

## SUPPLEMENTARY MATERIALS

**Supplementary Table 1:** Dosing schedule for mitragynine (MG) and morphine dependence induction.

Days	Mitragynine (MG) dose (mg/kg)	Morphine dose (mg/kg)
1 to 2	15	5
3 to 4	20	7.5
5 to 7	25	10
8 to 10	35	12.5
11 to 14	45	15

**Supplementary Table 2:** The counted signs and checked signs with the respective weighing factors to evaluate rats' withdrawal severity.

Counted signs	Weighing factor
Wet-dog shaking	2
Rearing	2
Stretching	2
Jumping	2
Teeth chattering	2
Grooming	2
Chewing	2
Checked sign	Weighing factor
Diarrhoea	1