Supplemental figures for JPET:

Title: A novel maintenance therapeutic for Opioid Use Disorder

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**Pharmacokinetics of RM1490:**
RM1490 (1 mg/kg IV injection): half-life (0.63±0.03 hours); Clearance 5.9±0.78 L/hr/kg
RM1490 (1 mg/kg SC injection): half-life (2.67±1.15 hours); Cmax 46.4±2.33 ng/ml
N=3 rats per group.
The effects of RM1490 are reversible

Summary data for comparable fentanyl (Fen) induced respiratory depression before and 230min after injection of RM1490 (10mg/kg SC); n=4 per group, ANOVA F (2, 9) = 8.3, P=0.009; Dunnet’s post hoc test (Fen_1 vs. RM1490 (mean diff: 36.26, **p=0.006), and Fen_1 vs fen_2 mean diff: 10.17, ns).

FIG S2
The effects of RM1490 are reversible

Summary data for comparable fentanyl (Fen) induced respiratory depression before and 230min after injection of RM1490 (10mg/kg SC); n=4 per group, ANOVA F (2, 9) = 8.3, P=0.009; Dunnet’s post hoc test (Fen_1 vs. RM1490 (mean diff: 36.26, **p=0.006), and Fen_1 vs fen_2 mean diff: 10.17, ns).
RM1490 does not induce place preference during detoxification from morphine
Naltrexone (n=10), RM1490 (n=9), Morphine (n=5) per group, ANOVA F (2, 21) = 10.8, P=0.0006; Dunnett’s post hoc test (Nltrx vs. Morphine (mean diff: 85.13, **p=0.001), and RM1490 vs Morphine mean diff: 18.7, **p=0.005).

**FIG S3**