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Effect of *Moringa oleifera* leaves extract towards cerebral histopathology in methanol induced male Wistar rats

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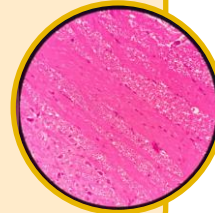
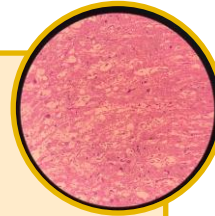
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Introduction

- Methanol intoxication CFR in Indonesia → 30%
- Cause of intoxication → unintentional ingestion, abuse
- Methanol intoxication cause blindness, central nervous system damage and metabolic acidosis
- Definitive therapy for cerebral damage cause by methanol intoxication remain unknown
- *Moringa oleifera* (MO) leaf has various bioactive effect such as anticancer, anti-inflammation, anti-diabetes and antioxidant

Research Purpose

To analyze effect of *Moringa oleifera* leaf extract on brain histopathology in male Wistar strain rats inducing methanol in terms of brain volume, Purkinje cell necrosis percentage and leukocyte count percentage



Method and material

**Acclimatization
and
randomization**

**Methanol
poisoning**

**Negative
control and
group testing**

**Data obtaining
and analyzing**

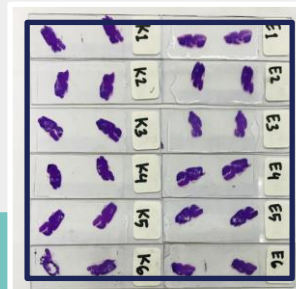
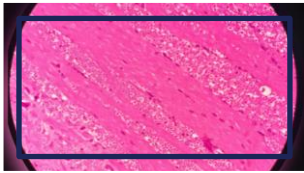
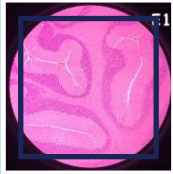
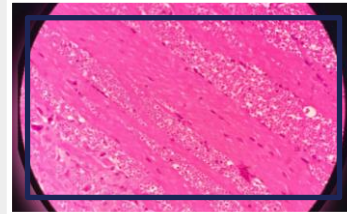
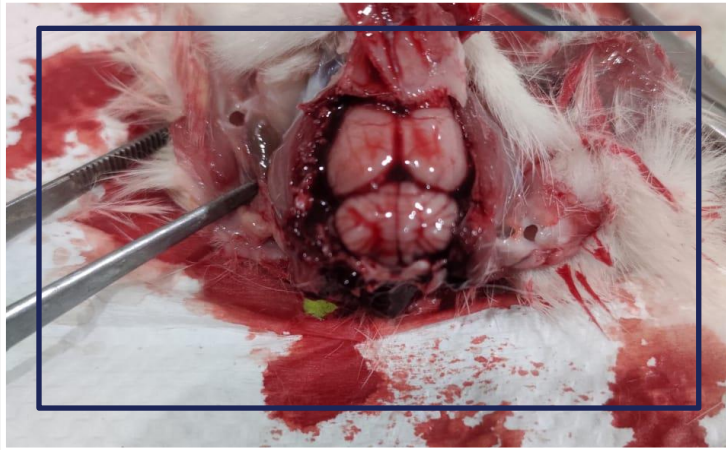
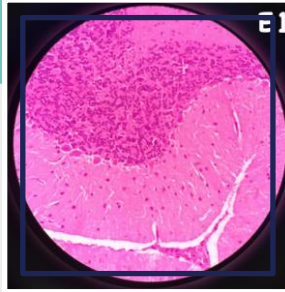
Result

	Negative control	Treatment group
Brain volume (mm ³)	2773.33 (±350)	2906.33 (±627)
Lymphocyte percentage (%)	15.5 (±5.36)	4.0 (±1.26)
Necrosis percentage (%)	56.3 (±16.7)	66.8 (±23.5)

Cont'd

	Brain Volume	Lymphocyte Percentage	Necrosis Percentage
Chi-Square	0.104	8.426	0.641
Df	1	1	1
Asymp. Sig.	0.747	.004*	0.423

Photograph



Discussion

- Typical dose of MO leaf is 300mg/kg body weight, but efficacy in this dose is still on further research, as 1000mg/kg body weight is still considered safe.
- On the other hand, the effect of MO leaf extract on necrosis percentage of brain tissue was found to be insignificant in our study.
- This may be due to smaller dose administration compared to other studies, namely 800mg/kg of body weight of experimental animals.

- While the measurement of brain oedema represented macroscopically with brain volume was also obtained insignificant between two groups.
- We suspect the dosage of MO leaf extract also has an influence on this effect.
- Further experiment and evaluation are mandatory.

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**Thank
You**

THANKS

Do you have any questions?

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