4-WEEK TOXICITY STUDY IN RATS WITH IMMUNOTOX (BY KLH ELISA ON SATELLITE ANIMALS)

MPI Research Proposal <Number> for <Sponsor>

STUDY DESIGN:

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<th>Main Study</th>
<th>Satellite Study</th>
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<tr>
<td></td>
<td>Males</td>
<td>Females</td>
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<td>Vehicle Control</td>
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<td>Low Dose</td>
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<td>Mid Dose</td>
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<td>High Dose</td>
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DOSE ROUTE/FREQUENCY: As requested/Once daily all animals for 28 days

OBSERVATIONS: Twice daily (mortality/moribundity)

DETAILED CLINICAL OBSERVATION: Weekly

FUNCTIONAL OBSERVATIONAL BATTERY: Pretest and Day 25

BODY WEIGHTS: Weekly

FOOD CONSUMPTION: Weekly

OPHTHALMOLOGY: All animals prior to test article administration; all surviving main study animals at study termination

CLINICAL PATHOLOGY: Hematology, coagulation, clinical chemistry, and urinalysis evaluations on all surviving main study animals at termination (see Appendix A)

IMMUNOTOXICOLOGY (KLH ELISA): Immunize animals from the satellite groups on Day 23. At termination, collect ~1-2 mL of blood for serum animals on Day 29 at which time animals are bled out (for serum).

NECROPSY: All main study animals; satellite animals euthanized and discarded

ORGAN WEIGHTS: Adrenals, brain, heart, kidneys, liver, lungs, ovaries with oviducts, pituitary, prostate, salivary glands, seminal vesicles, spleen, thyroid with parathyroid, thymus, testes, uterus, two lymph nodes (e.g. mesenteric, axillary, popliteal, etc) including the lymph node draining the route of administration

SLIDE PREPARATION/MICROSCOPIC PATHOLOGY: All animals in the vehicle control and high dose groups and all found dead animals; full set of standard tissues (approximately 70), add Peyer’s patch, extra lymph node; low and mid-dose group target organs (to be determined); gross lesions from all animals

STATISTICAL ANALYSIS: Standard

ANALYTICAL: Sample analysis included; Validation will be conducted under a separate study number (additional cost).

BIOANALYTICAL: Sample analysis included; Validation will be conducted under a separate study number (additional cost).

STUDY PRICE:$

To receive information about this study, please contact Dr. Jia En Chin at JiaEn.Chin@mpi research.com or call 1-269-668-3336.