

DAFTAR PUSTAKA

- Abba K.dkk. 2010. Nutritional supplements for people being treated for active tuberculosis. Cochrane Collaboration. John Wiley & Son, Ltd. Available from: <http://www.thecochranelibrary.com>.
- Abera et al., 2015. Incidence of Antituberculosis-Drug-Induced Hepatotoxicity and Associated Risk Factors Among Tuberculosis Patients in Dawro Zone, South Ethiopia: A cohort study. *Int J Mycobacteriol.* 2016 Mar;5(1):14-20. doi: 10.1016/j.ijmyco.2015.10.002. Pubmed.
- Almatsier, Sunita. Penuntun Diet Edisi Baru. Jakarta: PT. Gramedia. 2006
Angka Kecukupan Gizi (AKG). 2004
- Al-Salem 2016. *The British Journal of Haematology*. Springer, Heidelberg.
- Aminah.S. 2013. Perbedaan Kadar SGOT, SGPT, Ureum dan kreatinin Pada Penderita TB Paru Setelah Enam Bulan Pengobatan. *Jurnal Analis Kesehatan.* 2(2):260-269
- Aminah, S. 2017. Hubungan Kualitas Spesimen Dahak Dengan Gradasi Hasil Pemeriksaan BTA Pada Penderita TB Paru Di Kabupaten Pringsewu Tahun 2012. *Jurnal Analis Kesehatan,* 2 (2) : 290-296.

Andi Fatima, 2022. Uji Toksisitas Akut Organ Hepar Pada Tikus Wistar Setelah Aplikasi Pulp-Out: Kajian Histologi, Sgot Dan Sgpt. Makassar : Universitas Hasanuddin.

Anwar, F., Latif, S., Ashraf, M., Gilani, A.H., 2007. Moringa oleifera: a food plant with multiple medicinal uses. *Phytother. Res.* 21, 17–25.

Aotari, Wanti. *PENGARUH PEMBERIAN SIRUP KOMBINASI KURMA (Phoenix Dactylifera) DAN BEE POLLEN TERHADAP INDEKS ERITROSIT DAN BERAT BADAN LAHIR ANAK TIKUS PUTIH GALUR WISTAR (Rattus Norvegicus)*. Diss. Universitas Hasanuddin, 2021.

Asmadi 2008. Konsep Dasar Keperawatan. Edisi 1. EGC. Jakarta

Astuti, P. R. (2018) Pengaruh Pengobatan Tuberkulosis Terhadap Jumlah Trombosit Pada Pasien Tuberkulosis Paru 2 dan 5 Bulan. Semarang : Universitas Muhammadiyah Semarang.

Ayuningtyas D.N.R. 2014. Perbedaan Kadar SGOT-SGPT Sebelum dan Sesudah Pemberian Obat Antituberkulosis Fase Awal. Jogjakarta.

Azzahra, Zira. Faktor-Faktor Yang Mempengaruhi Kejadian Penyakit Tuberkulosis Paru Di Wilayah Kerja Puskesmas Mulyorejo Kecamatan Sunggal Kabupaten Deli Serdang 2017. Medan: Skripsi, Fakultas Kesehatan Masyarakat, Universitas Sumatera Utara.2017.

Bacelo et.al., 2015. Nutritional Supplementation Is a Necessary Complement to Dietary Counseling among Tuberculosis and Tuberculosis-HIV Patients. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0134785>

Bannour Ichrak 2022. Anaphylaxis to Moringua oleifera in North Africa : A case report and review of the literature. Department of immuno-oncology Faculty of medicine of Monastir.

Bayupurnama, P. 2006. Hepatotoksisitas Imbas Obat. Ajar Ilmu Penyakit Dalam Universitas Indonesia Jilid I. Balai Penerbit FK-UI. Jakarta.

Bestari, G., & Adang. (2014). Perbedaan Kadar Leukosit Sebelum dan Sesudah Pemberian Obat Anti Tuberkulosis Pada Fase Awal,. In Yogyakarta: Fakultas Kedokteran dan Ilmu Kesehatan Universitas Muhammadiyah.

Bogdanov S, et all. 2015. Physicochemical Characteristics Of Honey From Different Origins. Journal of Apicultural Research 60(2), 279-287.

Bogdanov 2017. Pollen: Collection, Harvest, Compostion, Quality. https://www.researchgate.net/publication/304011810_Pollen_Collection_Harvest_Compostion_Quality

Cahyono.JBSB. 2009. Hepatitis A. Yogyakarta: Kanisius Yogyakarta.

Campos m.G.r., Bogdanov s., Almeida-muradian l.b., szczesna t., mancebo y., FriGerio c., Ferreira F. 2008. Pollen composition and

standardization of analytical methods. *J. Apicult. Res. Bee World*, 47: 154–163.

Carneiro, A.L.B., Gomes, A.A., Da Silva, L.A., Alves, L.B., Da Silva, E.C., Pinto, A.C.D.S., Tadei, W.P., Pohlit, A.M., Teixeira, M.F.S., Gomes, C.C., et al. (2019). Antimicrobial and Larvicidal Activities of Stingless Bee Pollen from Maues, Amazonas, Brazil. *Bee World* 96, 98–103.

Chen, J., & Bai, W. et.al., (2014). Advance on cell wall disruption method of bee pollen. *Food Research and Development*, 35(12), 102-104.

Clarasanti, dkk. 2016. Gambaran Enzim Transaminase Pada Pasien Tuberkulosis Paru Yang Diterapi Dengan Obat-Obat Anti Tuberkulosis Di Rsup Prof. Dr. R. D. Kandou Manado. Manado : Universitas Sam Ratulangi.

Darnton Hill, 2022. Opportunities to prevent and manage undernutrition to amplify efforts to end TB. Sidney : University of Sydney.

De Oliveira, 2013. Effect of bee pollen on the immunity and tibia characteristics in broilers. *Brazilian Journal of Poultry Science*.

Depkes RI. Pedoman Nasional Penanggulangan Tuberkulosis. Jakarta: Depkes RI;2011

Depkes RI. Pedoman Nasional Penanggulangan Tuberkulosis. Jakarta: Depkes RI;2015

- Depkes RI. Pedoman Nasional Penanggulangan Tuberkulosis. Jakarta: Depkes RI;2007.
- Dillard *et al.*, 2000. Phytochemicals : A Review of Nutraeuticals and Human Health. *J.Sci.Food Agric.* 80. 1744-1756.
- Ernawati, T. (2018). Bioaktivitas senyawa turunan alkaloid Kinkona. *Jurnal Agrosains dan Teknologi*, 3(2), 87- 96.
- Ganiswarna, S., 2009, Farmakologi dan Terapi, Fakultas Kedokteran Universitas Indonesia, Jakarta.
- Ghosh *et al.* 2017. Nutritional value of beecollected pollens of hardy kiwi, *Actinidiaarguta (Actinidiaceae)* and oak, *Quercus sp. (Fagaceae)*. *Journal of Asia-Pacific Entomology*.
- Goodman and Gilman, 2008, Manual Farmakologi dan Terapi, Buku Kedokteran. EGC, Jakarta.
- Graikou, Konstantia, et.al. "Chemical analysis of Greek pollen-Antioxidant, antimicrobial and proteasome activation properties." *Chemistry Central Journal* 5.1 (2011): 1-9.
- Grobler, et.al.2016. *Cochrane Database of Systematic Reviews* dengan judul *Nutritional supplements for people being treated for active tuberculosis (Review)*. Page 94-95

- Gupta KB, Gupta R, Atreja A, Verma M, Vishvkarma S. Tuberculosis and nutrition. *Lung India*. 2009;26(1):9–16
- Huang, 2011. Pollen Nutrition Affects Honey Bee Stress Resistance. *Terrestrial Arthropod Reviews*.
- Huang et al. 2017. Protective effect of *Schisandra chinensis* bee pollen extract on liver and kidney injury induced by cisplatin in rats. [Biomedicine & Pharmacotherapy Volume 95](#), November 2017, Pages 1765-1776
- Humaira. Faktor-faktor yang berhubungan dengan perilaku pasien tuberkulosis paru dalam pencegahan penularan tuberkulosis di puskesmas tanggerang tahun 2013. Jakarta: Skripsi, Fakultas Kedokteran dan Ilmu Kesehatan, UIN Syarif Hidayatullah. 2013.
- Istiantoro, Y. H., dan Setiabudy, R. 2007. Farmakologi dan Terapi Edisi 5. 616-619, Penerbit FKUI, Jakarta
- Jahja, Riwati. Etiologi dan Patofisiologi Tuberkulosis Paru. Alomedika, 2018. Hanin, Naovi Nur Fadia, and Rarastoeti Pratiwi. "Kandungan Fenolik, Flavonoid dan Aktivitas Antioksidan Ekstrak Daun Paku Laut (*Acrostichum aureum* L.) Fertil dan Steril di Kawasan Mangrove Kulon Progo, Yogyakarta." *Journal of Tropical Biodiversity and Biotechnology* 2.2 (2017): 51.

Jagdis Sussman, 2012. Anaphylaxis from bee pollen supplement. Canadian Medical Association Jurnal July 10, 2012 184 (10) 1167-1169; DOI:<https://doi.org/10.1503/cmaj>. 112181

Jaya, F. (2017). Produk-produk lebah madu dan hasil olahannya. UB Press

Kalma, dkk. 2019. Platelet And Hemoglobin Concentration In Tuberculosis Patients With Anti-Tuberculosis Medication. Makassar : Poltekes Kemenkes Makassar.

Katarzyna Komosinska-Vassev, 2015. Bee Pollen: Chemical Composition and Therapeutic Application. <https://www.hindawi.com/journals/ecam/2015/297425/>

Kee.J.L.2007. Pedoman Pemeriksaan Laboratorium dan Diagnostik. Edisi 6. Jakarta: EGC.

Kemenkes RI., 2009, Pedoman Penanggulangan TB Kementerian Kesehatan RI Tuberkulosis, Jakarta.

Kemenkes RI., 2011, Pedoman Nasional Penanggulangan Tuberkulosis Kementerian Kesehatan RI, Jakarta.

Kemenkes RI, 2013. Pedoman Nasional Pelayanan Kedokteran; Tata Laksana Tuberkulosis. Jakarta: Kemenkes RI.

Kemenkes RI, 2014. Strategi Nasional Pengendalian TB di Indonesia 2010-2014. Jakarta: Direktorat Jenderal Pengendalian Penyakit dan Penyehatan Lingkungan.

Kemenkes RI, 2014. Profil Kesehatan Indonesia Tahun 2014. Jakarta: Kemenkes RI.

Kemenkes RI, 2015. Profil Kesehatan Indonesia Tahun 2015. Jakarta: Kemenkes RI.

Kemenkes RI, 2016. Profil Kesehatan Indonesia Tahun 2016. Jakarta: Kemenkes RI.

Kemenkes RI., 2018, Pusat Data dan Informasi Kementerian Kesehatan RI Tuberkulosis, Jakarta.

Kemenkes RI., 2019, Direktorat Jenderal Pencegahan dan Pengendalian Penyakit Tuberkulosis, Jakarta.

Kemenkes RI., 2021, Pusat Data dan Informasi Kementerian Kesehatan RI Tuberkulosis, Jakarta.

Khaironi, dkk. 2017. Gambaran jumlah leukosit dan jenis leukosit pada pasien tuberkulosis paru sebelum pengobatan dan setelah pengobatan satu bulan intensif. J Analis Kes Klinikal Sains 2017;5(2):61

Khofifah Nur Inayah, 2022. Tuberkulosis di Masa Pandemi. Ners. Surabaya : Universitas Air Langga.

Krisnadi, A.D. 2015. *Kelor Super Nutrisi*. Bora: Pusat Informasi dan Pengembangan Tanaman Kelor Indonesia.

Lackey, Brian, et al. 2015. Patient Characteristics Associated with Tuberculosis Treatment Default: A Cohort Study in a High-Incidence Area of Lima, Peru. Plos One Journal : 1-11.

Lasut, N.M., 2014. Gambaran Kadar Hemoglobin dan Trombosit pada Pasien Tuberculosis Paru di RSUP Prof. DR. R. D. Kandou Manado Periode Januari-Desember 2014. Ringkasan Penelitian. Manado: Universitas Sam Ratulangi.

LeBlanc, B.W., Boue, S., Hoffman, G.D.G., Deeby, T., McCready, H., Loeffelmann, K. (2008). β Cyclodextrins as carriers of monoterpenes into the hemolymph of the honey bee (*Apis mellifera*) for integrated pest management. *Journal Agricultural and Food Chemistry*, 56(18), 8565–8573

Lestari, R. H., Uwan, W. B., & Widi Raharjo. (2019). Gambaran Kadar Enzim Transaminase Pada Pasien Tuberkulosis Yang Mendapat Terapi Obat Anti 54 Tuberkulosis Di Unit Pengobatan Penyakit Paru-Paru Provinsi Kalimantan Barat. *Jurnal Mahasiswa PSPD FK Universitas Tanjungpura*, 5(1), 2–11

L.E. Mansfield *et al.* Anaphylactic reaction after ingestion of local bee pollen
Ann Allergy (1981)

Liolios, C. Tananaki, A. Papaioannou, D. Kanelis, M. Rodopoulou, N.
Argena, Mineral content in monofloral bee pollen: investigation of the
effect of the botanical and geographical origin. Journal of Food
Measurement and Characterization **13**(3), 1674–1682 (2019)

Lopez et all. 2020. [Biochemistry, essential amino acids.](https://europepmc.org/article/NBK/nbk557845)
[https://europepmc.org/article/NBK/nbk557845.](https://europepmc.org/article/NBK/nbk557845)

Lubis, dkk. 2022. Pemanfaatan Aplikasi “TBMenu” untuk Penderita
Tuberkulosis di Kota Medan. Medan : Fakultas Kedokteran,
Universitas Muhammadiyah Sumatera Utara.

Mahmood dkk.2007. Alanin Aminotransferase / Aspartae Aminotransferase
Ratio Reversal and prolonged Prothrombin Time : A Specific
Indicator of Hepatic Cirrhosis.

Makaminang dkk, 2022. Aktivitas Enzim Sgot Dan Sgpt Pada Penderita
Tuberkulosis Paru Yang Sedang Menjalani Pengobatan Di
Puskesmas Rujukan Kota Manado. Manado : Politeknik Kesehatan
Kementerian Kesehatan Manado.

Mardalena. 2017. Ilmu Gizi. Jakarta: Kementerian Kesehatan RI.

Maria Michalczyk, Rajmund Sokół. POLISH JOURNAL OF NATURAL
SCIENCES Abbrev.: Pol. J. Natur. Sc., Vol 34(1): 143–156,

Department of Parasitology and Invasive Diseases University of Warmia and Mazury in Olsztyn, Poland.

Marselia, S., Wibowo, M.A., Arreneuz, S. (2015). Aktivitas antibakteri ekstrak daun soma (*Ploiarium alternifolium* melch) terhadap *Propionibacterium acnes*, *Jurnal Kimia Khatulistiwa*, 4(4), 72-82

Masdiana, T.dkk, 2016. Analisis Kandungan Vitamin C Dan B- Karoten Dalam Daun Kelor (*Moringa Oleifra* Lam.) Dengan Metode Spektrofotometri Uv–Vis. *Jurnal Fitofarmaka Indonesia* Vol.3/1

Michael J Lopez Biochemistry, Ceruloplasmin, 2022.
<https://pubmed.ncbi.nlm.nih.gov/32119309/>

MOLAN, P (2006) The evidence supporting the use of honey as a wound dressing. *The International Journal of Lower Extremity Wounds* 5: 40-54.

Morgan, L. L., Udasin, I., & Davis, D. L. (2018). Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102). *Environmental research*, 167, 673-683.

Morgano, M. A., Milani, R. F., Martins, M. C. T., & Rodriguez-amaya, D. B. (2011). Determination of water content in Brazilian honeybee-collected pollen by Karl Fischer titration. *Food Control*, 22(10), 1604–1608. <https://doi.org/10.1016/j.foodcont.2011.03.016>

- Naga, Sholeh S. Buku Panduan Lengkap Ilmu Penyakit Dalam. Yogyakarta: DIVA Press, 2014.
- Nasution, 2015. Malnutrisi dan Anemia Pada Penderita Tuberkulosis Paru. Lampung : Fakultas Kedokteran Universitas Lampung.
- Nizar, Muhamad. 2010. Pemberantasan dan Penanggulangan Tuberkulosis. Yogyakarta: penerbit Gosyen Publisng.
- Nugraha G, Maftuhin A, editor. 2015 Panduan pemeriksaan laboratorium hematologi Dasar. Jakarta: Trans Info Media.
- Nur Melizza, 2018. Pengaruh Intervensi Supportive Educative System Berbasis Integrasi Self Care dan Family Centered Nursing Model Terhadap Dukungan Keluarga Dalam Meningkatkan Status Gizi Penderita Tuberkulosis. Universitas Airlangga. Surabaya.
- Nyoman Budi Setiawan, et all. 2022. Immunonutrition and Hepatoprotectant Aspects of *Moringa Oleifera* Leaf Nanoemulsion Syrup as an Antituberculosis Adjuvant for Children with Tuberculosis. Bali : Udayana.
- Oehadian. A., 2003. Aspek Hematologi Tuberkulosis. Sub-Bagian Hematologi-Onkologi Medik SMF Penyakit Dalam RS Perjan Hasan Sadikin/FK UNPAD Bandung.

Oki Nugraha Putra, 2022. Pengaruh Obat Antituberkulosis Terhadap Perubahan Parameter Farmakokinetik Dan Farmakodinamik Obat Oral Antidiabetes. Surabaya : Universitas Hang Tuah.

Oktaviana, Errinda Pramesti, and Niniek Widyorini. "Pengaruh konsentrasi fenol yang berbeda terhadap sintasan benih ikan mas (*Cyprinus Carpio* L.)." *Management of Aquatic Resources Journal (MAQUARES)* 5.1 (2017): 62-68.

Oyer, R. and Schlossberg, D. (1994) 'Hematologic Changes in Tuberculosis. In: Schlossberg D. Tuberculosis', in. Philadelphia; Springer-Verlag, pp. 257–9

Pariand and A. Kumar, "Hepatoprotective activity of *Moringa oleifera* on antitubercular drug-induced liver damage in rats," *Journal of Medicinal Food*, vol. 5, no. 3, pp. 171–177, 2002

PDPI. Pedoman Diagnosis Dan Penatalaksanaan Tuberkulosis Di Indonesia; 2006

Pepeljnjak, S., Kalodera, Z., Zovko. M. (2005). Antimicrobial activity of flavonoids from *Pelargonium radula* (Cav.) L'Hérit. *Acta Pharmaceutica*, 55(4), 431– 435

Pérez-Pérez, E., Sulbarán-Mora, M., Barth, O.M., Massaro, C.F., Vit, P. (2018). Bioactivity and Botanical Origin of *Austroplebeia* and *Tetragonula* Australian Pot-Pollen. In *Pot-Pollen in Stingless Bee*

Melittology; Vit, P., Pedro, S.R.M., Roubik, D.W., Eds.; Springer International Publishing, pp.377–390. 10.1007/978-3-319-61839-5_27

Prasetyo H., dkk. 2022. Pemberdayaan Kader Kesehatan Dan Keluarga Dalam Monitoring Status Kesehatan Penderita Tuberkulosis Di Masa Pandemi Covid19. Journal Homepage: <http://ejurnal.poltekkestasikmalaya.ac.id/index.php/EMaSS/>

Prihatni.D. 2005. Efek Hepatotoksik Anti Tuberkulosis Terhadap Kadar Aspartate Amino transferase dan Alanine Aminotransferase Serum Penderita Tuberkulosis Paru. Indonesian Journal of Clinical Pathology and Medical Laboratory.12(1):1-5.

Purwaeni, dkk. 2020. Perbandingan Jumlah Leukosit Pada Penderita Tuberkulosis Sebelum Dan Sesudah Pengobatan Obat Anti Tuberkulosis Fase Intensif

Puspita, D., Labola, Y.A. (2017) Peran Antioksidan Karotenoid Penangkal Radikal Bebas Penyebab Berbagai Penyakit. Farmasetika, 2(2), doi: 10.24198/farmasetika.v2i2.13668

Quamila, Ajeng. Hello sehat, Efek Samping Obat TBC yang Perlu Anda Waspada. 2018

Riyanto, E.I, Widowati I., dan Sabdono, A. 2013. Skrining aktivitas antibakteri pada ekstrak *Sargasum polycystum* terhadap bakteri

- Vibrio harveyi dan Micrococcus luteus di Pulau Panjang Jepara.
Journal of Marine Research 1(1):115- 121
- Safitri, A. (2018). Nutrisi pada Pasien Tuberculosis dengan Geriatri Disertai Gizi Buruk. *UMI Medical Journal*, 3(2), 59-66.
- Saini, R.K., Nile, S.H., Park, S.W. (2015). Carotenoids from fruits and vegetables: Chemistry, analysis, occurrence, bioavailability and biological activities. *Food Research International*. 76 : 735–750
- Salma Malihah, Nor-Khaizura Mahmud-Ab-Rashid, and Norhasnida Zawawi. "Stingless Bee-Collected Pollen (Bee Bread): Chemical and Microbiology Properties and Health Benefits." *Molecules* 26.4 (2021): 957
- Saputra, Lyndon. (2013). Pengantar Kebutuhan Dasar Manusia. Jakarta: Binarupa. Aksara.
- Sari, D.R.A., Yustiantara, P.S., Paramita, N.L.P., Wirasuta, I.M.A.G. (2014). Uji Aktivitas Antibakteri Ekstrak Etanol Buah Lada Hitam (*Piper nigrum* L.) Terhadap Bakteri *Propionibacterium acnes*. *Jurnal Farmasi Udayana*, 3(2), 1–4.
- Schlossberg, 1994. Tuberculosis. 3rd ed.
- Setiawan dkk., 2014. Pengaruh Terapi Standar Dan Nutrisi Tambahan Terhadap Fungsi Fisik Dan Antropometri Penderita Tuberculosis Paru. *Jurnal Ilmiah Kedokteran* Vol.3, No.2 Edisi Oktober Hal 1-13. FK Universitas Wijaya Kusuma Surabaya.

- Setiawati, A., 2007, Interaksi Obat dalam Gunawan, S.G, 2007, Farmakologi dan Terapi, Edisi 5, hal 862-873, Bagian Farmakologi dan Terapeutik Fakultas Kedokteran UI, Jakarta
- Shaden AM.Khalifa et all, 2021. Bee Pollen : Current Status and Therapeutic Potential. <https://www.mdpi.com/2072-6643/13/6/1876>.
- Situmorang, R.O.P, Hasanudin, A. (2014). Panduan Manual Budidaya Lebah Madu. Balai Penelitian Kehutanan Aek Nauli.
- Sulbarán-Mora, M., Barth, O. M., Flavia Massaro, C., & Vit, P. (2018). Bioactivity and Botanical Origin of Austroplebeia and Tetragnola Australian Pot-Pollen. In *Pot-Pollen in Stingless Bee Melittology* (pp. 377-390). Springer, Cham.
- Suryaningrum, L. D. (2012). *Efek Hepatoprotektif Daun Kelor (Moringa oleifera Lam.) Terhadap Kerusakan Hepar Akibat Obat Isoniazid Pada Tikus Wistar* (Doctoral dissertation, UNS (Sebelas Maret University)
- Syamsu, dkk. 2021. Asupan Nutrisi Mikro Pada Penderita Tuberkulosis dari Beberapa Ekstak Tanaman. Makassar : FK Universitas Muslim Indonesia.
- Syarifah, A., 2015. Kandungan Nutrisi dan Sifat Fungsional Tanaman Kelor (Moringa oleifera). BPTP, Jakarta

- Thakur, M.; Nanda, V. (2020) Composition and functionality of bee pollen: A review. *Trends in Food Science and Technology*. 98, 82–106.
- Thuraidah, dkk. 2017. *Anemia dan Lama Konsumsi Obat Anti Tuberculosis*. Banjarmasin : Poltekes Kemenkes Banjarmasin.
- Toding, 2017. *PENATALAKSANAAN NUTRISI PADA TUBERKULOSIS*. FK Unhas. Makassar.
- Tostmann, A, Boeree, M.J., Aarnoutse, Rob, E., Lange, Wiel, C.M.de., Ven, A. J A M van der., dan Dekhuijzen, R. 2007. Antituberculosis drug-induced hepatotoxicity: Concise up-to-date review, *Journal of Gastroenterology and Hepatology*, 23:192-202
- Tostmann, A., Boeree, M. J., Aarnoutse, R. E., De Lange, W. C. M., Van Der Ven, A. J. A. M., & Dekhuijzen, R. (2008). Antituberculosis drug-induced hepatotoxicity: Concise up-to-date review. *Journal of Gastroenterology and Hepatology (Australia)*, 23(2), 192–202. <https://doi.org/10.1111/j.1440-1746.2007.05207.x>
- Umesh Bharti, et.al., 2017. Ameliorating effect of Bee Pollen against AntiTuberculosis drugs (Rifampicin and Isoniazid) Induced Toxicity on Haematology of Sprague Dawley Rats. *International Journal of Science and Research (IJSR)*
- URCAN, Adriana, et al. "Chemical Composition and Biological Activities of Beebread-Review." *Bulletin of the university of agricultural sciences*

& veterinary medicine Cluj-Napoca. Animal Science & Biotechnologies 74.1 (2017).

USSAID. 2010. Nutrition and Tuberculosis. A review of the literature and considerations for TB control programs. Africa's Health Programme.

Vijayalakshmi, A., Tripura, A., Ravichandiran, V. (2011). Development and Evaluation Anti Acne Products from Terminalia arjuna Bark. International Journal of ChemTech Research. Vol. 3. No. 1. pp. 320-327.

Visser., J. Community-based supplementary feeding for food insecure, vulnerable and malnourished populations - an overview of systematic reviews,. Meta-AnalysisCochrane Database Syst Rev. 2018

Werdhani, Asti Retno. Patofisiologi, Diagnosis, dan Klasifikasi Tuberkulosis. Departemen Ilmu Kedokteran Komunitas, Okupasi, dan Keluarga. Universitas Indonesia. Jakarta, 2014

Widowati R. 2013, . Substitute pollen pengganti serbuk sari .Jurnal WIDYA Kesehatan Dan Lingkungan, 31-36

Widoyono. 2008. Penyakit Tropis, Epidemiologi, Penularan, Pencegahan dan Pemberantasannya.Jakarta : Erlangga.

Widoyono. Penyakit Tropis: Epidemiologi, Penularan, Pencegahan dan Pemberantasannya. Jakarta: Penerbit Erlangga; 2011

World Health Organization Report 2013. Global Tuberculosis Report. Geneva, Switzerland : WHO. 2013

World Health Organization. Global Tuberculosis Report. Geneva: World Health Organization; 2015.

World Health Organization. Global Tuberculosis Report 2020. Geneva. World Health Organization; 2020.

World Health Organization. Global Tuberculosis Report 2021. Geneva. World Health Organization; 2021.

Yeh et.al., 2008. AML1-ETO reprograms hematopoietic cell fate by downregulating scl expression. [ZDB-PUB-071227-16](#) PMID:18156164. Cambridge. England.

Yerlikaya, O. (2014). Effect of bee pollen supplement on antimicrobial , chemical , rheological , sensorial properties and probiotic viability of fermented milk beverages. *Mljekarstvo*, 64(4), 268–279. <https://doi.org/10.15567/mljekarstvo.2014.0406>

Yildiz et.al., 2013. Complementary and Alternative Therapies for Liver Diseases. Hepatoprotective Potential of Chestnut Bee Pollen on Carbon Tetrachloride-Induced Hepatic Damages in Rats.

Yulianti, H., Hadju, V., & Alasiry, E. (2016). Pengaruh ekstrak daun kelor terhadap peningkatan kadar hemoglobin pada remaja putri di SMU Muhammadiyah Kupang. *JST Kesehatan*, 6(3), 399-404

Zachariah R, Spielmann M, Harries A, Salaniponi F. Malnutrition in tuberculosis patients on admission and weight-gain in relation to HIV status in Thyolo distric. Malawi Medical Journal. African Journals Online (AJOL);2001 apr ;13(4).

Zahidul Islam et.al., 2021. *Moringa oleifera* is a prominent source of nutrients with potentials benefits. Bangladesh : Bangladesh Council of Scientific and Industrial Research.

Zakaria et.al., 2022. [Bee Products and Their Applications in the Food and Pharmaceutical Industries](#) 2022, Pages 283-314.

Zuhra, C.F., Tarigan, J., Sihotang, H. (2008). Aktivitas antioksidan senyawa flavonoid dari daun Katuk (*Sauropus androgonus(L) Merr.*). Jurnal Biologi Sumatera, 3(1), 7-10.

Lampiran 1.

LEMBAR PENJELASAN UNTUK RESPONDEN

Assalamu'alaikum Warahmatullahi Wabarakatuh. Salam Sejahtera.

Mohon maaf saya menyita waktu Bapak/Ibu beberapa menit. Saya "X" relawan tim peneliti yang sedang membantu Peneliti Mahasiswi Program Magister Biomedik Farmakologi Universitas Hasanuddin iyang juga tenaga pengajar di Fakultas Kedokteran Unpatti Ambon bermaksud untuk memberikan sedikit informasi mengenai penelitian yang akan dilakukan di kota Ambon saat ini untuk mensupport nutrisi penderita TBC yang sedang menjalani program pengobatan dengan pemberian makanan suplemen yang sudah berbentuk kapsul berisi bee pollen dan juga daun kelor yang fungsi utamanya untuk perbaikan fungsi hati bapak/ibu dan status nutrisi (berat badan) Bapak/Ibu.

Tujuan Penelitian ini adalah memberikan terapi suportif untuk mengurangi efek samping obat obat TBC yang bisa merusak organ tubuh penderita TBC terutama fungsi hati dan status nutrisi sementara Bapak/Ibu menjalani pengobatan program.

Penelitian ini bersifat sukarela. Saya sebagai relawan tim peneliti akan menjaga kerahasiaan identitas dan informasi yang di dapat selama penelitian ini berlangsung.

Bila bapak/ibu bersedia mendapatkan terapi suportif selama 30 hari, maka akan ada beberapa data laboratorium Bapak/Ibu di awal pengobatan yang akan kami ambil, kemudian kami minta kesediaan Bapak/Ibu untuk diperiksa kembali setelah 30 hari dengan semua biaya akan menjadi tanggungan peneliti. Beberapa item yang akan diperiksa kembali adalah Profil Darah Lengkap, Fungsi Hati dan Berat Badan Bapak/Ibu. Selama 30 hari penelitian ini bapak/ibu akan mendapat suplementasi nutrisi kapsul yang akan diminum 3 kali sehari 2 jam setelah sarapan atau makan.

Bila selama penelitian ini berlangsung Bapak/Ibu tiba-tiba ingin mengundurkan diri karena sesuatu hal (misalnya sakit lainnya atau ada keperluan lain mendesak) maka bapak/ibu dapat menghubungi langsung kepada saya.

Ambon, November 2022

Peneliti

Marissa Matinahoru

Lampiran 2

FORMULIR PERSETUJUAN

Yang bertanda tangan dibawah ini :

Nama

Usia

No.Hp

Setelah mendengar dan mengerti penjelasan yang diberikan tentang apa yang dilakukan pada penelitian berjudul "UJI KLINIK BEE POLLEN DAN DAUN KELOR (MORINGA OLEIFERA) SEBAGAI TERAPI SUPORTIF UNTUK PERBAIKAN FUNGSI HATI DAN STATUS NUTRISI PASIEN TB PARU", maka saya bersedia berpartisipasi dalam penelitian ini.

Saya mengerti jika pada penelitian ini saya akan mendapat terapi suportif selama 30 hari dengan kapsul yang harus saya minum tiga kali sehari. Saya menjadi responden atas keinginan saya sendiri, dan tidak ada paksaan apapun dari pihak lain dan tidak ada biaya apapun yang akan ditanggungkan kepada saya.

Saya percaya jika keamanan dan kerahasiaan data yang didapat dari saya selaku responden akan terjamin dan saya dengan ini menyetujui seluruh informasi saya yang diperoleh dalam penelitian ini bisa dipublikasikan dalam bentuk lisan ataupun tulisan dengan tidak mencantumkan nama. Jika terjadi perbedaan pendapat di kemudian hari, kami akan menyelesaikannya secara kekeluargaan.

Ambon, November 2022

Responden

Penanggungjawab Penelitian

Nama : dr.Marissa Matinahoru

Alamat : Perumahan Dosen Unpatti jl.Pisang Tongka Langit Rt 3 Rw 2
Lorong Depan Puskesmas Rumahtiga Ambon 97234

Hp : 081273938347

Email : dokter.marissa@gmail.com

Lampiran 3

SUSUNAN TIM PENELITI

No.	Nama	Kedudukan dalam Penelitian
1.	dr.Marissa Matinahoru	Peneliti Utama
2.	Prof. dr. Peter Kabo, Ph.D., Sp.JP, Sp.FK	Dosen Pembimbing Utama
3.	Yulia Y.Djabir S.Si,MBM.Sc,M.Si, PhD,Apt	Dosen Pembimbing kedua

Lampiran 4

BIODATA PENELITI UTAMA

I. Data Pribadi

Nama : dr.Marissa Matinahoru, S.Ked
Jenis Kelamin : Wanita
Program Studi : Ilmu Biomedik/Farmakologi
NIM : P062182012
Tempat/tgl.lahir : Ambon
Agama : Kristen
Email : dokter.marissa@gmail.com
Alamat : Ambon
Status : Menikah

II. Riwayat Pendidikan:

NO.	STRATA	INSTITUSI	TEMPAT	TAHUN LULUS
1	SD	SDN 1 Rumahtiga Ambon	Ambon	1996
3	SMP	SMP Negeri 7 Ambon	Ambon	1999
4	SMA	SMA Xaverius Ambon	Ambon	2002
5	S1 & Profesi	Universitas Kristen Krida Wacana	Jakarta	2010

III. Pengalaman Penelitian:

1. Perbandingan efek pemberian madu dan *N-acetylcysteine* terhadap gambaran histopatologis ginjal mencit (*mus musculus*) yang diberikan paparan asap rokok (published 2019).

Lampiran 5

BEE POLLEN



PLACEBO



EKSTRAK KELOR



Lampiran 6



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN
RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS KESEHATAN MASYARAKAT

Jln.Perintis Kemerdekaan Km.10 Makassar 90245, Telp.(0411) 585658,
E-mail : fkm.unhas@gmail.com, website: <https://fkm.unhas.ac.id/>

REKOMENDASI PERSETUJUAN ETIK

Nomor : 14367/UN4.14.1/TP.01.02/2022

Tanggal : 30 November 2022

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

No.Protokol	221122092342	No. Sponsor Protokol	
Peneliti Utama	Marissa Matinahoru	Sponsor	Pribadi
Judul Peneliti	Uji Klinik Bee Pollen Dan Daun Kelor (Moringa Oleifera) Sebagai Terapi Suportif Untuk Perbaikan Fungsi Hati Dan Status Nutrisi Pasien TB Paru		
No.Versi Protokol	1	Tanggal Versi	22 November 2022
No.Versi PSP	1	Tanggal Versi	22 November 2022
Tempat Penelitian	Kota Ambon		
Judul Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 30 November 2022 Sampai 30 November 2023	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan 	Tanggal 30 November 2022
Sekretaris komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan 	Tanggal 30 November 2022

Kewajiban Peneliti Utama :

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



Lampiran 7

Data Excel Sampel

NO	SGOT		SGPT		HB		LED		TROMBOSIT		LEUKOSIT		ERITROSIT		IMT	
	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah	sebelum	sesudah
1	34	31	50	42	9,7	10,3	24	20	150	170	4,1	7,5	4,5	4,1	17,8	18,3
2	52	45	60	54	9	9,5	30	21	170	195	8,2	5,7	5,8	5,3	16,8	17,2
3	42	32	45	36	9,3	10	26	20	158	180	6,3	9,5	4,8	4,2	17,5	17,9
4	41	38	51	46	9,1	10,8	25	19	161	181	4,6	5,8	5,2	4,5	16,8	17,3
5	43	40	49	40	9,5	11	23	20	154	175	8,7	6,5	4,3	3,7	17,2	17,6
6	46	42	53	45	9,9	10,5	27	20	165	186	4,9	6,4	5,1	4,7	17,3	17,7
7	48	35	46	38	10,8	11,5	29	21	180	200	7,1	7,4	4,3	3,8	18,4	18,9
8	55	40	45	40	10,2	11,1	28	20	175	195	8,4	9,9	4,6	3,9	17,8	18,3
9	40	31	47	38	11,5	12	23	21	159	179	4,4	5,1	5,7	5,1	17,6	18,4
10	45	40	55	47	9,8	10,8	28	20	168	190	4,7	5,8	4,5	4,1	18,6	19,5
11	55	40	59	54	8,9	9,3	30	21	173	193	5,7	6,4	4,7	4,1	19,1	20
12	51	48	48	38	9,1	9,7	26	18	164	185	9,7	8,1	5,4	4,8	18,3	18,75
13	40	35	52	44	11,2	11,9	23	20	150	170	5,6	5,9	4,8	3,9	19,2	19,6
14	46	42	43	34	11,3	12	25	19	158	178	6,1	5	5,7	4,9	20	20
15	50	44	45	39	9,6	10,2	25	20	162	182	7,7	6,5	4,2	3,5	17,7	18,6
16	32	26	51	43	9,9	11,1	25	21	169	189	8,1	9,8	4,6	3,8	17,4	17,8
17	51	50	60	51	8,9	9,5	28	17	173	193	5,4	6,2	4,8	4,1	17,1	17,5
18	44	40	56	48	9,7	10,9	25	20	170	190	4,3	5,2	5,7	5,2	17,5	18,3
19	40	31	46	39	10,3	11,2	24	18	154	174	8,7	5,9	4,9	4,2	18,2	18,6
20	45	40	45	40	9,5	9,9	29	19	180	200	8,1	9,7	5,1	4,5	18,3	18,7
21	43	31	53	46	9	9,8	23	19	161	181	7,5	7,1	5,3	4,6	19,1	19,4
22	55	40	57	48	8,9	9,5	30	26	170	190	8,3	9,1	5,7	5,3	18,2	19,0
23	52	32	50	44	9,2	9,6	28	21	179	199	7,9	6,5	4,7	4,2	18,8	19,1
24	41	35	56	51	9,1	9,8	30	22	152	172	5,1	6,8	4,5	3,8	18,3	19,1
25	40	31	47	37	10,2	11,3	25	20	155	180	4,6	4,1	5,6	4,7	19,1	19,4
26	46	39	45	39	11,1	12	30	23	163	188	6,7	7,9	5,7	4,5	19,1	19,8
27	42	31	58	50	9,1	9,7	28	20	174	194	4,9	5,8	4,9	4,5	19,5	19,5
28	50	30	60	51	8,9	9,9	24	20	159	194	8,4	9,5	5,2	4,7	19,5	19,9
29	54	31	46	38	10,3	11,1	21	19	157	177	8,7	7,9	5,9	5,3	18,3	19,0
30	41	38	45	35	10,5	11,7	23	18	155	175	6,8	7,5	5,5	5,1	17,9	18,2
31	47	31	54	47	9,3	9,9	26	20	169	189	5,4	6,8	4,7	4,2	18,4	19,1
32	38	30	58	49	9	9,8	28	22	154	174	8,1	9,1	4,2	3,5	18,3	19,1
33	52	35	49	41	10,4	11,2	24	21	178	200	9,8	8,7	4,8	4,1	19,3	19,7
34	38	30	51	44	9,7	10,5	29	23	180	200	4,6	5,8	5,4	4,9	20,2	20,5
35	43	39	57	48	9,3	10,1	27	22	154	174	4,9	4,1	5,2	4,5	20,2	20,5
36	40	27	50	43	9,6	10,2	24	19	164	184	5,4	6,8	4,8	4,3	19,0	19,7
37	50	42	53	44	9,3	9,6	23	19	173	193	6,8	7,7	5,1	4,6	18,3	19,1
38	48	42	48	40	9,9	10,1	28	21	151	171	5,5	6,1	4,9	4,2	18,3	19,1
39	39	31	59	49	8,9	9,7	30	23	164	184	8,4	9,1	4,3	3,4	17,6	18,3
40	47	40	46	39	10,3	11,2	27	24	169	189	7,6	6,2	5,7	5,3	17,6	18,7
41	43	31	54	48	9,5	10,7	26	19	175	200	5	6,1	5,4	5,1	19,1	19,8
42	40	31	52	45	9,8	10,5	23	18	159	179	8,9	9,5	5,2	4,5	18,7	19,4
43	55	41	47	41	10,1	10,8	25	21	172	197	4,3	5	4,2	3,4	17,9	18,7
44	50	31	49	40	9,9	10,6	26	20	156	176	7,9	8,3	4,5	3,8	17,4	17,8
45	46	40	51	43	9,7	10,3	27	21	168	186	4,7	6,5	5,1	4,3	17,1	17,5
46	55	50	57	52	9,2	10	25	20	156	176	6,2	7	4,6	3,9	17,5	18,3
47	38	30	60	50	8,9	9,8	29	23	164	186	5,3	6,9	5,8	4,9	18,2	18,6
48	41	35	55	48	9,1	9,8	24	20	179	199	6	5,2	4,2	3,5	18,3	18,7
49	67	55	46	54	10,5	11,7	30	24	171	191	6,1	7,2	4,9	4,2	19,1	19,4
50	55	45	52	43	9,4	10,1	28	23	159	179	8,9	9,8	5,1	4,6	18,2	19,0
51	42	30	45	40	11,1	12,1	25	21	175	195	7,8	9	5,3	4,7	19,1	19,4
52	44	32	52	49	9,8	10,5	26	21	163	183	6,2	5,6	4,3	3,6	18,2	18,5
53	46	40	49	46	9,9	10,8	24	20	156	176	4,6	5,3	4,2	3,4	18,8	19,1
54	39	31	60	53	8,9	9,5	27	20	172	197	5,7	6,4	5,4	4,9	18,3	18,8
55	46	42	39	38	9,1	9,9	21	18	165	185	7,8	8,5	5,6	4,9	19,1	19,4
56	51	43	40	36	10,2	11,5	23	20	153	173	6,1	5,4	4,7	4,1	19,1	19,4
57	54	30	49	46	9,7	10,4	26	22	180	200	5,8	4,7	4,8	4,3	19,5	19,5
58	44	38	40	38	9,6	10,2	29	24	156	176	5,9	6,8	5,7	5,2	19,5	19,9
59	40	30	48	45	9,2	9,9	30	23	174	194	8,8	9,5	4,6	4,2	18,3	19,0
60	50	35	40	38	9,1	9,7	24	20	160	185	7,6	8,9	4,1	3,3	17,9	18,2
61	40	30	39	37	11,2	12	28	23	167	187	5	6,4	5,4	4,8	18,4	19,1
62	48	39	55	49	9,7	10,4	24	21	154	174	6,9	7,5	5,9	5,3	18,3	18,8
63	42	32	48	42	9,5	10,5	27	24	170	190	8,7	9,9	5,7	5,3	19,3	19,7
64	63	50	39	36	10,5	11,2	27	21	168	193	9,2	8,4	4,2	3,6	20,2	20,5
65	44	36	42	40	10,1	11	25	20	173	193	5,3	6,1	5,6	5,2	20,2	20,5
66	55	42	60	52	8,9	9,5	23	20	150	170	5,8	4,9	5,3	4,5	19,0	19,4
67	51	36	58	49	9,1	9,8	26	21	158	178	9	8,5	4,8	4,2	18,3	19,1
68	43	31	49	45	9,2	10	28	20	162	182	6,7	7,5	4,2	3,5	18,3	18,8
69	50	35	49	40	10	10,8	26	22	174	194	4,1	5,6	4,1	3,5	17,6	18,3
70	48	44	52	49	9,9	10,9	27	23	160	180	8,7	6,8	5,9	5,5	17,6	17,6
71	55	49	59	51	9,3	10,1	30	23	157	177	4	5,3	5,7	5,2	19,1	19,8
72	38	32	43	41	9,6	10,8	24	19	163	183	7,5	8,2	4,8	4,2	18,7	19,4

Lampiran 8

SPSS

SGOT

Descriptive Statistics

Dependent Variable: SGOT.pre

Perlakuan	Mean	Std. Deviation	N
Bee Pollen	45.281	6.0334	32
Eks. Kelor	47.056	7.7799	18
Plasebo	46.955	6.2601	22
Total	46.236	6.5359	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
SGOT.pre	Bee Pollen	.097	32	.200*	.963	32	.323
	Eks. Kelor	.143	18	.200*	.913	18	.098
	Plasebo	.136	22	.200*	.951	22	.324

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
SGOT.pre	Based on Mean	.707	2	69	.497
	Based on Median	.708	2	69	.496
	Based on Median and with adjusted df	.708	2	65.142	.496
	Based on trimmed mean	.693	2	69	.503

ANOVA

SGOT.pre

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	52.618	2	26.309	.609	.547
Within Groups	2980.368	69	43.194		
Total	3032.986	71			

Descriptive Statistics

Dependent Variable: SGOT.post

Perlakuan	Mean	Std. Deviation	N
Bee Pollen	36.531	5.9133	32
Eks. Kelor	37.500	7.6331	18
Plasebo	36.682	6.2212	22
Total	36.819	6.3895	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
SGOT.post	Bee Pollen	.184	32	.007	.929	32	.037
	Eks. Kelor	.192	18	.079	.924	18	.153
	Plasebo	.183	22	.053	.898	22	.028

a. Lilliefors Significance Correction

NPar Tests Kruskal-Wallis Test

Ranks

	Perlakuan	N	Mean Rank
SGOT.post	Bee Pollen	32	36.23
	Eks. Kelor	18	37.36
	Plasebo	22	36.18
	Total	72	

Test Statistics^{a,b}

	SGOT.post
Kruskal-Wallis H	.041
Df	2
Asymp. Sig.	.980

a. Kruskal Wallis Test

b. Grouping Variable: Perlakuan

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	SGOT.PrePln	45.281	32	6.0334	1.0666
	SGOT.post.Pln	36.5313	32	5.91327	1.04533
Pair 2	SGOT.pre.Klr	47.0556	18	7.77985	1.83373
	SGOT.post.klr	37.5000	18	7.63313	1.79915
Pair 3	SGOT.pre.plsbo	46.9545	22	6.26006	1.33465
	SGOT.post.plsbo	36.6818	22	6.22121	1.32637

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	SGOT.PrePln & SGOT.post.Pln	32	.536	.002
Pair 2	SGOT.pre.Klr & SGOT.post.klr	18	.854	.000
Pair 3	SGOT.pre.plsbo & SGOT.post.plsbo	22	.726	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	SGOT.PrePln - SGOT.post.Pln	8.75000	5.75298	1.01699	6.67583	10.82417	8.604	31	.000
Pair 2	SGOT.pre.Klr - SGOT.post.klr	9.55556	4.16176	.98094	7.48596	11.62515	9.741	17	.000
Pair 3	SGOT.pre.plsbo - SGOT.post.plsbo	10.27273	4.62068	.98513	8.22403	12.32142	10.428	21	.000

SGPT

Descriptive Statistics

	N	Mean	Std. Deviation
SGPTsebBP	32	51.09	5.468
SGPTsebKLR	18	52.00	4.298
SGPTsebPLB	22	47.95	7.234
Valid N (listwise)	18		

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
SGPT.pre	Bee Pollen	.148	32	.072	.912	32	.013
	Eks. Kelor	.111	18	.200*	.955	18	.502
	Plasebo	.137	22	.200*	.907	22	.041

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
SGPT.pre	Based on Mean	3.091	2	69	.052
	Based on Median	2.945	2	69	.059
	Based on Median and with adjusted df	2.945	2	57.068	.061
	Based on trimmed mean	3.193	2	69	.047

ANOVA

SGPT.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	192.938	2	96.469	2.845	.065
Within Groups	2339.673	69	33.908		
Total	2532.611	71			

Descriptive Statistics

	N	Mean	Std. Deviation
SGPTssdhBP	32	43.47	5.747
SGPTssdhKLR	18	45.11	4.404
SGPTssdhPLB	22	43.64	5.551
Valid N (listwise)	18		

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
SGPT.post	Bee Pollen	.164	32	.028	.950	32	.142
	Eks. Kelor	.155	18	.200*	.943	18	.324
	Plasebo	.153	22	.198	.922	22	.084

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
SGPT.post	Based on Mean	1.684	2	69	.193
	Based on Median	1.892	2	69	.159
	Based on Median and with adjusted df	1.892	2	67.919	.159
	Based on trimmed mean	1.745	2	69	.182

ANOVA

SGPT.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.815	2	16.908	.583	.561
Within Groups	2000.837	69	28.998		
Total	2034.653	71			

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
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Pair 1	SGPT.Pre.Pln	51.0938	32	5.46755	.96654
	SGPT.Post.Pln	43.4688	32	5.74728	1.01599
Pair 2	SGPT.Pre.Klr	52.0000	18	4.29774	1.01299
	SGPT.Post.Klr	45.1111	18	4.40439	1.03813
Pair 3	SGPT.Pre.Plsbo	47.9545	22	7.23403	1.54230
	SGPT.Post.Plsbo	43.6364	22	5.55102	1.18348

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	SGPT.Pre.Pln & SGPT.Post.Pln	32	.960	.000
Pair 2	SGPT.Pre.Klr & SGPT.Post.Klr	18	.584	.011
Pair 3	SGPT.Pre.Plsbo & SGPT.Post.Plsbo	22	.957	.000

HAEMOGLOBIN (Hb)

Descriptive Statistics

Dependent Variable: HB.pre

Perlakuan	Mean	Std. Deviation	N
Pollen	9.744	.7878	32
Eks. Kelor	9.639	.4865	18
Plasebo	9.709	.6369	22
Total	9.707	.6704	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
HB.pre	Pollen	.151	32	.062	.887	32	.003
	Eks. Kelor	.090	18	.200*	.965	18	.704
	Plasebo	.109	22	.200*	.916	22	.063

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
HB.pre	Based on Mean	2.650	2	69	.078
	Based on Median	1.972	2	69	.147
	Based on Median and with adjusted df	1.972	2	59.735	.148
	Based on trimmed mean	2.359	2	69	.102

ANOVA

HB.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.127	2	.063	.138	.872
Within Groups	31.780	69	.461		
Total	31.907	71			

Descriptive Statistics

Dependent Variable: HB.post

Perlakuan	Mean	Std. Deviation	N
Pollen	10.541	.8680	32
Eks. Kelor	10.383	.5742	18
Plasebo	10.523	.7348	22
Total	10.496	.7563	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
HB.post	Pollen	.176	32	.013	.913	32	.013
	Eks. Kelor	.134	18	.200*	.944	18	.333
	Plasebo	.103	22	.200*	.947	22	.280

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

NPar Tests Kruskal-Wallis Test

Ranks			
	Perlakuan	N	Mean Rank
HB.post	Pollen	32	36.77
	Eks. Kelor	18	34.72
	Plasebo	22	37.57
	Total	72	

Test Statistics^{a,b}

HB.post	
Kruskal-Wallis H	.193
Df	2
Asymp. Sig.	.908

a. Kruskal Wallis Test

b. Grouping Variable: Perlakuan

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	HB.PrePln	9.744	32	.7878	.1393
	HB.post.Pln	10.541	32	.8680	.1534
Pair 2	HB.pre.Klr	9.639	18	.4865	.1147
	HB.post.klr	10.383	18	.5742	.1353
Pair 3	HB.pre.plsbo	9.709	22	.6369	.1358
	HB.post.plsbo	10.523	22	.7348	.1567

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	HB.PrePln & HB.post.Pln	32	.934	.000
Pair 2	HB.pre.Klr & HB.post.klr	18	.906	.000
Pair 3	HB.pre.plsbo & HB.post.plsbo	22	.971	.000

ERITROSIT

Descriptive Statistics

Dependent Variable: Eritrosit.pre

Perlakuan	Mean	Std. Deviation	N
Pollen	5.019	.5264	32
Eks. Kelor	4.956	.4731	18
Plasebo	5.014	.6439	22
Total	5.001	.5458	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Eritrosit.pre	Pollen	.130	32	.184	.933	32	.048
	Eks. Kelor	.120	18	.200*	.963	18	.665
	Plasebo	.172	22	.090	.893	22	.021

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Eritrosit.pre	Based on Mean	3.142	2	69	.049
	Based on Median	2.761	2	69	.070
	Based on Median and with adjusted df	2.761	2	68.461	.070
	Based on trimmed mean	3.140	2	69	.050

ANOVA

Eritrosit.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.051	2	.025	.083	.920
Within Groups	21.099	69	.306		
Total	21.150	71			

Descriptive Statistics

Dependent Variable: Eritrosit.post

Perlakuan	Mean	Std. Deviation	N
Pollen	4.400	.5394	32
Eks. Kelor	4.306	.5610	18
Plasebo	4.027	.7179	22
Total	4.385	.5976	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Eritrosit.post	Pollen	.145	32	.087	.951	32	.156
	Eks. Kelor	.092	18	.200*	.965	18	.706
	Plasebo	.148	22	.200*	.921	22	.078

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Eritrosit.post	Based on Mean	2.254	2	69	.113
	Based on Median	2.225	2	69	.116
	Based on Median and with adjusted df	2.225	2	66.873	.116
	Based on trimmed mean	2.257	2	69	.112

ANOVA

Eritrosit.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.160	2	.080	.219	.804
Within Groups	25.193	69	.365		
Total	25.353	71			

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Ertst.PrePln	5.019	32	.5264	.0930
	Ertst.post.Pln	4.400	32	.5394	.0954
Pair 2	Ertst.pre.Klr	4.956	18	.4731	.1115
	Ertst.post.klr	4.306	18	.5610	.1322
Pair 3	Ertst.pre.plsbo	5.014	22	.6439	.1373
	Ertst.post.plsbo	4.027	22	.7179	.1531

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Ertst.PrePln & Ertst.post.Pln	32	.944	.000
Pair 2	Ertst.pre.Klr & Ertst.post.klr	18	.963	.000
Pair 3	Ertst.pre.plsbo & Ertst.post.plsbo	22	.988	.000

LEUKOSIT

Descriptive Statistics

Dependent Variable: Lekst.pre

Perlakuan	Mean	Std. Deviation	N
Pollen	6.663	1.6700	32
Eks. Kelor	6.461	1.7133	18
Plasebo	6.691	1.6189	22
Total	6.621	1.6445	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Lekst.pre	Pollen	.149	32	.068	.919	32	.019
	Eks. Kelor	.172	18	.171	.915	18	.104
	Plasebo	.120	22	.200*	.948	22	.289

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Lekst.pre	Based on Mean	.152	2	69	.859
	Based on Median	.151	2	69	.860
	Based on Median and with adjusted df	.151	2	62.531	.860
	Based on trimmed mean	.149	2	69	.862

ANOVA

Lekst.pre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.623	2	.311	.112	.894
Within Groups	191.396	69	2.774		
Total	192.019	71			

Descriptive Statistics

Dependent Variable: Lekst.post

Perlakuan	Mean	Std. Deviation	N
Pollen	7.075	1.5868	32
Eks. Kelor	7.000	1.5952	18
Plasebo	7.055	1.6062	22
Total	7.050	1.5725	72

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Lekst.post	Pollen	.141	32	.103	.941	32	.082
	Eks. Kelor	.117	18	.200*	.971	18	.823
	Plasebo	.136	22	.200*	.939	22	.192

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Lekst.post	Based on Mean	.143	2	69	.867
	Based on Median	.107	2	69	.899
	Based on Median and with adjusted df	.107	2	67.076	.899
	Based on trimmed mean	.136	2	69	.873

ANOVA

Lekst.post

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.065	2	.033	.013	.987
Within Groups	175.495	69	2.543		
Total	175.560	71			

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Leukst.PrePln	6.663	32	1.6700	.2952
	Leukst.post.Pln	7.075	32	1.5868	.2805
Pair 2	Leukst.pre.Klr	6.461	18	1.7133	.4038
	Leukst.post.klr	7.000	18	1.5952	.3760
Pair 3	Leukst.pre.plsbo	6.691	22	1.6189	.3452
	Leukst.post.plsbo	7.055	22	1.6062	.3424

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Leukst.PrePln & Leukst.post.Pln	32	.580	.000
Pair 2	Leukst.pre.Klr & Leukst.post.klr	18	.842	.000
Pair 3	Leukst.pre.plsbo & Leukst.post.plsbo	22	.818	.000

TROMBOSIT

Descriptive Statistics

Dependent Variable: Trmbst.post

Perlakuan	Mean	Std. Deviation	N
Pollen	184.937	9.0765	32
Eks. Kelor	186.889	9.7672	18
Plasebo	184.773	8.7120	22
Total	185.375	9.0576	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Trmbst.post	Pollen	.110	32	.200 [*]	.951	32	.158
	Eks. Kelor	.127	18	.200 [*]	.927	18	.174
	Plasebo	.146	22	.200 [*]	.957	22	.430

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Trmbst.post	Based on Mean	.206	2	69	.814
	Based on Median	.164	2	69	.849
	Based on Median and with adjusted df	.164	2	67.474	.849
	Based on trimmed mean	.214	2	69	.808

ANOVA

Trmbst.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	55.359	2	27.679	.331	.719
Within Groups	5769.516	69	83.616		
Total	5824.875	71			

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Trmbst.PrePln	163.781	32	8.9541	1.5829
	Trmbst.post.Pln	184.938	32	9.0765	1.6045
Pair 2	Trmbst.pre.Klr	166.222	18	9.0460	2.1322
	Trmbst.post.klr	186.889	18	9.7672	2.3022
Pair 3	Trmbst.pre.plsbo	164.091	22	8.3147	1.7727
	Trmbst.post.plsbo	184.773	22	8.7120	1.8574

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Trmbst.PrePln & Trmbst.post.Pln	32	.947	.000
Pair 2	Trmbst.pre.Klr & Trmbst.post.klr	18	.985	.000
Pair 3	Trmbst.pre.plsbo & Trmbst.post.plsbo	22	.980	.000

Descriptive Statistics

Dependent Variable: Trmbst.pre

Perlakuan	Mean	Std. Deviation	N
Pollen	163.781	8.9541	32
Eks. Kelor	166.222	9.0460	18
Plasebo	164.091	8.3147	22
Total	164.486	8.7226	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Trmbst.pre	Pollen	.110	32	.200*	.951	32	.158
	Eks. Kelor	.121	18	.200*	.955	18	.505
	Plasebo	.102	22	.200*	.967	22	.633

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Trmbst.pre	Based on Mean	.165	2	69	.848
	Based on Median	.185	2	69	.832
	Based on Median and with adjusted df	.185	2	68.787	.832
	Based on trimmed mean	.166	2	69	.848

ANOVA

Trmbst.pre

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	73.588	2	36.794	.476	.623
Within Groups	5328.398	69	77.223		
Total	5401.986	71			

INDEKS MASSA TUBUH (IMT)

Descriptive Statistics

Dependent Variable: IMT.post

Perlakuan	Mean	Std. Deviation	N
Bee Pollen	18.222	.8245	32
Eks. Kelor	18.444	.9018	18
Plasebo	18.764	.7234	22
Total	18.443	.8368	72

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
IMT.post	Bee Pollen	.107	32	.200 [*]	.973	32	.574
	Eks. Kelor	.175	18	.152	.940	18	.295
	Plasebo	.148	22	.200 [*]	.949	22	.305

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IMT.post	Based on Mean	.388	2	69	.680
	Based on Median	.210	2	69	.811
	Based on Median and with adjusted df	.210	2	64.332	.811
	Based on trimmed mean	.358	2	69	.700

ANOVA

IMT.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.826	2	1.913	2.877	.063
Within Groups	45.890	69	.665		
Total	49.717	71			

Descriptive Statistics

Dependent Variable: IMT.post

Perlakuan	Mean	Std. Deviation	N
Bee Pollen	18.736	.8046	32
Eks. Kelor	19.044	.8234	18
Plasebo	19.191	.6962	22
Total	18.952	.7933	72

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
IMT.post	Bee Pollen	.097	32	.200 [*]	.963	32	.341
	Eks. Kelor	.107	18	.200 [*]	.974	18	.861
	Plasebo	.118	22	.200 [*]	.971	22	.732

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IMT.post	Based on Mean	.649	2	69	.525
	Based on Median	.627	2	69	.537
	Based on Median and with adjusted df	.627	2	68.550	.537
	Based on trimmed mean	.641	2	69	.530

ANOVA

IMT.post

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.903	2	1.452	2.398	.098
Within Groups	41.774	69	.605		
Total	44.677	71			

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	IMT.Pre.PIn	18.2219	32	.82452	.14576
	IMT.Post.PIn	18.7359	32	.80465	.14224
Pair 2	IMT.Pre.Klr	18.4444	18	.90178	.21255
	IMT.Post.Klr	19.0444	18	.82335	.19407
Pair 3	IMT.Pre.Plsbo	18.7636	22	.72345	.15424
	IMT.Post.Plsbo	19.1909	22	.69619	.14843

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	IMT.Pre.PIn & IMT.Post.PIn	32	.956	.000
Pair 2	IMT.Pre.Klr & IMT.Post.Klr	18	.966	.000
Pair 3	IMT.Pre.Plsbo & IMT.Post.Plsbo	22	.952	.000

PAIR T-TEST

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	SGPT.Pre.PIn - SGPT.Post.PIn	7.62500	1.60141	.28309	7.04763	8.20237	26.935	31	.000
Pair 2	SGPT.Pre.Klr - SGPT.Post.Klr	6.88889	3.96883	.93546	4.91523	8.86254	7.364	17	.000
Pair 3	SGPT.Pre.Plsbo - SGPT.Post.Plsbo	4.31818	2.51446	.53608	3.20333	5.43303	8.055	21	.000

Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	HB.PrePIn - HB.post.PIn	-.7969	.3116	.0551	-.9092	-.6845	-14.467	31	.000
Pair 2	HB.pre.Klr - HB.post.klr	-.7444	.2455	.0579	-.8665	-.6224	-12.866	17	.000
Pair 3	HB.pre.plsbo - HB.post.plsbo	-.8136	.1910	.0407	-.8983	-.7290	-19.983	21	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Ertst.PrePIn - Ertst.post.PIn	.6187	.1786	.0316	.5544	.6831	19.599	31	.000
Pair 2	Ertst.pre.Klr - Ertst.post.klr	.6500	.1654	.0390	.5678	.7322	16.674	17	.000
Pair 3	Ertst.pre.plsbo - Ertst.post.plsbo	.5864	.1283	.0274	.5295	.6433	21.429	21	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower Upper			
Pair 1	Leukst.PrePln - Leukst.post.Pln	-.4125	1.4936	.2640	-.9510 .1260	-1.562	31	.128
Pair 2	Leukst.pre.Klr - Leukst.post.klr	-.5389	.9382	.2211	-1.0054 -.0723	-2.437	17	.026
Pair 3	Leukst.pre.plsbo - Leukst.post.plsbo	-.3636	.9718	.2072	-.7945 .0672	-1.755	21	.094

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower Upper			
Pair 1	Trmbst.PrePln - Trmbst.post.Pln	- 21.1563	2.9415	.5200	-22.2168 -20.0957	-40.686	31	.000
Pair 2	Trmbst.pre.Klr - Trmbst.post.klr	- 20.6667	1.7823	.4201	-21.5530 -19.7804	-49.197	17	.000
Pair 3	Trmbst.pre.plsbo - Trmbst.post.plsbo	- 20.6818	1.7563	.3744	-21.4605 -19.9031	-55.235	21	.000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower Upper			
Pair 1	IMT.Pre.Pln - IMT.Post.Pln	-.51406	.24138	.04267	-.60109 -.42704	-12.047	31	.000
Pair 2	IMT.Pre.Klr - IMT.Post.Klr	-.60000	.23764	.05601	-.71817 -.48183	-10.712	17	.000
Pair 3	IMT.Pre.Plsbo - IMT.Post.Plsbo	-.42727	.22078	.04707	-.52516 -.32938	-9.077	21	.000