

## **BAB 7** **KESIMPULAN DAN SARAN**

### **7.1 Kesimpulan**

Berdasarkan hasil penelitian dapat disimpulkan bahwa :

1. Berdasarkan hasil uji mikrodilusi, KHM *Morus nigra* belum dapat ditentukan.
2. Pemberian ekstrak etanol *Morus nigra* memiliki efikasi atau daya hambat terhadap pertumbuhan *Salmonella typhi*.
3. *Morus nigra* dapat dipakai sebagai potensial bakteriostatik terhadap *Salmonella typhi*.

### **7.2 Saran**

Berdasarkan hasil penelitian dapat disarankan sebagai berikut:

1. Konsentrasi *Morus nigra* ditingkatkan agar KBM dapat ditentukan pada uji mikrodilusi.
2. Range konsentrasi *Morus nigra* lebih dipersempit agar penentuan konsentrasi daya hambat dan daya bunuh lebih spesifik.
3. Membuat penelitian untuk mikroorganisme lain yang mudah menginfeksi manusia.

## **DAFTAR PUSTAKA**

1. Sudoyo AW, Setiyohadi B, Alwi I, Simadibrata M, Setiadi S. Buku ajar ilmu penyakit dalam jilid 1. Interna Publishing. 2014. 1973-1983 p.
2. Nuruzzaman H, Syahrul F. Analisis risiko kejadian demam tifoid berdasarkan kebersihan diri dan kebiasaan jajan di rumah. 2016;
3. Rohana Y. The difference of knowledge and primary preventive for typhoid fever between parents in rural and urban areas to children under-five ages. Vol. 4, Jurnal Berkala Epidemiologi. 2017. 384 p.
4. Amarantini C. Seleksi bakteri Salmonella Typhi dari kultur darah penderita demam tifoid. 2015;(May 2009).
5. Tobergte DR, Curtis S. Medical microbiology and infection at a glance. Vol. 53, Journal of Chemical Information and Modeling. 2013. 1689-1699 p.
6. Soedarmo SSP, Garna H, Hadinegoro SRS, Satari HI. Buku ajar infeksi & pediatri tropis. Bagian Ilmu Kesehatan Anak FKUI. 2002. 339-45 p.
7. Cita YP. Bakteri Salmonella typhi dan demam tifoid. J Kesehat Masy Sept - Maret 2011. 2011;6(1):42–6.
8. Carroll KC, Butel JS, Morse SA, Mietzner T. Jawetz, Melnick, & Adelberg's Medical Microbiology, 27 ed. 2016. 867 p.
9. Services M. UK standards for microbiology investigations. Bacteriology. 2015;B 55(5.2):1–21.
10. Kemenkes.RI. Pedoman pengendalian tifoid. 2006;
11. Ugboko H, De N. Mechanisms of antibiotic resistance in *Salmonella typhi*. Vol. 3, International Journal of Current Microbiology and Applied Sciences. 2014. p. 461–76.
12. Sehra D, Sehra S, Relia P, Sehra ST. An altered drug resistance pattern in *Salmonella Typhi*. Am J Infect Dis Microbiol. 2013;1:84–5.
13. World Health Organisation (WHO). WHO traditional medicine strategy 2014-2023. World Health Organization (WHO) 2013 p. 1–76.
14. Effendi M. Pemanfaatan sistem pengobatan tradisional (Battro) di puskesmas. J Univ Airlangga. 2013;2.
15. Susanti ANA, Aristya GR, Kasiamdari RSRI. Karakterisasi Morfologi dan Anatomi Stroberi ( *Fragaria x ananassa* D . cv . Festival ) Hasil Induksi Kolkisin. Biog J Ilm Biol. 2015;3(2):66–75.
16. Isnain W, Muin N. “Tanaman murbei” sumber daya hutan multi manfaat. Info Tek EBONI. 2015;12:111–9.
17. Koyuncu F, Çetinbaş M, Ibrahim E. Nutritional Constituents of Wild-

- Grown Black Mulberry ( *Morus nigra* L .). J Appl Bot Food Qual. 2014;87:93–6.
18. Khalid N, Fawad SA, Ahmed I. Antimicrobial Activity, Phytochemical Profile and Trace Minerals of Black Mulberry (*Morus Nigra* L.) Fresh Juice. Pak J Bot. 2011;43:91–6.
  19. *Morus nigra*. In. Available from: <https://drylands.org.au/product/morus-nigra-black/>
  20. *Morus nigra* [Internet]. ITIS Report. 2011 [cited 2018 Mar 5]. p. 19069. Available from: [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=19069#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=19069#null)
  21. Imran M, Khan H, Shah M, Khan R, Khan F. Chemical composition and antioxidant activity of certain *Morus* species. J Zhejiang Univ Sci B [Internet]. 2010;11(12):973–80. Available from: <http://www.springerlink.com/index/10.1631/jzus.B1000173>
  22. Kumar V, Chauhan S. Mulberry: life enhancer. J Med Plants Res. 2008;2:271–8.
  23. KOYUNCU F. Morphological and agronomical characterization of native black mulberry (*Morus nigra* L.) in Sütçüler, Turkey. Plant Genet Resour Newsl. 2004;138:32–5.
  24. Souza GR, Oliveira-Junior RG, Diniz TC, Branco A, Lima-Saraiva SRG, Guimarães AL, et al. Assessment of the antibacterial, cytotoxic and antioxidant activities of *Morus nigra* L. (Moraceae). Brazilian J Biol. 2017;14(2):1–7.
  25. Yiğit D, Yiğit N. Antibacterial activity of black mulberry (*morus nigra*) fruits and leaves. EÜFBED - Fen Bilim Enstitüsü Derg Cilt-Say. 2008;1:39–47.
  26. Krisch J, Galgóczy L, Tölgyesi M, Papp T, Vágvölgyi C. Effect of fruit juices and pomace extracts on the growth of Gram-positive and Gram-negative bacteria. Acta Biol Szeged. 2008;52(2):267–70.
  27. Budiman A, Aulifa DL, Kusuma ASW, Sulastri A. Antibacterial and antioxidant activity of black mulberry (*Morus nigra* L.) extract for acne treatment. Pharmacogn J. 2017;9(5).
  28. Min J, Yu SW, Baek SH, Nair KM, Bae ON, Bhatt A, et al. Neuroprotective effect of cyanidin-3-O-glucoside anthocyanin in mice with focal cerebral ischemia. Neurosci Lett. 2011;500(3):157–61.
  29. Kim H, Yoon YJ, Shon JH, Cha IJ, Shin JG, Liu KH. Inhibitory effects of fruit juices on CYP3A activity. Drug Metab Dispos [Internet]. 2006;34(11):521–3. Available from: [papers://7e9ae530-1d17-4621-9692-33eea58f3f1f/Paper/p388](https://pubs.acs.org/doi/10.1021/dm060174r)
  30. Sakagami H, Asano K, Satoh K, Takahashi K, Kobayashi M, Koga N, et al.

- Anti-stress, anti-HIV and vitamin C-synergized radical scavenging activity of mulberry juice fractions. *In Vivo* (Brooklyn). 2007;21(3):499–506.
31. Kasper D, Fauci A, Hauser S, Longo D, Jameson J, Loscalzo J. Harrison's principles of internal medicine. 19th ed. Star. McGraw-Hill; 2015. 2958 p.
  32. S D. Keanekaragaman genetik *Salmonella typhi*. 2009;2.
  33. Kathleen PT, Barry C. Foundation of microbiology. Vol. 1, The effects of brief mindfulness intervention on acute pain experience: An examination of individual difference. 2012. 1689-1699 p.
  34. Lorian V. Antibiotics in laboratory medicine. 3rd edition. 3rd ed. Baltimore: Williams and Wilkins; 1991. 97, 113 p.