

## DAFTAR PUSTAKA

- Abraham, M.H. dan Acree, W.E. 2011. Partition coefficients and solubilities of compounds in the water–ethanol solvent system. *Journal of Solution Chemistry*. 40(1): 1279-1290. <http://dx.doi.org/10.1007/s10953-011-9719-x>
- Adewoyin, M., Teoh, S.L., Azmai, M.N.A. dan Nasruddin, N.S. 2022. Exploiting the differences between zebrafish and medaka in biological research: a complementary approach. *Pharmacophore*. 13(6):115-124. <https://doi.org/10.51847/a5QHctAVDz>
- Ajaj, A., J'Bari, S., Ononogbo, A., Buonocore, F., Bear, J.C., Mayes, A.G. dan Morgan, H. 2021. An insight into the growing concerns of styrene monomer and poly (styrene) fragment migration into food and drink simulants from poly (styrene) packaging. *Foods*. 10(5). 1-16. <https://doi.org/10.3390/foods10051136>
- Akhter, M. A., dan Saha, A. K. 2013. Effects of Fenitrothion on some histo architecture of freshwater fish *Channa punctatus*. *IOSR Journal of Pharmacy and Biological Sciences*. 5(6): 27-32.
- Arman, S. 2021. Effects of acute triclosan exposure on gill and liver tissues of zebrafish (*Danio rerio*). In *Annales de Limnologie-International Journal of Limnology*. 57(6): 1-9. <https://doi.org/10.1051/limn/2021004>
- Azizah, P., Ridlo, A. dan Suryono, C.A. 2020. Mikroplastik pada Sedimen di Pantai Kartini Kabupaten Jepara Jawa Tengah. *Journal of Marine Research*. 9(3). 326-332. doi : 10.14710/jmr.v9i3.28197.
- Batutah, M.A., Setiawan, M.A. dan Kusnanto, H. 2022. Proses pirolisis pengolahan sampah plastik menjadi bahan bakar cair. *Jurnal Chemurgy*. 6(1): 1-8. <http://e-journals.unmul.ac.id/index.php/TK>
- Bashirova, N., Poppitz, D., Klüver, N., Scholz, S., Matysik, J. dan Alia, A. 2023. A mechanistic understanding of the effects of polyethylene terephthalate nanoplastics in the zebrafish (*Danio rerio*) embryo. *Scientific Reports*. 13(1): 1891. <https://doi.org/10.1038/s41598-023-28712-y>
- Bhagat, J., Zang, L., Nishimura, N. and Shimada, Y. 2020. Zebrafish: An emerging model to study microplastic and nanoplastic toxicity. *Science of The Total Environment*. 728(1): 1-11. <https://doi.org/10.1016/j.scitotenv.2020.138707>
- Borges, R.S., Pereira, A.C.M., de Souza, G.C. dan Carvalho, J.C.T. 2019. Histopathology of zebrafish (*Danio rerio*) in nonclinical toxicological studies of new drugs. In *Zebrafish in Biomedical Research*. 1(1): 1-9. DOI: 10.5772/intechopen.88639
- Brandts, I., Cánovas, M., Tvarijonavičiute, A., Llorca, M., Vega, A., Farré, M., Pastor, J., Roher, N. dan Teles, M. 2022. Nanoplastics are bioaccumulated in fish liver and muscle and cause DNA damage after a chronic exposure. *Environmental Research*. 212(1): 113433. <https://doi.org/10.1016/j.envres.2022.113433>
- Brown, D.R., Clark, B.W., Garner, L.V. dan Di Giulio, R.T. 2015. Zebrafish cardiotoxicity: the effects of CYP1A inhibition and AHR2 knockdown following exposure to weak aryl hydrocarbon receptor agonists. *Environmental Science and Pollution Research*. 22(1): 8329-8338. doi:10.1007/s11356-014-3969-2

- Camargo, M.M. dan Martinez, C.B. 2007. Histopathology of gills, kidney and liver of a Neotropical fish caged in an urban stream. *Neotropical Ichthyology*. 5(1): 327-336. <https://www.scielo.br/j/ni/a/ryQDgTqwJ6sydzYCGNRvwPG/>
- Cassar, S., Dunn, C. dan Ramos, M.F. 2021. Zebrafish as an animal model for ocular toxicity testing: a review of ocular anatomy and functional assays. *Toxicologic Pathology*. 49(3). 38-454. doi: 10.1177/0192623320964748
- Cheville, Norman F. 2006. *Introduction to Veterinary Pathology, Third Edition*. Blackwell Publishing: New Jersey. Halaman: 61.
- Chowdhury, K., Lin, S. dan Lai, S.L. 2022. Comparative study in zebrafish and medaka unravels the mechanisms of tissue regeneration. *Frontiers in Ecology and Evolution*. 10(1). 1-27. doi: 10.3389/fevo.2022.783818.
- Cong, Y., Jin, F., Tian, M., Wang, J., Shi, H., Wang, Y. dan Mu, J. 2019. Ingestion, egestion and post-exposure effects of polystyrene microspheres on marine medaka (*Oryzias melastigma*). *Chemosphere*. 228(1): 93-100. <https://doi.org/10.1016/j.chemosphere.2019.04.098>
- Cooper, T.K. dan Spitsbergen, J.M. 2016. Valvular and mural endocardiosis in aging zebrafish (*Danio rerio*). *Veterinary Pathology*. 53(2): 504-509.
- D'arcy, M.S. 2019. Cell death: a review of the major forms of apoptosis, necrosis and autophagy. *Cell Biology International*. 43(6): 582-592. <https://doi.org/10.1002/cbin.11137>
- Dewi, N.M.N.B.S. 2022. Studi literatur dampak mikroplastik terhadap lingkungan. *Sosial Sains dan Teknologi*. 2(2). 239-250. doi: <https://doi.org/10.35327/sosintek.v2i2.355>
- Fahmi, M. R., Prasetyo, A. B dan Vidiakusuma R. 2018. Potensi ikan medaka (*oryzias woworae*, *o. javanicus* dan *o. profundicola*) sebagai ikan hias dan ikan model. *Pros Semin Nas Ikan ke 8*. 1(1): 227-233. <http://iktiologi-indonesia.org/wp-content/uploads/2018/01/24-MeltaRiniFahmi.pdf>
- Faleti, A.I. 2022. Microplastics in the nigerian environment-a review. 1(1): 1-7. [microplastics-in-the-nigerian-environment-a-review.pdf](https://chemrxiv.org/abstract/microplastics-in-the-nigerian-environment-a-review.pdf) (chemrxiv.org)
- Grabher, C., Cliffe, A., Miura, K., Hayflick, J., Pepperkok, R., Rørth, P. dan Wittbrodt, J. 2007. Birth and life of tissue macrophages and their migration in embryogenesis and inflammation in medaka. *Journal of Leucocyte Biology*. 81(1): 263-271. doi: 10.1189/jlb.0806526
- Guerrera, M.C., Aragona, M., Porcino, C., Fazio, F., Laurà, R., Levanti, M., Montalbano, G., Germanà, G., Abbate, F. dan Germanà, A. 2021. Micro and nano plastics distribution in fish as model organisms: histopathology, blood response and bioaccumulation in different organs. *Applied Sciences*. 11(13): 11-25. <https://doi.org/10.3390/app11135768>
- Gupta, T. dan Mullins, M.C., 2010. Dissection of organs from the adult zebrafish. *Journal of visualized experiments: JoVE*. 1(37): 1-5. doi:10.3791/1717
- Hasanah, N., Omar, S.B.A. dan Tresnati, J. 2022. Rasio kelamin ikan medaka endemik *oryzias celebensis* di sulawesi selatan. *Jurnal Ilmiah Agri Sains*. 23(2). 60-66. <https://ejurnal.fapetkan.untad.ac.id/index.php/agrisains/article/view/82>.

- Hilgers, L. dan Schwarzer, J. 2019. The untapped potential of medaka and its wild relatives. *Elife*. 8(1): 1-14. doi: 10.7554/eLife.46994
- Holden, J.A., Layfield, L.L. dan Matthews, J.L. 2013. *The zebrafish: atlas of macroscopic and microscopic anatomy*. Cambridge University Press: UK. <https://books.google.co.id/books?id=wWMhAwAAQBAJ&lpg=PA68&pg=PR4#v=onepage&q&f=false>
- Hou, L., Liu, K., Li, Y., Ma, S., Ji, X. dan Liu, L. 2016. Necrotic pyknosis is a morphologically and biochemically distinct event from apoptotic pyknosis. *Journal of Cell Science*. 129(16): 3084-3090. doi:10.1242/jcs.184374
- Hu, X., Biswas, A., Sharma, A., Sarkodie, H., Tran, I., Pal, I. dan De, S. 2021. Mutational signatures associated with exposure to carcinogenic microplastic compounds bisphenol A and styrene oxide. *NAR Cancer*. 3(1): 1-13. doi: 10.1093/narcan/zcab004
- Huang, S.Y., Feng, C.W., Hung, H.C., Chakraborty, C., Chen, C.H., Chen, W.F., Jean, Y.H., Wang, H.M.D., Sung, C.S., Sun, Y.M. dan Wu, C.Y. 2014. A novel zebrafish model to provide mechanistic insights into the inflammatory events in carrageenan-induced abdominal edema. *Plos One*. 9(8): 1-11. doi: 10.1371/journal.pone.0104414
- Ikhsanudin, A.F., Tjahjanti, P.H., Akbar, A. dan Fernanda, R.E. 2022. Pengkajian briket dari campuran sampah botol jenis pet dan bahan natural dengan perekat kanji. *Jurnal Sains dan Teknologi*. 5(2): 73-80. doi: 10.31764/justek.vXiY.ZZZ
- Kamaruddin, H., Patittingi, F., Assidiq, H., Bachril, S.N., dan Al Mukarramah, N.H. 2022. Legal aspect of plastic waste management in Indonesia and Malaysia: Addressing marine plastic debris. *Sustainability*. 14(12): 1-17. doi: 10.3390/su14126985
- Kim, H.J., Shin, S.R., Park, J.J. dan Lee, J.S. 2024. Feeding, excretion, survival, and histological alterations in zebrafish *Danio rerio* from single and combined exposure to microplastics and copper. *Korean Journal of Environmental Biology*. 42(1): 1-14. <https://doi.org/10.11626/KJEB.2024.42.1.001>
- Klavins, M., Klavins, L., Stabnikova, O., Stabnikov, V., Marynin, A., Ansone-Bertina, L., Mezulis, M. dan Vaseashta, A. 2022. Interaction between microplastics and pharmaceuticals depending on the composition of aquatic environment. *Microplastics*. 1(3): 520-535. doi: 10.3390/microplastics1030037
- Laurén, D.J. and Wails, D. 2018. Liver structural alterations accompanying chronic toxicity in fishes: potential biomarkers of exposure. *In Biomarkers of Environmental Contamination*. 1(1): 17-57.
- Leiba, J., Özbilgiç, R., Hernández, L., Demou, M., Lutfalla, G., Yatime, L. dan Nguyen-Chi, M. 2023. Molecular actors of inflammation dan their signaling pathways: mechanistic insights from zebrafish. *Biology*. 12(2): 1-44. <https://doi.org/10.3390/biology12020153>
- Lin, C.Y., Chiang, C.Y. dan Tsai, H.J. 2016. Zebrafish dan medaka: new model organisms for modern biomedical research. *Journal of Biomedical Science*. 23(1): 1-11. doi: 10.1186/s12929-016-0236-5

- Magtoon, W. dan Termvidchakorn, A. 2009. A revised taxonomic account of ricefish *oryzias* (beloniformes; adrianichthyidae), in thailand, indonesia and japan. *Tropical Natural History*. 9(1): 35-68.
- Menke, A.L., Spitsbergen, J.M., Wolterbeek, A.P. dan Woutersen, R.A. 2011. Normal anatomy and histology of the adult zebrafish. *Toxicologic pathology*. 39(5): 759-775.
- Munawar, S.M. dan Sabjan, K.B. 2021 *Environmental Chemistry and Its Applications For The Pollution Abatement: The impacts of micro and nanoplastics on the ecosystems*. Blue Hill Publications: India.
- Murray, K.N., Polley, T.M., Whipps, C.M., Hurley, K.M., Miller, J.H. dan Kent, M.L. 2023. Acute mortality in laboratory medaka (*Oryzias latipes*). *Journal of the American Veterinary Medical Association*. 261(12): 1-4. doi.org/10.2460/javma.23.07.0409
- Myosho, T., Takahashi, H., Yoshida, K., Sato, T., Hamaguchi, S., Sakamoto, T., dan Sakaizumi, M. 2018. Hyperosmotic tolerance of adult fish and early embryos are determined by discrete, single loci in the genus *oryzias*. *Scientific Reports*. 8(1). 1-8. doi: 10.1038/s41598-018-24621-7
- Olayinka, O., Ryu, H., Wang, X., Malik, A.B. dan Jung, H.M. 2024. Tissue regeneration requires edema fluid clearance by compensatory lymphangiogenesis in zebrafish. *Biorxiv*, 1-29. doi: 10.1101/2024.05.30.596701
- Parenti, L.R. 2008. A phylogenetic analysis and taxonomic revision of ricefishes, *oryzias* and relatives (beloniformes, adrianichthyidae). *Zoological Journal of the Linnean Society*. 154(3): 494-610. doi: 10.1167/iavs.63.11.21
- Poppe, T. T., dan Ferguson, H. W. 2006. *Cardiovascular system: In Systemic Pathology of Fish*. Scotian Press: London, UK.
- Putri, R.A., Diansyah, M.N., Ashariati, A., Bintoro, S.U.Y., Amrita, P.N.A., Savitri, M. dan Romadhon, P.Z. 2022. Diathesis hemorrhagic, coagulation and fibrinolytic system. *Biomol Heal Sci J*. 5(1): 54-61. doi: 10.20473/bhsj.v5i1.35280
- Risnawati, Umar, M. R dan Andriani, I. 2015. *Distribusi populasi dan ekologi ikan medaka oryzias spp. di perairan sungai maros, kabupaten maros sulawesi selatan*. Univ Hasanuddin. Published online:1-9.
- Rochman, C.M., Hoh, E., Kurobe, T. dan Teh, S.J. 2013. Ingested plastic transfers hazardous chemicals to fish and induces hepatic stress. *Scientific Reports*. 3(1): 1-7. doi: 10.1038/srep03263
- Rochman, C.M., Kross, S.M., Armstrong, J.B., Bogan, M.T., Darling, E.S., Green, S.J., Smyth, A.R. dan Verissimo, D. 2015. Scientific evidence supports a ban on microbeads. *Environ Science Technology*. 49(1): 10759–10761. doi: 10.1021/acs.est.5b03909
- Romano, N., Renukdas, N., Fischer, H., Shrivastava, J., Baruah, K., Egnaw, N. dan Sinha, A.K. 2020. Differential modulation of oxidative stress, antioxidant defense, histomorphology, ion-regulation and growth marker gene expression in goldfish (*Carassius auratus*) following exposure to different dose of virgin microplastics. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*. 238(1): 1-15. <https://doi.org/10.1016/j.cbpc.2020.108862>

- Rusidi, Iwani W., Rushdi, Wan M., Khairul, Sofiah Hamzah, Wan M. A. W., Mohd K., Sabiqah T. A., Nor S. A., Nasehir Khan E.M. Yahya, dan Alyza A. Azmi. 2024. Microplastics pollution mitigation in wastewater treatment: current practices, challenges, and future perspectives. *Malaysian Journal of Analytical Sciences*. 28(1): 79-96.
- Said, D.S dan Hidayat. 2015. *101 Ikan Hias Air Tawar Nusantara*. Jakarta: Lipi.
- Santos, A.L., Rodrigues, L.C., Rodrigues, C.C., Cirqueira, F., Malafala, G. dan Rocha, T.L. 2024. Polystyrene nanoplastics induce developmental impairments and vasotoxicity in zebrafish (*Danio rerio*). *Journal of Hazardous Materials*. 464(1): 1-33. <https://doi.org/10.1016/j.jhazmat.2023.132880>
- Sari, D.K., Andriani, I. dan Yaqin, K. 2018. Micromorphological observation of the anterior gut of sulawesi medaka fish (*oryzias celebensis*). *Int J Current Micro Applied Sci*. 7(02): 2942-2946. doi: 10.20546/ijcmas.2018.702.357
- Sarmah, S. dan Marrs, J.A. 2016. Zebrafish as a vertebrate model system to evaluate effects of environmental toxicants on cardiac development and function. *International Journal of Molecular Sciences*. 17(12): 1-16. <https://doi.org/10.3390/ijms17122123>
- Schluessel, V., Kortekamp, N., Cortes, J.O., Klein, A. dan Bleckmann, H. 2015. Perception and discrimination of movement and biological motion patterns in fish. *Animal Cognition*. 18(1): 1077-1091. doi: 10.1007/s10071-015-0876-y
- Serdiati, N., Nurdin, M.S., Hasan, V. dan Fikri, D. 2023. Population dynamic of endemic ricefish in lake poso implications for conservation. *International Journal of Conservation Science*. 14(1): 281-294.
- Silitongaa S. R , Hendrawana I. G. dan Putra I. N. G. 2022. Kelimpahan dan jenis mikroplastik pada sedimen lamun di perairan nusa dua, bali. *Journal of Marine Research and Technology*. 6(1): 1-6. <https://ojs.unud.ac.id/index.php/JMRT>
- Steinbach, C., Kroupová, H.K., Wahli, T., Klicnarová, J. dan Schmidt-Posthaus, H. 2016. Histopathological alterations of the heart in fish: proposal for a standardized assessment. *Diseases of Aquatic Organisms*. 118(3): 185-194. doi: 10.3354/dao02971
- Suardy, N.H., Tahrim, N.A. dan Ramli, S. 2020. Analysis and characterization of microplastic from personal care products and surface water in bangi, selangor. *Sains Malaysiana*. 49(9): 2237-2249. doi: 10.17576/jsm-2020-4909-21
- Suman, T.Y., Jia, P.P., Li, W.G., Junaid, M., Xin, G.Y., Wang, Y. dan Pei, D.S. 2020. Acute and chronic effects of polystyrene microplastics on brine shrimp: first evidence highlighting the molecular mechanism through transcriptome analysis. *Journal of Hazardous Materials*. 400(1): 1-35.
- Surinlert, P., Kongthong, N., Watthanard, M., Sae-Lao, T., Sookbangnop, P., Pholpramool, C. dan Tipbunjong, C. 2020. Styrene oxide caused cell cycle arrest and abolished myogenic differentiation of C2C12 myoblasts. *Journal of Toxicology*. 1(1): 1-11. doi: 10.1155/2020/1807126
- Tanaka, K., Takada, H., Yamashita, R., Mizukawa, K., Fukuwaka, M.A. dan Watanuki, Y. 2013. Accumulation of plastic-derived chemicals in tissues of

- seabirds ingesting marine plastics. *Marine Pollution Bulletin*. 69(1): 219-222. doi: 10.1016/j.marpolbul.2012.12.010
- Trupti, T. dan Satish, B. 2019. Evaluation of teratogenicity of ethanol and dmsol in zebrafish. *Asian Journal of Pharmacy and Pharmacology*. 5(2): 256-289. doi: 10.31024/ajpp.2019.5.2.11
- Tuan, T., Kaminishi, Y., Funahashi, A., Hassanin, A.A. dan Itakura, T. 2014. Cloning and tissue expression of cytochrome P450 1B1 and 1C1 genes from Javanese Medaka, *Oryzias Javanicus*, under environmental stress conditions. *African Journal of Biotechnology*. 13(20): 2028-2040. doi: 10.5897/AJB2014.13614
- Wang, Q., Li, Y., Chen, Y., Tian, L., Gao, D., Liao, H., Kong, C., Chen, X., Junaid, M. dan Wang, J. 2022. Toxic effects of polystyrene nanoplastics and polybrominated diphenyl ethers to zebrafish (*Danio rerio*). *Fish & Shellfish Immunology*. 126(1): 21-33. <https://doi.org/10.1016/j.fsi.2022.05.025>
- Weis, Judith A., Clinton J. D., John F., Raymond G., John L., Robert J. L., Peter L. dan Robert R., N. 2015. Human health impacts of microplastics and nanoplastics. *SAB Public Health Standing Committee*. 23(1). 1-10.
- Wu, X., Hua, X., Xu, K., Song, Y. dan Lv, T., 2023. Zebrafish in lung cancer research. *Cancers*. 15(19): 4721. doi: 10.3390/cancers15194721
- Yoon, H., Park, B., Rim, J. dan Park, H. 2022. Detection of microplastics by various types of whiteleg shrimp (*Litopenaeus vannamei*) in the Korean sea. *Separations*. 9(11): 332. doi: 10.3390/separations9110332
- Zhou, Y., Zhao, L., Xu, H., Xu, E.G., Li, M. dan Wang, Y. 2022. Long-term exposure to polystyrene nanoplastics impairs the liver health of medaka. *Water*. 14(17): 1-11. <https://doi.org/10.3390/w14172767>