

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> The guinea pig's ability to move around the cage is limited for 2-4 hours a day due to a tethering process that's used during behavior studies. The tether will prevent the animal from twisting or turning 90 degrees in the cage, but does not interfere with their ability to access food and water. Although the animals are slowly acclimated to the tethering system; the procedure may result in unrelieved distress.</p> <p><b>Reason pain relieving medications cannot be used:</b> The behavioral and psychological studies must be conducted while the animals are alert and facing forward. The use of anesthetics and sedatives would prevent the animals from participating in the behavior studies.</p>	2

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> The research goal is to identify anti-fibrotic therapies in a rabbit model of inflammatory bowel disease. Inflammation of the intestine will likely cause diarrhea, but similar intestinal inflammation in humans would not be expected to be painful. It is possible that animals will experience discomfort.</p> <p><b>Reason pain relieving medications cannot be used:</b> Analgesics cannot be used due to the increased risk of serious complications in the model of inflammatory bowel disease. Animals are euthanized when clinical signs warrant it.</p>	25

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> Macaques are restrained in chairs for periods less than 8 hours. The restraint occurs to facilitate behavior studies. During the studies the animals' head, and/or arm(s) may be physically restrained. Although the animals are trained and acclimated being physically restrained; they may experience unrelieved distress from the procedure.</p> <p><b>Reason pain relieving medications cannot be used:</b> The animals are expected to experience the most distress during the acclimation process at which time they will receive sedation if necessary. However, no sedation can be used during the behavior studies because the drugs would interfere with the studies.</p>	5

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> Intravenous glucose tolerance tests require of the catheterization of the jugular vein. Maintenance of the catheter in place is needed and is only achievable if animals are individually prolonged restraint in a stalled.</p> <p><b>Reason pain relieving medications cannot be used:</b>  Animals have jugular catheterization and must remain in stalls for the duration of the test (3hours), but not restrained; they can lay and stay at free will. To minimize a stress from isolation (highest source of stress in sheep), animals are placed next to each other during the entire duration of the experiment. Animals are not subjected to pain during this time and therefore no analgesics are required. Analgesics will be given as preventive and palliative treatment in specific procedures.</p>	11

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> Animals will be connected to numerous lines for monitoring, infusion of intravenous fluids and medications, and oxygen sweep gas flow. Animals must be housed in the stanchion for up to 30 days post-surgery to facilitate physiological measurements and ensure appropriate care. The animals are able to stand, sit down and change positions, but they are not able to turn around in the cage.</p> <p><b>Reason pain relieving medications cannot be used:</b> Although the sheep display no signs of distress, the potential exists for them to experience unrelieved distress. Consequently, the animals are being housed using this process and cannot be sedated.</p>	29

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> The pigs undergo abdominal surgery for organ transplant procedures. Some animals will sustain prolonged fasting (12-48 hrs) and will be monitored for any signs of hypoglycemia or dehydration, despite water being available.</p> <p><b>Reason pain relieving medications cannot be used:</b> These animals are listed in category E for prolonged fasting. They will receive appropriate analgesic and euthanasia protocols.</p>	15

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<b>Procedure:</b> New born piglets will be feed artificially rather than being permitted to suckle on the sow. This lack of interaction with the sow may result in more than momentary distress.  <b>Reason pain relieving medications cannot be used:</b> The study requires animals to receive a controlled and regular diet with a total lack of parenteral nutrition.	22

425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> Voles are used in behavioral assays to identify physiological consequences in a model of stress-induced major depression and head fixed recordings to record electrophysiological signals during natural sleep and behavioral assays. During activities, animals will experience stress or distress related to the intention of the specific behavioral assays.</p> <p><b>Reason pain relieving medications cannot be used:</b> Physiologic measurements and observations of awake, behaving animals are required for the goals of this study. Analgesics would interfere with the brain activity and/or behavioral responses and confound analysis of the behavioral data, thus interfering with the purpose of the studies.</p>	130



425 Victor Vaughan, Ann Arbor, MI 48109-2054

34-R-0001

University of Michigan USDA Category E Explanations	# Used
<p><b>Procedure:</b> Animals that will undergo dexamethasone and ACTH injections and will be blood sampled and other individuals that will just be blood sampled. Anesthesia cannot be used because it affects the stress hormone levels and production and would obscure any experimental effects.</p> <p><b>Reason pain relieving medications cannot be used:</b> It is likely that squirrels will experience temporary pain and distress when receiving two injections for the stress axis sensitivity tests and associated blood sampling. Squirrels may also experience temporary pain when ear tissue sampling occurs. This is necessary and anesthesia cannot be provided because it can affect our measures of hormones, oxidative stress, or other physiological parameters.</p>	52