Experiment Number: S0305_1
Route: Gavage, IV
Species/Strain: Mouse/B6C3F1

Toxicokinetics Data Summary
Test Compound: Methadone hydrochloride
CAS Number: 1095-90-5

Date Report Requested: 01/11/2017
Time Report Requested: 12:23:12
Lab: Research Triangle Institute

	Male				
	Treatment Groups (mg/kg)				
	2.5 [a]	2.5 [b]	15 [b]	2.5 IV [a]	7.5 IV [b]
	Plasma				
C_{max} (percent of dose*g/mL)	1.03	1.03	2.63		2.41
T_{max} (minute)	15	15	15		45
Lambda$_z$ (minute^-1)	0.0058			0.0170	
$t_{1/2}$ (minute)	119.2			59.4	
k_{10} (minute^-1)		0.0107	0.0063		0.0112
$t_{1/2(k10)}$ (minute)		65.0	110.5		61.9
AUC_{0-t} (percent of dose*g*min/mL)	73.9	73.9	556.4	910.4	239.1
F (percent of intravenous)	8.1	8.1	61	100	26

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	Female			
	Treatment Groups (mg/kg)			
	2.5 [a]	15 [b]	2.5 IV [a]	7.5 IV [a]
	Plasma			
C_{max} (percent of dose*g/mL)	0.83	3.06		2.22
T_{max} (minute)	75	45		75
Lambda$_z$ (minute^-1)	0.0181		0.0149	0.0316
$t_{1/2}$ (minute)	38.3		46.7	21.9
k_{10} (minute^-1)		0.0074		
$t_{1/2(k10)}$ (minute)		93.1		
AUC_{0-t} (percent of dose*g*min/mL)	40.6	232.2	907.7	116.5
F (percent of intravenous)	4.5	26	100	12.8

LEGEND

Data are displayed as mean values

MODELING METHOD & BEST FIT MODEL

[a] ADAPT II (a pharmacokinetic modeling package) was used to perform the nonlinear curve fitting; non-model dependent analysis

[b] ADAPT II (a pharmacokinetic modeling package) was used to perform the nonlinear curve fitting; one compartment model

ANALYTE

Methadone hydrochloride

TK PARAMETERS

C_{max} = Observed or Predicted Maximum plasma (or tissue) concentration

T_{max} = Time at which C_{max} predicted or observed occurs

$Lambda_z$ = Non-compartmental analysis (NCA) terminal elimination rate constant, NCA k_e or k_{elim}

$t_{½}$ = $Lambda_z$ half-life, $t_{1/2}$, the terminal elimination half-life based on non-compartmental analysis

k_{10} = Elimination rate constant from the central compartment also k_e or k_{elim}

$t_{1/2(k10)}$ = Half-life for the elimination process from the central compartment

AUC_{0-t} = Area under the plasma concentration versus time curve, AUC, from time t_i (initial) to t_f (final), AUC_{last}

F = Bioavailability, absolute bioavailability

** END OF REPORT **