2.31(e)(4) DIRECT

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC).

A protocol approved by the Institutional Animal Care and Use Committee (IACUC) involving full-thickness skin irradiation in guinea pigs categorized 28 males and 28 females as “Pain or distress relieved by analgesia or anesthesia.”

The protocol also later states that “Pain, distress and/or irritation are not an expected outcome; however, if deemed necessary by veterinary assessment, non-NSAID analgesics (e.g. buprenorphine…) and diphenhydramine may be provided, as needed. This latter statement is contradictory to the classification as “Pain or distress relieved by analgesia or anesthesia.”

At the time of the inspection, forty (40) animals had open wounds (partial to full-thickness loss of skin at the irradiated site) and varying degrees of redness and swelling immediately surrounding the irradiated site indicating substantial inflammation. The test facility noted 19 animals with "distress when picked up from cage and has an open wound at the irradiation site." These signs could be interpreted as evidence of “pain, distress and/or irritation” noted within the protocol as a basis for provision of analgesia. A total of 10 animals were treated with buprenorphine by the test facility based upon general clinical signs and a supportive provision of a food cup in place of a feeder to make it easier for them to eat.

The protocol classification approved by the IACUC as Category D “Pain or distress relieved by analgesia or anesthesia” requires administration of analgesia or anesthetics. By not providing analgesia or anesthesia in these affected animals renders them as Category E “Unrelieved pain or distress.”

A protocol approved by the IACUC must contain a clear description of the procedures designed to assure that discomfort and pain to animals will be limited to that which is unavoidable for the conduct of scientifically valuable research, including provision for the use of analgesic, anesthetic, and tranquilizing drugs where indicated and appropriate to minimize discomfort and pain to animals. A scientific justification is required for animals that
experience unrelieved pain or distress and such justification must be approved by the IACUC.

Unless such approved justification exists, an animal that can be reasonably be expected to experience more than slight or momentary pain and/or distress like these animals must receive analgesics, anesthetics and/or or other interventions appropriate to the nature and severity of the pain, discomfort or distress. Such methods of relief must be approved by the IACUC.

Correct from this time forward.

2.33(e)(5) CRITICAL REPEAT
ATTENDING VETERINARIAN AND ADEQUATE VETERINARY CARE.
In a protocol involving non-human primates, one of the monkeys sustained a fracture of the two long bones of the left forearm. Although lack of use and favoring of the affected limb was noted by facility personnel on two separate occasions on two days, the veterinarian was not contacted until approximately 19-20 hours after the first such observation. This monkey was subsequently euthanized shortly after veterinary examination. Fractures cause pain, which can be quite severe depending upon the location and severity of the fracture. While the fracture was unanticipated, the lack of reporting caused this animal to experience pain longer than had it been reported to the veterinary staff when initially noticed.

In a protocol involving full-thickness irradiation of guinea pigs, the approved protocol stated that pain or distress was not anticipated (despite categorization of the majority of animals as Category D) but pain relief would be provided if deemed necessary upon veterinary assessment. Forty (40) animals experienced outcomes (partial to full-thickness skin loss of skin caused by the irradiation) that could reasonably be expected to cause more than slight or momentary pain and/or distress. Of these, ten (10) animals were treated with buprenorphine.

In the event that unexpected pain or distress would occur in an animal, the attending veterinarian must be promptly contacted to assure expedient and appropriate action is taken to alleviate the pain, distress or discomfort. The affected animal must receive analgesics, anesthetics or other interventions appropriate to the nature and severity of the pain, discomfort or distress.

2.38(f)(1) CRITICAL REPEAT
MISCELLANEOUS.

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Date: 05-MAY-2017

Received By: (b)(6), (b)(7)(c)
Title: 
Date: 05-MAY-2017
On 06 February 2017, a cynomolgus macaque on a study protocol received fractures of the radius and ulna.

On that morning, the monkey received a baseline neurological/musculoskeletal evaluation with no abnormalities detected. Blood was then collected minutes later for two separate evaluations. Approximately two-and-a-half hours later, the monkey was restrained for administration of a test article. All animal handling was conducted using a procedure box, to which it had been previously acclimatized.

Observation of the animal on a scheduled neurological/musculoskeletal evaluation conducted approximately four hours post-dose indicated that it could grasp with the left hand when the squeeze back was used, but not using that hand when left alone. Clinical observations approximately one hour later indicated bruising of the right lower forelimb and right hind limb, as well as a scab/crust of an upper hind limb.

Scheduled clinical observations and neurological/musculoskeletal evaluation the next morning were consistent with those on the previous day. An unscheduled clinical observation was performed approximately 20 hours after the first abnormal neurological/musculoskeletal evaluation. This observation included consistent results as previous observations but included swelling of the lower left forelimb.

A veterinary examination was conducted within minutes of this latter observation, which indicated no use of the left arm, mild swelling to the forearm, with a planned sedation for x-ray and limb palpation. This latter evaluation revealed displaced fractures of the radius and ulna. The monkey was then euthanized. The veterinary assessment was conducted approximately 20 hours after the initial abnormal observation due to lack of reporting to the veterinary staff.

While the exact cause of the fractures was not determined by the test facility, the “Animal Welfare Incident Report” submitted to the facility Institutional Animal Care and Use Committee stated that “the injury most likely occurred during the Feb. 6th blood collection and/or dosing.”

The test facility must assure that the handling of all animals is conducted as expeditiously and carefully as possible in a manner that does not cause trauma, overheating, excessive cooling, behavioral stress, physical harm, or unnecessary discomfort.

During this inspection, it was noted that the test facility has enacted a number of improvements with regards to the welfare, training and behavior and environmental enhancements since the last inspection. These changes include a re-organization to align husbandry, study and veterinary staff under one cohesive line of management and improved
observation and tracking of behavioral conditions.

This inspection and exit briefing were conducted with facility representatives.

Additional Inspectors
Schnell Michael, Veterinary Medical Officer

[b](6), [b](7)(c)