

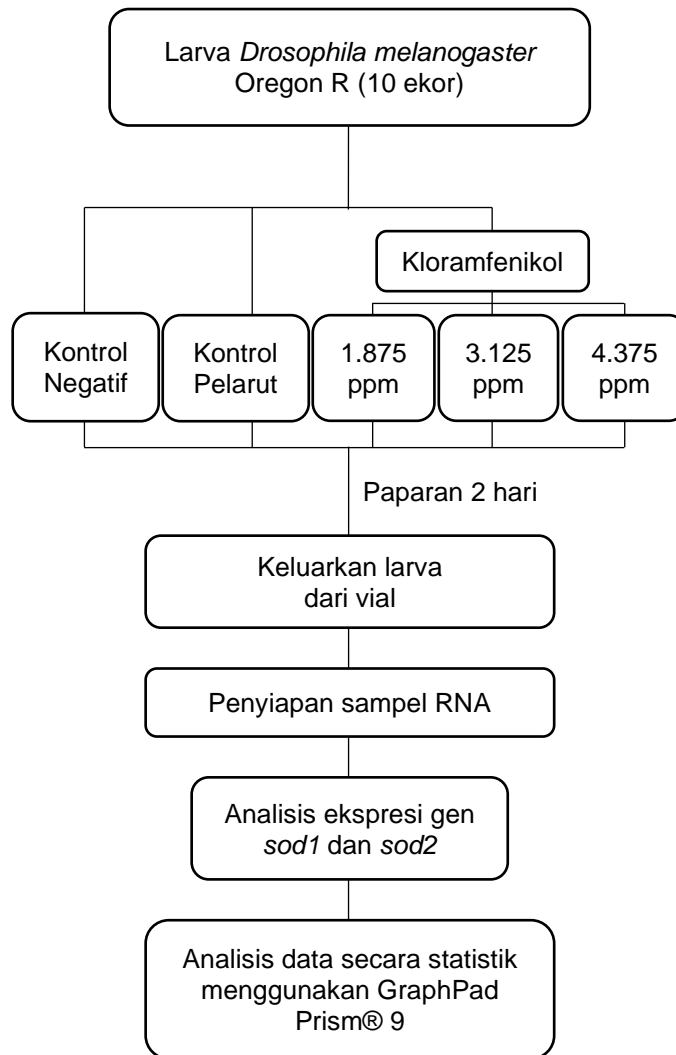
## DAFTAR PUSTAKA

- Abdollahi, M. dan Mostafalou, S. (2014) *Encyclopedia of Toxicology*, Elsevier Inc. Elsevier Inc. doi:10.1016/B978-0-12-386454-3.00709-0.
- Cassar, M. *et al.* (2015) 'A Dopamine Receptor Contributes to Paraquat-Induced Neurotoxicity in *Drosophila*', *Human Molecular Genetics*, 24(1), pp. 197–212. doi:10.1093/hmg/ddu430.
- Eleutherio, E.C.A. *et al.* (2021) 'SOD1, more than just an antioxidant', *Archives of Biochemistry and Biophysics*, 697, p. 108701. doi:10.1016/j.abb.2020.108701.
- Hikmah, F., Hardiany, N.S. dan Kunci, K. (2021) 'Peran *Reactive Oxygen Species* (ROS) dalam Sel Punca Kanker', *Jurnal Kedokteran Yarsi*, 29(3), pp. 120–134.
- Ighodaro, O.M. dan Akinloye, O.A. (2018) 'First line defence antioxidants-superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPX): Their fundamental role in the entire antioxidant defence grid', *Alexandria Journal of Medicine*, 54(4), pp. 287–293. doi:10.1016/j.ajme.2017.09.001.
- Meneely, P.M. *et al.* (2017) *Genetics: Genes, Genomes, and Evolution*. New York: Oxford University Press.
- Moffa, M. dan Brook, I. (2015) *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*. Eighth Edi, Elsevier Inc. Eighth Edi. Elsevier Inc. doi:10.1016/B978-1-4557-4801-3.00026-6.
- Monari, M. *et al.* (2008) 'Chloramphenicol Influence on Antioxidant Enzymes with Preliminary Approach on Microsomal CYP1A Immunopositive-Protein in *Chamelea gallina*', *Chemosphere*, 73(3), pp. 272–280. doi:10.1016/j.chemosphere.2008.06.033.
- Mulhall, A., De Louvois, J. and Hurley, R. (1983) 'Chloramphenicol Toxicity in Neonates: Its Incidence and Prevention', *British Medical Journal*, 287(6403), pp. 1424–1427. doi:10.1136/bmj.287.6403.1424.
- Nainu, F. (2018) 'Review : Penggunaan *Drosophila melanogaster* sebagai Organisme Model dalam Penemuan Obat', *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)*, 4(1), pp. 50–67. doi:10.22487/j24428744.2018.v4.i1.9969.
- Nolan, T., Hands, R.E. dan Bustin, S.A. (2006) 'Quantification of mRNA using real-time RT-PCR', *Nature Protocols*, 1(3), pp. 1559–1582. doi:10.1038/nprot.2006.236.

- Oong, G.C. dan Tadi., P. (2023) *Chloramphenicol*, StatPearls Publishing. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK555966/#>.
- Otaki, Y. *et al.* (2016) 'The Impact of Superoxide Dismutase-1 Genetic Variation on Cardiovascular and All-Cause Mortality in A Prospective Cohort Study: The Yamagata (Takahata) Study', *PLoS ONE*, 11(10), pp. 1–12. doi:10.1371/journal.pone.0164732.
- Páez, P.L., Becerra, M.C. dan Albesa, I. (2008) 'Chloramphenicol-induced oxidative stress in human neutrophils', *Basic and Clinical Pharmacology and Toxicology*, 103(4), pp. 349–353. doi:10.1111/j.1742-7843.2008.00290.x.
- Pelt-Verkuil, E. van, Belkum, A. van dan Hays, J.P. (2008) *Principles and Technical Aspects of PCR Amplification*. Netherlands: Springer Dordrecht.
- Pogue, J.M. *et al.* (2017) *Infectious Diseases*. 4th edn, Elsevier Inc. 4th edn. Edited by J. Cohen, W.G. Powderly, and S.M. Opal. Elsevier Ltd. doi:10.1016/B978-0-7020-6285-8.00146-5.
- Pomatto, L.C.D. *et al.* (2018) 'Sex-Specific Adaptive Homeostasis in *D. melanogaster* Depends on Increased Proteolysis by the 20S Proteasome: Data-in-Brief', *Data in Brief*, 17, pp. 653–661. doi:10.1016/j.dib.2018.01.044.
- Sharifi-Rad, M. *et al.* (2020) 'Lifestyle, Oxidative Stress, and Antioxidants: Back and Forth in the Pathophysiology of Chronic Diseases', *Frontiers in Physiology*, 11(July), pp. 1–21. doi:10.3389/fphys.2020.00694.
- Siddhardha, B., Dyavaiah, M. dan Kasinathan, K. (2020) *Model organisms to study biological activities and toxicity of nanoparticles*, *Model Organisms to Study Biological Activities and Toxicity of Nanoparticles*. doi:10.1007/978-981-15-1702-0.
- Sultan, R. *et al.* (2001) 'Drug Resistance of Bacteria Commensal with *Drosophila melanogaster* in Laboratory Cultures', *Dros. Inf. Serv.*, 84, pp. 175–180.
- Susilawati, I.D.A. (2021) 'Kajian Pustaka: Sumber Reactive Oxygen Species (ROS) Vaskular', *STOMATOGNATIC - Jurnal Kedokteran Gigi*, 18(1), p. 1. doi:10.19184/stoma.v18i1.27959.
- Syed, M.A. *et al.* (2021) 'The Relationship of Drug Therapy to Aplastic Anemia in Pakistan: A Hospital-based case Control Study', *Therapeutics and Clinical Risk Management*, 17, pp. 903–908. doi:10.2147/TCRM.S325742.

## LAMPIRAN

### Lampiran 1. Skema Kerja Penelitian



## Lampiran 2. Perhitungan

### Pembuatan larutan kloramfenikol 50.000 ppm

$$50.000 \text{ ppm} = 5 \text{ mg/mL}$$

Dibuat dalam 10 mL

$$50.000 \text{ ppm} = 50 \text{ mg/mL} \times 10 \text{ mL}$$

$$\text{Kloramfenikol} = 500 \text{ mg}$$

### Pembuatan pakan *Drosophila* yang mengandung kloramfenikol

#### Konsentrasi 1.875 ppm

$$N_1 \times V_1 = N_2 \times V_2$$

$$50.000 \times V_1 = 1.875 \times 5 \text{ mL}$$

$$V_1 = 187,5 \text{ } \mu\text{L} \text{ (dari larutan kloramfenikol 50.000 ppm, ad 5 ml pakan)}$$

#### Konsentrasi 3.125 ppm

$$N_1 \times V_1 = N_2 \times V_2$$

$$50.000 \times V_1 = 3.125 \times 5 \text{ mL}$$

$$V_1 = 312,5 \text{ } \mu\text{L} \text{ (dari larutan kloramfenikol 50.000 ppm, ad 5 ml pakan)}$$

#### Konsentrasi 4.375 ppm

$$N_1 \times V_1 = N_2 \times V_2$$

$$50.000 \times V_1 = 4.375 \times 5 \text{ mL}$$

$$V_1 = 437,5 \text{ } \mu\text{L} \text{ (dari larutan kloramfenikol 50.000 ppm, ad 5 ml pakan)}$$

### Lampiran 3. Data Statistik

**Tabel 2. Hasil *One-Way ANOVA* ekspresi gen *sod1***

ANOVA summary	Value
F	46,58
P value	0,0004
P value summery	***
Significant diff. among means (P < 0.05)?	Yes
R square	0,9739

**Tabel 3. Hasil uji lanjutan *Dunnnett* ekspresi gen *sod1***

Dunnnett's Multiple Comparisons Test	Mean Diff.	Summary	Adjusted P Value
KP vs. KS	-0,09500	ns	0,9963
KP vs. 1875	4,285	***	0,0003
KP vs. 3125	2,040	**	0,0084
KP vs. 4375	2,180	**	0,0063

**Tabel 4. Hasil uji lanjutan *Tukey* ekspresi gen *sod1***

Tukey's multiple comparisons test	Mean Diff.	Summary	Adjusted P Value
KS vs. KP	0,09500	ns	0,9988
KS vs. 1875	4,380	***	0,0004
KS vs. 3125	2,135	*	0,0122
KS vs. 4375	2,275	**	0,0093
KP vs. 1875	4,285	***	0,0005
KP vs. 3125	2,040	*	0,0148
KP vs. 4375	2,180	*	0,0112
1875 vs. 3125	-2,245	**	0,0098
1875 vs. 4375	-2,105	*	0,0130
3125 vs. 4375	0,1400	ns	0,9945

**Tabel 5. Hasil *One-Way ANOVA* ekspresi gen *sod2***

ANOVA summary	Value
F	87,11
P value	<0,0001
P value summery	****
Significant diff. among means (P < 0.05)?	Yes
R square	0,9859

**Tabel 6. Hasil uji lanjutan *Dunnnett* ekspresi gen *sod2***

Dunnnett's Multiple Comparisons Test	Mean Diff.	Summary	Adjusted P Value
KP vs. KS	0,2800	ns	0,4469
KP vs. 1875	2,720	***	0,0001
KP vs. 3125	2,335	***	0,0002
KP vs. 4375	1,810	***	0,0006

**Tabel 7. Hasil uji lanjutan Tukey ekspresi gen *sod2***

<b>Tukey's multiple comparisons test</b>	<b>Mean Diff.</b>	<b>Summary</b>	<b>Adjusted P Value</b>
KS vs. KP	-0,2800	ns	0,5979
KS vs. 1875	2,440	***	0,0002
KS vs. 3125	2,055	***	0,0006
KS vs. 4375	1,530	**	0,0023
KP vs. 1875	2,720	***	0,0001
KP vs. 3125	2,335	***	0,0003
KP vs. 4375	1,810	**	0,0010
1875 vs. 3125	-0,3850	ns	0,3524
1875 vs. 4375	-0,9100	*	0,0227
3125 vs. 4375	-0,5250	ns	0,1614

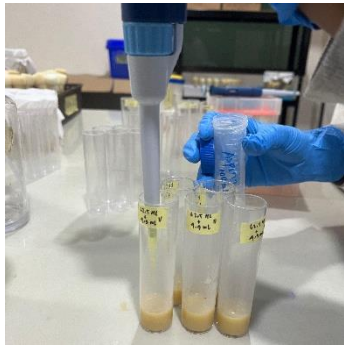
#### Lampiran 4. Dokumentasi Penelitian



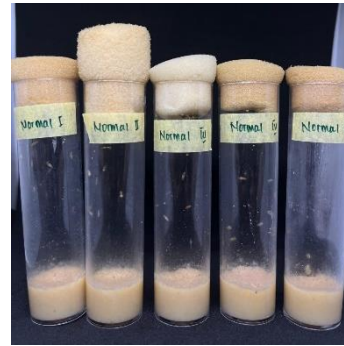
**Gambar 5. Pembuatan pakan**



**Gambar 6. Pembuatan stok kloramfenikol**



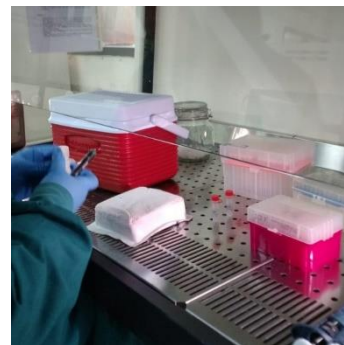
**Gambar 7. Pembuatan pakan perlakuan**



**Gambar 8. Paparan kloramfenikol**



**Gambar 9. Collecting larva**



**Gambar 10. Peparasi isolasi RNA**



**Gambar 11. Isolasi RNA**



**Gambar 12. Running Real Time PCR**