

DAFTAR PUSTAKA

- Adams, J.A., Galloway, T.S., Mondal, D., Esteves, S.C. & Mathews, F. (2014), “Effect of mobile telephones on sperm quality: A systematic review and meta-analysis”, *Environment International*, Elsevier B.V., Vol. 70, pp. 106–112.
- Adekunle, A.O., Arowojolu, A.O., Adejuwon, C.A., Okpara, N.C. & Ladipo, O.A. (2001), “Seminal plasma zinc level in users of gossypol.”, *African Journal of Medicine and Medical Sciences*, Nigeria, Vol. 28 No. 1–2, pp. 1–4.
- Akondi, R.B. *et al.* (2011) ‘Protective effect of rutin and naringin on sperm quality in streptozotocin (STZ) induced type 1 diabetic rats’, *Iranian Journal of Pharmaceutical Research*, 10(3), pp. 585–596.
- Arifin, Muhammad. (2023). *DAYA TANGKAL PROPOLIS TERHADAP NILAI pH, MOTILITAS DAN VIABILITAS SPERMATOZOA MENCIT (Mus musculus) YANG DIBERIKAN ALUMINIUM KLOORIDA (AlCl₃)*. S1 thesis, UNIVERSITAS JAMBI.
- Askrening, & Yulita, H. (2017). The Effectiveness of Counseling through Vasectomy Module in North Kolaka, indonesia. *International Journal of Public Health Science (IJPHS)*, 6(3), 231–236. <https://doi.org/10.11591/ijphs.v6i3.pp231-236>.
- Au, D.W.T., Yurchenko, O. V. & Reunov, A.A. (2003), “Sublethal effects of phenol on spermatogenesis in sea urchins (*Anthocidaris crassispina*)”, *Environmental Research*, Vol. 93 No. 1, pp. 92–98.
- Aulia, R.N. & Sulistyaningsih, R. (2020), “Kandungan Metabolit Sekunder Dan Aktivitas Senyawa Bioaktif Tumbuhan Mangrove Perepat (*Sonneratia Alba*)”, *Farmaka*, Vol. 17 No. 3, pp. 151–156.
- Banerjee, M., Hazra, A., Bharitkar, Y.P. & Mondal, N.B. (2014), “Insights of Spermicidal Research: An Update”, *Journal of Fertilization: In Vitro - IVF-Worldwide, Reproductive Medicine, Genetics & Stem Cell Biology*, Vol. 03 No. 01, pp. 1–15.
- Bundhun, P.K., Janoo, G., Bhurtu, A., Teeluck, A.R., Soogund, M.Z.S., Pursun, M. & Huang, F. (2019), “Tobacco smoking and semen quality in infertile males: a systematic review and meta-analysis”, *BMC Public Health*, Vol. 19 No. 1, p. 36.
- Calogero, A.E., La Vignera, S., Condorelli, R.A., Perdichizzi, A., Valenti, D., Asero, P., Carbone, U., *et al.* (2011), “Environmental car exhaust pollution damages human sperm chromatin and DNA.”, *Journal of Endocrinological Investigation*, Vol. 34 No. 6, pp. 139–143.
- Chakraborty, S. & Saha, S. (2022), “Understanding sperm motility mechanisms and the implication of sperm surface molecules in promoting motility”, *Middle East Fertility Society Journal*, Vol. 27 No. 4, pp. 1–12.

- Chassaing B, Koren O, Goodrich JK, Poole AC, Srinivasan S, Ley RE, Gewirtz AT. (2015). Dietary emulsifiers impact the mouse gut microbiota promoting colitis and metabolic syndrome. *Nature*. 5;519(7541):92-6. doi: 10.1038/nature14232.
- Clermont, Y. (1972), “Kinetics of spermatogenesis in mammals: seminiferous epithelium cycle and spermatogonial renewal.”, *Physiological Reviews*, Vol. 52 No. 1, pp. 198–236.
- Culty, M. (2009), “Gonocytes, the forgotten cells of the germ cell lineage”, *Birth Defects Research Part C - Embryo Today: Reviews*, Vol. 87 No. 1, pp. 1–26.
- Darusman H, Nugroho S, Munggaran F, Sajuthi D. 2018. Teknik penanganan kendali hewan sesuai kaidah kesejahteraan hewan meningkatkan akurasi pengukuran profil hemodinamika tikus laboratorium. *Jurnal Veteriner* 19(2): 208-214.
- Dcunha, R., Hussein, R.S., Ananda, H., Kumari, S., Adiga, S.K., Kannan, N., Zhao, Y., *et al.* (2022), “Current Insights and Latest Updates in Sperm Motility and Associated Applications in Assisted Reproduction”, *Reproductive Sciences*, Reproductive Sciences, Vol. 29 No. 1, pp. 7–25.
- Ding, J., Shang, X., Zhang, Z., Jing, H., Shao, J., Fei, Q., Rayburn, E.R., *et al.* (2017), “FDA-approved medications that impair human spermatogenesis”, *Oncotarget*, Vol. 8 No. 6, pp. 10714–10725.
- Dubey, R. & Dubey, K. (2019), “Sperm Immobilization Potential of Saponin Extract of *Ziziphus mauritiana*”, *Journal of Drug Delivery and Therapeutics*, Vol. 9, pp. 78–80.
- Durairajanayagam, D., Rengan, A., Sharma, R. & Agarwal, A. (2015), “Sperm Biology from Production to Ejaculation”, *Unexplained Infertility, Part II: Pathophysiology, Evaluation and Treatment*, Springer, New York, pp. 29–42.
- Durairajanayagam, D., Sharma, R.K., du Plessis, S.S. & Agarwal, A. (2014), “Testicular Heat Stress and Sperm Quality BT - Male Infertility: A Complete Guide to Lifestyle and Environmental Factors”, in du Plessis, S.S., Agarwal, A. and Sabanegh Edmund S., J. (Eds.), *Male Infertility*, Springer New York, New York, pp. 105–125.
- Dutta, S., Sengupta, P. & Muhamad, S. (2019), “Male reproductive hormones and semen quality”, *Asian Pacific Journal of Reproduction*, Vol. 8 No. 5, pp. 189–194.
- Ferramosca, A. & Zara, V. (2022), “Diet and Male Fertility: The Impact of Nutrients and Antioxidants on Sperm Energetic Metabolism”, *International Journal of Molecular Sciences*, Vol. 23 No. 5, available at: <https://doi.org/10.3390/ijms23052542>.
- Finelli, R., Mottola, F. & Agarwal, A. (2022), “Impact of alcohol consumption on male fertility potential: A narrative review”, *International Journal of*

- Environmental Research and Public Health*, Vol. 19 No. 1, available at: <https://doi.org/10.3390/ijerph19010328>.
- Girsh, E. (2021), “Physiology of the Male Reproductive System”, in Girsh, E. (Ed.), *A Textbook of Clinical Embryology*, Cambridge University Press, Cambridge, pp. 13–27.
- Gorpinchenko, I., Nikitin, O., Banyra, O. & Shulyak, A. (2014), “The influence of direct mobile phone radiation on sperm quality”, *Central European Journal of Urology*, Vol. 67 No. 1, pp. 65–71.
- Guyton, A.C. (2016), *Guyton and Hall Textbook of Medical Physiology*.
- Handayani, N., Gofur, A. & Maslikah, S.I. (2018), “Potensi Daun Pulutan Sebagai Bahan Antifertilitas Manusia”, *MS Open*, No. 5, pp. 173–182.
- Hardoko, M. (2020). STUDI AKTIVITAS ANTIDIABET CUKA BUAH MANGROVE PEDADA (*Sonneratia alba*) SECARA IN VIVO. *JFMR-Journal Fish. Mar. Res.*, 4(3), 399–407.
- Hayati, L., Joko Marwoto, Septi Purnamasari & Yuni Fitriyanti. (2021), “Gendola Leaf Ethyl Acetate Fraction (*Basella rubra* Linn) Reduces Spermatozoa Motility and Viability in Vitro”, *Bioscientia Medicina: Journal of Biomedicine and Translational Research*, Vol. 5 No. 3, pp. 272–277.
- Herika, Khairani, Putri, I. (2018), “SKRINING FITOKIMIA DAN UJI TOKSISITAS AKUT EKSTRAK DAUN BEREMBANG (*Sonneratia caseolaris*) SEBAGAI ANTIHIPERTENSI”, *Jeumpa*, Vol. 5 No. 2.
- Holder MK, Peters NV, Whylings J, Fields CT, Gewirtz AT, Chassaing B, de Vries GJ. (2019). Dietary emulsifiers consumption alters anxiety-like and social-related behaviors in mice in a sex-dependent manner. *Sci Rep.* 9(1):172. doi: 10.1038/s41598-018-36890-3.
- Idris, H. (2019), “Factors Affecting the Use of Contraceptive in Indonesia: Analysis from the National Socioeconomic Survey (Susenas)”, *Jurnal Kesehatan Masyarakat*, Vol. 15 No. 1, pp. 117–123.
- Jamco, J. C. S. & Balami, A. M. (2022). Analisis Kruskal-Wallis untuk Mengetahui Konsentrasi Belajar Mahasiswa Berdasarkan Bidang Minat Program Studi Statistika Fmipa Unpatti. *Jurnal Matematika, Statistika, dan Terapannya*. Vol. (1), No. (1), pp 29–34.
- Kasmeri, R. & Annisa Putri. (2020), “PENGARUH EKSTRAK PEDADA MERAH (*Sonneratia careolaris* L. TERHADAP JUMLAH DAN MORFOLOGI SPERMATOZOA MENCIT (*Mus musculus* L.)”, *Bioconchetta-Jurnal Biologi Dan Pendidikan Biologi*, Vol. 6 No. 1, pp. 7–13.
- Khodamoradi, K., Kuchakulla, M., Narasimman, M., Khosravizadeh, Z., Ali, A., Brackett, N., Ibrahim, E., *et al.* (2020), “Laboratory and clinical management of leukocytospermia and hematospermia: a review”, *Therapeutic Advances in*

Reproductive Health, Vol. 14, pp. 1–12.

King Saud University. (2022), “Seminal fluid analysis”.

Kumar, N. & Singh, A. (2015), “Trends of male factor infertility, an important cause of infertility: A review of literature”, *Journal of Human Reproductive Sciences*, Vol. 8 No. 4, pp. 191–196.

Kumar, S., Biswas, S., Mandal, D., Roy, H.N., Chakraborty, S., Kabir, S.N., Banerjee, S., *et al.* (2007), “Chenopodium album seed extract: a potent sperm-immobilizing agent both in vitro and in vivo”, *Contraception*, Vol. 75 No. 1, pp. 71–78.

Kurniaji. A., M. Idris, dan Muliani. (2017). *Uji Daya Hambat Ekstrak Daun Mangrove (Sonneratia alba) pada Bakteri Vibrio harveyi secara in vitro*. Perairan FPIK Universitas Halu Oleo.

Kurniawan, D., Muliawan, A. & Kuspradini, H. (2017), “Efektivitas Ekstrak Buah Sonneratia Alba Terhadap Aktivitas Bakteri”, *Jurnal Harpodon Borneo*, Vol. 10 No. 1, pp. 1–12.

Larumpaa, S., Mongi, J., Hariyadi, Karuwan, F. & Lengkey, Y. (2019), “Skrining Fitokimia Dan Uji Aktivitas Antioksidan Ekstrak Akar Mangrove Sonneratia alba dengan Menggunakan Metode DPPH”, *The Tropical Journal of Biopharmaceutical*, Vol. 2 No. 2, pp. 158–169.

Lestary, Ratty Mei and Umar, Liya Agustin and Sinuhaji, Besly. (2021). *PENGARUH EKSTRAK DAUN MANGROVE (Sonneratia alba) TERHADAP MOTILITAS DAN AGLUTINASI SPERMATOZOA MANUSIA*. Undergraduated thesis, Universitas Bengkulu.

Lohiya, N.K., Manivannan, B., Goyal, S. & Ansari, A.S. (2018), “Sperm motility inhibitory effect of the benzene chromatographic fraction of the chloroform extract of the seeds of Carica papaya in langur monkey, Presbytis entellus entellus”, *Asian Journal of Andrology*, Vol. 10 No. 2, pp. 298–306.

Lu, Z., Wang, L., Zhou, R., Qiu, Y., Yang, L., Zhang, C., Cai, M., *et al.* (2013), “Evaluation of the spermicidal and contraceptive activity of Platycodin D, a saponin from Platycodon grandiflorum”, *PLoS ONE*, Vol. 8 No. 11, pp. 1–11.

Mairing, P.P. & Ariantari, N.P. (2022), “Review: Metabolit Sekunder dan Aktivitas Farmakologi Tanaman Mangrove Sonneratia alba”, *Jurnal Farmasi Udayana*, Vol. 11 No. 1, p. 1.

Mannowetz, N., Miller, M.R. & Lishko, P. V. (2017), “Regulation of the sperm calcium channel CatSper by endogenous steroids and plant triterpenoids”, *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 114 No. 22, pp. 5743–5748.

Melyandari, R., Umar, A. H., Riski, R., Salampe, M. (2016). Uji Aktivitas Ekstrak Etanol Bunga Kembang Sepatu (*Hibiscus rosasinensis L.*) Terhadap Motilitas

- Sperma Mencit Jantan (*Mus musculus*). *Journal of Pharmaceutical and Medicinal Sciences*. Vol. 1 (1). pp. 18–21.
- Mutiarahmi, C.N., Hartady, T. & Lesmana, R. (2021), “Use of Mice As Experimental Animals in Laboratories That Refer To the Principles of Animal Welfare: a Literature Review”, *Indonesia Medicus Veterinus*, Vol. 10 No. 1, pp. 134–145.
- Niken, I. L. E. Putri, F. R. Gusti. 2019. Uji Senyawa Fitokimia Buah Pedada Merah (*Sonneratia caseolaris*) di Kawasan Hutan Mangrove Mangguang Kota Pariaman. *Jurnal Kesehatan Sainatika Meditory*.1 (2): 44-49.
- Oakberg, E.F. (1956), “A description of spermiogenesis in the mouse and its use in analysis of the cycle of the seminiferous epithelium and germ cell renewal”, *American Journal of Anatomy*, Vol. 99 No. 3, pp. 391–413.
- OpenStax. (2020), “Anatomy and Physiology of the Male Reproductive System”, *Anatomy and Physiology (Internet)*, LibreTexts Medicine, pp. 27.1.1-27.1.12.
- Page, R., Lester, T., Rorie, R. & Rosenkrans Jr., C. (2019), “Ergot Alkaloid Effects on Bovine Sperm Motility & In Vitro”, *Advances in Reproductive Sciences*, Vol. 07 No. 01, pp. 7–15.
- Pakrashi, A., Ray, H., Pal, B.C. & Mahato, S.B. (1991), “Sperm immobilizing effect of triterpene saponins from *Acacia auriculiformis*”, *Contraception*, Vol. 43 No. 5, pp. 475–483.
- Paputungan, Z., Wonggo, D., Kaseger, B. E. (2017). Uji Fitokimia dan Aktivitas Antioksidan Buah Mangrove *Sonneratia Alba* Di Desa Nunuk Kecamatan Pinolosian Kabupaten Bolaang Mongondow Selatan Sulawesi Utara. *Media Teknologi Hasil Perikanan*. 5(3), 96–102. doi: <https://doi.org/10.35800/mthp.5.3.2017.16866>
- Pramudita, K. P., Lokapirnasari, W. P., Susilowati, S., et al. (2020). Pengaruh injeksi nikotin terhadap motilitas, viabilitas, dan integritas membran spermatozoa mencit (*Mus Musculus*). *Ovoza*. Vol. 9 (3). pp. 77–81.
- Primiani, N.C. (2018). Potensi Genistein pada Sistem Reproduksi Mencit sebagai Penyusunan Bahan Ajar Fisiologi Reproduksi. *Belantika Pendidikan*. Vol.1 No. 1, pp. 37–44.
- Rahman, M.S.; Hasan, M.S.; Nitai, A.S.; Nam, S.; Karmakar, A.K.; Ahsan, M.S.; Shiddiky, M.J.A.; Ahmed, M.B. (2021) Recent Developments of Carboxymethyl Cellulose. *Polymers*, 13, 1345. pp 1-48. <https://doi.org/10.3390/polym13081345>
- Rehfeld, A. (2020), “Revisiting the action of steroids and triterpenoids on the human sperm Ca²⁺ channel CatSper”, *Molecular Human Reproduction*, Vol. 26 No. 11, pp. 816–824.
- Shakkarpude, J., Mishra, A., Lakhani, P. & Jain, A. (2019), “Role of growth

- hormone in reproduction”, *International Journal of Chemical Studies*, Vol. 7 No. 3, pp. 4683–4692.
- Susetyarini, E. (2019), “DNA Profile of White Male Rats Spermatozoa after Treatment with Tannins Beluntas (*Pluchea indica*)”, Vol. 8 No. 1, pp. 302–5.
- Tang, Q., Pan, F., Wu, X., Nichols, C.E., Wang, X., Xia, Y., London, S.J., *et al.* (2019), “Semen quality and cigarette smoking in a cohort of healthy fertile men”, *Environmental Epidemiology*, Vol. 3 No. 4, pp. 1–7.
- Tootian, Z., Fazelipour, S. & Goodarzi, N. (2015), “The effect of pure phenol on sperm parameters and fertility rate in male mice”, *Iranian Journal of Veterinary Medicine*, Vol. 9 No. 4, pp. 295–301.
- United Nations. (2020), *World Fertility and Family Planning 2020, Department of Economic and Social Affairs Population Division*.
- Untari, Heni Dwi., Basuki Rochmad Suryanto., Zaza Famia., Suprihatin. (2018). *Optimalisasi Penerapan Prinsip Kesejahteraan Hewan (Animal Welfare) pada Hewan Coba di BBVet Wates Untuk Mendukung Diagnosis Laboratorium*. Prosiding Penyidikan Hewan Rapat Teknis dan Pertemuan Ilmiah (RATEKPIL) dan Surveilans Kesehatan Hewan Tahun 2018. pp. 209–217.
- World Health Organization. (2010). *WHO laboratory manual for the examination and processing of human semen*, 5th ed. World Health Organization.
- World Health Organization. (2020), “Infertility”.
- World Health Organization. (2021), *WHO Laboratory Manual for the Examination and Processing of Human Semen Sixth Edition*, World Health Organization.
- Wurlina, W., Hariadi, M., Safitri, E., Susilowati, S. & Meles, D.K. (2020), “The effect of crude guava leaf tannins on motility, viability, and intact plasma membrane of stored spermatozoa of Etawa crossbred goats”, *Veterinary World*, Vol. 13 No. 3, pp. 530–537.
- Yuan, J., Yang, D., Liang, Y., Gao, W., Ren, Z., Zeng, W., Wang, B., *et al.* (2012), “Alkaloids from Areca (Betel) Nuts and Their Effects on Human Sperm Motility In Vitro”, *Journal of Food Science*, Vol. 77 No. 4, pp. 70–78.
- Zedan, H., Ismail, S., Gomaa, A., Saleh, R., Henkel, R. & Agarwal, A. (2018), “Evaluation of reference values of standard semen parameters in fertile Egyptian men”, *Andrologia*, Vol. 50 No. 4, pp. 1–6.