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Protocol 2

1. A total of 9 column "E" guinea pigs were utilized in this study.

2. Painful procedure: The guinea pigs receive a dose of soman which results in seizure activity. Seizure activity may or may not be associated with motor convulsions, and if present, these convulsions will most likely bring about some degree of pain or discomfort. However, it has been suggested that animals are unresponsive during seizure activity and may not be aware of pain or distress. Thus, the worst case scenario is assumed.

3. Justification: To meet the objectives of this project, in terms of relevance to actual field conditions, it is critical that anticonvulsant drugs be evaluated in a model in which seizure activity is ongoing. The presence of anesthetics or analgesics will confound the data making it impossible to distinguish analgesic/anesthetic-induced perturbation from real differences. Thus, the administration of anesthetics or analgesics for this particular study will be counterproductive to the overall goals of the project.

4. No federal regulations mandate this procedure.

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Protocol 3

1. A total of 6 column "E" guinea pigs were utilized in this study.

2. Painful procedure: Guinea pigs will receive a convulsive dose of the nerve agent soman, which is thought to cause some pain and/or distress due to the intense physical activity caused by the seizure.

3. Justification: The use of anesthetics and/or analgesics would result in misleading information regarding the role of mast cell mediated anaphylactoid reactions/mast cell degranulation in acute organophosphorous poisoning. Anesthetics/analgesics also have profound effects on brain function that can interact with the toxicity of the nerve agent and thus complicate interpretation of the results.

4. No federal regulations mandate this procedure.