

SUBACUTE TOXICITY OF MICROGRANULATED *Myrmecodia platytyrea* AQUEOUS TUBER EXTRACT (gMPAE)

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Introduction

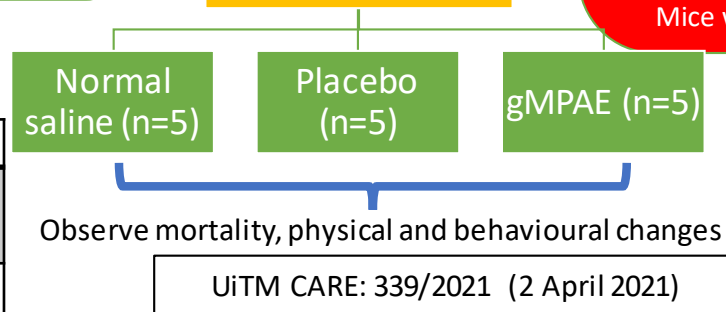
Myrmecodia platytyrea or locally known as 'Sarang Semut' is an epiphytic plant native to Asia and the Asia Pacific regions (Fig. 1). The tubers of this plant were traditionally used in the management of cancer, hyperuricaemia and coronary heart diseases (1). Scientifically, it has been proven that the aqueous extract of this tuber has potential pharmacological benefits including anti-cancer, anti-diabetic and anti-inflammatory properties, to name a few (2). Hence, the extract has the potential to be developed as a supplement in boosting the immune system since the extract showed no acute and subacute toxic effects.



Fig 1 *Myrmecodia platytyrea* tubers



OECD guidelines 407



Objective

The aim of this study is to investigate the subacute toxicity of the microgranulated aqueous extract of *M. platytyrea* tuber (gMPAE).

Methodology

gMPAE: 400g of 1:6 (Maltodextrin : Lactose) + 60 ml 1% PVP K90 using fluidbed spray dried granulator. Time of spray : 30 sec; Drying time : 3-5 min; Speed : 159 rpm. Temperature: 70 – 80°C

Subacute toxicity: Female ICR mice (18-25 g, 8 weeks), 5 per group. Study done based on OECD 407 (2008) (3). Behavioral and physical changes were observed every day for 28 days and 2 weeks post-administration for late onset. Mice were sacrificed and gross necropsy was done.

Results & Discussion

- After single oral administration of 2000 mg/kg b.w. of *M. platytyrea*, no sign of toxicity on general behavior and no mortality was reported. (Table 1)
- There was no changes on gross appearance.

Table 1 Mortality and symptoms of toxicity observed after 28-day oral administration of microgranulated *M. platytyrea* tuber aqueous extract of female albino mice.

	Mice	Effects	
	D/T	Mortality latency (h)	Symptoms observed
Normal saline	0/5	-	None
Placebo	0/5	-	None
gMPAE	0/5	-	None

D: number of dead; T: number of treated mice

Conclusion

Microgranulated *M. platytyrea* tuber aqueous extract (400 mg/kg) showed no toxicity in female albino mice, subacutely thus, safe for consumption.

References:

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