



DAFTAR PUSTAKA

- Affandi, S. P., Iswari, I. K., & Hendri, S. T. P. (2022). *Teknologi Budi Daya dan Pascapanen Manggis Berdaya Saing Ekspor*. Bumi Aksara.
- Agalou, A., Thapsianiotis, M., Angelis, A., Papakyriakou, A., Skaltsounis, A. L., Aligiannis, N., & Beis, D. (2018). Identification of novel melanin synthesis inhibitors from Crataegus pycnoloba using an in vivo zebrafish phenotypic assay. *Frontiers in Pharmacology*, 9, 265. <https://doi.org/10.3389/fphar.2018.00265>
- Ainia, H.N., Heru, A., & Fadli, Z. (2015). Uji toksisitas akut dekokta orthosiphon stamineus, Benth terhadap daya tetas dan malformasi organ embrio *Danio rerio*. *Jurnal Kedokteran Komunitas*. 3(1).
- Al Madury, S., Fakhrunnisa, F., & Amin, A. (2013). Pemanfaatan kulit manggis (*Garcinia mangostana L*) sebagai formulasi tablet anti kanker yang praktis dan ekonomis. Khazanah: *Jurnal Mahasiswa*, 5(2):1-11. <https://doi.org/10.20885/khazanah.vol5.iss2.art1>
- Ambarwati, W. N. (2009). Hubungan Preeklamsia Dengan Kondisi Bayi Yang Dilahirkan Secara Sectio Caesarea Di Rsud Dr. Moewardi Surakarta. *Berita Ilmu Keperawatan* ISSN 1979-2697 2(1): 1-6. <http://journals.ums.ac.id/index.php/BIK/article/view/3755>
- Anderson, P.D. & D' Appolonia. (1978). Aquatic animals : Buttler, G. C. (ed). *Principles of ecotoxicology*. John Wiley & Sons. Chichester
- Andriyanto, W., Slamet, B., & Ariawan, I. M. D. J. (2013). Perkembangan Embrio dan Rasio Penetasan Telur Ikan Kerapu Raja Sunu (*Plectropoma Laevis*) Pada Suhu Media Berbeda. *Jurnal Ilmu dan Teknologi Kelautan Tropis*, 5(1), 193. <https://doi.org/10.29244/jitkt.v5i1.7766>.
- Apschner, A., Schulte-Merker, S., & Witten, P. E. (2011). Not all bones are created equal—using zebrafish and other teleost species in osteogenesis research. *Methods in Cell Biology*. 105: 239- 255. <https://doi.org/10.1016/b978-0-12-381320-6.00010-2>
- Athiroh, N. (2018). Dekokta Scurulla atropurpurea Terhadap Kelengkungan Tulang Belakang Embrio Ikan Zebra. *Biota: Biologi dan Pendidikan Biologi*, 11(1):13-25. <https://doi.org/10.20414/jb.v11i1.82>
- Baek, S. H., & Lee, S. H. (2016). Omeprazole inhibits melanin biosynthesis in melan-a cells and zebrafish. *Experimental Dermatology*, 25(3), 239-241.. doi: 10.1111/exd.12915.
- Bagnat, M., & Gray, R. S. (2020). *Development of a straight vertebrate body axis*. Development (Cambridge, England), 147(21): dev175794. <https://doi.org/10.1242/dev.175794>
- Boyd, H. A., Basit, S., Behrens, I., Leirgul, E., Bundgaard, H., Wohlfahrt, J., Melbye, M. & Øyen, N. (2017). Association between fetal congenital heart defects and maternal risk of hypertensive disorders of pregnancy in the same pregnancy and across pregnancies. *Circulation*, 136(1): 39-48. <https://doi.org/10.1161/circulationaha.116.024600>
- Campbell, N. A., Reece, J. B., & Mitchell, L. G. (2004). *Biologi jilid 2*. Jakarta: Erlangga..
- Carnovali, M., Banfi, G., & Mariotti, M. (2019). Zebrafish models of human skeletal disorders: embryo and adult swimming together. *BioMed Research*



- International*, 2019. <https://doi.org/10.1155/2019/1253710>
- Choi, Y. H., Han, S. Y., Kim, Y. J., Kim, Y. M., and Chin, Y. W. (2014). Absroption, tissue distribution, tissue metabolism and safety of α-mangostin mangosteen extract using mouse ikans. *Food and Chemical Toxicogyl*, 66: 140-146. <https://doi.org/10.1016/j.fct.2014.01.028>
- Clotfelter, E. D., Ardia, D. R., & McGraw, K. J. (2007). Red fish, blue fish: trade-offs between pigmentation and immunity in *Betta splendens*. *Behavioral Ecology*, 18(6): 1139-1145. <https://doi.org/10.1093/beheco/arm090>
- Dani, H. B. (2021). Pengaruh material keramik terhadap struktur jaringan tulang pada model zebrafish (*Danio rerio*). *Tesis*. Universitas Gadjah Mada.
- Dewi, I. D. A. D. Y., Astuti, K. W., & Warditiani, N. K. (2013). Identifikasi kandungan kimia ekstrak kulit buah manggis (*Garcinia mangostana* L.). *Jurnal Farmasi Udayana*, 2(4): 13-18. <http://ojs.unud.ac.id/index.php/jfu/article/view/8404>
- Duminy, P. C., & Burger, P. D. (1981). Fetal abnormality associated with the use of captopril during pregnancy. *South African medical journal= Suid-Afrikaanse tydskrif vir geneeskunde*, 60(21), 805. <https://pubmed.ncbi.nlm.nih.gov/7029734/>
- Effendi, M.I. (1979). *Metodelogi Perikanan*. Yayasan Dewi Sri Bogor.
- Folkman, J., & Klagsbrun, M.. (1987) Angiogenic factors. *Science*. 235(4787): 442-7. doi: 10.1126/science.2432664. PMID: 2432664.
- Gielen, S., de Backer, G., Piepoli, M.F., & Wood, D. (2015). *The ESC Textbook of Preventive Cardiology*. Oxford University Press, UK
- Gitawati, R., & Handayani, R. S. (2008) Profil Konsumen Obat Tradisional Terhadap Ketanggapan Akan Adanya Efek Samping Obat Tradisional. *Buletin Penelitian Sistem Kesehatan*, 11(3): 283-288. <http://ejournal.litbang.depkes.go.id/index.php/hsr/article/view/1876>
- Guignard, J., Burgener, F., & Cálame, A. (1981) Persistent anuria in a neonatë: a side effect of captopril. *International Journal of Pediatric Nephrology*. 2(133).
- Gusrina. (2018). *Genetika dan reproduksi ikan*. Deepublish. Yogyakarta
- Hasan, A. E. Z., Nashrianto, H., & Juhaeni, R. N. (2012). Optimasi kondisi untuk rendemen hasil ekstraksi kulit manggis (*Garcinia mangostana* L.). *FITOFARMAKA: Jurnal Ilmiah Farmasi*, 2(2): 153-159.
- Huang, D., Li, H., He, Q., Yuan, W., Chen, Z. & Yang, H. (2018). Developmental toxicity of diethylnitrosamine in zebrafish Embryos/juveniles related to excessive oxidative stress. *Water, Air, and Soil Pollution*, 229(3): 81. doi: 10.1007/s11270-018-3739-8
- Hui, W., Xiaowen, Z., Haizhen, W., Jun, Q., Pao, X., & Ruiwei, L. (2012). Joint Effect of Temperatur, Salinity ang pH on the Percentage Fertilization and Hacthing Rate of Nile Tilapia (*Oreochromis niloticus*). *Aquaculture Research*. :1-11. <https://doi.org/10.1111/J.1365-2109.2012.03222.X>
- Kelsh, R. N., Brand, M., Jiang, Y., Heisenberg, C., Lin, S., Haffter, P., Odenthal, J., Mullins, M. C., Eeden, F. J. M., Furutani-Seiki, M., Granato, M., Hammerschmidt, M., Kane, D. A., Warga, R. M., Beuchle, D., Vogelsang, L., & Nusslein-Volhard (1996). Zebrafish pigmentation mutations and the process of neural crest development. *Development*. 123: 369– 389
- Kim, K. N., Yang, H. M., Kang, S. M., Ahn, G., Roh, S. W., Lee, W., Kim, D. K.,



- & Jeon, Y. J. (2015). Whitening effect of octaphlorethol A isolated from Ishige foliacea in an in vivo zebrafish model. *Journal of Microbiology and Biotechnology*, 25(4): 448-451. doi: 10.4014/jmb.1409.09033
- Kimmel, C. B., Ballard, W. W., Kimmel, S. R., Ullmann, B., & Schilling, T. F. (1995). Stages of embryonic development of the zebrafish. *Developmental Dynamics*, 203(3): 253–310. <https://doi.org/10.1002/aja.1002030302>
- Kitipaspallop, W., Sillapaprayoon, S., Taepavarapruk, P., Chanchao, C., & Pimtong, W. (2021). Evaluation of developmental and transcriptional effects of α -mangostin on zebrafish embryos. *Toxicological & Environmental Chemistry*, 103(3), 254-268. <https://doi.org/10.1080/02772248.2021.1960349>
- Kittipaspallop, W., Ponnarin, T., Chanchao, C., & Pimtong, W. (2018). Acute toxicity and teratogenicity of α -mangostin in zebrafish embryos. *Experimental Biology and Medicine* (Maywood), 243 (15-16): 1212-1219. <https://doi.org/10.1177%2F1535370218819743>
- Kristiyani, D. S. (2013). *Laporan Kasus: Hipertensi dalam Kehamilan*. FK Universitas Udayana Denpasar Bali.
- Landmesser, U., Cai, H., Dikalov, S., McCann, L., Hwang, J., Jo, H., & Harrison, D. G. (2002). Role of p47 phox in vascular oxidative stress and hypertension caused by angiotensin II. *Hypertension*, 40(4): 511-515. Doi: <https://doi.org/10.1161/01.hyp.0000032100.23772.98>
- Li Li, J., Zhang, Y., Liu, K., He, Q., Sun, C., Han, J., Han, L., & Tian, Q. (2018). Xiaoaiping induces developmental toxicity in zebrafish embryos through activation of ER stress, apoptosis and the Wnt pathway. *Frontiers in pharmacology*, 9(1250). <https://doi.org/10.3389/fphar.2018.01250>
- Li, N. C., Fan, J., & Papadopoulos, V. (2016). Sterol carrier protein-2, a nonspecific lipid-transfer protein, in intracellular cholesterol trafficking in testicular Leydig cells. *PLoS One*, 11(2), e0149728. <https://doi.org/10.1371%2Fjournal.pone.0149728>
- Lu, Z. G., Li, M. H., Wang, J. S., Wei, D. D., Liu, Q. W., & Kong, L. Y. (2014). Developmental toxicity and neurotoxicity of two matrine-type alkaloids, matrine and sophocarpine, in zebrafish (*Danio rerio*) embryos/larvae. *Reproductive Toxicology*, 47: 33-41. <https://doi.org/10.1016/j.reprotox.2014.05.015>
- Marbun, T. P., D. Bakti., & Nurmatias. (2014). Pemberian Ikan Maskoki (*Carrasius auratus*) Dengan Menggunakan Berbagai Substrat. *Jurusan Manajemen Sumberdaya Perairan*, Fakultas Pertanian, Universitas Sumatera Utara.
- Mardiana, L., & PS, T. P. (2011). *Ramuan & Khasiat Kulit Manggis*. Penebar Swadaya Grup. Hal: 6-9.
- Mayangsari, E., Lestari, B., Soeharto, S., Permatasari, N., Kalsum, U., Khotimah, H., & Nugrahenny, D. (2017). *Farmakologi Dasar*. Universitas Brawijaya Press.
- Miryanti, Y. A., Sapei, L., Budiono, K., & Indra, S. (2011). Ekstraksi antioksidan dari kulit buah manggis (*Garcinia mangostana L.*). *Research Report-Engineering Science*, 2.
- Mork, L., & Crump, G. (2015). Zebrafish craniofacial development: a window into early patterning. *Current topics in developmental biology*, 115:235-269.



<https://doi.org/10.1016/bs.ctdb.2015.07.001>

- Mulyani, H., Widayastuti, S. H., & Ekowati, V. I. (2016). Tumbuhan herbal sebagai jamu pengobatan tradisional terhadap penyakit dalam serat primbon jampi jawi jilid I. *Jurnal Penelitian Humaniora*, 21(2): 73-91. <https://doi.org/10.21831/hum.v21i2.13109>
- Mulyani, T., Julianti, C. I., dan Sihombing, R. (2020). Tinjauan Pustaka: teknik pengujian toksisitas teratogenik pada obat herbal. *Jurnal Farmasi Udayana* 9(1): 31-36. <https://doi.org/10.24843/JFU.2020.v09.i01.p05>
- Nelli, G. B., and E.K. Kilari. (2013). Antidiabetic effect of α -mangostin and its protective role in sexual dysfunction of streptozotocin induced diabetic male rats. *Systems Biology in Reproductive Medicine*, 59 (6): 319-328. <https://doi.org/10.3109/19396368.2013.820369>
- Nidyasari, R. S., Akmal, H., & Ariyanti, N. S. (2018). Karakterisasi morfologi dan anatomi tanaman manggis dan kerabatnya (*Garcinia* spp.) di Taman Buah Mekarsari. *Jurnal Sumberdaya Hayati*, 4(1):12-20. <https://doi.org/10.29244/jsdh.4.1.12-20>
- Nofrizal. (2014). Aktivitas jantung ikan Nila *Oreochromis niloticus* (linnaeus, 1758) pada kecepatan renang berbeda yang dipantau dengan elektrokardiograf (EKG). *Jurnal Iktiologi Indonesia*, 14(2):101-109. <https://doi.org/10.32491/jii.v14i2.86>
- Obat, B. P., & Makanan, R. I. (2010). *Acuan sediaan herbal*. Volume Kelima Edisi Pertama. Direktorat Obat Asli Indonesia.
- Paramawati, R. (2010). *Dahsyatnya Manggis untuk menumpas penyakit*. Jakarta: PT AgroMedia Pustaka.
- Parichy, D. M., Ransom, D. G., Paw, B., Zon, L. I., & Johnson, S. L. (2000). An orthologue of the kit-related gene fms is required for development of neural crest-derived xanthophores and a subpopulation of adult melanocytes in the zebrafish, *Danio rerio*. *Development*, 127(14): 3031-3044. <https://doi.org/10.1242/dev.127.14.3031>
- Park, H., Lee, J. Y., Park, S., Song, G., Lim, W. (2019). Developmental toxicity and angiogenic defects of etoxazole exposed zebrafish (*Danio rerio*) larvae. *Aquatic Toxicology*. 217. 10.1016/j.aquatox.2019.105324.
- Park, J., Lee, J., Lau, S. T., Lee, C., Huang, Y., Lien, C. L., & Kirk Shung, K. (2012). Acoustic radiation force impulse (ARFI) imaging of zebrafish embryo by high-frequency coded excitation sequence. *Annals of biomedical engineering*, 40(4): 907-915. <https://doi.org/10.1007%2Fs10439-011-0466-3>
- Patterson, A. D., Gonzalez, F. J., & Idle, J. R. (2010). Xenobiotic metabolism: a view through the metabolometer. *Chemical research in toxicology*, 23(5): 851-860.
- Piacham, T., Isarankura-Na-Ayudhya, C., & Prachayasittikul, V. (2015). Quercetin-imprinted polymer for anthocyanin extraction from mangosteen pericarp. *Material Science & Engineering C-Materials for Biological Applications*. 51:127-31. doi: 10.1016/j.msec.2015.02.051. Epub 2015 Feb 26. PMID: 25842116.
- Purnomo, A. (2015). Pengaruh Ekstrak Kulit Manggis (*Garcinia mangostana*) terhadap Daya Tahan Hidup, Laju Penetasan, dan Kecacatan pada Embrio Ikan Zebra (*Danio rerio*) (*Doctoral dissertation*, Universitas Brawijaya).



- Rachmawati, I. N. (2004). Hipertensi Pada Kehamilan: Analisis Kasus. *Jurnal Keperawatan Indonesia*, 8(1): 30-35. <https://dx.doi.org/10.7454/jki.v8i1.144>
- Rahayu, M & Solihat, M.F. (2018). Bahan Ajar Teknologi Laboratorium Medik (TLM) : Toksikologi Klinik: 3-5. BPPSDMK Kemenkes. Jakarta
- Raterman, S. T., Metz, J. R., Wagener, F. A., & Von den Hoff, J. W. (2020). Zebrafish models of craniofacial malformations: Interactions of environmental factors. *Frontiers in Cell and Developmental Biology*, 8(600926). <https://doi.org/10.3389%2Ffcell.2020.600926>
- Rita, W.S., I.W. Suirta., & A. Sabikin. (2008). Isolasi dan Identifikasi Senyawa yang Berpotensi sebagai Antitumor Pada Daging Buah Pare (*Momordica charantia L.*). Jurusan Kimia FMIPA Universitas Udayana, Bukit Jimbaran. *Jurnal Kimia*, 2: 1907-9850.
- Sánchez, M., Galisteo, M., Vera, R., Villar, I. C., Zarzuelo, A., Tamargo, J., & Duarte, J. (2006). Quercetin downregulates NADPH oxidase, increases eNOS activity and prevents endothelial dysfunction in spontaneously hypertensive rats. *Journal of hypertension*, 24(1), 75-84.. doi: 10.1097/01.hjh.0000198029.22472.d9. PMID: 16331104.
- Sandi, I. (2013). Hubungan antara tinggi badan, berat badan, indeks massa tubuh, dan umur terhadap frekuensi denyut nadi istirahat siswa smkn-5 denpasar. *Sport and Fitness Journal*, 1(1): 38–44.
- Sant, K. E., & Timme-Laragy, A. R. (2018). Zebrafish as a model for toxicological perturbation of yolk and nutrition in the early embryo. *Current Environmental Health Report*. 5: 125-133. 10.1007/s40572-018-0183-2
- Sarasamma, S., Audira, G., Juniardi, S., Sampurna, B., Liang, S.-T., Hao, E., Lai, Y.-H., Hsiao, and C.-D. (2018). Paparan Seng Klorida Menghambat Tingkat Asetilkolin Otak, Menghasilkan Tanda Tangan Neurotoksik, dan Mengurangi Aktivitas Memori dan Motorik pada Ikan Zebra Dewasa. *International Journal of Molecular Sciences.*, 19: 3195
- Sinaga, R. N., & Siregar, N. S. (2016). Phytochemical Screening and Test of Antioxidant Activity in the Extract of Mangosteen Rind. *Accelerating The Achievement Of Sustainable Development Goals For The Improvement And Equitable Distribution Of Population Health* [Internet]. Solo: Graduate Studies in Public Health, Graduate Program, Sebelas Maret University.
- Staal, Y. C. M., Meijer, J., van der Kris, R. J. C., de Bruijn, A. C., Boersma, A. Y., Gremmer, E. R., Zwart, E. P., Beekhof, P. K., Slob, W., & van der Ven, L. T. M. (2018). Head skeleton malformations in zebrafish (*Danio rerio*) to assess adverse effects of mixtures of compounds. *Archives of Toxicology*, 92(12), 3549–3564. <https://doi.org/10.1007/s00204-018-2320-y>
- Stainier D.Y.R, Robert K.L., Mark, C.F. (1993). *Myocardial fate map and heart tube formation*. Cardiovascular research center, Massachusetts General Hospital.
- Suksamrarn, S., Suwannapoch, N., Phakhodee, W., Thanuhiranlert, J., Ratananukul, P., Chimnoi, N., & Suksamrarn, A. (2003). Antimycobacterial activity of prenylated xanthones from the fruits of *Garcinia mangostana*. *Chemical and pharmaceutical bulletin*, 51(7): 857-859. <https://doi.org/10.1248/cpb.51.857>.



- Suwignyo A. 2014. Uji toksisitas ekstrak etanol kulit manggis (*Garcinia mangostana*) pada embrio zebrafish (*Danio rerio*). *Sarjana thesis, Universitas Brawijaya*.
- Tonelli, F., Bek, J. W., Besio, R., De Clercq, A., Leoni, L., Salmon, P., & Forlino, A. (2020). Zebrafish: a resourceful vertebrate model to investigate skeletal disorders. *Frontiers in Endocrinology*, 11:489. <https://doi.org/10.3389/fendo.2020.00489>
- Utami, A. W., Wijayanti, A., & Novarina, D. (2021). Penggunaan Obat Tradisional Pada Pasien Hipertensi Di Puskesmas Gondokusuman I. *Jurnal Ilmu Kesehatan Bhakti Setya Medika p-ISSN*, 6(2), 100-107. <https://doi.org/10.56727/bsm.v6i2.75>
- Warren, K. S., Baker, K., & Fishman, M. C. (2001). The slow mo mutation reduces pacemaker current and heart rate in adult zebrafish. *American Journal of Physiology-Heart and Circulatory Physiology*, 281(4): H1711-H1719. <https://doi.org/10.1152/ajpheart.2001.281.4.H1711>
- Weigle J, & Franz-Ondelaal, T. A. (2016) Functional bone histology of zebrafish reveals two types of endochondral ossification, different types of osteoblast clusters and a new bone type. *Journal of Anatomy*. 2016; 229(1): 92- 103. <https://doi.org/10.1111/joa.12480>
- Wiendarlina, I. Y., Herlina, N., & Maretta, E. (2022). Toksisitas Akut Sediaan Cair Berbasis Bawang Putih Dengan Metode Zebrafish Embryo Toxicity (Zfet). *Fitofarmaka: Jurnal Ilmiah Farmasi*, 12(1): 78-88.
- Wu, T., Shu, T., Kang, L., Wu, J., Xing, J., Lu, Z., & Lv, J. (2017). Icaritin, a novel plant-derived osteoinductive agent, enhances the osteogenic differentiation of human bone marrow-and human adipose tissue-derived mesenchymal stem cells. *International Journal of Molecular Medicine*, 39(4): 984-992. <https://doi.org/10.3892/ijmm.2017.2906>
- Yaqin, A., Elyani, H. & Purnomo, Y. (2018). Efek Teratogenik Dekokta Daun Pulutan (Urena lobata L.)(Studi terhadap Kelengkungan Tulang Belakang dan Panjang Badan pada Embrio Ikan Zebra (*Danio rerio*). *Jurnal Bio Komplementer Medicine*, 5(1).
- Yesudhason, B. V., Selvan Christyraj, J. R. S., Ganesan, M., Subbiahanadar Chelladurai, K., Venkatachalam, S., Ramalingam, A., & Selvan Christyraj, J. D. (2020). Developmental stages of zebrafish (*Danio rerio*) embryos and toxicological studies using foldscope microscope. *Cell Biology International*, 44(10): 1968-1980. <https://doi.org/10.1002/cbin.11412>
- Yu, G. Y., Zheng, G. Z., Chang, B., Hu, Q. X., Lin, F. X., Liu, D. Z., et al. (2016). Naringin Stimulates Osteogenic Differentiation of Rat Bone Marrow Stromal Cells via Activation of the Notch Signaling Pathway. *Stem Cell International* 2016, 7130653. doi:10.1155/2016/7130653
- Yumnamcha, T., Roy, D., Devi, M. D., & Nongthoma, U. (2015). Evaluation of developmental toxicity and apoptotic induction of aqueous extract of *Millettia pachycarpa* using zebrafish as a model organism. *Toxicology & Environmental Chemistry* 97. 1363- 1381. 10.1080/02772248.-2015.1093750
- Yuniarto. A., Sukandar. E. Y., Fidrianny, I., & Adnyana, I. K. (2017). Aplikasi Zebrafish (*Danio rerio*) pada Beberapa Ikan Penyakit Eksperimental. *Media Pharmaceutica Indonesiana*, 1 (3):116-126.



UNIVERSITAS
GADJAH MADA

Efek Paparan Dekokta Kulit Manggis *Garcinia mangostana* L. terhadap Daya Tetas dan Kelengkungan

Tulang Belakang Embrio Ikan Zebra *Danio rerio* (Hamilton, 1822)

Neri Yunita, Dr. Bambang Retnoaji, M.Sc.

Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

<https://doi.org/10.24123/mpi.v1i3.215>

Yunita, E.A., Nanik, H.S., & Jafron W.H. (2009). Pengaruh Ekstrak Daun Teklan (*Eupatorium riparium*) Terhadap Mortalitas dan Perkembangan Larva

Aedes aegypti. *Bioma*. 11(1):11-17.

http://eprints.undip.ac.id/1990/1/Bioma_Nanik_Juni_2009.pdf