

# TOXICITY

## ACUTE TOXICITY - SAMPLE DESIGNS

- Single-Dose Toxicity Study in Beagle or Mixed Breed Dogs
- MTD Determination with Repeat Dose Range-Finding in Beagle or Mixed Breed Dogs

## REPEAT DOSE TOXICOLOGY STUDIES - Non GLP

- 14- Day Repeat Toxicity Study in Beagle or Mixed Breed Dogs
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# ACUTE TOXICITY - SAMPLE DESIGNS

## Single-Dose Toxicity Study in Beagle or Mixed Breed Dogs

Acute Toxicity: Single Dose	
<b>Number of Animals</b>	4 Dogs (2 M/2F)
<b>Treatment Frequency</b>	Single dose
<b>Dose Route</b>	To be specified by sponsor (ex. oral, bolus iv, infusion, subcutaneous injection, intraperitoneal injection, topical ocular, etc.)
<b>Study Duration</b>	48 hours Clinical
<b>Observation Frequency</b>	Daily
<b>Body Weight</b>	Pre-dose and study end Clinical Pathology: Collection pre-dose, 24 and 48 hours post-dose. Options include clinical chemistry, hematology, and/or coagulation parameters.
<b>Necropsy</b>	Gross
<b>Organ Weight</b>	As specified by Sponsor
<b>Histopathology</b>	As specified by Sponsor (ex. Lesions only, target organs, or main organs); Standard histology includes paraffin embedding and slides prepared with H&E
<b>Deliverables</b>	Report with observations and dose administration table for in-life phase, as well as any clinical pathology, gross observations, and pathology results, as applicable.
<b>Compliance</b>	Non-GLP

# ACUTE TOXICITY-SAMPLE DESIGNS (1)

## MTD Determination with Repeat Dose Range-Finding in Beagle or Mixed Breed Dogs

Phase I: Single Acute Dose	
<b>Animals</b>	4 dogs (2/sex)
<b>Study Duration</b>	Approximately 9 days
<b>Dosing</b>	Up to 4 dose administrations of a single dose with a sponsor-specified washout period between escalating doses
<b>Dose Route</b>	As specified by Sponsor (i.e. Oral, iv, ip)
<b>Clinical Observation</b>	Twice Daily Body Weights and all other observations specified by the sponsor (Prior to dose administration)
<b>Blood Sampling</b>	One sample per treatment for TK



## ACUTE TOXICITY - SAMPLE DESIGNS (2)

Phase II: 7-Day Repeat Dose Range-Finding Study	
<b>Animals</b>	24 dogs (3/sex/group)
<b>Study Duration</b>	7 days
<b>Dosing</b>	Daily for 7 days
<b>Dose Route</b>	As specified by Sponsor (i.e. Oral, iv, ip)
<b>Clinical Observation</b>	Twice Daily
<b>Body Weight</b>	Daily
<b>Blood Sampling &amp;TK</b>	Pre-dose and at the end of the study (for clinical chemistry and hematology) TK (6 to 9 time points per day)
<b>Gross Necropsy Organ Weight</b>	Standard by ICH/OECD guidelines
<b>Histopathology</b>	Lesions as applicable; additional charges will be incurred for preservation, processing, and evaluation

# REPEAT DOSE TOXICOLOGY STUDIES - Non GLP (1)

## 14- Day Repeat Toxicity Study in Beagle or Mixed Breed Dogs

		Main Study		Optional Recovery	
	Group	Male	Female	Male	Female
Dog	Control	4	4	3	3
	Low	4	4	0	0
	Mid	4	4	0	0
	High	4	4	3	3
<b>Total animals</b>		N= 32		N= 12	
<b>Dose Route</b>	Specified by the sponsor (ex. oral, bolus IV, infusion, subcutaneous injection, intraperitoneal injection, topical ocular ...)				
<b>Dose Frequency</b>	Daily				
<b>In-Life Study Duration</b>	14 days dosing plus Recovery Period (i.e. 7 or 14 days)				
<b>Dose Formulation</b>	As specified by Sponsor				
<b>Dose Sampling</b>	Sampling on first and last dose days for dose verification				

# REPEAT DOSE TOXICOLOGY STUDIES - Non GLP (2)

## 14- Day Repeat Toxicity Study in Beagle or Mixed Breed Dogs

<b>Dose Route</b>	To be specified (ex. oral, bolus IV, infusion, subcutaneous injection, intraperitoneal injection, topical ocular ...)
<b>Clinical Observation</b>	Daily
<b>Food Consumption</b>	Weekly
<b>Body Weight</b>	Weekly
<b>Ophthalmic examination</b>	As specified by sponsor. Suggested prior to first dose and during week 2
<b>Clinical Pathology</b>	All animals, pre-dose and at sacrifice: standard panels for clinical chemistry, hematology, and coagulation, terminal collection for urinalysis
<b>TK Blood sampling</b>	Approximately six time points on day 1 and day 14
<b>TK Blood Processing</b>	A refrigerated centrifuge will be used to process whole blood to plasma. Plasma samples will be directly transferred to appropriate tubes and stored at -80. Samples will be shipped to sponsor on dry ice upon receipt of shipping request,
<b>Necropsy</b>	Main and recovery animals
<b>Organ Weight</b>	Standard tissues per ICH/OECD guidelines
<b>Tissue Preservation</b>	Mid and low level group tissues stored in formalin
<b>Histology/Pathology</b>	Standard tissues on high and control animals in main and recovery groups: Sponsor to specify request for histopathology on all tissues or preserved tissues



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