DAFTAR PUSTAKA

Alba, S., Bakker, M. I., Hatta, M., Scheelbeek, P. F. D., Dwiyanti, R., Usman, R., … Smits, H. L. (2016). Risk factors of typhoid infection in the Indonesian archipelago. *PLoS ONE*, *11*(6), 1–14. https://doi.org/10.1371/journal.pone.0155286

Ambati, S. R., Nath, G., & Das, B. K. (2007). Diagnosis of typhoid fever by polymerase chain reaction. *Indian Journal of Pediatrics*, *74*(10), 909–913. https://doi.org/10.1007/s12098-007-0167-y

Aranow, C. (2011). Vitamin D and the immune system, 881–886. https://doi.org/10.231/JIM.0b013e31821b8755

Baker, S., Favorov, M., & Dougan, G. (2010). Searching for the elusive typhoid diagnostic. *BMC Infectious Diseases*, *10*(Figure 1), 1–8. https://doi.org/10.1186/1471-2334-10-45

Bartley, J., Garrett, J., Grant, C. C., & Camargo, C. A. (2013). Could vitamin D have a potential anti-inflammatory and anti-infective role in bronchiectasis? *Current Infectious Disease Reports*, *15*(2), 148–157. https://doi.org/10.1007/s11908-013-0321-9

Bikle, D. (2009). Nonclassic actions of vitamin D. *Journal of Clinical Endocrinology and Metabolism*, *94*(1), 26–34. https://doi.org/10.1210/jc.2008-1454

Bikle, D. (2017). Vitamin D: production, metabolism, and mechanisms of action. In *Endotext [Internet]*. MDText. com, Inc.

Bikle, D. D. (2014). Vitamin D metabolism, mechanism of action, and clinical applications. *Chemistry & biology*, *21*(3), 319–329.

Buckle, G. C., Walker, C. L. F., & Black, R. E. (2012). Typhoid fever and paratyphoid fever: Systematic review to estimate global morbidity and mortality for 2010. *Journal of Global Health*, *2*(1), 1–9. https://doi.org/10.7189/jogh.02.010401

Chowdhury, M. J., Shumy, F., Anam, A. M., & Chowdhury, M. K. (2014). Current status of typhoid fever : a review. *Bangladesh Medical Journal*, *43*(2), 106–

111. https://doi.org/10.3329/bmj.v43i2.21394

Chun, R. F., Liu, P. T., Modlin, R. L., Adams, J. S., & Hewison, M. (2014). Impact of vitamin D on immune function: Lessons learned from genome-wide analysis. *Frontiers in Physiology*, *5 APR*(April), 1–16. https://doi.org/10.3389/fphys.2014.00151

Cohen, J. (2018). 'Frightening' typhoid fever outbreak spreads in Pakistan. *Science*, *361*(6399), 214. https://doi.org/10.1126/science.361.6399.214

Deeb, K. K., Trump, D. L., & Johnson, C. S. (2007). Vitamin D signalling pathways in cancer: potential for anticancer therapeutics. *Nature Reviews. Cancer*, *7*(9), 684–700. https://doi.org/10.1038/nrc2196

Deluca, G. C., Kimball, S. M., Kolasinski, J., Ramagopalan, S. V., & Ebers, G. C. (2013). Review: The role of vitamin D in nervous system health and disease. *Neuropathology and Applied Neurobiology*, *39*(5), 458–484. https://doi.org/10.1111/nan.12020

Di Domenico, E. G., Cavallo, I., Pontone, M., Toma, L., & Ensoli, F. (2017). Biofilm producing Salmonella typhi: Chronic colonization and development of gallbladder cancer. *International Journal of Molecular Sciences*, *18*(9). https://doi.org/10.3390/ijms18091887

Dougan, G., & Baker, S. (2014). Salmonella enterica serovar typhi and the pathogenesis of typhoid fever. *Annual Review of Microbiology*, *68*, 317–336. https://doi.org/10.1146/annurev-micro-091313-103739

Dwiyanti, R., Hatta, M., Natzir, R., Pratiwi, S., Sabir, M., Yasir, Y., … Bahar, B. (2017). Association of typhoid fever severity with polymorphisms NOD2, VDR and NRAMP1 Genes in endemic area, Indonesia. *Journal of Medical Sciences (Faisalabad)*, *17*(3), 133–139. https://doi.org/10.3923/jms.2017.133.139

Dwiyanti, R., Yasir, Y., Sabir, M., Natzir, R., Rahardjo, S. P., Purnamasari, N. I., … Hatta, M. (2015). Titer IgG anti-flagellum Antibody and Flagellin Gene Variants of Salmonella enterica Serovar Typhi as Risk Factor for Typhoid Fever Carriers. *American Journal of Infectious Diseases and Microbiology*, *3*(2), 65–69. https://doi.org/10.12691/ajidm-3-2-1

Efendi, S., Budu, Hatta, M., Natsir, R. I., Sriyanah, N., Maryunis, & Dwiyanti, R.

(2019). Analysis of VDR gene expression and its relationship with bacterial load in typhoid fever patients. *Indian Journal of Public Health Research and Development*, *10*(10), 1476–1481. https://doi.org/10.5958/0976-5506.2019.03045.6

Eng, S. K., Pusparajah, P., Ab Mutalib, N. S., Ser, H. L., Chan, K. G., & Lee, L. H. (2015). Salmonella: A review on pathogenesis, epidemiology and antibiotic resistance. *Frontiers in Life Science*, *8*(3), 284–293. https://doi.org/10.1080/21553769.2015.1051243

Esmailnia, E., Amani, J., & Gargari, S. L. M. (2020). Identification of novel vaccine candidate against Salmonella enterica serovar Typhi by reverse vaccinology method and evaluation of its immunization. *Genomics*, *112*(5), 3374–3381. https://doi.org/10.1016/j.ygeno.2020.06.022

Febriza, A., Natzir, R., Hatta, M., As'ad, S., Budu, ., Kaelan, C., … Idrus, H. H. (2020). The Role of IL-6, TNF-α, and VDR in Inhibiting the Growth of Salmonella Typhi: in vivo Study. *The Open Microbiology Journal*, *14*(1), 65–71. https://doi.org/10.2174/1874285802014010065

Flayhart, D., Borek, A. P., Wakefield, T., Dick, J., & Carroll, K. C. (2007). Comparison of BACTEC PLUS blood culture media to BacT/Alert FA blood culture media for detection of bacterial pathogens in samples containing therapeutic levels of antibiotics. *Journal of Clinical Microbiology*, *45*(3), 816–821. https://doi.org/10.1128/JCM.02064-06

Gao, L., Tao, Y., Zhang, L., & Jin, Q. (2010). Vitamin D receptor genetic polymorphisms and tuberculosis: updated systematic review and meta-analysis. *The International Journal of Tuberculosis and Lung Disease : The Official Journal of the International Union against Tuberculosis and Lung Disease*, *14*(1), 15–23.

Gillespie, S. H. (2014). *Medical microbiology illustrated*. Butterworth-Heinemann.

Gopinath, S., Carden, S., & Monack, D. (2012). Shedding light on Salmonella carriers. *Trends in Microbiology*, *20*(7), 320–327. https://doi.org/10.1016/j.tim.2012.04.004

Grouzard, Veronique ; Rigal, J. ; S. M. (2016). Clinical Guidelines Diagnosis and treatment manual. *Clinical and Guidelines Diagnosis and treantment*

manual, 186.

Gupte, S. (2009). *The Short Textbook of Pediatrics (11th Edition)*. *The Short Textbook of Pediatrics (11th Edition)*. https://doi.org/10.5005/jp/books/10983

Hamer, D. H. (2010). *Public health and infectious diseases*. Elsevier.

Hanif, S., Bai, S., Ur Rehman, E., Memon, M. H., Ashfaq, M., & Rajesh. (2021). Emerging trends of resistance of typhoid fever in paediatric population: A hospital based study. *Journal of the Liaquat University of Medical and Health Sciences*, *20*(1), 21–25. https://doi.org/10.22442/jlumhs.2021.00764

Harris, J. B., & Brooks, W. A. (2020). Typhoid and Paratyphoid (Enteric) Fever. *Hunter's Tropical Medicine and Emerging Infectious Diseases*, 608–616. https://doi.org/10.1016/b978-0-323-55512-8.00074-0

Hatta, M. (2011). New flagellin gene for Salmonella enterica serovar typhi from the East Indonesian archipelago. *American Journal of Tropical Medicine and Hygiene*, *84*(3), 429–434. https://doi.org/10.4269/ajtmh.2011.10-0605

Hatta, M., Bakker, M., Beers, S. van, Abdoel, T. H., & Smits, H. L. (2009). Risk factors for clinical typhoid fever in villages in rural South-Sulawesi, Indonesia. *International Journal of Tropical Medicine*, *4*(3), 91–99.

Hatta, M., Goris, M. G. A., Heerkens, E., Gooskens, J., & Smits, H. L. (2002). Simple dipstick assay for the detection of Salmonella typhi-specific IgM antibodies and the evolution of the immune response in patients with typhoid fever. *American Journal of Tropical Medicine and Hygiene*, *66*(4), 416–421. https://doi.org/10.4269/ajtmh.2002.66.416

Hatta, M., Pastoor, R., Scheelbeek, P. F. D., Sultan, A. R., Dwiyanti, R., Labeda, I., & Smits, H. L. (2011). Multi-locus variable-number tandem repeat profiling of Salmonella enterica serovar Typhi isolates from blood cultures and gallbladder specimens from Makassar, South-Sulawesi, Indonesia. *PLoS ONE*, *6*(9). https://doi.org/10.1371/journal.pone.0024983

Hatta, M., & Ratnawati. (2008). Enteric fever in endemic areas of Indonesia: An increasing problem of resistance. *Journal of Infection in Developing Countries*, *2*(4), 279–282. https://doi.org/10.3855/jidc.222

Hatta, M., & Smits, H. L. (2007a). Detection of Salmonella typhi by nested polymerase chain reaction in blood, urine, and stool samples. *The American*

Journal of Tropical Medicine and Hygiene, *76*(1), 139–143.

Hatta, M., & Smits, H. L. (2007b). Detection of Salmonella typhi by nested polymerase chain reaction in blood, urine, and stool samples. *American Journal of Tropical Medicine and Hygiene*, *76*(1), 139–143. https://doi.org/10.4269/ajtmh.2007.76.139

Hewison, M. (2012). An update on vitamin D and human immunity. *Clinical Endocrinology*, *76*(3), 315–325. https://doi.org/10.1111/j.1365-2265.2011.04261.x

Higa, G. M., Hicks, J., & Isabella, C. (2012). Adjudication of the Alleged Role of Vitamin D in the Antimicrobial Pathway. *Scientifica*, *2012*(Figure 1), 1–12. https://doi.org/10.6064/2012/129516

Holick, M. F. (2008). Molecular Aspects of Medicine The vitamin D deficiency pandemic and consequences for nonskeletal health : Mechanisms of action. *Molecular Aspects of Medicine*, *29*(6), 1360–1367. https://doi.org/10.1016/j.mam.2008.08.008

Huang, S. J., Wang, X. H., Liu, Z. D., Cao, W. L., Han, Y., Ma, A. G., & Xu, S. F. (2017). Vitamin D deficiency and the risk of tuberculosis: A meta-analysis. *Drug Design, Development and Therapy*, *11*, 91–102. https://doi.org/10.2147/DDDT.S79870

Im, J., Islam, M. T., Kim, D. R., Ahmmed, F., Chon, Y., Zaman, K., … Clemens, J. D. (2020). Protection conferred by typhoid fever against recurrent typhoid fever in urban Kolkata. *PLoS neglected tropical diseases*, *14*(8), e0008530. https://doi.org/10.1371/journal.pntd.0008530

Jiménez-Sousa, M., Jiménez, J., Fernández-Rodríguez, A., Brochado-Kith, O., Bellón, J., Gutierrez, F., … Resino, S. (2019). VDR rs2228570 Polymorphism Is Related to Non-Progression to AIDS in Antiretroviral Therapy Naïve HIV-Infected Patients. *Journal of Clinical Medicine*, *8*(3), 311. https://doi.org/10.3390/jcm8030311

Jo, E. K. (2013). Autophagy as an innate defense against mycobacteria. *Pathogens and Disease*, *67*(2), 108–118. https://doi.org/10.1111/2049-632X.12023

Junita, A. R., Hamid, F., Natzir, R., Agus, R., Bahar, B., & Hatta, M. (2020).

Natural Resistance Associated Macrophage Protein-1 Expression in Salmonella typhi Infection with Acute Recurrence State of Typhoid Fever in Endemic Areas, Indonesia. *Microbiology Research Journal International*, *30*(9), 1–10. https://doi.org/10.9734/mrji/2020/v30i930258

Kongsbak, M., Levring, T. B., Geisler, C., & von Essen, M. R. (2013). The vitamin D receptor and T cell function. *Frontiers in Immunology*, *4*(JUN), 1–10. https://doi.org/10.3389/fimmu.2013.00148

Kumar, A., Arora, V., Bashamboo, A., & Ali, S. (2002). Detection of Salmonella typhi by polymerase chain reaction: Implications in diagnosis of typhoid fever. *Infection, Genetics and Evolution*, *2*(2), 107–110. https://doi.org/10.1016/S1567-1348(02)00090-4

Kure, S., Nosho, K., Baba, Y., Irahara, N., Shima, K., Ng, K., … Ogino, S. (2009). Vitamin D receptor expression is associated with PIK3CA and KRAS mutations in colorectal cancer. *Cancer Epidemiology Biomarkers and Prevention*, *18*(10), 2765–2772. https://doi.org/10.1158/1055-9965.EPI-09-0490

Kusumaningrat, I. B. V., & Yasa, I. W. P. S. (2014). Test for Diagnosing Typhoid Fever That Carried Out At Nikki Medika Clinic Laboratory. *E-Jurnal Medika Udayana*, *3*(1), 22–37.

L., M., Bostick, R. M., & Mayo, T. L. (2009). Vitamin D gene pathway polymorphisms and risk of colorectal, breast, and prostate cancer. *Annual Review of Nutrition*, *29*, 111–132. https://doi.org/10.1146/annurev-nutr-080508-141248

Lastória, J. C., & de Abreu, M. A. M. M. (2014). Leprosy: Review of the epidemiological, clinical, and etiopathogenic aspects - Part 1. *Anais Brasileiros de Dermatologia*, *89*(2), 205–218. https://doi.org/10.1590/abd1806-4841.20142450

Lee, Y. H., & Song, G. G. (2015). Vitamin D receptor gene FokI, TaqI, BsmI, and ApaI polymorphisms and susceptibility to pulmonary tuberculosis: A meta-analysis. *Genetics and Molecular Research*, *14*(3), 9118–9129. https://doi.org/10.4238/2015.August.7.21

Massi, M. Nasrum, Shirakawa, T., Gotoh, A., Bishnu, A., Hatta, M., & Kawabata,

M. (2005). Quantitative detection of Salmonella enterica serovar Typhi from blood of suspected typhoid fever patients by real-time PCR. *International Journal of Medical Microbiology*, *295*(2), 117–120. https://doi.org/10.1016/j.ijmm.2005.01.003

Massi, Muhammad Nasrum, Shirakawa, T., Gotoh, A., Bishnu, A., Hatta, M., & Kawabata, M. (2003). Rapid diagnosis of typhoid fever by PCR assay using one pair of primers from flagellin gene of Salmonella typhi. *Journal of Infection and Chemotherapy*, *9*(3), 233–237. https://doi.org/10.1007/s10156-003-0256-4

Massi, Muhammad Nasrum, Shirakawa, T., Gotoh, A., Hatta, M., & Kawabata, M. (2005). Identification and sequencing of Salmonella Enterica serotype typhi isolates obtained from patients with perforation and non-perforation typhoid fever. *Southeast Asian Journal of Tropical Medicine and Public Health*, *36*(1), 118–122.

Mazahery, H., & von Hurst, P. R. (2015). Factors affecting 25-hydroxyvitamin D concentration in response to vitamin D supplementation. *Nutrients*, *7*(7), 5111–5142. https://doi.org/10.3390/nu7075111

McCullough, M. L., Bostick, R. M., Daniel, C. R., Flanders, W. D., Davison, J., Daniel, C. R., … Hollis, B. W. (2009). Vitamin d status and impact of vitamin d3 and/or calcium supplementation in a randomized pilot study in the southeastern United States. *Journal of the American College of Nutrition*, *28*(6), 678–686. https://doi.org/10.1080/07315724.2009.10719801

McDonald, L. C., Fune, J., Gaido, L. B., Weinstein, M. P., Reimer, L. G., Flynn, T. M., … Reller, L. B. (1996). Clinical importance of increased sensitivity of BacT/Alert FAN aerobic and anaerobic blood culture bottles. *Journal of Clinical Microbiology*, *34*(9), 2180–2184. https://doi.org/10.1128/JCM.34.9.2180-2184.1996

McDonald, L. C., Weinstein, M. P., Fune, J., Mirrett, S., Reimer, L. G., & Reller, L. B. (2001). Controlled comparison of BacT/ALERT FAN aerobic medium and BACTEC fungal blood culture medium for detection of fungemia. *Journal of Clinical Microbiology*, *39*(2), 622–624. https://doi.org/10.1128/JCM.39.2.622-624.2001

MPKB. (2012). Metabolism of Vitamin D and the vitamin D receptor, The Marshall Protocol Knowledge Base, Autoimmunity.

Murray, P. R., Rosenthal, K. S., & Pfaller, M. A. (2020). *Medical Microbiology E-Book*. Elsevier Health Sciences.

Nakamura-Uchiyama, F., & Ohnishi, K. (2010). [Widal test]. *Nippon rinsho. Japanese journal of clinical medicine*, *68 Suppl 6*, 147–149. https://doi.org/10.5005/jp/books/10654_43

Narayanappa, D., Sripathi, R., Jagdishkumar, K., & Rajani, H. S. (2010). Comparative study of dot enzyme immunoassay (Typhidot-M) and Widal test in the diagnosis of typhoid fever. *Indian Pediatrics*, *47*(4), 331–333. https://doi.org/10.1007/s13312-010-0062-x

Nelwan, R. H. H. (2012). Tata laksana terkini demam tifoid. *Cermin Dunia Kedokteran*, *39*(no.4), 247–250. https://doi.org/10.1097/00007632-198109000-00015

Olopoenia, L. A., & King, A. L. (2000). Widal agglutination test - 100 years later: Still plagued by controversy. *Postgraduate Medical Journal*, *76*(892), 80–84. https://doi.org/10.1136/pmj.76.892.80

Olsen, S. J., Pruckler, J., Bibb, W., Thanh, N. T. M., Trinh, T. M., Minh, N. T., … Mintz, E. D. (2004). Evaluation of Rapid Diagnostic Tests for Typhoid Fever. *Journal of Clinical Microbiology*, *42*(5), 1885–1889. https://doi.org/10.1128/JCM.42.5.1885-1889.2004

Paschoal, D. (2014). Update on Genetics of Leprosy. *Journal of Ancient Diseases & Preventive Remedies*, *02*(01), 1–6. https://doi.org/10.4172/2329-8731.1000109

Paul, U. K., & Bandyopadhyay, A. (2017). Typhoid fever: a review. *International Journal of Advances in Medicine*, *4*(2), 300. https://doi.org/10.18203/2349-3933.ijam20171035

Pike, J. W. (2011). Genome-wide principles of gene regulation by the vitamin D receptor and its activating ligand. *Molecular and Cellular Endocrinology*, *347*(1–2), 3–10. https://doi.org/10.1016/j.mce.2011.05.012

Qamar, F. N., Azmatullah, A., Kazi, A. M., Khan, E., & Zaidi, A. K. M. (2014). A three-year review of antimicrobial resistance of Salmonella enterica serovars

Typhi and Paratyphi A in Pakistan. *Journal of Infection in Developing Countries*, *8*(8), 981–986. https://doi.org/10.3855/jidc.3817

Rasheed, M. K., Hasan, S. S., Babar, Z.-U.-D., & Ahmed, S. I. (2019, Maret). Extensively drug-resistant typhoid fever in Pakistan. *The Lancet. Infectious Diseases*. United States. https://doi.org/10.1016/S1473-3099(19)30051-9

Rathored, J., Sharma, S. K., Singh, B., Banavaliker, J. N., Sreenivas, V., Srivastava, A. K., … Goswami, R. (2012). Risk and outcome of multidrug-resistant tuberculosis: Vitamin D receptor polymorphisms and serum 25(OH)D. *International Journal of Tuberculosis and Lung Disease*, *16*(11), 1522–1528. https://doi.org/10.5588/ijtld.12.0122

Retnosari, S., & Tumbelaka, A. R. (2016). Pendekatan Diagnostik Serologik dan Pelacak Antigen Salmonella typhi. *Sari Pediatri*, *2*(2), 90. https://doi.org/10.14238/sp2.2.2000.90-5

Ryan, J. S. G. J. M. M. S. B. S. D. R. C. C. E. T. (2014). Gallbladder Persistence. *Trends Microbiol*, *22*(11), 648–655. https://doi.org/10.1016/j.tim.2014.06.007.Salmonella

Saporito, L., Colomba, C., & Titone, L. (2016). *Typhoid Fever*. *International Encyclopedia of Public Health* (Second Edi, Vol. 7). Elsevier. https://doi.org/10.1016/B978-0-12-803678-5.00475-6

Sattar, A., Yusuf, M., Islam, M., & Jahan, W. (2014). Journal of current and advance medical research. *Journal of Current and Advance Medical Research*, *1*(2), 35–41. Diambil dari http://www.banglajol.info/index.php/JCAMR/article/view/20517/14177

Sucipta, A. . M. (2015). Baku Emas Pemeriksaan Laboratorium Demam Tifoid Pada Anak. *Jurnal Skala Husada*, *12*(1), 24–25. Diambil dari http://poltekkes-denpasar.ac.id/files/JSH/V12N1/A.A Made Sucipta.pdf

Sutiono, A. B., Qiantori, A., Suwa, H., & Ohta, T. (2010). Characteristics and risk factors for typhoid fever after the tsunami, earthquake and under normal conditions in Indonesia. *BMC Research Notes*, *3*. https://doi.org/10.1186/1756-0500-3-106

Talat, N., Perry, S., Parsonnet, J., Dawood, G., & Hussain, R. (2010). Vitamin D deficiency and tuberculosis progression. *Emerging Infectious Diseases*,

16(5), 853–855. https://doi.org/10.3201/eid1605.091693

Tang, Y.-W. (2014). *Molecular medical microbiology*. Academic press.

Varahram, M., Farnia, P., Anoosheh, S., Kazampour, M., Merza, M., Saeif, S., … Velayati, A. A. (2009). The VDR and TNF-α gene polymorphisms in Iranian tuberculosis patients: The study on host susceptibility. *Iranian Journal of Clinical Infectious Diseases*, *4*(4), 207–213.

Visweswaran, Rk., & Lekha, H. (2013). Extraskeletal effects and manifestations of Vitamin D deficiency. *Indian Journal of Endocrinology and Metabolism*, *17*(4), 602. https://doi.org/10.4103/2230-8210.113750

Wain, J., & Hosoglu, S. (2008). Review Article The laboratory diagnosis of enteric fever. *J. Infect Developing Countries*, *2*(6), 421–425.

Wang, Y., Zhu, J., & DeLuca, H. F. (2012). Where is the vitamin D receptor? *Archives of Biochemistry and Biophysics*, *523*(1), 123–133. https://doi.org/10.1016/j.abb.2012.04.001

Wardhani, P., Prihatini, P., & M.Y, P. (2018). Kemampuan Uji Tabung Widal Menggunakan Antigen Import Dan Antigen Lokal. *Indonesian Journal of Clinical Pathology and Medical Laboratory*, *12*(1), 31. https://doi.org/10.24293/ijcpml.v12i1.838

Widodo, D. (2009). Demam tifoid. *Buku Ajar Ilmu Penyakit Dalam Edisi Ke-5*, 2797–2806.

Wu, F., Zhang, W., Zhang, L., Wu, J., Li, C., Meng, X., … Zhang, J. (2013). NRAMP1, VDR, HLA-DRB1, and HLA-DQB1 gene polymorphisms in susceptibility to tuberculosis among the chinese kazakh population: A case-control study. *BioMed Research International*, *2013*. https://doi.org/10.1155/2013/484535

Zasloff, M. (2006). Fighting infections with vitamin D. *Nature Medicine*, *12*(4), 388–390. https://doi.org/10.1038/nm0406-388

Zhou, L., & Pollard, A. J. (2010). A fast and highly sensitive blood culture PCR method for clinical detection of Salmonella enterica serovar Typhi. *Annals of Clinical Microbiology and Antimicrobials*, *9*, 1–7. https://doi.org/10.1186/1476-0711-9-14

Lampiran 1 : HASIL ANALISA HUMAN VITAMIN D RECEPTOR (VDR) ELISA Kit Catalog No. LS-F27316

Plate 1 (Acute Recurrence)

No.	No Sampel	Konsentrasi (ng/ml)
1.	S01	8,568
2.	S02	8,182
3.	S03	19,930
4.	S04	10,301
5.	S05	18,775
6.	S06	7,605
7.	S07	11,456
8.	S08	7,990
9.	S09	16,656
10.	S10	11,071
11.	S11	17,042
12.	S12	19,353
13.	S13	18,005
14.	S14	9,338
15.	S15	6,642
16.	S16	14,731
17.	S17	12,805
18.	S18	13,382
19.	S19	17,234
20.	S20	19,545
21.	S21	13,768
22.	S22	12,612
23.	S23	16,271
24.	S24	10,108
25.	S25	18,197
26.	S26	9,723
27.	S27	14,538
28.	S28	13,190
29.	S29	14,345
30.	S30	12,034

Plate 2 (Typhoid Fever)

No.	No Sampel	Konsentrasi (ng/ml)
1.	S31	21,086
2.	S32	25,516
3.	S33	29,367
4.	S34	25,323
5.	S35	20,123
6.	S36	24,168
7.	S37	27,249
8.	S38	21,471
9.	S39	23,205
10.	S40	22,627
11.	S41	20,457
12.	S42	27,644
13.	S43	21,039
14.	S44	22,205
15.	S45	26,284
16.	S46	29,392
17.	S47	25,507
18.	S48	26,478
19.	S49	21,622
20.	S50	28,032
21.	S51	29,198
22.	S52	23,565
23.	S53	28,421
24.	S54	20,651
25.	S55	25,313
26.	S56	27,061
27.	S57	23,953
28.	S58	24,730
29.	S59	24,924
30.	S60	29,781

Plate 3 (Healthy Persons)

No.	No Sampel	Konsentrasi (ng/ml)
1.	S61	50,177
2.	S62	44,932
3.	S63	43,767
4.	S64	36,774
5.	S65	42,019
6.	S66	49,206
7.	S67	37,551
8.	S68	37,357
9.	S69	42,407
10.	S70	46,681
11.	S71	38,522
12.	S72	38,328
13.	S73	47,458
14.	S74	47,263
15.	S75	37,745
16.	S76	37,162
17.	S77	45,127
18.	S78	43,184
19.	S79	47,069
20.	S80	42,601
21.	S81	48,623
22.	S82	39,105
23.	S83	46,098
24.	S84	42,213
25.	S85	45,709
26.	S86	45,321
27.	S87	49,012
28.	S88	48,040
29.	S89	48,429
30.	S90	36,968

Lampiran 2 : Hasil Uji Widal

(Acute recurrence)

No.	No Sampel	Widal
1.	S01	2
2.	S02	3
3.	S03	2
4.	S04	3
5.	S05	2
6.	S06	2
7.	S07	2
8.	S08	3
9.	S09	2
10.	S10	2
11.	S11	3
12.	S12	2
13.	S13	2
14.	S14	2
15.	S15	2
16.	S16	3
17.	S17	2
18.	S18	2
19.	S19	2
20.	S20	2
21.	S21	2
22.	S22	2
23.	S23	2
24.	S24	2
25.	S25	2
26.	S26	2
27.	S27	2
28.	S28	2
29.	S29	2
30.	S30	3

Keterangan:

Widal = 1 **Titer = 1/160**

Widal = 2 **Titer = 1/320**

Widal = 3 **Titer = 1/640**

(Typhoid Fever)

No.	No Sampel	Widal
1.	S31	2
2.	S32	2
3.	S33	2
4.	S34	2
5.	S35	2
6.	S36	3
7.	S37	2
8.	S38	2
9.	S39	2
10.	S40	3
11.	S41	3
12.	S42	2
13.	S43	2
14.	S44	2
15.	S45	2
16.	S46	2
17.	S47	2
18.	S48	2
19.	S49	2
20.	S50	2
21.	S51	2
22.	S52	2
23.	S53	2
24.	S54	2
25.	S55	2
26.	S56	2
27.	S57	2
28.	S58	3
29.	S59	2
30.	S60	2

Keterangan:

Widal = 1 **Titer = 1/160**

Widal = 2 **Titer = 1/320**

Widal = 3 **Titer = 1/640**

Lampiran 3:

Rekomendasi Persetujuan Etik

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed.PhD. SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK

Nomor : 834/UN4.6.4.5.31/ PP36/ 2020

Tanggal: 30 Desember 2020

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

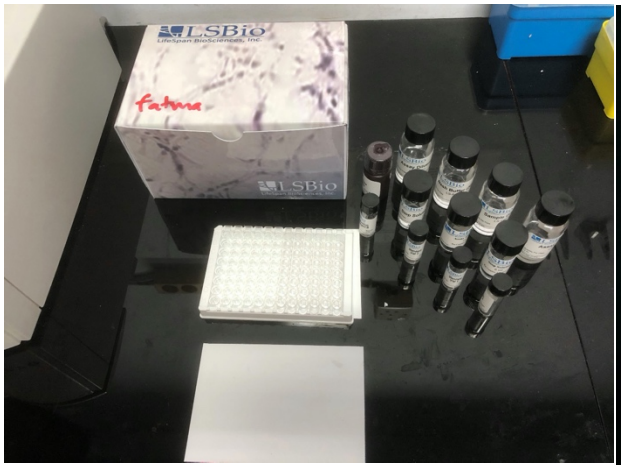
No Protokol	UH20120722	No Sponsor Protokol	
Peneliti Utama	**dr. Fatmawati Annisa Syamsuddin, S.Ked**	Sponsor	
Judul Peneliti	ANALISIS KADAR PROTEIN VITAMIN D RESEPTOR (VDR) PADA PENDERITA DEMAM TIFOID AKUT REKUREN DAN HUBUNGANNYA DENGAN PENDERITA DEMAM TIFOID		
No Versi Protokol	**1**	Tanggal Versi	28 Desember 2020
No Versi PSP		Tanggal Versi	
Tempat Penelitian	**Laboratorium Imunologi dan Biologi Molekuler Fakultas Kedokteran Universitas Hasanuddin Makassar**		
Jenis Review	[x] Exempted [ ] Expedited [ ] Fullboard Tanggal	Masa Berlaku **30 Desember 2020** sampai **30 Desember 2021**	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama **Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)**	Tanda tangan	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	Nama **dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)**	Tanda tangan	

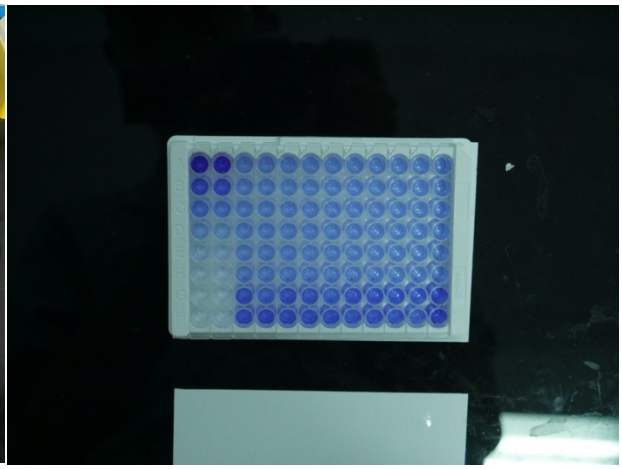
Kewajiban Peneliti Utama:

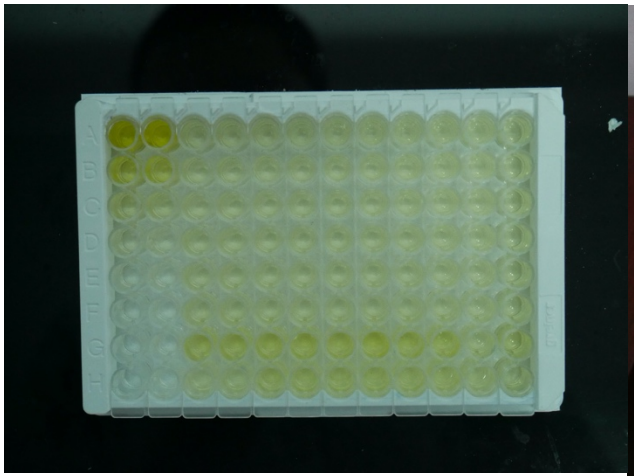
- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 4

Dokumentasi Kegiatan







Lampiran 5 : Analisis statistik

T-Test : VDR DTAR & DT

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
VDR	DTAR	30	13.44657	3.988917	.728273
	DT	30	24.87973	2.988264	.545580

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
VDR	Equal variances assumed	3.152	.081	-12.564	58	.000	-11.433167
	Equal variances not assumed			-12.564	53.754	.000	-11.433167

Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
VDR	Equal variances assumed	.909967	-13.254663	-9.611670
	Equal variances not assumed	.909967	-13.257731	-9.608602

T-Test : DTAR & OS

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
VDR	DTAR	30	13.44657	3.988917	.728273
	OS	30	43.49493	4.402948	.803865

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
VDR	Equal variances assumed	.712	.402	-27.702	58	.000	-30.048367
	Equal variances not assumed			-27.702	57.443	.000	-30.048367

Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
VDR	Equal variances assumed	1.084703	-32.219635	-27.877098
	Equal variances not assumed	1.084703	-32.220083	-27.876650

T-Test : DT & OS

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
VDR	DT	30	24.87973	2.988264	.545580
	OS	30	43.49493	4.402948	.803865

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
VDR	Equal variances assumed	7.359	.009	-19.161	58	.000	-18.615200
	Equal variances not assumed			-19.161	51.040	.000	-18.615200

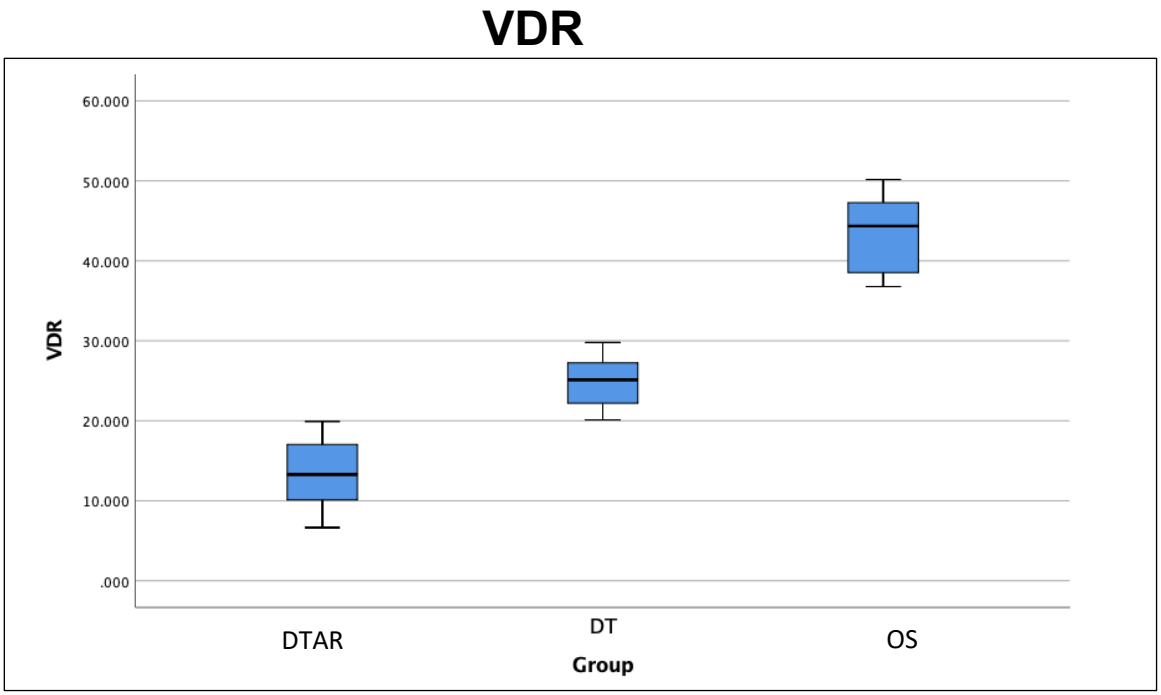
Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
VDR	Equal variances assumed	.971522	-20.559914	-16.670486
	Equal variances not assumed	.971522	-20.565576	-16.664824

Group

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Group	N	Percent	N	Percent	N	Percent
VDR	ADRT	30	100.0%	0	0.0%	30	100.0%
	DT	30	100.0%	0	0.0%	30	100.0%
	HP	30	100.0%	0	0.0%	30	100.0%



Correlations : Titerwidal & VDR

Correlations

		Titerwidal	VDR
Titerwidal	Pearson Correlation	1	-.302**
	Sig. (2-tailed)		.004
	N	90	90
VDR	Pearson Correlation	-.302**	1
	Sig. (2-tailed)	.004	
	N	90	90

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Lampiran 6 : Surat keterangan jurnal

KEMENTRIAN PENDIDIKAN, KEBUDAYAAN,
RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
SEKOLAH PASCASARJANA
Sekretariat lantai 3 Jl. Perintis Kemerdekaan KM. 10 Makassar, 90245

SURAT KETERANGAN JURNAL

Yang bertanda tangan di bawah ini menerangkan bahwa:

Nama	: Fatmawati Annisa Syamsuddin
NIM	: P062191024
Program Studi	: Biomedik
Judul Jurnal	: The Analysis of Vitamin D Receptor Protein in Salmonella Typhi Infection in Acute Recurrent Cases in the Endemic Area, Indonesia

Naskah tersebut telah diterima/*accept* pada **Jurnal Biomedika (Universitas Setia Budi Surakarta) (ISSN: 2302-1306)** dan akan di terbitkan pada **Vol 14 No 2 2021** yang terindex **Sinta 3** dan mempunyai **Impact factor** 0.63

Makassar, 03 August 2021
a.n Dekan,
Wakil Dekan Bidang Akademik
dan Publikasi Ilmiah

Prof. Dr. Ing. Herman Parung, M.Eng
NIP. 196207291987031001

Setelah ditandatangani, Silahkan digandakan/*Fotocopy*

Lampiran 7 : Surat bebas plagiasi

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
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UNIVERSITAS HASANUDDIN
SEKOLAH PASCASARJANA
JL. PERINTIS KEMERDEKAAN KM. 10 MAKASSAR 90245 TELP.:(0411) 585034,585036 FAX. : (0411) 585858
E-mail :info@pasca.unhas.ac.id Website :http://pasca.unhas.ac.id

SURAT KETERANGAN BEBAS PLAGIASI

Yang bertandatangan di bawah ini, menerangkan bahwa :

Nama	:	Fatmawati Annisa Syamsuddin
NIM	:	P062191024
Program Pendidikan	:	Magister
Program Studi	:	Ilmu Biomedik
Judul Tesis/Disertasi	:	Analisis Kadar Protein Vitamin D Reseptor (Vdr) Pada Penderita Demam Tifoid Akut Rekuren Dan Hubungannya Dengan Penderita Demam Tifoid

benar naskah Tesis/Disertasi yang bersangkutan telah melalui proses deteksi plagiasi menggunakan aplikasi Turnitin (maksimal 30%) dengan persentase tingkat kemiripan naskah tersebut sebesar 28 %

Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.

Makassar, 29 Juli 2021

Menyetujui
Ketua Program Studi S2
Ilmu Biomedik

Dr.dr. Ika Yustisia, M.Sc

Pemeriksa,

Arman Jaya, S.Kom.

Mengetahui,
Wakil Dekan Bidang Akademik, Riset dan Publikasi Ilmiah

Prof. Dr. Ir. Herman Parung, M.Eng.
NIP. 196207291987031001