BILATERAL USE OF EYES FOR RESEARCH ACTIVITIES

PERFORMANCE STANDARD: All animals shall have adequate use of their sensory organs during research, testing, or training activities.

BACKGROUND/PURPOSE: Creation of visual disability as a consequence of ocular experimentation or disease development is a special animal welfare consideration that may apply to select research protocols. In its definition of major survival surgery, the Guide to the Care and Use of Laboratory Animals includes any surgical intervention that has the potential for producing a permanent handicap in an animal that is expected to recover. Hence, any experimental procedure that results in, or has the potential to result in, a level of visual disability sufficient to disrupt an animal's normal daily activity should be considered a major survival procedure. Such procedures require appropriate justifications and suitable animal care accommodations. Protocols involving bilateral survival ocular procedures require special consideration and justification, with particular attention to any visual consequences. Such procedures include bilateral ocular surgeries, whether performed simultaneously or sequentially, and any other experiments with the potential to affect vision bilaterally. The Guide recommends that animals not be subjected to multiple major survival surgical procedures unless they are related components of a particular research project. Accordingly, a visually disabling procedure should not be performed bilaterally unless the two procedures are related components of a specific project. As noted in The Guide, cost savings alone is not an adequate justification for performing multiple survival surgical procedures. The privilege of using animals requires full attentiveness to humane care principles. Researchers must balance the scientific value of animals providing their own ‘control’ against the potential animal distress by having total sensation affected or destroyed.

ROLES:
1. Researchers must assure animals are able to perform and sustain themselves in the research environment.
2. The IACUC shall review requests for bilateral use of the same organ, and when appropriate, shall provide approval for bilateral organ use, with appropriate protections in place to assure animal wellbeing and encouraging reliable research outcomes.

PROTECTIVE MEASURES REQUIRED: Personnel protective equipment is required; appropriate to the species and the hazard being used.

POLICY OUTLINE:
1. The IACUC will consider proposals involving bilateral use of the eyes when bilateral use provides a necessary control to the experimental condition.
2. Due to the potential risk to vision associated with bilateral eye use, any bilateral eye use will require scientific justification, similar to the requirement for multiple major surgery. Bilateral eye procedures are not considered multiple major surgeries, but will be treated in the same manner (requires scientific justification). Bilateral eye use will not require a Section K.
3. Requests for bilateral eye use must be considered by either the SCSC or full Committee.
REFERENCES:

Association for Research in Vision and Ophthalmology: Statement for the use of animals in ophthalmic and visual research