

## DAFTAR PUSTAKA

- Al-Hamed, F. S., Kouniaris, S., Tamimi, I., Lordkipanidze, M., Madathil, S. A., Kezouh, A., Karp, I., Nicolau, B., and Tamimi, F., 2021. Acetylcholinesterase Inhibitors and Risk of Bleeding and Acute Ischemic Events in Non-hypertensive Alzheimer's Patients. *Translational Research & Clinical Interventions*. 7: 1-9.
- Arnold, P. A., Johnson, K. N., dan White, C. R., 2013. Physiological and Metabolic Consequences of Viral Infection in Drosophila melanogaster. *Journal of Experimental Biology*. 216 (17): 3350-3357
- Asbah, A., Ummussaadah, U., Parenjen, N., Putri, A. S. W., Rosa, R. A., Rumata, N. R., Emran, T. B., Dhama, K., and Nainu, F., 2021. Pharmacological Effect of Caffeine on Drosophila melanogaster: A Proof of Concept in Vivo Study for Nootropic Investigation. *Arch Razi Inst.* 76(6): 1645-1654
- Barwell, T., DeVeale, B., Poirier, L., Zheng, J., Seroide, F., and Seroude, L., 2017. Regulating the UAS/GAL4 System in Adult Drosophila with Tet-off GAL80 Transgenes. *PeerJ*. 5: 2-28
- Bayo-Olubgami, A., Nafiu, A. B., Amin, A., Ogundele, O. M., Lee, C. C., dan Owoyele, V., 2020. Vitamin D Attenuated 6-OHDA-induced Behavioural Deficits, Dopamine Dysmetabolism, Oxidative Stress, and Neuro-Inflammation in Mice. *Nutritional Neuroscience*. 24(4): 823-834.
- Bhat, M. dan Ismail, A., 2015. Vitamin D Treatment Protect Against and Reverses Oxidative Stress Induced Muscle Proteolysis. *The Journal of Steroid Biochemistry and Molecular Biology*. 152: 171-179.
- Braak, H and Tredici, D. K., 2012. Where, When, and in What Form Does Sporadic Alzheimer's Disease Begin. *Current Opinion in Neurology*. 25. (6): 708-714.
- Brothers, H. M., Gosztyla, M. L., and Robinson, S. R., 2018. The Physiological Roles of Amyloid- $\beta$  Peptide Hint at New Ways to Treat Alzheimer's Disease. *Frontiers in Aging Neuroscience*. 10(118): 1-16
- Stasyshyn, R. K. A., Saccon, R. A., Frata, P. and Fisher, E. M. C., 2015. SOD1 Function and Its Implications for Amyotrophic Lateral



- Sclerosis Pathology: New and Renascent Themes. *Neuroscientist*. 21(5): 519-529.
- Cheng, X., Song, C., Du, Y., Gaur, U., and Yang, M., 2020. Pharmacological Treatment of Alzheimer's Disease: Insights from *Drosophila melanogaster*. *International Journal of Molecular Sciences*. 21(13).
- Chiti, F. and Dobson, C. M., 2017. Protein Misfolding, Amyloid Formation, and Human Disease: A Summary of Progress Over the Last Decade. *Annual Review of Biochemistry*. 86: 27-68.
- Desikan, R S., Cebral, H. J., Hess, C. P., Dillon, W. P., Glastonbury, C. M., and Weiner, M. W., 2009. Automated MRI Measures Identify Individuals with Mild Cognitive Impairment and Alzheimer's Disease. *Brain*. 132. (8): 2048-2057.
- Gadhav, K., Bolshette, N., Ahire, A., Pardesi, R., Thakur, K., Trandafir, C., Istrate, A., Ahmed, S., Lahkar, M., Muresanu, D. F., dan Balea, M., 2016. The Ubiquitin Proteasomal System: a Potential Target for the Management of Alzheimer's Disease. *Journal of Cellular and Molecular Medicine*. 20(7): 1392-1407.
- Gargano, J., Martin, I., Bhandari, P., dan Grotewiel, M. S., 2005. Rapid Iterative Negative Geotaxis (RING): a New Method for Assessing Age-related Locomotor Decline in *Drosophila*. *Experimental Gerontology*. 40(5): 386-395.
- Garibyan, L. dan Avashia, N., 2013. Research Techniques Made Simple: Polymerase Chain Reaction (PCR). *Journal Invest Dermatol* 133(3).
- Gowda, S. B. M., Salim, S., dan Mohammad, F., 2020. Anatomy and Neural Pathways Modulating Distinct Locomotor Behaviors in *Drosophila* Larva. *Biology*. 10 (90); 1-30.
- Hadi, H. M., Tarwotjo, U., dan Rahardian, R., 2009. *Biologi Insekta Entomologi*. Yogyakarta: Graha Ilmu
- Higuchi, R., Fockler, C., Dollinger, G., and Watson, R., 1993. Kinetic PCR Analysis: Real-time Monitoring of DNA Amplification Reactions. *Bio/Technology*. 11. (9): 1026-1030



Cheung, A., Bascoul-Mollevi, C., Assenat, E., Boissiere-Michot, F., Bibeau, F., Cellier, D., Ychou, M., and Lopez-Crapez, E., 2009. Reverse Transcription-quantitative Polymerase Chain Reaction:

Description of a RIN-based Algorithm for Accurate Data Normalization. *BMC Molecular Biology*. 10. (31): 1-10.

Joshi, M. dan Deshpande, J. D., 2010. Polymerase Chain Reaction: Methods, Principles And Application., *International Journal of Biomedical Research*.

Klemchuk, P. P., 2012. Antioxidants. *Encyclopedia of Industrial Chemistry*. 4. 157-177

Kardinan, A., 2010. *Mengenal Lebih Dekat Tanaman Pengendali Lalat Buah*. Jakarta: PT. Agromedia Pustaka.

Kasanin, J., Wang, X., Jiao, W., Li, Q., dan Lu, B., 2022. Studying Alzheimer's Disease Using *Drosophila melanogaster* as a Powerful Tool. *Advances in Alzheimer's Disease*. 11: 23-37.

Kelly, S. M., Elchert, A., dan Kahl, M., 2017. Dissection and Immunofluorescent Staining of Mushroom Body and Photoreceptor Neurons in Adult *Drosophila melanogaster* Brains. *Journal of Visualized Experiments*. 129: 1-13.

Lee, J. H., O'Keefe, J. H., Bell, D., Hensrud, D. D., dan Folick, M. F., 2008. An Important, Common, and Easily Treatable Cardiovascular Risk Factor. *J Am Coll Cardiol*. 52: 1949-1956

Lin, A. M. Y., Chen, K. B., Chao, P. L., 2005. Antioxidative Effect of Vitamin D3 on Zinc-induced Oxidative Stress in CNS. *Ann. N. Y. Acad. Sci.* 1053: 319-329

Mendez, M. F., 2012. Early Onset Alzheimer's Disease: Nonamnestic Subtypes and Type 2 AD. *Archives od Medical Research*. 43. (8): 677-685.

Milani, P., Gagliardi, S., Cova, E., dan Cereda, C., 2011. Sod1 Transcriptional and Posttranscriptional Regulation and Its Potential Implication in ALS. *Neurology Research International*. 2011: 458427.

Nainu, F., 2018. Penggunaan *Drosophila melanogaster* sebagai organisme model dalam penemuan obat. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy)*. 4(1): 50-67.



- Nikl, K., Castillo, S., Hoie, E., and O'Brien, K. K., 2019. Alzheimer's Disease: Current Treatments and Potential New Agents. *The Pharmacist's Resource for Clinical Excellence*. 44(1): 20-23.
- Ott, S., Vishnivetskaya, A., Malmendal, A., dan Crowther, D. C., 2016. Metabolic Shanges May Precede Proteostatic Dysfunction in a Drosophila Model of Amyloid Beta Peptide Toxicity. *Neurobiology of Aging*. 41: 39-52
- Reaume, C. J., dan Sokolowski, M. B., 2006. The Nature of Drosophila melanogaster. *Curr Biol*. 16(16): 623-628
- Rogers, A., Towery, L., McCown, A., dan Carlson, K. A., 2020. Impaired Geotaxis as a Novel Phenotype of Nora Virus Infection of Drosophila melanogaster. *Scientifica*. 1-6.
- Sabandal, P. R., Saldes, E. B., and Han, K., 2022. Acetylcholine deficit causes dysfunctional inhibitory control in an aging-dependent manner. *Sci. Rep.* 12: 1-11
- Sea, K., Sohn, S. H., Durazo, A., Sheng, Y., Shaw, B. F., Cao, X., 2015. Insight Into the Role of The Unusual Disulfide Bond in Copper-zinc Superoxide Dismutase. *The Journal of Biological Chemistry*. 290(4): 2405-2418
- Sehar, U., Rawat, P., Reddy, A. P., Kopel, J., and Reddy, P. H., 2022. Amyloid Beta in Aging and Alzheimer's Disease. *Int. J. Mol. Sci.* 23:1-25
- Sepidarkish, M., Farsi, F., Fakhrabadi, M. A., Namazi, N., Hashiani, A. A., Hagiagha, A. M., and Heshmati, J., 2019. The effet of Vitamin D Supplementation of Oxidative Stress Parameters: A Systematic Review and Meta-Analysis of Clinical Trials. *Elsevier: Pharmacological Research*. 139: 141-152.
- Showell, S. S., Martinez, Y., Gondolfo, S., Boppana, S., and Lawal, H. O., 2020. Overexpression of the vesicular acetylcholine transporter disrupts cognitive performance and causes age-dependent locomotion decline in Drosophila. *Mol. Cell Neurosci*. 105.
- Simon, R. P., Greenberg, D. A., and Aminoff, M. J., 2018. *Clinical Neurology*. New York: McGraw Hill.



- G. S., 2022. Regional Amyloid Correlates of Cognitive Performance in Ageing and Mild Cognitive Impairment. *Brain Communication*. 4(1): 1-14.
- Tanaka, K., 2009. The Proteasome: Overview of Structure and Functions. *Proc. Jpn. Acad., Ser. B*. 85 (12). 12-36.
- Tello, J. A., Williams, H. E., Eppler, R. M., Steinhilb, M. L., and Khanna, M., 2022. Animal Models of Neurodegenerative Disease: Recent Advances in Fly Highlight Innovative Approaches to Drug Discovery. *Frontiers in Neuroscience*. 15.
- Tiraboschi, P., Hansen, L. A., Thal, L. J., and Corey-Bloom, J., 2004. The Importance of Neuritic Plaques and Tangles to The Development and Evolution of AD. *Neurology*. 62. (11): 1984-1989
- Todd, S., Barr, S., Roberts, M., and Passmore, A. P., 2013. Survival in Dementia and Predictors of Mortality: a Review. *International Journal of Geriatric Psychiatry*. 28. (11): 1109-1124.
- Vale, P. F., dan Jardine, M. D., 2015. Sex-specific Behavioural Symptoms of Viral Gut Infection and Wolbachia in *Drosophila melanogaster*. *Journal of Insect Physiology*. 82: 28-32
- Vasconcelos, M. A., Orsolini, P. C., Oliveira, V. C., Lima, P. M. A. P., Naves, M. P. C., Morais, C. R., Junior, N. N., Bonetti, A. M., and Spano, M. A., 2020. Modulating Effect of Vitamin D3 on the Mutagenicity and Carcinogenicity of Doxorubicin in *Drosophila melanogaster* and in Silico Studies. *Elsevier: Food and Chemical Toxicology*. 143.
- Wahyuni, A. dan Nisa, K., 2016. Pengaruh Aktivitas dan Latihan Fisik terhadap Fungsi Kognitif pada Penderita Demensia. *MAJORITY*. 5(4): 12-16.
- Wang, W., Li, Y., and Meng, X., 2023. Vitamin D and Neurodegenerative Diseases. *Heliyon*. 9.
- Wei-Wei, M., Ye, T., Yan-Ying, W., dan Feng, P., 2017. Impaired Geotaxis as a Novel Phenotype of Nora Virus Infection of *Drosophila melanogaster*. *Chinese Journal of Natural Medicines*. 15(12): 899-904.



H., 2007. *Antioksidan Alami dan Radikal bebas Potensi dan Aplikasinya dalam Kesehatan*. Yogyakarta: Kanisius

Zahra, N., Johan, A., dan Ngestiningsih, D., 2019. Hubungan Antara Kadar Vitamin D dengan Kadar Malonaldehid (MDA) Plasma pada Lansia. *Jurnal Kedokteran Diponegoro*. 8(1): 333-342

Zhang, H., Liu, Y., Fang, X., Gu, L., Luo, C., Chen, L., and Qian W., 2021. Vitamin D3 Protects Mice from Diquat-Induced Oxidative Stress Through the NF- $\kappa$ B/Nrf2/HO-1 Signaling Pathway. *Oxidative Medicine and Cellular Longevity*. 1-15.

Zhang, X. X., Tian, Y., Wang, Z. T., Ma, Y., Tan, L., and Yu, J. T., 2021. The Epidemiology of Alzheimer's Disease Modifiable Risk Factors and Prevention. *The Journal of Prevention of Alzheimer's Disease*. 8: 313-321

Zhang, Y., Chen, H., Li, R., Sterling, K., and Song, W., 2023. Amyloid- $\beta$  Based Therapy for Alzheimer's Disease: Challenges, Successes and Future. *Signal Transduction and Targeted Therapy*. 8: 248.

Zhao, C., Tsapanou, A., Manly, J., Schupf, N., Brickman, A. M., and Gu, Y., 2020. Vitamin D intake is associated with dementia risk in the Washington Heights-Inwood Columbia Aging Project (WHICAP). *Alzheimer's & Dementia*. 1-9.

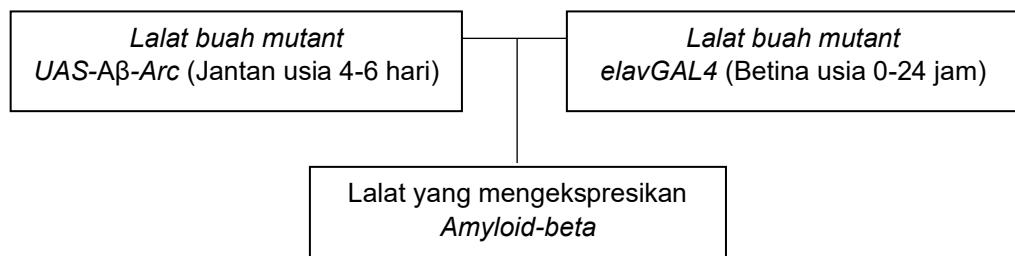
Zhu, Q., Ren, X., dan Zhang, C., 2015. Effects of d-galactose on The Structure of Nerve Fibers in Cerebellar White Matter. *Pakistan J. Zool.* 47(1):187–92.



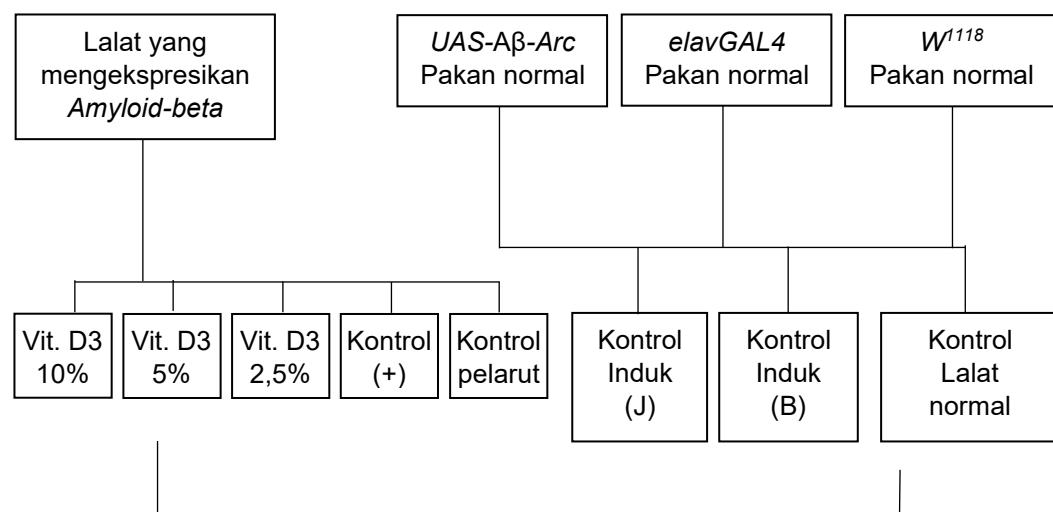
## LAMPIRAN

### Lampiran 1. Skema Kerja Umum

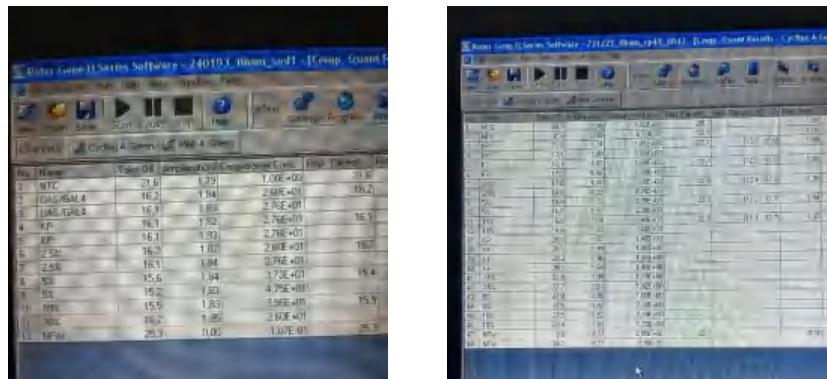
#### Lampiran 1.1. Skema Penyiapan *Drosophila transgenik*



#### Lampiran 1.2. Skema Pengujian



## Lampiran 2. Gambar Hasil Pengujian



Gambar 6. Hasil pengukuran PCR



Gambar 7. Hasil pengujian Lokomotor dan Fungsi Kognitif



### Lampiran 3. Dokumentasi



Gambar 8. Proses isolasi dan running PCR



Gambar 9. Proses pemisahan kepala lalat