

## KEPUSTAKAAN

American Thoracic Society and Centers for Disease Control and Prevention. 2006. Diagnosis Standards and classifications of tuberculosis in adults and children. Am J Respir Crit Care Med. 161: 1376-1395.

Amin, Z., Bahar, A. 2014. Tuberkulosis Paru. In: Setiati S, Alwi I, Sudoyo AW, et al, editors. Buku Ajar Ilmu Penyakit Dalam jilid 1. 6<sup>th</sup> ed., Interna Publishing; Jakarta.

Anderson, U., Tracey, K. J. 2011. HMGB1 is a therapeutic target for sterile inflammation and infection. Annu Rev Immunol. 29(1(2)): 31-4. doi: 10.1146/annurev-immunol-030409-101323.

Asavarut, P., Zhao, H., Gu, J., Ma, D. 2013. The role of HMGB1 in Inflammation-mediated organ injury. Acta Pharmaceutica Sinica B. Taiwan. 6(3): 183-188. doi: 10.1016/j.aat.2013.03.007

Awasthi, A., Kuchroo, V. K. 2009. The yin and yang of follicular helper T cells. Science. 325: 953–955. DOI: 10.1126/science.1178752

Babu, S., Anuradha, R., Kumar, N.P., George, P.J., Kumaraswami, V., Nutman, T.B. 2011. Filarial lymphatic pathology reflects augmented toll-like receptor-mediated, mitogen-activated protein kinase-mediated proinflammatory cytokine production. Infect Immun. 79(11): 4600 – 8. doi: [10.1128/IAI.05419-11]

Bagian Pulmonologi Fakultas Kedokteran Universitas Indonesia. 2001. Prosedur dan tindakan bidang paru dan pernapasan: Diagnostik dan Terapi. Balai Penerbit FKUI Jakarta. hal 103-4,113-5.

Boom, R., Sol, C. J., Salimans, M. M., Jansen, C. L., Wertheim-van Dillen, P. M., van der Noordaa, J. 1990. Rapid and Simple Method for Purification of Nucleic Acids. J Clin Microbiol. 28(3) : 495-503.

Bothamley, G.H. 1995. Serological diagnosis of tuberculosis. ERS. Journals. Ltd. Suppl. 20: 676s-688s.

Carpenter, S., O'Neill, L.A. 2007. How important are Toll-like receptors for antimicrobial responses?. Cell Microbiol. 9(8):1891–901.



For Disease Control and Prevention. 2010. Update Guidelines for using Interferon Gamma Release Assays to detect Mycobacterium tuberculosis infection. United States. 59: (RR-5).

Center for Disease Control. 2009. The Difference Between Latent TB Infection and TB Disease. Available at: [www.cdc.gov/tb](http://www.cdc.gov/tb).

Center for Disease Control and Prevention. 2013. Latent Tuberculosis Infection: A Guide for Primary Health Care Providers.

Chen, Q., Guan, X., Zuo, X., Wang, J., Yin, W. 2016. The Role of High Mobility Group Box 1 (HMGB1) in Pathogenesis of Kidney Diseases. *Acta Pharmaceutica Sinica B.China.* 6(3): 183–188.

Cliff J. M., Kaufmann S. H., McShane H., van Helden P., O'Garra A. 2015. The Human immune response to tuberculosis and its treatment: a view from the blood. *Immunological Reviews.* The Medical Research. 264: 88-102.

Danusantoso, H. 2014. Tuberkulosis Paru. In: Suyono JY, editor. Buku Saku Ilmu Penyakit Paru. 2<sup>nd</sup> ed. EGC;Jakarta.

Dahlan, M. S. 2016. Besar Sampel Dalam Penelitian Kedokteran dan Kesehatan.Jakarta. hal 69-74.

de Martino, M., Galli, L., Chiappini, E. 2014. Reflections on the immunology of Tuberculosis: will we ever unravel the skein?. *BMC Infection Disease.* 14(Suppl 1): 1-6.

de Witt, E. 2009. Analysis of Host Determining Factors in Susceptibility to Tuberculosis in The South African coloured Population. Dissertation. Presented for the degree of Doctor of Philosophy in Medical Biochemistry. Stellenbosch University. Nedherland. 8-10.

Dheda, K., Booth, H., Huggett, J. F., Johnson, M. A., Zumia, A., Rook, G, A. 2005. Lung Remodeling in Pulmonary Tuberculosis. *J Infect Dis.* 192: 1201-1210. <https://doi.org/10.1086/444545>

Dheda, K., Schwander, S. K., Zhu, B., Van Zyl-smith, R., Zhang, Y. 2010. The Immunology of Tuberculosis: from bench to bedside. *Respirology.* 15: 433-50.

Dheda, K., Smit, R.Z., Badri, M., Pai, M. 2009. T-cell interferon-gamma release assays for the rapid immunodiagnosis of tuberculosis: Clinical utility in high-burden vs. low-burden settings. *Curr. Opin. Pulm. Med.* 15(3): 188–200. DOI: 10.1097/MCP.0b013e32832a0adc



Cui, X., Liu, Q. 2017. Emerging role of HMGB1 in Lung disease: friend or foe. *Journal of cellular and molecular medicine.* 21(6): 1046-1057. doi: 10.1111/jcmm.13048.

- Druszcynska, M., Kowalewicz-Kulbat, M., Fol, M., Włodarczyk, M., Rudnicka, W. 2012. Latent *M.tuberculosis* infection - Pathogenesis, Diagnosis, Treatment and Prevention Strategies. Polish Journal of Microbiology. Poland. 61(1): 3-10.
- Ferguson, J.S., Weiss, J.J., Martin, J.I. 2004. Complement protein C3 binding to Mycobacterium tuberculosis is initiated by the classical pathway in human bronchoalveolar lavage fluid. Infect Immun. 72: 2564-2573.
- Feruglio, S. L., Troseid, M., Damas, J.K., Kvale, D., Dyrhol-Riise, A.M. 2013. Soluble marker of the Toll-like Receptor 4 Pathway differentiate between Active and Latent Tuberculosis and Are Associated with Treatment Responses. Plos One. 13; 8(7): 1-8.
- Fogel, N. 2015. Tuberculosis: a disease without boundaries. Tuberculosis. 95(5): 527-31.
- Frieden, T.R., Sterling, T.R., Munsiff, Watt, C.J., Dye, C. 2003. Tuberculosis. Lancet. 362: 887-899.
- Gabay, C. 2006. Interleukin-6 and chronic inflammation. Arthritis Research & Therapy. 8(Suppl 2): S3. <https://doi.org/10.1186/ar1917>
- Getahun, H., Matteelli, A., Chaisson, R.E., Raviglione, M. 2015. Latent Mycobacterium tuberculosis Infection. N Eng J Med. 372: 2127-35. DOI: 10.1056/NEJMra1405427
- Goletti, D., Lee, M.R., Wang, J.Y., Walter, N., Ottenhoff, T. H. M. 2018. Update on Tuberculosis biomarker: From correlate of risk, to correlate of active disease and of cure from disease. ASPR. 23: 455-66. Doi: 10.1111/resp.13272.
- Goodwin, G.H., Rabbani, A., Nicolas, P.H., Johns, E.W. 1997. The isolation of the high mobility group non-histone chromosomal protein HMG 14. FEBS Lett. 80: 413-6.
- Goyot-Revol, V., Innes, J., Hackforth. S. 2006. Regulatory T cells are expanded in blood and disease sites in patients with tuberculosis. Am J Resp Crit Care Med. 173: 803-810.
- Grover, A., Taylor, J., Troudt, J., Keyser, A., Sommersted, K., Schenkel, A., et al. 2008. Mycobacterial infection induces the secretion of high mobility group box 1 protein. Cellular Microbiology. Blackwell Publishing Ltd. USA. 10; 6: 1390-1404.



- Hatta, M., Smits, H. L. 2007. Detection of *Salmonella typhi* by nested Polymerase Chain Reaction in blood, urine and stool samples. American J. Tropical Medicine Hygiene. 76: 139- 43.
- Hernandez-Pando, R., Barrios-Payan, J., Mata-Espinosa, D., Marquina-Castillo, B., Hernandez-Ramirez, D., Botasso, O. A., et al. 2015. The Role of High Mobility Group Box 1 Protein in the Immunopathology Experimental Pulmonary Tuberculosis. Plos ONE. 10(7): 1-14. DOI 10.1371/journal.pone.0133200
- Human High Mobility Group Box 1 (HMGB-1). 2017. Elisa Kit. LSBio. Leaflet. 1-12.
- Houben, E. N., Nguyen, L., Pieters, J. 2009. Interaction of pathogenic mycobacteria with the host immune system. Curr Opin Microbiol. 9: 76-85. DOI: 10.1016/j.mib.2005.12.014
- Jensen, P.A., Lambert, L.A., Iadermarco, M.F., Rene, R. 2005. Center for disease Control and Prevention. Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care settings. MMWR Recomm Rep. 54(RR-17): 1-141.
- Kagan, J.C., Medzhitov, R. 2006. Phosphoinositide-mediated adaptor recruitment controls Toll-like receptor signaling. Cell. 125(5): 943–55.
- Kahwati, L. C., Feltner, C., Halpern, M., Woodell, C. L., Boland, E., Amick H. R., et al. 2016. Primary Care Screening and Treatment for Latent Tuberculosis Infection in Adults: Evidence Report and Systemic Review for the US Preventive Services Task Force. JAMA. 316(7): 971-5.
- Kang, R., Chen, R., Zhang, Q., Hou, W., Wu, S., Cao, L., et al. 2014. HMGB1 in health and disease. *Molecular aspects of medicine*. 40: 1-116. DOI: 10.1016/j.mam.2014.05.001
- Kardjito, T.V.M. 1997. Host defense against tuberculosis. Naskah Lengkap Seminar Nasional Tuberkulosis dan Lepra. Pusat Kedokteran Tropis Universitas Gadjah Mada. Yogyakarta.
- Kementerian Kesehatan Republik Indonesia. 2011. Pedoman Nasional Pengendalian Tuberkulosis. Dirjen Pengendalian Penyakit dan Penyehatan Lingkungan. Jakarta. hal 1- 20.



Kementerian Kesehatan Republik Indonesia. 2014. Petunjuk Teknis Pengendalian terpadu Tuberkulosis Resistan Obat. Dirjen Pengendalian Penyakit dan Penyehatan Lingkungan. Jakarta. hal 67-100.

Kementerian Kesehatan Republik Indonesia. 2015. Profil Kesehatan Indonesia. Jakarta. hal 161-2.

Kementerian Kesehatan Republik Indonesia. 2018. Pusat Data dan Informasi Kementerian Kesehatan RI. Jakarta. hal 1-6

Keyel , P. A. 2014. How is inflammation initiated? Individual influences of IL-1, IL-18 and HMGB1. *Cytokine*. 69(1): 136-145. doi: 10.1016/j.cyto.2014.03.007

Kim, S. Y., Koh, W.J., Park, H.Y., Jeon, K., Lee, S.Y., Yim, J.J., et al. 2017. Down-regulation of serum high-mobility group Box 1 protein in patients with pulmonary tuberculosis and nontuberculous mycobacterial lung disease. *Tuberculosis and respiratory diseases*, Seoul. 80(2): 153-158.

Kimura, A., Kishimoto, T. 2010. IL-6: Regulator of Treg/Th17 balance. *European Journal of Immunology*. 40: 1830–1835. doi: 10.1002/eji.201040391

Kishimoto, T., Toshio, T. 2015. Interleukin 6. *Encyclopedia of Inflammatory Diseases*. 1-8.

Koch, A., Mizrahi V. 2018. Mycobacterium Tuberculosis. *Microbe of the Month*. 26(6): 555-6. DOI: <https://doi.org/10.1016/j.tim.2018.02.012>

Laudet, V., Stehelin, D., Clevers, H. 1993. Ancestry and diversity of the HMG box superfamily. *Nucleic Acids Res* 21: 2493-501.

Lawn, S.D., Nicol, M. P. 2011. Xpert® MTB/RIF assay: development, evaluation and implementation of a new rapid molecular diagnostic for tuberculosis and rifampicin resistance. *Future Microbiol*. 6(9):1067–82.

Lee, S. A., Kwak, M. S., Kim, S., Shin, J. S. 2014. The Role of High Mobility Group Box 1 in innate Immunity. *Yonsei Med J.*, Seoul. 55(5): 1165 - 1176. doi: 10.3349/ymj.2014.55.5.1165



., Ford, C. B., Coleman, M. T., Myers, A. J., Gawenda, R., Ioerger, ., et al. 2014. Sterilization of granulomas is common in both active and latent tuberculosis despite extensive within-host variability in bacterial killing. *Nat Med.*, USA. 20(1): 1-19.

- Liu, Y., Yin, H., Zhao, M., Lu, Q. 2014. TLR2 and TLR4 in Autoimmune Diseases: a Comprehensive Review. *Clinical Reviews in Allergy & Immunology.* 47(2): 136-47. doi: 10.1007/s12016-013-8402-y.
- Liu, Q. Y., Han, F., Pan, L. P., Jia, H. Y., Li, Q., Zhang, Z. D. 2018. Inflammation responses in patients with pulmonary tuberculosis in an intensive care unit. *Experimental and therapeutic medicine.* 15(3): 2719-2726. doi: 10.3892/etm.2018.5775.
- Lui, G., Wong, C. K., Ip, M., Chu, Y. J., Yung, I. M., Cheung, C. S., et al. 2016. HMGB1/RAGE Signaling and Pro-Inflammatory Cytokine Responses in Non-HIV Adults with Active Pulmonary Tuberculosis. *PloS one.* 11(7): e0159132. doi: 10.1371/journal.pone
- Madiyono B. Sastroasmoro S, Budiman I. 2014. Perkiraan besar sampel .Dalam: Sastroasmoro S dan Ismael S(penyunting). Dasar-dasar metodologi penelitian klinis.Jakarta: CV Sagung Seto: 352-386.
- Magna M., Pisetsky D. S. 2014. The Role of HMGB1 in the pathogenesis of inflammatory and Autoimmune Diseases. *Mol Med. The Feinstein institute for Medical Research.* 20: 138-46.
- Magrys, A., Paluch-Oles, J., Koziol-Montewka, M., Zaborowski, T., Milanowski, J., Maciejewska, B. 2013. Evaluation of High Mobility Group Box 1 Protein Concentration in Serum of Patient with M.tuberculosis Infection. *Journal of Molecular and Cellular Immunology.* 42: Issue 1.
- Nicod, L. P. 2007. Immunology of Tuberculosis. *Swiss Med Wkly.* Swiss. 137: 357-62.
- Oeckinghaus, A., Hayden, M. S., Ghosh, S. 2011. Crosstalk in NF- $\kappa$ B signaling pathways. *Nat Immunol.* 12 (8): 695–708.
- Orme, I.M., Mc Murray, D.N., Beliste, J. T. 2001. Tuberculosis vaccine development: recent progress. *Trends Microbiol.* 9: 115-8.
- Park J. S., Svetkauskaite D., He Q., Kim JY., Strassheim D., Ishizaka A., et al. 2004. Involvement of Toll like Receptors 2 and 4 in cellular activation by High mobility Group Box 1 Protein. *J. Biol. Chem. The American Societyfor Biochemistry andMolecular Biology.* 279(9): 7370-76. DOI: 10.1074/jbc.M306793200.



S., Gamboni-Robertson F., He Q., Svetkauskaite D., He Q., Kim JY., et al. 2006. High mobility group box 1 protein interacts with multiple toll-like receptors. *Am J Physiol. The American Physiological Society.* 290: C917-23. DOI: 10.1152/ajpcell.00401.2005.

Perhimpunan Dokter Paru Indonesia. 2011. Pedoman Diagnosis dan Penatalaksanaan Tuberkulosis di Indonesia. Jakarta. PDPI: 1-55.

Perhimpunan Dokter Paru Indonesia. 2016. Pedoman Tatalaksana Infeksi TB laten. Jakarta. PDPI: 1-28.

Portou, M. J., Baker, D., Abraham, D., Tsui, J. 2015. The Innate Immune system, toll like receptors and dermal wound healing: A review. Vascular Pharmacology. Elsevier. 71: 31-6.

Russel, D.G. 2007. Who puts the tubercle in tuberculosis. Nat Rev Microbial. 5: 39-49. DOI: 10.1038/nrmicro1538

Sharma SK., Mohanan S., Sharma A. 2012. Relevance of Latent TB Infection in Area High TB Prevalence. Chest. 142(3): 761-73.

Shaler, C. R., Horvath, C. N., Jeyanathan, M., Xing, Z. 2013. Within the Enemy's Camp: contribution of granuloma to the dissemination, persistence and transmission Mycobacterium tuberculosis. Frontiers in Immunology. 4(30): 2-6.

Sirait, N., Parwati, I., Dewi, N. S., Suraya, N. 2013. Validitas Metode Polymerase Chain Reaction GeneXpert MTB/RIF pada bahan pemeriksaan sputum untuk mendiagnosis Multidrug Resistant Tuberculosis. Bandung: MKB; 45(4): 234-240.

Subowo. 2014. Respon imun dan interaksi sel-sel imunokompeten. Dalam : Imunobiologi Edisi 3. Sagung Seto. Jakarta: 115-361.

Suhail A. Pathogenesis, Immunology and diagnosis of latent mycobacterium tuberculosis Infection. 2011. Clinical developmental Immunology. India. 2011: 1-11. doi:10.1155/2011/814943

Suharti, N. 2010. Imunologi tuberkulosis dan aplikasi diagnostiknya. Majalah Kedokteran Andalas. Padang; 27 (2): 42-47.

Suprabhat, M., Karmakar, S., Sinha Babu, S. P. 2016. TLR2 and TLR4 mediated host immune responses in major infectious diseases: a review. Braz J Infect Dis. 20(2): 193-204.

Tang, D., Kang, R., Livesey, K. M., Cheh, C.W., Farkas, A., Loughran, P., et al. 2010. Endogenous HMGB1 regulates autophagy. J Cell Biol. 190: 881-92.

T., Narazaki, M., Ogata, A., Kishimoto T. A. 2014. New era for the treatment of inflammatory autoimmune diseases by interleukin-6 blockade strategy. Seminars in Immunology. 26: 88–96.



- Van Crevel, R., Ottenhoff, T. H. M., Van der Meer, J. W. M. 2002. Innate Immunity to *Mycobacterium tuberculosis*. *Clin Microbiol Rev.* 5: 294-309.
- Wang H, Bloom O, Zhang M, Vishnubhakat JM, Ombrellino M, Che J, et al. 1999. HMG-1 as a late mediator of endotoxin lethality in mice. *Science.* 285: 248-251
- Wikanningtyas, T. A., Hatta, M., Massi, M. N., Pratiwi, I., Fachri, M., Santoso, S. S., et al. 2018. Diagnosis Spectrum of Pulmonary Tuberculosis at Islam Hospital Sukapura, Jakarta, Indonesia: A Retrospective study of 317 Cases. *J. Med. Sci.* 18(3): 143-148.
- World Health Organization (WHO). 2011. Rapid implementation of the Xpert MTB/RIF diagnostic test. Geneva.
- World Health Organization (WHO). 2011. Use of tuberculosis interferon gamma release assay (IGRAs) in Lowand middle income countries. Policy Statement 2011.Geneva.
- World Health Organization (WHO). 2015. *Global Tuberculosis Report 2015.* Geneva.
- World Health Organization (WHO). 2018. *Global Tuberculosis Report 2018.* Geneva.
- World Health Organitation (WHO). 2015. Guideline on Management of Latent Tuberculosis Infection. Geneva.
- World Health Organitation(WHO). 2015. Global strategy and targets for tuberculosis prevention, care and control. Geneva.
- Word Health Organization (WHO). 2011. Use of tuberculosis interferon gamma release assay (IGRAs) in Lowand middle income countries. Policy Statement 2011.Geneva.
- Wu, C., Sun, H., Wang, H., Chi, J., Liu, Q., Guo, H., et al. 2012. Evaluation of high mobility group box 1 protein as a presurgical diagnostic marker reflecting the severity of acute appendicitis. *Journal of Trauma, Resuscitation and Emergency Medicine.* 20(61): 1-6.
- Yajima T., Yagihashi A., Kameshima, H., Kobayashi, D., Furuya, D., Hirata, K., et al. 1998. Quantitative reverse transcription-PCR assay of the RNA component of human telomerase using the TaqMan fluorogenic detection system. *Clinical Chemistry.* 44(12): 2441–2445.
- .., Tracey, K. J. 2010. Targeting HMGB1 in inflammation. *Biochim Biophys Acta.* 1799(1): 149-156.



Yanai, H., Ban, T., Taniguchi, T. 2011. Essential role of high-mobility group box proteins in nucleic acid-mediated innate immune responses. Journal of Internal Medicine. 270: 301- 8. DOI: 10. 1111/j.1365-2796.2011.02433.x

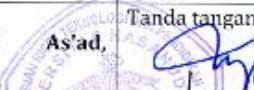
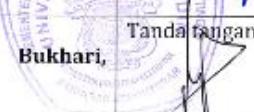
Yu, Y., Tang, D., Kang, R. 2015, Oxidative stress-mediated HMGB1 biology., Frontiers in Physiology. Florida.6(93): 1-6.

Zeng, J.C., Xiang, W.Y., Lin, D.Z., Zhang, J. A., Liu, G. B., Kong, B., et al., 2015. Elevated HMGB1-related interleukin-6 is associated with dynamic responses of monocytes in patients with active pulmonary tuberculosis. Int J Clin Exp Pathol. 8(2): 1341-53.



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## Lampiran 1. Persetujuan Etik

<b>KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI          UNIVERSITAS HASANUDDIN          FAKULTAS KEDOKTERAN          RSPTN UNIVERSITAS HASANUDDIN          RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR          KOMITE ETIK PENELITIAN KESEHATAN</b>			
  <p>Sekretariat : Lantai 3 Gedung Laboratorium Terpadu          JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.          Contact Person: dr. Agussalim Bulhari, M.Med,Ph.D,Sp.GK TELP. 081241850658, 0411.5780103, Fax 0411-561431</p>			
<b><u>REKOMENDASI PERSETUJUAN ETIK</u></b>			
Nomor : 1007 / H4.B.4.5.31 / PP36-KOMETIK / 2017			
Tanggal: 27 November 2017			
Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :			
No Protokol	UH17010820	No Protokol	Sponsor
Peneliti Utama	<b>dr.Tri Ariguntar W,Sp.PK</b>	Sponsor	Pribadi
Judul Peneliti	Imunopatogenesis Tuberkulosis Paru : Analisis Peran Ekspresi mRNA Gen High- Mobility Group Box 1 (HMGB-1), Soluble Protein HMGB 1,Toll Like Receptor 4 (TLR 4) dan Interleukin 6 (IL 6)		
No Versi Protokol	2	Tanggal Versi	<b>17 November 2017</b>
No Versi PSP	2	Tanggal Versi	<b>17 November 2017</b>
Tempat Penelitian	<b>RSI Cempaka Putih, RSI Sukapura dan RSI Pondok Kopi Jakarta</b>		
Dokumen Lain			
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku <b>27 November 2017</b> sampai <b>27 November 2018</b>	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama <b>Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)</b>	Tanda tangan 	Tanggal
Sekretaris Komisi Etik Penelitian	Nama <b>dr. Agussalim Bukhari, M.Med.,Ph.D,Sp.GK (K)</b>	Tanda tangan 	Tanggal
Kewajiban Peneliti Utama: <ul style="list-style-type: none"> <li>• Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan</li> <li>• 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</li> <li>• Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah</li> <li>• Menyerahkan laporan akhir setelah Penelitian berakhir</li> <li>• Melaporkan penyimpangan dari protokol yang disetujui (protocol deviation / violation)</li> <li>• Mematuhi semua peraturan yang ditentukan</li> </ul>			



No	Kode	Sex	Umur (thn)	Pddk	Pekerjaan	BB (Kg)	TB (M)	IMT	Diagnosa	Tes HIV	GD (mg/dL)	BTA	GenXpert	Radiologi (Foto Thoraks)	Kadar HMGB1 serum (pg/mL)	Kadar IL 6 serum (pg/mL)	Kadar TLR 4 (ng/mL)	Eksprese gen mRNA HMGB1 (kopi/uL)	Lama Kontak (tahun)
1	(RA)	P	38	SLTA	Wiraswasta	53	1,53	22,64	TB aktif	Negatif	102	1+/1+/1+		TB aktif	1332	24,758	9,562	10,948 ± 0,211	
2	(AW)	L	24	S1	Karyawan Swasta	35	1,63	13,17	TB aktif	Negatif	98	(-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB Paru Dupleks	1187	23,213	10,992	11,884 ± 0,080	
3	(MAR)	L	55	SLTP	Wiraswasta	65	1,77	20,75	TB aktif	Negatif	105	2+/2+/2+		TB Paru Dupleks	1151	26,132	10,206	11,172 ± 0,098	
4	(MUB)	L	24	SLTA	Karyawan Swasta	68	1,65	24,98	TB aktif	Negatif	99	(-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB Paru Dextra	1245	23,9	11,207	12,586 ± 0,550	
5	(RY)	L	34	SD	Karyawan Swasta	48	1,76	15,50	TB aktif	Negatif	113	1+/1+/1+		TB Paru Dupleks	1183	22,698	9,848	10,662 ± 0,240	
6	(KH)	P	50	Tidak Sekolah	IRT	62	1,52	26,84	TB aktif	Negatif	90	(-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB aktif	1393	22,354	10,492	11,731 ± 0,114	
7	(ATH)	L	19	SLTA	Mahasiswa	38	1,6	14,84	TB aktif	Negatif	110	1+/1+/1+		TB Paru Dupleks	1361	24,415	11,135	11,480 ± 0,049	



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8	(MY)	L	58	SLTA	Buruh	60	1,65	22,04	TB aktif	Negatif	108	1+/1+/ 1+		TB Paru Dextra	1350	25,789	11,493	13,047 ± 0,116	
9	(YD)	L	28	SLTA	Karyawan n Swasta	62	1,65	22,77	TB aktif	Negatif	104	(-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB aktif	1131	24,587	9,49	11,865 ± 0,191	
10	(MHN)	L	55	SLTP	Wiraswa sta	58	1,7	20,07	TB aktif	Negatif	120	2+/2+/ 2+		TB Paru Dupleks	1307	25,96	10,063	12,754 ± 0,197	
11	(AK)	L	18	SLTA	Pelajar	38	12,00	16,89	TB aktif	Negatif	100	3+/3+/ 3+		TB aktif	1248	25,102	11,421	10,275 ± 0,105	
12	(ISH)	P	29	S2	Dosen	49	1,63	18,44	TB aktif	Negatif	96	(-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB aktif	1106	22,183	9,347	10,317 ± 0,226	
13	(BS)	L	43	D3	Pegawai Swasta	68	1,75	22,20	TB aktif	Negatif	117	1+/1+/ 1+		TB aktif	1154	22,869	10,849	12,039 ± 0,239	
14	(MA)	L	22	SLTA	Mahasis wa	52	1,7	17,99	TB aktif	Negatif	98	(-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB Paru Dextra	1070	26,476	10,349	10,945 ± 0,211	
			SLTA	Pengamen	36	1,7	12,46	TB aktif	Negatif	110	3+/3+/ 3+		TB Paru milier bilateral	1162	22,526	9,705	12,922 ± 0,136		
			SLTA	Satpol PP	72	1,73	24,06	TB aktif	Negatif	103	2+/2+/ 2+		TB aktif	1135	26,304	11,35	11,176 ± 0,098		

17	(RK)	P	33	SLTA	IRT	43	1,58	17,22	TB aktif	Negatif	90	(-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB aktif	1329	25,617	10,778	$10,583 \pm 0,055$	
18	(CH)	L	37	SLTA	Wiraswasta	58	1,7	20,07	TB aktif	Negatif	102	2+/2+/2+	Gen Expert MTB detected medium, Rif resistance not detected	TB Paru Sinistra	1087	24,93	9,419	$11,655 \pm 0,240$	
19	(SDL)	L	25	SLTA	Karyawan Swasta	50	1,66	18,14	TB aktif	Negatif	95	(+8/+8 /+8)	Gen Expert MTB detected low, Rif resistance not detected	TB Paru Dextra	1345	23,556	9,92	$10,899 \pm 0,223$	
20	(MJ)	L	50	SD	Pedagang	48	1,62	18,29	TB aktif	Negatif	100	(-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB Paru Dupleks	1232	25,274	10,563	$11,473 \pm 0,049$	
21	(INW)	L	54	SLTP	Wiraswasta	65	1,7	22,49	TB aktif	Negatif	94	2+/2+/2+		TB Paru Sinistra	1167	23,385	10,921	$11,036 \pm 0,116$	
22	(FZ)	P	21	SLTA	Karyawan swasta	45	1,65	16,53	TB aktif	Negatif	110	(-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB Paru Dextra	1442	25,445	10,277	$11,857 \pm 0,191$	



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23	(ASP)	L	22	SLTA	Swasta	45	1,63	16,94	TB aktif	Negatif	88	(/-/-)	Gen Expert MTB detected low, Rif resistance not detected	TB Paru Dupleks	1280	24,072	10,635	12,748 ± 0,197	
24	(JPY)	L	56	SLTA	Wiraswasta	40	1,6	15,63	TB aktif	Negatif	114	(/-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB Paru Dupleks	1296	23,728	11,278	10,269 ± 0,105	
25	MSH	L	57	SMP	Buruh	55	1,65	20,20	TB aktif	Negatif	116	(3+/2+ /2+)		TB Paru Dupleks	1103	23,041	9,633	10,309 ± 0,226	
26	(SHT)	L	46	SLTA	Peg Swasta	65	1,68	23,03	TB aktif	Negatif	110	(/-/-)	Gen Expert MTB detected very low, Rif resistance not detected	TB aktif + Efusi Pleura	1312	24,243	10,134	12,035 ± 0,239	
27	(HLS)	P	50	D3	Perawat	78	1,55	32,47	TB Laten	Negatif	92	tdk diperiksa	IGRA Positif	Normal	76,354	4,604	1,051	9,871 ± 0,147	24
28	(EL)	P	47	D3	Perawat	58	1,55	24,14	TB Laten	Negatif	88	tdk diperiksa	IGRA Positif	Normal	239,171	2,737	1,772	7,926 ± 0,136	27
29	(MS)	I	46	SLTA	Admin Laboratorium	73	1,64	27,14	TB Laten	Negatif	100	tdk diperiksa	IGRA Positif	Normal	150,362	1,55	0,257	8,173 ± 0,098	23
				D3	Perawat	65	1,58	26,04	TB Laten	Negatif	112	tdk diperiksa	IGRA Positif	Normal	194,766	3,925	0,69	8,593 ± 0,055	15



31	(SR)	P	46	S1	Perawat	75	1,68	26,57	TB Laten	Negatif	87	tdk diperiksa	IGRA Positif	Normal	327,98	5,452	0,835	7,658 ± 0,240		
32	(DM)	P	29	S1	Dokter	55	1,58	22,03	TB Laten	Negatif	90	tdk diperiksa	IGRA Positif	Normal	51,191	3,246	1,556	8,893 ± 0,223	23	
33	(STS)	P	33	D3	Perawat	52	1,63	19,57	TB Laten	Negatif	97	tdk diperiksa	IGRA Positif	Normal	224,369	2,059	0,474	6,483 ± 0,049	4	
34	(AW)	L	25	D3	Perawat	80	1,72	27,04	TB Laten	Negatif	102	tdk diperiksa	IGRA Positif	Normal	283,575	5,113	1,267	9,042 ± 0,116	11	
35	(LT)	P	53	D3	Perawat	70	1,57	28,40	TB Laten	Negatif	100	tdk diperiksa	IGRA Positif	Normal	108,917	2,398	0,041	8,862 ± 0,191	30	
36	(SY)	P	55	D3	Perawat	80	1,56	32,87	TB Laten	Negatif	95	tdk diperiksa	IGRA Positif	Normal	372,385	1,21	0,185	7,753 ± 0,197	30	
37	(FC)	L	33	S2	Dokter	98	1,65	36,00	TB Laten	Negatif	86	tdk diperiksa	IGRA Positif	Normal	298,377	5,622	1,7	9,285 ± 0,105	4	
38	(LL)	P	29	D3	Perawat	60	1,56	24,65	TB Laten	Negatif	89	tdk diperiksa	IGRA Positif	Normal	342,782	4,264	0,546	9,111 ± 0,150	3	
39	(FJ)	P	22	D3	Perawat	42	1,52	18,18	TB Laten	Negatif	92	tdk diperiksa	IGRA Positif	Normal	17,148	1,719	1,195	8,039 ± 0,239	1	
40	(KF)	I	23	D3	Perawat	46	1,65	16,90	TB Laten	Negatif	115	tdk diperiksa	IGRA Positif	Normal	209,568	4,434	0,113	8,943 ± 0,211	2	
				D3	Perawat	70	1,6	27,34	TB Laten	Negatif	86	tdk diperiksa	IGRA Positif	Normal	120,759	3,077	1,412	7,925 ± 0,136	5	



42	(WA)	P	27	D3	Perawat	52	1,55	21,64	TB Laten	Negatif	98	tdk diperiksa	IGRA Positif	Normal	165,163	4,095	1,845	8,173 ± 0,098	
43	(SRS)	P	33	D3	Perawat	67	1,65	24,61	TB Laten	Negatif	103	tdk diperiksa	IGRA Positif	Normal	61,552	2,907	0,762	8,584 ± 0,055	12
44	(FT)	P	27	D3	Perawat	87	1,5	38,67	TB Laten	Negatif	110	tdk diperiksa	IGRA Positif	Normal	357,583	3,586	0,33	8,664 ± 0,240	8
45	(STR)	P	43	D3	Perawat	49	1,55	20,40	TB Laten	Negatif	89	tdk diperiksa	IGRA Positif	Normal	268,774	5,282	1,628	8,892 ± 0,223	3
46	(NKS)	P	39	D3	Analis	65	1,55	27,06	TB Laten	Negatif	93	tdk diperiksa	IGRA Positif	Normal	91,155	1,041	0,402	9,475 ± 0,049	21
47	(MSI)	P	33	D3	Perawat	75	1,55	31,22	TB Laten	Negatif	99	tdk diperiksa	IGRA Positif	Normal	179,965	3,755	1,484	8,036 ± 0,116	5
48	(FDT)	P	27	D3	Perawat	78	1,62	29,72	TB Laten	Negatif	85	tdk diperiksa	IGRA Positif	Normal	105,957	2,228	0,979	6,857 ± 0,191	4
49	(ER)	P	55	D3	Perawat	65	1,56	26,71	TB Laten	Negatif	104	tdk diperiksa	IGRA Positif	Normal	135,56	4,773	0,618	7,750 ± 0,197	25
50	(LY)	P	29	D3	Perawat	54	1,6	21,09	TB Laten	Negatif	88	tdk diperiksa	IGRA Positif	Normal	46,751	1,38	1,34	9,271 ± 0,105	6
51	(EU)	P	41	SLTA	CS	80	13,55	32,05	TB Laten	Negatif	90	tdk diperiksa	IGRA Positif	Normal	31,949	4,943	0,907	8,345 ± 0,226	2
52	(PWH)	P	35	D3	Analis	45	1,5	20,00	TB Laten	Negatif	94	tdk diperiksa	IGRA Positif	Normal	313,179	2,568	1,123	8,012 ± 0,239	16

