LIBERTY UNIVERSITY INSTITUTIONAL ANIMAL CARE & USE COMMITTEE

POLICY REGARDING THE USE OF AVIAN EMBRYOS

PURPOSE:

The purpose of this policy is to establish procedures for the use of avian embryos in research, teaching, or testing activities at Liberty University.

POLICY:

Avian embryos are not considered live animals by the applicable US regulatory agencies. However, the scientific community has determined avian embryos beyond half way to hatching can experience pain. If the avian embryos hatch, then they become live vertebrate animals, and as such, are subject to IACUC oversight. To ensure adequate animal care, the IACUC has developed the following policy regarding avian embryos, with chick embryos serving as the model species.

- All personnel who intend to use avian embryos should notify the IACUC using the Avian Embryo Use form. This form allows the IACUC to have a record of the embryo use. Projects using embryos that are euthanized before or equal to 50% development do not require IACUC review. Projects using embryos beyond 50% development must be reviewed and approved by the IACUC prior to initiation.
- Chick embryos younger than embryonic day 10.5 (E10.5) are assumed to be unable to experience pain. Embryos E10.5 or younger should be euthanized by hypothermia, often achieved by placing the eggs in a -20C freezer for at least 4 hours.
- Chick embryos older than embryonic day 10.5 (E10.5) can experience pain and should be euthanized using a rapid and humane method. A suggested method is decapitation.
- Any avian embryos beyond 50% development must be humanely euthanized using CO₂, anesthetic agents, or decapitation. Remember, embryos are resistant to CO₂ so if exposed to this method, the embryos must be exposed to 90% CO₂ for at least 20 minutes. Dry ice is not an acceptable source of carbon dioxide for this situation.
- Inadvertent hatching may occur. In such cases, investigators are asked to describe their intended method for care or euthanasia of the hatchlings.

Note: The common days to hatch for a chicken is 21 days. Other common days to hatch can be found by following this link: <u>https://extension.psu.edu/incubation-period-of-other-species</u>