaoka, Y. 2001. Pandemic Threat Posed By Avian Influenza Viruses. *Clinical Microbiology Reviews*. American Society for Microbiology 14 (1) : 129-149.
- Horimoto, T. and Y. Kawaoka. 2005. Influenza : Lessons from Past Pandemics, Warning from Current Incidents. Nature Publishing Group. 3 : 591 – 600
- Isikhnas. 2015. Avian Influenza (AI). http://wiki.isikhnas.com/w/Penyakit_Avian_Influenza_HPAI. Diakses tanggal 15 April 2018.
- James, J., R. Zeiger, M. Lester, M. Fasano, J. Gern, L. Mansfield, H. Schwartz, H. Sampson, H. Windom, S. Machtinger, and S. Lensing. 1998. Safe administration of influenza vaccine to patients with egg allergy. *J. Pediatr.* 133:624–628
- Jihui, P., Tiago, J.S. Lopes., C.A. Nidom., E. Ghedin., C.A. Macken., A. Fitch, M. Imai, E.A. Maher., G. Neumann and Y. Kawaoka. 2015. Development of high-yield influenza A virus vaccine viruses. *Nature Communications* | DOI: 10.1038/ncomms9148.
- Julia, T.V., E.B. Guerrero., I.S.Romero., T.G. Gasca and A.G. Gasca 2016. A Muscle Tissue Culture System to Study Myostatin Function in Fish. *Researchgate*.
- Katz, J., and R. Webster. 1992. Amino acid sequence identity between the HA1 of influenza A (H3N2) viruses grown in mammalian and primary chick kidney cells. *J. Gen. Virol.* 73:1159–1165.

- Kawaoka, Y and Horimoto, T. 2007. Strategies for developing vaccines against H5N1 influenza A viruses. *Science Direct*: 9-15.
- Kreijtz, J. 2014. Safety and immunogenicity of a modified vaccinia virus Ankara based influenza A H5N1 vaccine: a randomised, double-blind phase 1/2a clinical trial. *Lancet Infect. Dis.* 14, 1196–1207.
- Kroehne1, V., V. Tsata., L. Marrone., C. Froeb., S. Reinhardt., A. Gompf, A.Dahl., J. Sternecker and M. M. Reimer. 2017. Primary Spinal OPC Culture System from Adult Zebrafish to Study Oligodendrocyte Differentiation In Vitro. *Frontiers in Cellular Neuroscience*. doi: 10.3389/fncel.00284.
- Kurniasih, S.W. 2015. Identifikasi Subtipe, Patogenitas, dan Filogenetik Virus Avian Influenza Isolat 2012-2013. Sekolah Pascasarjana Institut Pertanian Bogor.
- LaBarre, D.D. and Lowy, R.J., 2001. Improvements in methods for calculating virus titer estimates from TCID50 and plaque assays. *J. Virol. Methods* 96 (2), 107–126. [http:// dx.doi.org/10.1016/S0166-0934\(01\)00316-0](http://dx.doi.org/10.1016/S0166-0934(01)00316-0).
- Lahay, A.F. 2017. Infeksi Virus Flu Burung Pada Ikan Zebra (*Danio rerio*) Sebagai Model Studi Infeksi Biota Perairan (Tesis). Sekolah Pasca Sarjana. Universitas Airlangga Surabaya.
- Margine, I., Martinez-Gil, L., Chou, Y. Y. and Krammer, F. 2012. Residual baculovirus in insect cell-derived influenza virus-like particle preparations enhances immunogenicity. *PLoS ONE* 7, e51559.
- McIntosh, E.D.G. 2018. Healthcare-Associated Infections: Potential for Prevention through Vaccination. *Therapeutic Advances in Vaccines and Immunotherapy*, 6, 19-27. <https://doi.org/10.1177/2515135518763183>
- Meade, M.E, Roginsky, J.E., Schulz, J.R. 2019. Primary Cell Culture of Adult Zebrafish Spinal Neurons for Electrophysiological Studies, *Journal of Neuroscience Methods*. <https://doi.org/10.1016/j.jneumeth..04.011>
- Medina., Refael, A and Adolfo G.S. 2011. Influenza A viruses : New Research Development. *Nature Reviews*. 9 : 590 - 603
- Menke, A.L., J.M. Spitsbergen., Andre P. M. 2011. Wolterbeek and Ruud A. Woutersen. *Normal Anatomy and Histology of the Adult Zebrafish Toxicologic Pathology*, 39: 759-775.
- Monica, V., A. Figueras, B. Novoa. 2017. Modelling viral infections using zebrafish: Innate immune response and antiviral research. *Antiviral Research* 139 59e68. Elsevier
- Murakami, S.; Horimoto, T.; Yamada, S.; Kakugawa, S.; Goto, H. and Kawaoka, Y. 2008. Establishment of canine rna polymerase i-driven reverse genetics for influenza a virus: Its application for h5n1 vaccine production. *J. Virol* 82, 1605–1609.

- Muraki, Y.; Murata, T.; Takashita, E.; Matsuzaki, Y.; Sugawara, K. and Hongo, S. 2007. A mutation on influenza c virus m1 protein affects virion morphology by altering the membrane affinity of the protein. *J. Virol* 81, 8766–8773.
- Nathiga, N., K.S., Abdul, A.S., Taju, G., Sivasubbu., Sridhar., Sarath, B and Sahul, H.A.S. 2017. Effects of nicotine on zebrafish: a comparative response between a newly established gill cell line and whole gills, *Comparative Biochemistry and Physiology Part C*, doi:10.1016/j.cbpc.2017.02.013
- Neumann, G., T. Watanabe., H. Ito, S. Watanabe., H. Goto., P.Gao. M.Hughes., D.R. Perez., R.Donis., E. Hoffmanns, G. Hoboms and Y. Kawaoka. 1999.Generation of influenza A viruses entirely from cloned cDNAs. *Proc. Natl. Acad. Sci. USA* Vol. 96, pp. 9345–9350, *Microbiology*.
- Nicholson, K.G, Colegate AE, Podda. 2001. Safety and antigenicity of non-adjuvanted and MF59-adjuvanted influenza A/Duck/Singapore/ 97 (H5N3) vaccine: a randomised trial of two potential vaccines against H5N1 influenza. *Lancet* 357:1937–43.
- Nidom, C. A., R. Takano., S. Yamada, Y.S. Tagawa., S. Daulay., D. Aswadi, T. Suzuki, Y. Suzuki, K. Shinya, K. I. Horimoto, Y. Muramoto and Y. Kawaoka. 2010. Influenza A (H5N1) Viruses from Pigs, Indonesia. *Emerging Infectious Disease* · www.cdc.gov/eid 16, No. 10.
- Nidom, R.V. 2016. Kontruksi Seed-Vaksin Virus Flu Burung Strain Indonesia Dengan Gen Hemagglutinin Low Pathogenic dan Gen Neuraminidase PR8 Melalui Teknologi Reverse Genetic (Disertasi). Universitas Airlangga.
- Nidom, R.V., M.Y. Alamudi, S. Sillehu, S. Indrasari, R. D. Suindarti, E. Qurnianingsih, Y.P. Dachlan., Aryati., A. Syahrani, K. Rachmawati, K. P. Santoso and C.A Nidom. 2017. Construction of Indonesian-Strain Avian Flu Virus Seed Vaccine Using Low Pathogenic Hemagglutinin Gene and Neuraminidase Pr8 Gene through Reverse Genetics. *Journal of Vaccines and Immunology DOI CC By 005 Medical Group*
- Nidom, R.V, S.Indrasari, A.F.Lahay, U. Apritasari, K.P. Santoso, Chairul.A.Nidom. 2018. H5N1 Avian Influenza Virus Infection In Zebra Fish (*Danio rerio*) as an Alternative Media For Seed Vaccine Virus Propagation. AIRC Laboratory-Profesor Nidom Foundation, Faculty of Veterinary Medicine, Faculty of Fisheries & Marine Universitas Airlangga, Surabaya Indonesia.
- OIE. 2009. Manual of Diagnostic Test and Vaccines for Terrestrial Animal. <http://www.oie.int/manual-of-diagnostic-test-and-vaccines-for-terrestrial-animals/>.
- OIE Terrestrial Manual. 2016. Chapter 2.3.12. Infeksius Bursal Disease (Gumboro disease)

- Ozawa, M, H. Goto.,T.Horimoto and Y. Kawaoka, 2007. An Adenovirus Vector-Mediated Reverse Genetics System for Influenza A Virus Generation. *Journal Of Virology*. p9556-9559.
- Poland, G.A.2006. Vaccines against Avian Influenza—A Race against Time. *New England Journal of Medicine*, 354, 1411-1413. <https://doi.org/10.1056/NEJMe068047>
- Qiagen. 2011. QIAquick Gel Extraction Kit Protokol. www.qiagen.com
- Robert, R. J and Ellis, A. E. 2001. The Anatomy and Phsycology of Teleost, In *Fish Pathology* (R. J Roberts, ed) 3rd ed, pp. 12-54. Philadelphia, USA: W. B Saunders.
- Russell, C. J. and Webster, R. G.2005. The genesis of a pandemic influenza virus. *Cell*, 123, 368-371.
- Shen, S.-C.1993. *Fishes of Taiwan*.Department of Zoology, National Taiwan University, Taipei. 960 p. (in Chinese).
- Skowronski, D. M. and Low. 2014. influenza vaccine effectiveness associated with mutation in the egg-adapted H3N2 vaccine strain not antigenic drift in circulating viruses. *PLoS One* 9, e9215
- Stern, A.M and Markel H. 2005. "The history of vaccines and immunization: familiar patterns, new challenges". *Health Aff.* 24 (3): 611–21. doi:10.1377/hlthaff.24.3.611. PMID 15886151
- Sumber Pengertian. 2018. Pengertian Vaksin, Sejarah dan Jenis-jenisnya. <http://www.sumberpengertian.co/pengertian-vaksin-sejarah-dan-jenis-jenisnya>. Diakses tanggal 2 Mei 2018
- Swayne, D.E., Suarez, D.L., Spackman, E., Jadhao, S., Dauphin, G and Kim, T.M. 2015. Antibody titer has positive predictive value for vaccine protection against challenge with natural antigenic-drift variants of H5N1 high-pathogenicity avian influenza viruses from Indonesia. *J Virol* 89:3746–62
- Teuku, Z.H., C.R. Tabbu., W.T. Artama., A. Haryanto dan M. Isa. 2016. Isolation and Identification of Avian Influenza in Different Species of Poultry by Means of Serological and Molecular Methods. *Jurnal Kedokteran Hewan* Vol. 10 No. 1, Maret 2016 P-ISSN : 1978-225X; E-ISSN : 2502-5600.
- Tong, S., Zhu, X., Li, Y., Shi, M., Zhang, J., Bourgeois, M., Yang, H., Chen, X., Recuenco, S., Gomez, J., Chen, L.M., Johnson, A., Tao, Y and Donis, R.O. 2013. New world bats harbor diverse influenza A viruses. *PLoS Pathogol* 9:1–12
- Tripp, R. A. and Tompkins, S. M. 2014. Virus-vectored influenza virus vaccines. *Viruses* 6, 3055–3079.

- Ulmer, J., U. Valley and R. Rappuoli. 2006. Vaccine manufacturing: challenges and solutions. *Nat. Biotechnol.* 24:1377–1383
- Ungchusak, K., Auewarakulm P., Dowell, S.F. 2005. Probable person-to-person transmission of avian influenza A (H5N1). *N Engl J Med* 352:333–40
- US Food and Drug Administration. 2013. FDA approves new seasonal influenza vaccine made using novel technology. US Food and Drug Administration <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm335891.htm>. Diakses tanggal 15 April 2016.
- Werner, O., T.C. Harder. 2006. Avian Influenza 43. in Kamps, B.S., Hoffmann, C., Preiser, W. (eds.) *Influenza Report 2006*, Flying Publishers, Paris accessed at www.influenzareport.com
- White. R, Rose.K, and Zon.L. 2013. Zebrafish Cancer : The State Of Arth and The Path Forward. www.nature.com/nrc/journal/V13/ng/full/nrc3589.html
- WHO. 2017. Cumulative Number of Confirmed Human Cases of Avian Influenza A (H5N1) Reported to WHO, 2003–2017. http://www.who.int/influenza/human_animal_interface/2017_09_27791_tableH5N1.pdf?ua=1. Diakses tanggal 16 Mei 2018.
- WHO. 2005. Recommended laboratory tests to identify avian influenza A virus in specimens from humans. [http:// www.who.int/csr/disease /avian_ influenza /guidelines /referencelabs/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/referencelabs/en/index.html). Diakses tanggal 16 Mei 2018.
- Widiastuti, E. 2011. Teknik Pembenihan Ikan Zebra Pink (*Branchydanio rerio*) Di Peternak Ikan Hias “Usaha Mandiri” Nglegok, Kabupaten Blitar, Jawa Timur. *Praktek Kerja Lapang*.
- Wood, J.M and Robertson, J.S. 2004. From lethal virus to life-saving vaccine: developing inactivated vaccines for pandemic influenza. *Nat Rev Microbiol* 2:842–7.