

**Experiment Number:** S0609  
**Route:** Gavage, IV  
**Species/Strain:** Mouse/B6C3F1

**Toxicokinetics Data Summary**  
**Test Compound:** 3'-Azido-3'-deoxythymidine  
**CAS Number:** 30516-87-1

**Date Report Requested:** 01/11/2017  
**Time Report Requested:** 12:22:28  
**Lab:** Research Triangle Institute International

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	<b>Male</b>						
	<b>Treatment Groups (mg/kg)</b>						
	<b>15 #</b>	<b>15 *</b>	<b>25 #</b>	<b>25 ~</b>	<b>25 *</b>	<b>25 °</b>	<b>50 °</b>
	<b>Plasma</b>						
$C_{max}$ (ug/mL)	5.91	0.0863	13.0	0.163	0.205	0.224	0.308
$T_{max}$ (hour)	0.0833	0.500	0.333	0.500	0.500	8.00	0.333
Lambdaz (hour <sup>-1</sup> )	1.64		2.50				
$t_{1/2}$ (hour)	0.423		0.277				
Cl (mL/min/kg)	62.5		41.7				
$V_1$ (L/kg)							
$V_{1(F)}$ (L/kg)	2.29		1.00				
MRT (hour)	0.537		0.558				
$AUC_{0-t}$ (ug*hr/mL)		0.0072		0.0136	1.23	0.453	0.343

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<b>Male</b>									
<b>Treatment Groups (mg/kg)</b>									
	<b>50 #</b>	<b>50 *</b>	<b>50 ~</b>	<b>90 *</b>	<b>90 ~</b>	<b>90 °</b>	<b>90 #</b>	<b>100 °</b>	<b>100 ~</b>
<b>Plasma</b>									
$C_{\max(\text{obs})}$ (ug/mL)	28.9	0.795	0.219	0.868	0.530	0.601	74.9	0.720	0.493
$T_{\max(\text{obs})}$ (hour)	0.333	0.333	0.0833	0.167	0.500	0.333	0.333	0.500	0.333
$\text{Lambda}_z$ (hour <sup>-1</sup> )	1.41						1.51		
$t_{1/2}$ (hour)	0.491						0.461		
Cl (mL/min/kg)	36.3						26.3		
$V_1$ (L/kg)									
$V_{1(F)}$ (L/kg)	1.54						1.05		
MRT (hour)	0.606						0.833		
$\text{AUC}_{0-t}$ (ug*hr/mL)		2.01	0.120	6.48	0.276	0.620		0.269	1.75

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	<b>Male</b>							
	<b>Treatment Groups (mg/kg)</b>							
	<b>100 *</b>	<b>100 #</b>	<b>15 IV #</b>	<b>15 IV *</b>	<b>15 IV ~</b>	<b>50 IV #</b>	<b>50 IV °</b>	<b>50 IV *</b>
	<b>Plasma</b>							
$C_{\max(\text{obs})}$ (ug/mL)	1.01	61.5	37.6	2.28	0.0890	79.5	0.230	3.55
$T_{\max(\text{obs})}$ (hour)	0.167	0.0833		2.00	0.500		0.250	0.250
$\text{Lambda}_z$ (hour <sup>-1</sup> )		2.10	1.76			2.63		
$t_{1/2}$ (hour)		0.330	0.395			0.263		
Cl (mL/min/kg)		31.3	27.3			32.0		
$V_1$ (L/kg)			0.934			0.729		
$V_{1(F)}$ (L/kg)		0.895						
MRT (hour)		1.06	0.294			0.453		
$\text{AUC}_{0-t}$ (ug*hr/mL)	8.24			16.8	0.0659		0.0813	7.26

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**Male**

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	Treatment Groups (mg/kg)				
	50 IV ~	100 IV °	100 IV #	100 IV *	100 IV ~
	<b>Plasma</b>				
$C_{\max(\text{obs})}$ (ug/mL)	1.28	1.18	184	7.61	0.674
$T_{\max(\text{obs})}$ (hour)	0.250	0.250		6.00	0.750
$\text{Lambda}_z$ (hour <sup>-1</sup> )			1.96		
$t_{1/2}$ (hour)			0.353		
Cl (mL/min/kg)			21.0		
$V_1$ (L/kg)			0.643		
$V_{1(F)}$ (L/kg)					
MRT (hour)			0.767		
$\text{AUC}_{0-t}$ (ug*hr/mL)	0.107	0.899		69.1	0.218

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Female								
Treatment Groups (mg/kg)								
	15 #	25 ~	25 *	25 #	50 *	50 ~	50 #	50 °
Plasma								
C <sub>max(obs)</sub> (ug/mL)	7.86	0.100	1.96	13.6	0.869	0.302	32.5	0.173
T <sub>max(obs)</sub> (hour)	0.333	0.333	8.00	0.167	1.50	0.167	0.333	0.167
Lambda <sub>z</sub> (hour <sup>-1</sup> )	1.51			2.02			0.960	
t <sub>1/2</sub> (hour)	0.459			0.343			0.720	
Cl (mL/min/kg)	43.5			33.3			26.8	
V <sub>1</sub> (L/kg)								
V <sub>1(F)</sub> (L/kg)	1.73			0.990			1.67	
MRT (hour)	0.585			0.580			0.927	
AUC <sub>0-t</sub> (ug*hr/mL)		0.0401	10.9		2.07	0.0761		0.0488

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Female								
Treatment Groups (mg/kg)								
	15 IV #	15 IV *	50 IV #	50 IV *	100 IV °	100 IV *	100 IV ~	100 IV #
Plasma								
C <sub>max(obs)</sub> (ug/mL)	18.5	1.81	32.7	3.56	0.850	4.90	0.445	130
T <sub>max(obs)</sub> (hour)		8.00		0.250	0.250	8.00	0.750	
Lambda <sub>z</sub> (hour <sup>-1</sup> )	2.08		2.16					1.78
t <sub>1/2</sub> (hour)	0.333		0.321					0.389
Cl (mL/min/kg)	25.8		30.8					22.4
V <sub>1</sub> (L/kg)	0.743		0.855					0.756
V <sub>1(F)</sub> (L/kg)								
MRT (hour)	0.448		0.567					0.619
AUC <sub>0-t</sub> (ug*hr/mL)		5.36		6.22	0.593	63.6	0.229	

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## LEGEND

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Data are displayed as mean values

### MODELING METHOD & BEST FIT MODEL

WinNonlin (Model 200 and 201, WinNonlin Ver. 1.5A, Scientific Consulting, Inc. now Pharsight Corporation, Apex, NC); Non compartmental analysis

### ANALYTE

- # 3'-Azido-3'-deoxythymidine
- \* 3'-Amino-3'-deoxythymidine
- ~ 3'-amino-3'-deoxythymidine glucuronide
- ° Beta-D-glucuronide

### TK PARAMETERS

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

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

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

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

Cl = Clearance, includes total clearance

$V_1$  = Volume of distribution of the central compartment, includes  $V_d$  and  $V_{volume}$  of distribution,  $V_z$  apparent volume of distribution NCA,  $V_{app}$  apparent volume of distribution for intravenous studies

$V_{1(F)}$  = Apparent volume of distribution for the central compartment includes  $V_{d(F)}$ ,  $V_{(F)}$  for oral groups, and  $V_{c(F)}$

MRT = Mean residence time

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

**\*\* END OF REPORT \*\***