

51F0006

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Protocol 4

1. A total of 337 column "E" guinea pigs were utilized in this study.
2. Painful procedure: Guinea pigs receive a potentially convulsive dose of the nerve agents to be evaluated, and death from nerve agent intoxication is the primary endpoint of this protocol.
3. Justification: Death from nerve agent exposure is aesthetically unpleasant and probably painful to the animals due to the intense physical activity caused by the seizures. However, quantitative evaluation of nerve toxicity and the efficacy of therapeutic countermeasures requires exposure to anesthetics or analgesics to relieve pain would lead to an erroneous evaluation of the toxicity of these agents and the efficacy of pretreatment, treatment, and decontamination procedures.
4. No federal regulations mandate this procedure.

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Protocol 5

1. A total of 328 column "E" guinea pigs were utilized in this study.
2. Painful procedure: Guinea pigs 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 pain may be relieved to some extent by administration of one of the test drugs that successfully terminates the seizure. Anesthetics and analgesics are known to have profound effects on brain function that can interact with the drugs of interest and/or the toxicity of the nerve agent and thus complicate interpretation of the results. This is especially so since the purpose of the study is to model the pharmacological intervention a human nerve agent casualty would receive. Since the goal of the study is to evaluate the ability of novel anticonvulsant drugs to treat nerve agent-induced seizures, subjecting the animals to nerve agent intoxication that elicits seizures is essential.
4. No federal regulations mandate this procedure.

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