

DAFTAR PUSTAKA

- Abdulrahman RM., Boon MR., Sips HC., *et al.*, 2013. Impact of Metformin and compound C on NIS expression and iodine uptake *in vitro* and *in vivo*: a role for CRE in AMPK modulation of thyroid function. **Thyroid**, 2014; 24, pp 78–87
- Ahmad, M., Madni, A.U. and Usman, M., 2009. In-vitro release and pharmacokinetics of anti-tubercle drug ethionamide in healthy male subjects. **Journal of Bioanalysis & Biomedicine**, 1(1), pp.1-4.
- Akshata, J. S., Swapna R., Chakraborty A., *et al.*, 2015. Hypothyroidism in MDR-TB treatment – Rare occurrence but a major concern, **Egyptian Journal of Chest Diseases and Tuberculosis**: 64, pp-671–674.
- Andries, A. I. P., Das, M., Khan, S., *et al.*, 2013. High rate of hypothyroidism in multidrug-resistant tuberculosis patients co-infected with HIV in Mumbai, India. **PloS one**. 2013; 8(10), e78313.
- Angelia, E. 2016. Angka Kejadian Tuberkulosis Paru dan Ekstra Paru Pasien Rawat Jalan di Rumah Sakit Immanuel tahun 2014. **Fakultas Kedokteran Universitas Kristen Maranatha**. Bandung.
- Arbex, M.A., Varella, M.D.C.L., Siqueira, H.R.D. and Mello, F.A.F.D., 2010. Antituberculosis drugs: drug interactions, adverse effects, and use in special situations-part 1: first-line drugs. **Jornal Brasileiro de Pneumologia**, 36(5), pp.626-640.
- Arbex, M.A., Varella, M.D.C.L., Siqueira, H.R.D. and Mello, F.A.F.D., 2010. Antituberculosis drugs: drug interactions, adverse effects, and use in special situations-part 2: second-line drugs. **Jornal Brasileiro de Pneumologia**, 36(5), pp.641-656.

- Auclair, B., Nix, D.E., Adam, R.D., James, G.T. and Peloquin, C.A., 2001. Pharmacokinetics of ethionamide administered under fasting conditions or with orange juice, food, or antacids. **Antimicrobial Agents and Chemotherapy**, 45 (3), pp. 810-814.
- Bares R., Khalid N., Daniel H., *et al.*, 2016. Hypothyroidism during second-line treatment of multidrug-resistant tuberculosis: a prospective study. **The international journal of tuberculosis and lung disease: the official journal of the International Union against Tuberculosis and Lung Disease**, 20 (7), pp 876-881.
- Brennan, M.D., Powell, C., Kaufman, K.R., *et al.*, 2006. The impact of overt and subclinical hyperthyroidism on skeletal muscle. **Thyroid** 2006; 16, pp 375-380
- Brennan P.J., Young D.B., *et al*, 2008, **Handbook of Anti-Tuberculosis Agents**, *Global Alliance for TB Drug Development*, 88 (2), pp 85-170.
- Burgos, M., DeRiemer, K., Small, P.M., *et al.*, 2003. Effect of drug resistant on the generation of secondary cases of tuberculosis. **J Infect Dis**, 188 (12), pp 1878–1884.
- Canetti, G., 1965. Present aspects of bacterial resistant in tuberculosis. **Am Rev Respir Dis**, 92 (5), pp 687–703.
- Chan, E.D., Chatterjee, D., Iseman, M.D., *et al.*, 2003, Pyrazinamide, Ethambutol, Ethionamide, and Aminoglycosides, dalam Rom, W.N., Garay, S.M. (Ed.), **Tuberculosis**, 2nd Ed., 773-789, Lippincott Williams & Wilkins, Philadelphia, Pa, USA, 2004.
- Chang Yu San, Wu Yu Hsuan, Wang Chin Jen, *et al.*, 2018. The relationship between thyroid status, cortisol level, cognition and neuropsychiatric symptoms in patients with Alzheimer disease, **Neuropsychiatry (London)**, 8 (3), pp 786 – 793.

- Cheung, Y.M., Van, K., Lan, L., *et al.*, 2018. Hypothyroidism associated with therapy for multi-drug resistant tuberculosis in Australia. **Intern Med J.** 2018 Mar; 49 (3), pp 364-372.
- Clausen, P., Mersebach, H., Nielsen, B., *et al.*, 2009. Hypothyroidism is associated with signs of endothelial dysfunction despite 1-year replacement therapy with levothyroxine. **Clin Endocrinol.** 70 (6), pp 932-937.
- Cobat, A., Gallant, C.J., Simkin, L., *et al.*, 2009. Two loci control tuberculin skin test reactivity in an area hyperendemic for tuberculosis. **J Exp Med** 206(12), pp 2583–2591.
- Cohen, T., Sommers, B., Murray, M., 2003. The effect of drug resistant on the fitness of *Mycobacterium tuberculosis*. **Lancet Infect Dis** 3(1), pp 13–21.
- Conte, J.E., Golden, J.A., McQuitty, M., *et al.*, 2000. Effects of AIDS and gender on steady-state plasma and intrapulmonary ethionamide concentrations. **Antimicrobial Agents and Chemotherapy**, 44(5), pp.1337-1341.
- Coyne, K.M., Pozniak, A.L., Lamorde, M. and Boffito, M., 2009. Pharmacology of second - line antituberculosis drugs and potential for interactions with antiretroviral agents. **Aids**, 23(4), pp.437-446.
- Dannenber, A. M. Jr., 2006. Pathogenesis of Human Pulmonary Tuberculosis: Insights from the Rabbit Model. Washington, DC: **ASM Press**.
- DeBarber, A.E., Mdluli, K., Bosman, M., Bekker, L.G. and Barry, C.E., 2000. Ethionamide activation and sensitivity in multidrug-resistant *Mycobacterium tuberculosis*. **Proceedings of the National Academy of Sciences**, 97(17), pp. 9677-9682.
- Deshpande, A.Y., Gurav, S., Punde, R., *et al.*, 2011. Development and validation of a highly sensitive LC-MS/MS method for simultaneous quantitation of ethionamide and

- ethionamide sulfoxide in human plasma: application to a human pharmacokinetic study. **Biomedical Chromatography**, 25(9), pp.985-994.
- Drucker, D., Eggo, M.C., Salit, I.E., and Burrow G.N., 1984. Ethionamide induced goitrous hypothyroidism, **Ann. Intern. Med.** 100, pp 837–839.
- Elkington, P. T., and Friedland, J. S., 2006. Matrix metalloproteinases in destructive pulmonary pathology. **Thorax**. 61, pp 259–266.
- Elkington, P., Tebruegge, M., and Mansour, S., 2016. Tuberculosis: an infectioninitiated autoimmune disease? **Trends Immunol.** 37, pp 815–818.
- Engler, H. TA., Luthy, C., and Dorris M.L., 1983. Reversible and irreversible inhibition of thyroid peroxidase - catalyzed iodination by thioureylene drugs. **Endocrinology**, 112 (1), pp 86-95.
- Ernst, J.D., 2012. The immunological life cycle of tuberculosis. **Nat Rev Immunol** 12(8), pp 581–591.
- Escombe, A. R., Moore, D. A., Gilman, R. H., *et al*, 2008. The infectiousness of tuberculosis patients coinfecting with HIV. **PLoS Med** 5 (9), e188.
- Eastman C., and Zimmermann M., 2018. **The Iodine Deficiency Disorders**. Endocrinology Book, Feb 6. Endotext [Internet]. South Dartmouth (MA): MDText.com, Inc. <https://www.ncbi.nlm.nih.gov/books/NBK285556/> or www.endotext.org
- Ezeukwu I. P., 2017. Ethionamide pharmacokinetics in multidrugresistant tuberculosis patients with and without HIVinfection. **Thesis: University of the Western Cape**, April 2017, <http://etd.uwc.ac.za/>
- Fajardo, T.T., Guinto, R.S., Cellona, R.V., Abalos, R.M., Cruz, E.C.D. and Gelber, R.H., 2006. A clinical trial of ethionamide and prothionamide for treatment of lepromatous leprosy. **The American journal of tropical medicine and hygiene**, 74(3), pp.457-461.

- Falzon, D. and Harausz, E., 2017. World Health Organization treatment guidelines for drug-resistant tuberculosis, 2016 update. **European Respiratory Journal**, 49 (3), p. 1602308.
- Fatmawati, U., dan Kusmiati, T., 2017. Characteristics and the Side Effects of New MDR-TB Treatment in the Dr. Soetomo Hospital during 2016, **Jurnal Respirasi (JR)** Vol.3 No.3 Mei 2017 pp 35-41.
- Flipo, M., Desroses, M., Lecat-Guillet, N., *et al.*, 2011. Ethionamide Boosters: Synthesis, Biological Activity, and Structure-Activity Relationships of a Series of 1,2,4 Oxadiazole EthR Inhibitors. **J Med Chem** 54: 2994-3010.
- Fox, K. A., Kirwan, D. E., Whittington, A. M., *et al.*, 2018. Platelets regulated pulmonary inflammation and tissue destruction in tuberculosis, **Am. J. Respir. Crit. Care Med**: 198: pp-245-255.
- Gallegos, A. M., Pamer, E. G., and Glickman, M. S., 2008. Delayed protection by ESAT-6-specific effector CD4C T cells after airborne *Mycobacterium tuberculosis* infection. **J. Exp. Med.** 205, pp 2359–2368.
- Gagneux, S., Burgos, M. V., DeRiemer, K., *et al.*, 2006. Impact of bacterial genetics on the transmission of isoniazid-resistant *Mycobacterium tuberculosis*. **PLoS Pathog** 2(6), e61.
- Gandhi, N.R, Moll, A., Sturm AW, *et al.*, 2006. Extensively drug-resistant tuberculosis as a cause of death in patients co-infected with tuberculosis and HIV in a rural area of South Africa. **Lancet** 368(9547). pp 1575–1580.
- Garber, J.R., Cobin, R.H., Gharib, H., *et al.*, 2012. Clinical practice guidelines for hypothyroidism in adults: The American Association of Clinical Endocrinologists and the American Thyroid Association. **Thyroid** 22 (12), pp 1200-1235.
- Gencer, B., Collet, TH., Virgini, V., et al, 2012. Thyroid Studies Collaboration. Subclinical thyroid dysfunction and the risk of heart failure events: an individual participant data analysis from 6 prospective cohorts. **Circulation** 2012; 126:1040-9

- Guan, W. J., Gao, Y. H., Xu, G., *et al.*, 2015. Sputum matrix metalloproteinase-8 and -9 and tissue inhibitor of metalloproteinase-1 in bronchiectasis: clinical correlates and prognostic implications. **Respirology** 20, pp 1073–1081.
- Gupta, J. B. R., *and* Milburn, H. J., 2012. Drug-induced hypothyroidism in patients receiving treatment for multidrug-resistant tuberculosis in the UK. **The International Journal of Tuberculosis and Lung Disease**: the official journal of the International Union against Tuberculosis and Lung Disease. 2012; 16 (9), pp 1278.
- Henderson, M.C., Siddens, L.K., Morr e, J.T., Krueger, S.K. and Williams, D.E., 2008. Metabolism of the anti-tuberculosis drug ethionamide by mouse and human FMO1, FMO2 and FMO3 and mouse and human lung microsomes. **Toxicology and Applied Pharmacology**, 233(3), pp. 420-427.
- Hoa N.B., Nhung N.V., Khanh P.H., *et al.*, 2015. Adverse events in the treatment of MDR-TB patients within and outside the NTP in Pham Ngoc Thach hospital, Ho Chi Minh City. **BMC Research Notes. BioMed Central**; 8, pp 809.
- Hobby, G. L., Holman, A. P., Iseman, M. D., *et al.*, 1973. Enumeration of tubercle bacilli in sputum of patients with pulmonary tuberculosis. **Antimicrob Agents Chemother** 4 (2), pp 94–104.
- Hu Xiaowen, Liu Yang, Wang C., *et al.*, 2017. Metformin affects thyroid function in male rats, **Impact Journals, Oncotarget**: 8 (64), pp. 107589-107595.
- Human Metabolome Database (HMDB), 2019. **Ethionamid (HMDB0014747)**, <http://www.hmdb.ca/metabolites/HMDB0014747> diakses tanggal 20 Januari 2020.
- Hunter, R. L., 2016. Tuberculosis as a three-act play: a new paradigm for the pathogenesis of pulmonary tuberculosis, **Tuberculosis**: 97, pp-8–17.
- Irianti T., Kuswandi, Yasin N.M., Kusumaningtyas R.A., 2016. **Buku Anti-tuberkulosis**. Yogyakarta: UGM Press.

- Jacobs, T.Q. and Ross, A., 2012. Adverse effects profile of multidrug-resistant tuberculosis treatment in a South African outpatient clinic, **S. Afr. Family Pract.** 54 (6) pp 531–539.
- Jagielski, T., Ignatowska, H., Bakula, Z., *et al.*, 2014. Screening for streptomycin Resistant-conferring mutation in *Mycobacterium tuberculosis* clinical isolates from Poland, **Plos One**. June 2014 Vol. 9(6). pp 1-8.
- Jindani, A., Aber, V.R., Edwards, E.A., *et al.*, 1980. The early bactericidal activity of drugs in patients with pulmonary tuberculosis. **Am Rev Respir Dis** 121(6), pp 939–949.
- Jones-López, E.C., Namugga, O., Mumbowa, F., *et al.*, 2013. Cough aerosols of *Mycobacterium tuberculosis* predict new infection: a household contact study. **Am J Respir Crit Care Med** 187(9), pp 1007–1015.
- Kemenkes, 2014. **Pedoman Nasional Pengendalian Tuberkulosis**. Jakarta: Depkes RI.
- Kemenkes, 2015. **Petunjuk Teknis Pemeriksaan Tuberkulosis menggunakan alat Genexpert**. Jakarta: Depkes RI.
- Kemenkes, 2016. **Peraturan Menteri Kesehatan Nomor 67 Tahun 2016 Tentang Penanggulangan Tuberkulosis**. Jakarta: Depkes RI.
- Kemenkes, 2018. Update Petunjuk Teknis Pengobatan Tuberkulosis Resisten Obat, **Kementerian Kesehatan Republik Indonesia dan Gerakan Masyarakat Hidup Sehat: Edisi 13 April 2019**
- Kemenkes, 2019. Panduan Pelayanan Tuberkulosis Resisten Obat untuk Fasilitas Pelayanan Kesehatan, **Kementerian Kesehatan Republik Indonesia dan Gerakan Masyarakat Hidup Sehat: Edisi 3 April 2019**.
- King, P. T., 2009. The patophysiology of bronchiectasis, **Int. J. Chron. Obstruct. Pulmon. Dis.** 4, pp 411–419.
- Konukoglu, D., and Uzun, H., 2017. Endothelial dysfunction and hypertension. **Adv Exp Med Biol.** 956, pp. 511-540.

- Kotsis, V., Alevizaki, M., Stabouli, S., *et al.*, 2007 Hypertension and hypothyroidism: results from an ambulatory blood pressure monitoring study. **J Hypertens**. 25 (5), pp 993-999.
- Kwan, C. K., dan Ernst, J. D., 2011. HIV and tuberculosis: a deadly human syndemic. **Clin Microbiol Rev** 24 (2), pp 351–376.
- Lacy, C.F., Armstrong, L.L., Goldman, M.P., *et al.*, 2010. **Drug Information Handbook**, 21th edition, Lexi-comp, USA.
- Lammermann, T., Afonso, P. V., Angermann, B. R., *et al.*, 2013. Neutrophil swarms require LT_B4 and integrins at sites of cell death in vivo. **Nature** 498, pp 371–375.
- Lee, H.W., Kim, D.W., Park, J.H., *et al.*, 2009. Pharmacokinetics of prothionamide in patients with multidrug-resistant tuberculosis. **The International Journal of Tuberculosis and Lung Disease**, 13(9), pp. 1161-1166.
- Loudon, R. G., and Spohn, S. K., 1969. Cough frequency and infectivity in patients with pulmonary tuberculosis. **Am Rev Respir Dis** 99 (1): 109–111.
- Lupoli, R., Di Minno, A., Tortora, A., *et al.*, 2014. Effects of treatment with metformin on TSH levels: a meta-analysis of literature studies. **J Clin Endocrinol Metab**.99 (1), pp 143–148.
- Macgregor, A.E., Somner, A.R., 1954. The Anti Thyroid Action of Para Aminosalicyclic Acid. *The Lancet*. 1954; 264: pp 931–936.
- Mainenti, M.R., Vigário, P.S., Teixeira, P.F., *et al.*, 2009. Effect of levothyroxine replacement on exercise performance in subclinical hypothyroidism. **J Endocrinol Invest**: 32: pp-470-473.
- Manalu, H. S. P. 2010. Faktor-faktor yang Mempengaruhi Kejadian TB Paru dan Upaya Penanggulangannya. **Jurnal Ekologi Kesehatan**. 9(4): 1340-1346.

- Matveyeva, S.L., Shevchenko, O.S., Pogorelova. O.O., 2017. The function of the thyroid gland in patients with multi-drug resistant tuberculosis. **Antimicrobial Resistant and Infection Control** (2017) 6:82, pp 1-3.
- McDonnell, M.E., Braverman L.E., Bernardo J., 2005. Hypothyroidism due to ethionamide. **New England Journal Med** 352(26), pp 2757-2759.
- McEvoy, G.K., 2006. American Hospital Formulary Service. **AHFS Drug Information**. American Society of Health-System Pharmacists, Bethesda, MD., pp. 568.
- McQuade, C., Skugor, M., Brennan, D.M., *et al.*, 2011. Hypothyroidism and moderate subclinical hypothyroidism are associated with increased all-cause mortality independent of coronary heart disease risk factors: a PreCIS database study. **Thyroid** 2011; 21, pp 837-843.
- Meier, C., Staub, J.J., Roth, C.B., *et al.*, 2001. TSH-controlled L-thyroxine therapy reduces cholesterol levels and clinical symptoms in subclinical hypothyroidism: a double blind, placebo-controlled trial (Basel Thyroid Study). **J Clin Endocrinol Metab**; 86, pp 4860-4866.
- Meng Xianghui, Xu Shuhang, Chen G., *et al.*, 2017. Metformin and thyroid disease. **Journal of Endocrinology**, 233: 1, pp 43-51
- Micromedex, 2018. Drug Information for the Health Care Professional, Greenwood Village, CO., <https://www.micromedexsolutions.com/micromedex2/librarian/> diakses tanggal 20 januari 2020.
- Milliron, B., Henry, T. S., Veeraraghavan, S., and Little, B. P., (2015). Bronchiectasis: mechanisms and imaging clues of associated common and uncommon diseases. **Radiographics** 35, pp 1011–1030.

- Minato, Y., 2015. Mycobacterium tuberculosis folate metabolism and the mechanistic basis for para-aminosalicylic acid susceptibility and resistant. **Antimicrob Agents Chemother.** 2015; 59 (9), pp 5097–5106.
- Modongo, C., Zetola, N.M., 2012. Prevalence of hypothyroidism among MDR-TB patients in Botswana. **Int J Tuberc Lung Dis** 16 (11), pp 1561-1562.
- Moodley R. and Godec T., 2015. Short-course treatment for multidrug-resistant tuberculosis: the STREAM trials. **Eur Respir, Rev** 2016: pp 29-35.
- Munivenkatappa, S., Anil, S., Naik, B., *et al.*, 2016. Drug-Induced Hypothyroidism during Anti-Tuberculosis Treatment of Multidrug-Resistant Tuberculosis: Notes from the Field. **Journal of tuberculosis research.** 2016; 4 (3), pp 105-110.
- Narasimhan, P., Wood, J., MacIntyre, J. R., and Dilip, M., 2013. Review Article: Risk Factors for Tuberculosis, **Pulmonary Medicine**, Article ID 828939, pp 11.
- Nguyen, L., 2016. Antibiotic resistant mechanisms in Mycobacterium tuberculosis: an update, **Arch Toxicol**, PMC July 2016, 90(7), pp 1585-1604.
- Nusahi, B.S., 2018. Sensitivitas dan Spesifisitas Metode *Immunochromatography* (ICT-TB) Terhadap *GeneXpert MYCOBACTERIUM TUBERCULOSIS* pada tersangka penderita TB, <http://respiratory.unimus.ac.id>
- O'Garra, A., Redford, P. S., McNab, F. W., *et al.*, 2013. The immune response in tuberculosis. **Annu. Rev. Immunol.** 31, pp 475–527.
- Oner, F.A., Yurdakul, S., Oner, E., *et al.*, 2011. Evaluation of the effect of L-thyroxin therapy on endothelial functions in patients with subclinical hypothyroidism. **Endocrine.** 2011; 40 (2): 280-284.
- Ong, C. W., Elkington, P. T., Brilha, *et al.*, 2015. Neutrophil-derived MMP-8 drives AMPK dependent matrix destruction in human pulmonary tuberculosis. **PLoS Pathog.** 11: e1004917.

- Pae, C.U., Mandelli, L., Han, C., *et al.*, 2009. Thyroid hormones affect recovery from depression during antidepressant treatment. **Psychiatry Clin Neurosci**; 63:305-13
- Peloquin, C.A., 2008. Clinical pharmacology of the antituberculosis drugs. **Clinical tuberculosis**, Fourth Edition (Davies PDO, Barnes PF, Gordon SB, eds), pp.205-224.
- Raviglione, M.C., 2015. Tuberculosis in **Harrison's Principles of Internal Medicine 19th edition**. Harrison *et al* Editrs. McGrawHill. pp 1102-03.
- Razvi, S., Weaver, J.U., Vanderpump MP, Pearce SH. 2010. The incidence of ischemic heart disease and mortality in people with subclinical hypothyroidism: reanalysis of the Whickham Survey cohort. **J Clin Endocrinol Metab**; 95:1734-40.
- Rengarajan, J., Sasseti, C.M., Naroditskaya, V., *et al.*, 2004. The Folate Pathway is a Target for Resistant to the Drug ParaAminosalicylic Acid (PAS) in Mycobacteria, **Mol Microbiol**, 53, pp 275-282.
- Reuters, V.S., Teixeira, P.F., Vigário, P.S., *et al.*, 2009. Functional capacity and muscular abnormalities in subclinical hypothyroidism. **Am J Med Sci**; 338:259-63
- Riley, R.L., *and* Nardell E.A., 1989. Clearing the air. The theory and application of ultraviolet air disinfection. **Am Rev Respir Dis** 139(5):1286–1294.
- Rodondi, N., Bauer, D.C., Cappola, A.R., *et al.*, 2008. Subclinical thyroid dysfunction, cardiac function, and the risk of heart failure. The Cardiovascular Health Study. **J Am Coll Cardiol** 2008; 52:1152-9.
- Rodondi, N., den Elzen, W.P., Bauer, D.C., *et al.*, 2010 Thyroid Studies Collaboration. Subclinical hypothyroidism and the risk of coronary heart disease and mortality. **JAMA** 2010; 304:1365-74.
- Ross DR., 2019. Laboratory assessment of thyroid function. **UpToDate**: December 11, 2019.

- Ross DR., 2020. Subclinical hypothyroidism in nonpregnant adults. **UpToDate**: July 01, 2020.
- Rukminiati, Y., 2012. Uji kepekaan Obat Anti Tuberkulosis lini kedua menggunakan BACTEC *Mycobacterium Growth Indicator Tubes* (MGIT) 960, **Jurnal Kefarmasian Indonesia**, Vol 2.2.2012. pp 43-47
- Sakamoto, K., 2012. The Pathology of *Mycobacterium tuberculosis* infection. **Veterinary pathology**, 49(3), pp. 423-439.
- Sakamoto, K., Kim, M. J., Rhoades, E. R., *et al.*, 2013. *Mycobacterial trehalose dimycolate reprograms macrophage global gene expression and activates matrix metalloproteinases. Infect. Immun.* 81, pp 764–776.
- Satti, H., Mafukidze, A., Jooste, P.L., *et al.*, 2012. High rate of hypothyroidism among patients treated for multidrug-resistant tuberculosis in Lesotho, **Int. J. Tuberc. Lung Dis.** 16 pp 468–472.
- Schluger, N.W., Heysell, S., Friedland, G., 2019. Treatment of Drug-resistant Pulmonary Tuberculosis in adults, **UpToDate**. Desember 2019. pp 1-24.
- Smith, T., Wolff, K.A., and Nguyen, L., 2013, Molecular Biology of Drug Resistant in *Mycobacterium tuberculosis*, **Curr Top Microbiol Immunol.**, 374, pp 53–80.
- Singh, S., Maniakis-Grivas, G., Singh, U. K., *et al.*, 2018. Interleukin-17 regulates matrix metalloproteinase activity in human pulmonary tuberculosis. **J. Pathol.** 244, pp 311-322.
- Soedarsono, 2018. Initial Implementation of Shorter Regimen for MDR-TB in Dr Soetomo Hospital, Surabayas: The proportion between Eligibility and Ineligibility.
- Stabouli, S., Papakatsika, S., and Kotsis, V., 2010. Hypothyroidism and hypertension. **Expert Rev Cardiovasc Ther.** 8 (11), pp 1559-1565.

- Strek, C., Allwood, B., Walker, N.F., *et al.*, 2018. The Immune Mechanisms of Lung Parenchymal Damage in Tuberculosis and the Role of Host-Directed Therapy, **Frontier in Microbiology**. October 2018. Volume 9. pp 1-10.
- Sutherland, I., 1976. Recent studies in the epidemiology of tuberculosis, based on the risk of being infected with tubercle bacilli. **Adv Tuberc Res** 19, pp 1–63.
- Takata F., Dohgu S., Matsumoto J., *et al.*, 2013. Metformin induces up-regulation of blood-brain barrier functions by activating AMP-activated protein kinase in rat brain microvascular endothelial cells. **Biochemical and Biophysical Research Communications**, 433, pp 586–590
- Thee, S., Garcia-Prats, A.J., Donald, P.R., *et al.*, 2016. A review of the use of ethionamide and prothionamide in childhood tuberculosis. **Tuberculosis**, 97, pp.126-136.
- Tng Eng L., 2016. The debate on treating subclinical hypothyroidism. **Singapore Med J**, 57 (10), pp 539-545.
- Tobin, D. M., Roca, F. J., Oh, S. F., *et al.*, 2012. Host genotype-specific therapies can optimize the inflammatory response to mycobacterial infections. **Cell** 148, pp 434–446.
- Villar, H.C., Saconato, H., Valente, O., *et al.*, 2007. Thyroid hormone replacement for subclinical hypothyroidism. **Cochrane Database Syst Rev**; CD003419.
- Walsh, J.P., Bremner, A.P., Bulsara, M.K., *et al.*, 2005. Subclinical thyroid dysfunction as a risk factor for cardiovascular disease. **Arch Intern Med** 2005; 165:2467-72.
- Walter, KN., Corwin EJ., Ulbrecht J., *et al*, 2012. Elevated thyroid stimulating hormone is associated with elevated cortisol in healthy young men and women, **Thyroid Research**, Vol. 5: 13. <http://www.thyroidresearchjournal.com/content/5/1/13>
- Wang, Feng., Langley, R., Gulten, G., *et al.*, 2007. Mechanism of thionamide drug action against tuberculosis and leprosy, **JEM**, The Rockefeller University Press, Vol. 204. No. 1, Januari 2007, pp 73-78.

- Wang, J. Shen, H. 2009. Review of cigarette smoking and tuberculosis in China: Intervention is needed for smoking cessation among tuberculosis patients. **BMC Public Health**. 9: 292.
- WHO, 2016. **Treatment Guidelines for Drug-Resistant Tuberculosis - 2016 update**. Geneva: World Health Organization.
- WHO¹, 2018. **Global Tuberculosis Report 2018**, Geneva: World Health Organization.
- WHO², 2018. **Estimates of TB and MDR-TB burden are produced by WHO in consultation with countries: Indonesia**, Geneva: World Health Organization, www.who.int/tb/data.
- WHO¹, 2019. **Global Tuberculosis Report 2019**, Geneva: World Health Organization.
- WHO², 2019. **WHO Consolidated Guidelines on Drug - resistant Tuberculosis Treatment**, Switzerland: World Health Organization.
- Wolff K., Nguyen L., and Sherman M., 2011. Potentiation of Available Antibiotics by Targeting Resistance - An Emerging Trend in Tuberculosis Drug Development. **Research Gate**, December 2011.
- Yang T., Park H., Jang H., *et al.*, 2017. Side effects associated with the treatment of multidrug-resistant tuberculosis at a tuberculosis referral hospital in South Korea. **Medicine** (Baltimore); 96, pp 28.
- Zhang Y., Wu S., Xia Y., *et al.*, 2017. Adverse Events Associated with Treatment of Multidrug-Resistant Tuberculosis in China: An Ambispective Cohort Study. **Medical Science Monitor**; 23, pp 2348–2356.
- Zhu, M., Namdar, R., Stambaugh, J.J., *et al.*, 2002. Population pharmacokinetics of ethionamide in patients with tuberculosis. **Tuberculosis**, 82(2-3), pp. 91-96.