Experiment Number: K88073-2
Route: Gavage
Species/Strain: Rats/F344

Toxicokinetics Data Summary
Compound: 2',3'-Dideoxyinosine/ **Analyte:** 2',3'-Dideoxyinosine
CAS Number: 7481-89-2

Request Date: 7/11/2023
Request Time: 10:03:16
Lab: SO

Male

	Treatment Group (mg/kg)		
	84 Gavage Plasma[a]	**169 Gavage Plasma[a]**	**375 Gavage Plasma[a]**
Alpha Half-life (hour)	0.30	0.46	0.03
Beta Half-life (hour)	1.01	0.81	1.39
Cl (mL/hr*kg)	2420	4050	4780
AUC_0-T (ug*hr/mL)	34.7	41.7	78.5

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	Treatment Group (mg/kg)		
	652 Gavage Plasma[a]	**652 Gavage Plasma[a]**	**1154 Gavage Plasma[a]**
Alpha Half-life (hour)	0.07	0.03	0.45
Beta Half-life (hour)	2.08	2.36	2.04
Cl (mL/hr*kg)	4900	4980	6670
AUC_0-T (ug*hr/mL)	133	131	173

LEGEND

MODELING SOFTWARE

NONLIN

MODELING METHOD & BEST FIT MODEL

[a]NONLIN, Model shows an absorption (alpha) and monophasic elimination (beta) phases

ANALYTE

2',3'-Dideoxyinosine (DDC)

TK PARAMETERS

Alpha Half-life = Half-life for the alpha phase
Beta Half-Life = Half-life for the beta phase
Cl = Clearance, includes total clearance
AUC_0-T = Area under the plasma concentration versus time curve, AUC, from time ti (initial) to tf (final), AUClast

TK PARAMETERS PROTOCOL

ANALYSIS METHOD

Plasma was harvested and analyzed by HPLC likely with UV detection (280 nm). Plasma ddC values based upon the actual bleeding times were analyzed using a computer-based pharmacokinetics program (NONLIN) to calculate the AUC for each dose group. For the pharmacokinetic parameter program, the dose concentrations were converted to ug/kg. Computer generated plots show no absorption phase (alpha) which was not well defined pharmacokinetically and a monophasic, elimination phase. In the sister mouse study AUC was calculated for t=0 to 24 hours and presumably for the rats as well. This study was likely used to select dose levels for the potential 90 day subchronic study.

TK_GAVAGE PLASMA

84 mg/kg,169 mg/kg, 375 mg/kg, 652 mg/kg, 1154 mg/kg Male

F344 male rats were singly dosed with 84, 169, 375, 750, or 1500 mg/kg 2',3'-dideoxycytidine (ddC) by gavage. There were no vehicle control animals. Rats were weighed prior to dosing, and the oral doses were based upon these body weights. Blood samples were taken twice from the same animals at least 2 hours apart with timepoints at 15, 60, 120, 240, 480, and 1440 minutes postdose (n=4). The vehicle was likely 0.5% (w/v) methylcellulose in deionized water.

652 mg/kg Male

F344 male rats were dosed twice with 652 mg/kg 2',3'-dideoxycytidine (ddC) by gavage. Doses were spaced six hours apart and plasma ddC concentrations were measured after the second dose. There were no vehicle control animals. Rats were weighed prior to dosing, and the oral doses were based upon these body weights. Blood samples were taken twice from the same animals at least 2 hours apart with timepoints at 15, 60, 120, 240, 480, and 1440 minutes post dose (n=4). The vehicle was likely 0.5% (w/v) methylcellulose in deionized water.