

## DAFTAR PUSTAKA

- Ahmed, M.I. 2006. Morphological, Ecological, and Molecular examination of the Sea cucumber species along the Red Sea Coast of Egypt and Gulf of Aqaba, with the investigation of the possibility of using DNA barcoding technique as a standard method for Sea cucumber ID. Thesis. Marine Biology. University of Hull.
- Aisyah, R., Asmara, W., Wibawa, T. 2010. Analisis Molekuler Gen Polimeras Basic 2 Virus Avian Influenza H5N1 yang Diisolasi dari Unggas Asal Purworejo, Jawa Tengah dan Bantul, Yogyakarta. *Jurnal Biomedika* pp: 6–17.
- Alexander, D.J. 2007. An overview of the epidemiology of avian influenza. *Vaccine* 25 pp: 5637–5644.
- Amonsin, A., Payungporn, S., Theamboonlers, A., Thanawongnuwech, R., Suradhat, S., Pariyothorn, N., Tantilertcharoen, R., Damrongwattanapokin, S., Buranathai, C., Chaisingh, A., Songserm, T., Poovorawan, Y. 2006. Genetic characterization of H5N1 influenza A viruses isolated from zoo tigers in Thailand. *Virology* 344 (2) pp: 480-491.
- Anonim. 2003. Reagents for Influenza Virus Diagnosis. WHO Collaborating Centre for Reference and Research on Influenza, Melbourne, Australia.
- Asmara, Widya., M. Haryadi Wibowo., Charles Ranga Tabbu. 2005. Identifikasi Subtipe Hemagglutinin Virus Avian Influenza Pada Berbagai Spesies Unggas dengan RT-PCR. *Jurnal Sain Veteriner*. Vol 23, No 1
- Beare, AS., Webster RG. 1991. Replication of avian influenza viruses in humans. *Arch Virol*. 1991; 119(1-2) pp: 37-42.
- Bertram S., Glowacka I., Steffen I., Kühl A., Pöhlmann S. (2010). Novel Insights Into Proteolytic Cleavage of Influenza Virus Hemagglutinin. *Rev Med Virol* 20, pp: 298–310
- Brooks, G. F., Butel, J. S., Morse, S. A. 2005. Mikrobiologi kedokteran. Alih Bahasa. Mudihardi E, Kuntaman, Wasito EB et al. Jakarta: Salemba Medika. Pp: 317-327.
- Bussey, K.A., T.L. Bousse., E.A. Desmet., B. Kim and T. Takimoto. 2010. PB2 residue 271 plays a key role in enhanced polymerase activity of Influenza A viruses in mammalian host cells. *Journal of Virology* 84 pp: 4395-4406.
- Capua, I., Alexander, D. J. 2009. Ecology, epidemiology and human health implications of Avian Influenza virus infections. Di dalam: Capua I,

Alexander DJ, editor, Avian Influenza and Newcastle Disease. A Field and Laboratory Manual. Italia: Springer-Verlag.

Carver, K Donna. 2011. Preventing Avian Influenza in Backyard Poultry Flocks. <http://web.uconn.edu/poultry/poultrypages/Darre%20AI%20Symptoms.pdf>.

CDC. 2015. <http://www.cdc.gov/flu/avianflu/avian-in-birds.htm> 2015.

Chen, W., Calvo PA., Malide D., Gibbs J., Schubert U., Bacik I., Basta S., O'Neill R., Schickli J., Palese P., Henklein P., Bennink JR., Yewdell JW. 2001. A novel influenza A virus mitochondrial protein that induces cell death. *Nat Med* 7 (12) pp: 1306-1312.

Chien, H., Deng, G., Li, Z., Tian, G., Li, Y., Jiao, P., Zhang, L., Liu, Z., Webster, R. G., & Yu, K. 2004. The evolution of H5N1 influenza viruses in ducks in southern China. *Proc Natl AcadSci USA* 101 pp: 10452–10457.

Connor, R. J., Kawaoka, Y., Webster, R. G., Paulson, J. C. 1994. Receptor specificity in human, avian, and equine H2 and H3 influenza virus isolates. *Journal of Virology* 205 pp: 17–23.

Cross, K. J., Burleigh, L.M. and Steinhauer, D.A. 2001. Mechanisms of cell entry by influenza virus. *Expert Rev Mol Med* 6 pp: 1-18.

Damayanti R., Dharmayanti N.L.P.I., Indriani R., Wiyono A. dan Darminto. 2004. Deteksi Virus Avian Influenza Subtipe H5N1 pada Organ Ayam yang Terserang Flu Burung Sangat Patogenik di Jawa Timur dan Jawa Barat dengan Teknik Imunohistokimia. *JITV* 9 (3) pp: 197-203.

Darre, J. Michael. 2015. Signs and Symptoms of Avian Influenza in Poultry. <http://web.uconn.edu/poultry/poultrypages/Darre%20AI%20Symptoms.pdf>.

David, O. White., Frank Fenner. 1986. Medical Virology. Academic Press Inc. Orlando, Sandiego, New York, Boston, London, Sydney, Tokyo, Toronto.

De Jong, M. D., C. P. Simmons, T. T. Thanh, V. M. Hien, G. J. Smith, T. N. Chau, D. M. Hoang, N. V. Chau, T. H. Khanh, V. C. Dong, P. T. Qui, B. V. Cam, Q. Ha do, Y. Guan, J. S. Peiris, N. T. Chinh, T. T. Hien, and J. Farrar. 2006. Fatal outcome of human influenza A (H5N1) is associated with high viral load and hypercytokinemia. *Nature Med* 12 pp:1203–1207.

Dharmayanti, N.L.P.I., R. Damayanti, A.Wiyono, R. Indriani, dan Darminto. 2004. Identifikasi virus avian influenzavirus isolat Indonesia dengan metode reverse transcriptase polymerase chain reaction RT-PCR. *Jurnal Ilmu Ternak dan Veteriner* 9(2) pp: 136-143

- Dharmayanti N.L.P.I, D.A. Hewajuli, A.K Ratnawati, R. Indriani, Darminti. 2010. Karakter Genetik Protein Membran Virus Avian Influenza Subtipe H5N1. *Jurnal Ilmu Ternak dan Veteriner* 15 (3) pp: 231-239
- Dharmayanti, N.L.P.I., Hartawan R., Pudjiatmoko, Wibawa H., Hardiman, Balish A., Donis R., Davis C.T. and Samaan G. 2014. Genetic Characterization of Clade 2.3.2.1 Avian Influenza (H5N1) Viruses Indonesia 2012 Emerging Infectious Diseases. [www.cdc.gov/eid](http://www.cdc.gov/eid). 20(4) pp: 671-674.
- Dirjen PKH dan Keswan. 2012. <http://ditjennak.pertanian.go.id/perkembangan-kasus-avian-influenza-ai-pada-unggas-di-indonesia-s-d-30-maret-2012>.
- Dirjen PKH dan Keswan. 2017. <http://ditjenpkh.pertanian.go.id/situasi-kejadian-avian-influenza-ai-pada-unggas-kondisi-s-d-30-april-2017>.
- Donelan, N.R., C.F. Basler, A. Garcia-Sastre. 2003. A Recombinant Influenza A Virus Expressing an RNA-Binding-Defective NS1 Protein Induces High Levels of Beta Interferon and is Attenuated in Mice. *Journal of Virology* 77 pp: 13257–13266.
- Easterday, B.C., Hinshaw, V.S dan Halvorson D.A. 2007. Influenza in Disease of Poultry. Edisi X, Calnek, B.W (Eds). *IOWA State University Press, Ames, USA* pp: 583-605.
- Elton, D., Simpson-Holley, M., Archer, K., Medcalf, L., Hallam, R., McCauley, J. & Digard, P. 2001. Interaction of the influenza virus nucleoprotein with the cellular CRM1-mediated nuclear export pathway. *Journal of Virology* 75 pp: 408–419.
- FAO. 2016. Avian Influenza. <http://www.fao.org/avianflu/en/clinical.html>.
- Fenner, F. J., E. P. J., Gibss, F. A., Murphy, R., Rott, M.J., Studdert and D. o. White. 1995. *Veterinary Virology* 2nd Ed. (Harya Putra, dkk., trans). Semarang: IKIP Semarang Press.
- Fields. B. N., Knipe, D. M., Howley, P. M. 2007. *Fields virology*. Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Ferguson, N. M., Galvani, A. P., Bush, R. M. 2003. Ecological and immunological determinants of influenza evolution. *Nature* 422 pp: 428 – 433.
- Gabriel, G., M. Abram, B. Keiner, R. Wagner, H.D. Klenk, J. 2007. Stech Differential polymerase activity in avian and mammalian cells determines host range of influenza virus. *Journal of Virology* 81 pp: 9601–9604.

- Gambaryan, A., Webster, R., Matrosovich, M. 2002. Differences between influenza virus receptors on target cells of duck and chicken. *Arch Virol*147(6) pp:1197-1208.
- Garcia, M. A., J. Gil, I. Ventoso, S. Guerra, E. Domingo, C. Rivas and M. Esteban. 2006. Impact of protein kinase PKR in cell biology: from antiviral to antiproliferative action. *Microbiol. Mol. Biol.Rev* 70 pp: 1032–1060.
- Gastaminza, P., Perales, B., Falcon, A.M., and Ortin, J., 2003. Mutation in the N-terminal region of influenza virus PB2 protein affect virus RNA replication but not transcription. *Journal of Virology* 77 pp: 5098–5108.
- Gramer, M. R. 2005. Defining swine influenza virus. *J Swine Health Prod* 13 (3) pp: 157–160.
- Grose, C., Chokephaibulkit, K. 2004. Avian influenza virus infection of children in Vietnam and Thailand. *Pediatr Infect Dis J*23:793–794 10.1097/00006454-200408000-00024.
- Guan, Y., Poon L L., Cheung C Y., Ellis T M., Lim W., Lipatov A S., Chan K H., Sturm-Ramirez KM., Cheung C L., Leung Y H., Yuen K Y., Webster R G., Peiris J S. 2004. H5N1 influenza: a protean pandemic threat. *Proc Natl Acad Sci USA* 101(21) pp:8156-8161.
- Hagag, M. N., A. Arafa., M. H. EL-Hussieny., M. M. Aly., Ahmed A. El-Sanousi., and M.A. Shalaby. 2014. Molecular Characterization of Highly Pathogenic Avian influenza H5N1 in Ostrich. *International Journal of Virology*10 pp: 103-111.
- Hagag, N. M., A. Arafa., M. H. EL-Hussieny., M. M. Aly., Ahmed A. El-Sanousi., and M.A. Shalaby. 2014. Molecular Characterization of PB2 Gene of Highly Pathogenic Avian influenza H5N1 in Egypt. *International Journal of Virology* 10 pp: 143-149.
- Hale, B. G., Randall R E., Ortín J., Jackson D. 2008. The multifunctional NS1 protein of influenza A viruses. *J. Gen. Virol* 89 (Pt 10) pp: 2359 – 2376.
- Harder, T. C., and O. Werner. 2006. Avian Influenza. <http://www.influenzareport.com/ir/ai.htm>.
- Harimoto, T, and Kawaoka, Y. 2001. Pandemic Treat Posed by Avian Infuenza A Viruses. *Clin. Microbiol. Rev* pp: 129-149.
- Hatada, E., Takizawa, T., Fukuda, R. 1992. Specific binding of influenza A virus NS1 protein to the virus minus-sense RNA in vitro. *J. Gen. Virol*73 (Pt 1) pp: 17–25.

- Hatta, M., Hatta, Y., J.H. Kim, S. Watanabe, K. Shinya, M. Hatta, Y. Hatta, J.H. Kim, S. Watanabe, K. Shinya, T. Nguyen, P.S.Lie, Q.M. Mai Le and Y. Kawaoka. 2007. Growth of H5N1 influenza A viruses in the upper respiratory tracts of mice. *PLoS Pathog* 3(10): e133. doi:10.1371/journal.ppat.0030133.
- Hatta M, Gao P, Halfmann P, Kawaoka Y. 2001. Molecular basis for high virulence of Hong Kong H5N1 influenza A viruses. *Science* 293 (5536) pp: 1840 – 1842.
- Helm, J. D. 2007. Avian Flu. Universitas Clemson, US. <http://www.engormix.com>
- Herfst, S., Schrauwen, E. J., Linster, M., Chutinimitkul, S., de Wit, E., Munster, V. J., Sorrell, E. M., Bestebroer, T. M., Burke, D. F., Smith, D. J., Rimmelzwaan, G. F., Osterhaus, A. D., and Fouchier, R. A. 2012. Airborne transmission of influenza A/H5N1 virus between ferrets. *Science* 336 (6088) pp: 1534 – 1541.
- Hidayanto, N. K., Widya Asmara, Michael Haryadi Wibowo. 2015. Karakterisasi Gen Non Struktural 1 (NSI) Virus Avian Influenza pada Isolat Itik Tahun 2013. *Jurnal Sain Veteriner*. Vol 33 No 2.
- Inglis, S. C., Gething, M. J., & Brown, C. M. 1980. Relationship between the messenger RNAs transcribed from two overlapping genes of influenza virus. *Nucleic Acids Research* 8 pp: 3575 – 3589.
- Ito, T., Nelson, J., Nelson, S.S., Couceiro, S., Kelm, L.G., Baum, S., Krauss, M.R., Castrucci, I., Donatelli, H., Kida, J.C., Paulson, R.G., Webster and Y. Kawaoka. 1998. Molecular basis for the generation in pigs of influenza A viruses with pandemic potential. *J. Virol.* 72 pp: 7367–7373.
- Jacob, J. P., Butcher, G. D., Mather, F. B., Miles, R. D. 2003. Avian influenza in poultry. IFAS Extension. University of Florida. Gainesville, 32611, FL, USA.
- Jackson D, Hossain MJ, Hickman D, Perez DR, Lamb RA. 2008. A new influenza virus virulence determinant: the NS1 protein four C-terminal residues modulate pathogenicity. *Proceedings of the National Academy of Sciences* 105(11)pp:4381-4386. doi:10.1073/pnas.0800482105. pmid:1833462.
- Justin D. Brown, David E. Stallknecht, Joan R. Beck, David L. Suarez, and David E. Swayne. 2006. Susceptibility of North American Ducks and Gulls to H5N1 Highly Pathogenic Avian Influenza Viruses. *Emerg Infect Dis* ; 12 (11) pp: 1663–1670. doi: 10.3201/eid1211.060652.

- Keawcharoen, J., Oraveerakul, K., Kuiken, T., Fouchier, R. A., Amonsin, A., Payungporn, S., et al. 2004. Avian influenza H5N1 in tigers and leopards. *Emerg Infect Dis* 10 pp: 2189–2191.
- Kim, J. A., Ryu, S. Y., Seo, S. H. 2005. Cells in the respiratory and intestinal tracts of chicken have different proportions of both human and avian influenza virus receptors. *Journal of Microbiology* 43 (4) pp: 366 – 369.  
Abstract: <http://amedeo.com/lit.php?id=16145552>
- Kobayashi, Y., T. Horimoto, Y. Kawaoka, D. J. Alexander & C. Itakura. 1996. Pathological studies of chickens experimentally infected with two highly pathogenic avian influenza viruses. *Avian Pathology* 25(2) pp: 285–304, DOI: 10.1080/03079459608419142.
- Kochs, G., García-Sastre A., Martínez-Sobrido L. 2007. Multiple anti-interferon actions of the influenza A virus NS1 protein. *Journal of Virology* 81 (13) pp: 7011-7021.
- Krug, R. M., et al. 2003. Intranuclear Warfer between human influenza virus and human cells: The roles of the viral NS1 protein. *Virology* pp: 181–189.
- Kuzuhara, Takesi., Daisuke Kise, Hiroko Yoshida, Takahiro Horita, Yoshimi Murazaki, Akie Nishimura, Noriko Echigo, Hiroko Utsunomiya, and Hideaki Tsuge. 2009. Structural Basis of the Influenza A Virus RNA Polymerase PB2 RNA-binding Domain Containing the Pathogenicity-determinant Lysine 627 Residue. *J. Biol. Chem* 284 (11) pp: 6855-6860.
- Lamb, R. A. 1989. Genes and proteins of the influenza viruses. In *The Influenza Viruses*. Pp: 1-87. Edited by R. M. Krug. New York & London: Plenum Press.
- Lamb, R. A, Krug, R. M. 2001. Orthomyxoviridae: The viruses and their replication. In: Fields BN, Knipe DM, Howley PM, eds. *Fields Virology 4th ed* pp: 1487–1532. Philadelphia, Pennsylvania: Lippincott-Raven.
- Lamb, R. A., Lai, C. J., Choppin, P. W. 1981. Sequences of mRNAs derived from genome RNA segment 7 of influenza virus: colinear and interrupted mRNAs code for overlapping proteins. *Proc Natl Acad Sci U S A* 78 (7) pp: 4170-4174
- Lear, J. D. 2003. Proton conduction through the M2 protein of the influenza A virus; a quantitative, mechanistic analysis of experimental data. *FEBS Lett* 552 (1) pp: 17–22.
- Li, J., M. Ishaq., M. Prudence., X. Xi., T. Hu., Q. Liu and D. Guo. 2009. Single mutation at the amino acid position 627 of PB2 that leads to increased

virulence of an H<sub>5</sub>N<sub>1</sub> Avian influenza virus during adaptation in mice can be compensated by multiple mutations at other sites of PB2. *Virus Res* 144 pp: 123 – 129.

- Li, K. S., Guan Y., Wang J., Smith G J., Xu K M., Duan L., Rahardjo A P., Puthavathana P., Buranathai C., Nguyen T D., Estoepangestie A T., Chaisingh A., Auewarakul P., Long H T., Hanh N T., Webby R J., Poon L L., Chen H., Shortridge K F., Yuen KY., Webster R G., Peiris J S. 2004. Genesis of a highly pathogenic and potentially pandemic H5N1 influenza virus in eastern Asia. *Nature* 430 (6996) pp: 209 – 2013.
- Li, W, Wang G, Zhang H, Xin G, Zhang D, Zeng J, Chen X, Xu Y, Cui Y, Li K. 2010. Effects of NS1 variants of H5N1 influenza virus on interferon induction, TNFalpha response and p53 activity. *Cell Mol Immunol* 7 (3) pp: 235–342.
- Li, Zejun, Jiang, Y, Jiao. P, Wang, A, Zhao, F, Tian, G, Wang, X, Yu, K, Bu, Z, Chen, H. 2006. The NSI Gene Contributes to the Virulence of H5N1 Avian Influenza Viruses. *Journal of Virology* 22 pp: 11115–11123.
- Lipatov, A. S., Andreansky S., Webby R J., Hulse D J., Rehg J E., Krauss S., Perez D R., Doherty P C., Webster R G, Sangster M Y. 2005. Pathogenesis of Hong Kong H5N1 influenza virus NS gene reassortants in mice: the role of cytokines and B- and T-cell responses. *J. Gen. Virol* 86(Pt 4) pp:1121-1130.
- Long, J. X., Peng, D X., Liu, Y L., Wu, Y T., Liu, X F. 2008. Virulence of H5N1 avian influenza virus enhanced by a 15-nucleotide deletion in the viral non-structural gene. *Virus Genes* 36 pp: 471-478.
- Long, J. X., Peng, D X., Liu, YL. et al. 2008. Virulence of H5N1 avian influenza virus enhanced by a 15-nucleotide deletion in the viral nonstructural gene. *Virus Genes* 36 pp: 471. doi:10.1007/s11262-007-0187-8.
- Massin P, van der Werf S, and Naffakh N. 2001. Residue 627 of PB2 is a determinant of cold sensitivity in RNA replication of avian influenza viruses. *Journal of Virology* 75 (11) pp: 5398–5404.
- Matrosovich, M. N., T. Y. Matrosovich, T. Gray, N. A. Roberts, and H. D. Klenk. 2004. Human and avian influenza viruses target different cell types in cultures of human airway epithelium. *Proc. Natl. Acad. Sci. USA* 101 pp:4620–4624.
- McFadden, E. R. Jr., Pichurko BM, Bowman HF, Ingenito E, Burns, S. 1985. Thermal mapping of the airways in humans. *J. Appl Physiol* 58 pp: 564–570.

- Min, J.Y., and R.M. Krug. 2006. The primary function of RNA binding by the influenza A virus NS1 protein in infected cells: Inhibiting the 29-59 oligo (A) synthetase/RNase L pathway. *Proc. Natl. Acad. Sci. USA* 103 pp: 7100 – 7105.
- Min, J.Y., S. Li, G.C. Sen and R.M. Krug. 2007. A site on the influenza A virus NS1 protein mediates both inhibition of PKR activation and temporal regulation of viral RNA synthesis. *Virology* 363 pp: 236 – 243.
- Mulyono, Arief., Widya Asmara. 2012. Dynamics of avian influenza gene Genetic dynamic analysis of the H5N1 Avian influenza virus NS1 gene isolated in Bali. Vol. 3, No. 2, December 2012.
- Naffakh, N., Massin P., Escriou N., Crescenzo-Chaigne B., van der Werf S. 2000. Genetic analysis of the compatibility between polymerase proteins from human and avian strains of influenza A viruses. *J. Gen. Virol* 81 pp:1283–1291.
- Neumann, Gabrielle and Yoshihiro Kawaoka. 2001. Avian Influenza viruses. John Willey and son's, Ltd.
- Neumann, Gand Kawaoka, Y. 2006. Host range restriction and pathogenicity in the context of influenza pandemic. *Emerg. Infect. Dis* 12 (6) pp: 881–886.
- Neumann, G., Brownlee, G. G., Fodor, E., and Kawaoka, Y. 2006. Orthomyxovirus replication, transcription, and polyadenylation. In Kawaoka Y (Ed) *Biology of Negative Strand RNA Viruses: The Power of Reverse Genetics*. Springer Verlag Berlin Heidelberg pp: 121–143.
- Neumann, G., T. Watanabe, H. Ito, S. Watanabe, H. Goto, P. Gao, M. Hughes, D. R. Perez, R. Donis, E. Hoffmann, G. Hobom, and Y. Kawaoka. 2009. Generation of influenza A viruses entirely from cloned cDNAs. *Proc. Natl. Acad. Sci. USA* 96 pp:9345–9350.
- Obenauer, J. C., Denson J, Mehta PK, Su X, Mukatira S, Finkelstein DB, Xu X, Wang J, Ma J, Fan Y, Rakestraw KM, Webster RG, Hoffmann E, Krauss S, Zheng J, Zhang Z, Naeve CW. 2006. *Science* 311 (5767) pp: 1576–1580.
- OIE.2015. [www.oie.int/fileadmin/Home/eng/Health\\_standards/tahm/2.03.04\\_AI.pdf](http://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/2.03.04_AI.pdf).
- Palese P and M.L. Shaw. 2007. Orthomyxovirus. The Viruses and Their Replication. In: *Fields Virology 5<sup>th</sup>*. E.D Knipe., D.M and P.M Howley (Eds). Lippincott Williams And Wilkins, Philadelphia. Pp: 1647-1689.

- Perez, D.R., Lim W, Seiler JP, et al. 2003. Role of quail in the interspecies transmission of H9 influenza A viruses: molecular changes on HA that correspond to adaptation from ducks to chicken. *Journal of Virology* 77 pp: 3148-3156. Abstract: <http://amedeo.com/lit.php?id=12584339> – Full text at <http://jvi.asm.org/cgi/content/full/77/5/3148>.
- Perkins, L.E.L., Swayne, D.E. 2001. Pathobiology of A/chicken/Hong Kong/220/97 (H5N1) avian influenza virus in seven gallinaceous species. *Veterinary Pathology* 38 pp: 149–164. DOI:10.1354/vp.38-2-149.
- Racaniello Vincent. 2009. The A, B and C of influenza virus. <http://www.virology.ws/2009/09/22/the-a-b-and-c-of-influenza-virus/>
- Rott R, Klenk HD, Nagai Y, Tashiro M. Influenza Viruses, Cell Enzymes, and Pathogenicity. *Am J Respir Crit Care Med*. 1995;15 pp:16–19
- Salomon, R., Franks, J., Govorkova, E. A., Ilyusina, N. A., Yen., H. L., Post, D. J., H., Humberd, Jennifer., Trichet, M., Rehg. J. E., Webby, R. J., Webster, R. G., Hoffmann, E. 2006. The Polymerase complex genes contribute to the high virulence of the human H5N1 influenza virus isolate A/Vietnam/1203/04. *NJEM* 203 (3) pp: 689–697.
- Sambrook, J. dan Russel, D.W. 2001. *Molecular Cloning: A Laboratory Manual* 3th edition. Cold Spring Harbor Laboratory Press. New York. Pp: 78-125.
- Sauer, P., M. Muller., J. Kang. 1998. Quantitation of DNA. *Qiagen News* 2 pp: 23-26.
- Seo, S. H., Hoffmann, E., Webster, R. G. 2002. Lethal H5N1 influenza viruses escape host anti-viral cytokine responses. *Nature Med* 8 (9) pp: 950–954.
- Shafir SC, Fuller T, Smith TB, Rimoin AW. 2012. A national study of individuals who handle migratory birds for evidence of avian and swine-origin influenza virus infections. *J. Clin.Virol* 54(4) pp:364–367.
- Shinya, K., Hamm S, Hatta M, Ito H, Ito T, Kawaoka, Y. 2004. PB2 amino acid at position 627 affects replicative efficiency, but not cell tropism, of Hong Kong H5N1 influenza A viruses in mice. *Virology* 15: 320 (2) pp: 258–266.
- Silverman, R.H. 2007. Viral encounters with 29,59 oligoadenylate synthetase and RNase L during the interferon antiviral response. *Journal of Virology* 81 pp: 12720–12729.
- Smith, G. J. D., Naipospos, T. S. P., Nguyen, T. D., De Jong, M. D., Vijaykrishna, D., Usman, T. B., Hasan, S. S., Dao, T. V., Bui, N. A., Leung, Y. H. C., Cheung, C. L., Rayner, J. M., Zhang, J. X., Poon, L. L. M., Li, K. S.,

- Nguyen, V. C., Hien, T. T., Farrar, J., Webster, R. G., Chen, H., Peiris, J. S. SM., and Guan, Y. 2006. Evolution and adaptation of H5N1 Influenza virus in avian and human host in Indonesia and Vietnam. *Journal of Virology* 350 pp: 258–268.
- Songserm, T, Amonsin A, Jam-on R, Sae-Heng N, Meemak N, Pariyothorn N, Payungporn S, Theamboonlers A, Poovorawan Y. 2006. Avian influenza H5N1 in naturally infected domestic cat. *Emerg Infect Dis.* Apr;12(4) pp: 681-3
- Spackman, Erica. 2008. A Brief Introduction to be Avian Influenza Virus. Humana Press, NJ.
- Stevens, J., Blixt, O., Tumpey, T. M., Taubenberger, J. K., Paulson, J. C., and Wilson, I. A. 2006. Structure and receptor specificity of the hemagglutinin from an H5N1 influenza virus. *Science* 312 pp: 404–410.
- Suarez D.L, M.L. Perdue, N.J. Cox, T. Rowe, C. Bender, J. Huang, D. Swayne. 1998. Comparisons of Highly Virulent H5N1 Influenza A Viruses Isolated From Humans and Chickens From Hong Kong. *J. Virol.*, 72 (1998), pp. 6678-6688
- Subbarao K, London W, Murphy B. R. 1993. A single amino acid in the PB2 gene of influenza A virus is a determinant of host range. *Journal of Virology* 67 pp:1761–1764.
- Suresh V Kuchipudi.,Rahul Nelli., Gavin A White., Maureen Bain., Kin Chow Chang., and Stephen Dunham. 2009. Differences in influenza virus receptors in chickens and ducks: Implications for interspecies transmission. *J Mol Genet Med* 3 (1) pp: 143–151. Published online 2009 Jan 16. PMID: PMC2702077.
- Suwannakhon, N., Pookorn, S., Sanguanserm, D., Chamnanpood, C., Chamnanpood, P., Wongvilairat, R., Pongcharoen, S., Niumsup, P.R., Kunthalert, D., Sanguanserm, P. 2008. Genetic characterization of nonstructural genes of H5N1 avian influenza viruses isolated in Thailand in 2004-2005. *Southeast Asian J Trop Med Public Health* 39(5) pp:837-847.
- Suzuki, Y., Ito, T., Suzuki, T., Holland, R.E., Jr, Chambers, T.M., Kiso, M., Ishida, H., & Kawaoka, Y. 2000. Sialic acid species as a determinant of the host range of influenza A viruses. *Journal of Virology* 74 pp: 11825–11831.
- Swayne, D. E. 2007. Understanding the complex pathobiology of high pathogenicity avian influenza viruses in birds. *Avian Disease* 51(1 Suppl) pp:242–249.

- Swayne, D.E & Suarez, D.L. 2000. Highly pathogenic avian influenza. Southeast Poultry Research Laboratory, Agricultural Research Service, United States Department of Agriculture, 934 College Station Road, Athens, Georgia 30605, United States of America. *Rev.sci.tech.Off.int.Epiz.* 19 (2) pp: 463-482.
- Swayne, D.E., Suarez, D.L., Sims, L.D. 2013. Influenza In Diseases of Poultry. Swayne DE, editor; , Glisson JR, editor; , McDougald LR, editor; , Nolan LK, editor; , Suarez DL, editor; , Nair V, editor. (eds). 13th ed. *John Wiley & Sons, Inc:* Ames, Iowa, pp : 181–218.
- Tablante, L. Nathaniel. 2012. Clinical Presentation and Pathology of Avian Influenza. [https://scholar.cu.edu.eg/?q=wafaabelghany/files/ai\\_ppt8.pdf](https://scholar.cu.edu.eg/?q=wafaabelghany/files/ai_ppt8.pdf).
- Takano, R., C. A. Nidom, M. Kiso, Y. Muramoto, S. Yamada, Y .S. Tagawa, C. Macken, and Y. Kawaoka. 2009. Phylogenetic characterization of H5N1 avian influenza viruses isolated in Indonesia from 2003-2007. *Journal of Virology*390 pp: 13–21.
- Taubenberger, J. K, Reid AH, Lourens RM, Wang R, Jin G, Fanning TG. 2005. Characterization of the 1918 influenza viruspolymerase genes. *Nature*437 pp:889–893.
- Thepmalee C, Phanchana Sanguansermisri, Naratchala Suwanankhon, Chanpen Chamnanpood, Pornchai Chamnanpood, Sutatip Pongcharoen, Pannika R. Niumsap, Damratsamon Surangkul, and Donruedee Sanguansermisri. 2013. Changes in the NS1 Gene of Avian Influenza Viruses Isolated in Thailand Affect Expression of Type I Interferon in Primary Chicken Embryonic Fibroblast Cells.*Indian J Virol.* 24(3) pp:365–372
- Thijs, Kuiken., Guus Rimmelzwaan., Debby van Riel., Geert van Amerongen., Marianne Baars., Ron Fouchier., Albert Osterhaus. 2014. Avian Influenza H5N1 in cats. *Science* :Vol. 306, Issue 5694, pp. 241DOI: 10.1126/science.1102287.
- Tisoncik, R. Jeniffer., Rosalind Billharz., Svetlana Burmakina., Sarah E. Belisle., Sean C. Proll.,Marcus J. Korth., Adolfo García-Sastre., and Michael G. Katze. 2011. The NS1 protein of influenza A virus suppresses interferon-regulated activation of antigen-presentation and immune-proteasome pathways. *J Gen Virol*92 (Pt 9) pp: 2093–2104 doi: 10.1099/vir.0.032060-0
- Tong, S., 2013. New World Bats Harbor Diverse Influenza A Viruses. *Plos Pathogens* 9 (10).
- Triyana, Y. S., Asmara, W., Wibawa, T. 2010. Analisis Molekuler Gen Polymeras Basic 2 Virus Avian Influenza H5N1 yang Diisolasi dari Unggas Asal

Purworejo, Jawa Tengah dan Bantul, Yogyakarta. *Jurnal Biomedika* pp: 81–90.

United States Animal Health Association (USAHA). 1994. Report of the committee on transmissible diseases of poultry and other avian species. Criteria for determining that an AI virus isolation causing an outbreak must be considered for eradication. In Proc. 98th Annual Meeting of the United States Animal Health Association, 29 October–4 November, Grand Rapids, Michigan. USAHA, Richmond, Virginia, 522.

Viseshakul, N., Thanawongnuwech, R., Amonsin, A., Suradhat, S., Payungporn, S., Keawchaen, J., Oraveerakul, K., Wongyanin, P., Plitkul, S., Thaemboonlers, A., Poovorawan, Y. 2004. The Genome Sequences Analysis of H5N1 Avian Influenza A Virus Isolated from the Outbreak Among Poultry Populations in Thailand. *Virology* 328 pp: 169–176.

Wan, H., Perez, D. R. 2006. Quail carry sialic acid receptors compatible with binding of avian and human influenza viruses. *Virology* 346 (2) pp: 278–286.

Wan, X. F., Ren, T., Luo, K. J., Liao, M., Zhang, G. H., Chen, J. D., Cao, W. S., Li, Y., Xin, C. A. 2005. Genetic characterization of H5N1 Avian Influenza Viruses Isolated in Southern China During the 2003–2004 Avian Influenza Outbreaks. *Arch Virol* pp: 1257–1266.

Wang, W., Riedel, K., Lynch, P., Chien, C. Y., Montelione, G. T., Krug, R. M. 2002. RNA binding by the novel helical domain of the influenza virus NS1 protein requires its dimer structure and a small number of specific basic amino acids. *RNA* 5 pp: 195–205.

Webster, R.G., and Hulse, D. J. 2004. Microbial Adaptation and Change Avian Influenza. *Rev. Sci. Tech Int. Epiz* 23 (2) pp: 453–465.

Webster, R. G., D. J. Hulse-Post, K. M. Sturm-Ramirez, Y. Guan, M. Peiris, G. Smith, and H. Chen. 2007. Changing Epidemiology and Ecology of Highly Pathogenic Avian H5N1 Influenza Viruses. *Avian Diseases* 50:269–272

Webster, R. G., Kawaoka, Y. 1988. Avian influenza. *Crit. Rev. Poult. Biol* 1 pp: 211–246.

Weizhong, Li., Gefei Wang., Heng Zhang., Gang Xin., Dangui Zhang., Jun Zeng., Xiaoxuan Chen., Yanxuan Xu., Youhong Cui., and Kangsheng Li. 2010. Effects of NS1 variants of H5N1 influenza virus on interferon induction, TNF $\alpha$  response and p53 activity. *Cell Mol Immunol* 7(3) pp: 235–242. . doi: 10.1038/cmi.2010.6

- Wibawa, Hendra, Walujo Budi Prijono, Ni Luh Putu Indi Dharmayanti, Sri Handayani Irianingsih, Yuli Miswati, Anieka Rohmah, Ernes Andesyha, Romlah, Rosmalina Sari Dewi Daulay, dan Kiki Safitria. 2013. Investigasi wabah penyakit pada itik di Jawa Tengah, Yogyakarta, dan Jawa Timur: identifikasi sebuah clade baru virus avian influenza subtipe H5N1 di Indonesia. *Buletin laboratorium veteriner Balai Besar Veteriner Wates Jogjakarta*.
- Wibowo, Michael Haryadi., Eko Agus Srihanto, Khrisdiana Putri, Widya Asmara, Charles Rangga Tabbu. 2013. The Development of Pathogenicity of Avian Influenza Virus Isolated from Indonesia. *Indonesian Journal of Biotechnology* . Vol. 18, No. 2, pp: 133-143.
- Wibowo, Michael Haryadi., Dito Anggoro, Surya Amanu, AETH Wahyuni, Tri Untari, Sidna Artanto and Widya Asmara. 2016. Receptor Binding and Antigenic Site Analysis of Hemagglutinin Gene Fragments of Avian Influenza Virus Serotype H5N1 Isolated from Indonesia. *Pakistan Veterinary Journal*.
- Wibowo, Michael Haryadi., Widya Asmara., Charles Rangga Tabbu. 2006. Isolasi dan Identifikasi Serologis Virus Avian Influenza Dari Sampel Unggas Yang Diperoleh di D.I. Yogyakarta dan Jawa Tengah = Isolation and Serological Identification of Avian Influenza Virus From Poultry Sample . *Jurnal Sain Veteriner* Vol 24 no 1. Yogyakarta.
- William, G. Dundon and Ilaria Capua. 2009. *Viruses* 1 pp:1057–1072; doi:10.3390/v1031057.
- World Health Organization. 2006. Manual on Animal Influenza Diagnosis and Surveillance. Geneva, Switzerland:  
<http://www.who.int/emcdocuments/influenza/docs/animalinfluenza/html>.
- Wu, Y., et al. 2014. Bat-derived influenza-like viruses H17N10 and H18N11. Trends in Microbiology. *Journal of Metallomics and Nanotechnologies* 22 (4) pp: 183-191.
- Yao, L., Korteweg C, Hsueh W, Gu J. 2008. Avian influenza receptor expression in H5N1 infected and noninfected human tissues. *FASEB J* 22 pp:733–740.
- Yassine, H.M., C.W.Lee D.L.Suarez Y.M.Saif. 2008. Genetic and antigenic relatedness of H3 subtype influenza A viruses isolated from avian and mammalian species. *Science Direct*. Volume 26, Issue 7. pp: 966-977.

Yavarian, J., Nazanin Zahra Shafiei Jandaghi., Maryam Naseri., and Talat Mokhtari Azad. 2014. Characterization of Variations in PB2, NS1, M, Neuraminidase and Hemagglutinin of Influenza A (H3N2) Viruses in Iran. *Jundishapur J Microbiol* 7(3) p: 9089.

Zhao, D., Liang, L., Li, Y., Jiang, Y., Liu, L., and Chen, H. 2012. Phylogenetic and Pathogenic Analyses of Avian Influenza A H5N1 Viruses Isolated from Poultry in Vietnam. *PLoS ONE* 7 (11) pp: E50959.