 <p>Standard Operating Procedure</p>	Title: Using a slit lamp	
	Doc. Number: ESLIM_014_001 Rev No.	Date Issued: 01/06/04

**1.0 Purpose:**

- 1.1 This test can be used to determine whether a mouse presents with eye abnormalities that affect the iris, cornea and lens.

**2.0 Scope:**

- 2.1 Individuals who have been trained, and are competent in performing the procedures described herein must follow this procedure.
- 2.2 Any queries, comments or suggestions, either relating to this SOP in general or to a specific problem encountered during a procedure, should be addressed to the Visual Research Project Leader.
- 2.3 Any deviances from this protocol must be reported to the Visual Research Project Leader.

**3.0 Safety Requirements:**

- 3.1 General laboratory procedures should be followed, which include: no eating, no chewing gum, no drinking, and no applying of cosmetics in the work area. Laboratory coats and gloves must be worn at all times in the work area, unless the protocol specifically describes the appropriate attire for the procedure.


**4.0 Associated Documents:**

**5.0 Notes:**

**6.0 Quality Control:**

**7.0 Equipment:**

- 7.1 Nikon FS-3V zoom-photo slit lamp or Zeiss SL30 slit lamp (or similar slit lamp)

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- 7.2 Dell computer and monitor (or similar brand)
- 7.3 Photoshop 4.0 (or most recent version)
- 7.4 Nikon Camera, with Kodak digital science DCS420 attachment

**8.0 Supplies:**

- 8.1 CD for storage of data

**9.0 Procedure:**

- 9.1 Switch on the slit lamp control box, the camera and the computer.
- 9.2 Select the Photoshop icon on the computer and on 'Twain 32' to set-up the camera software.
- 9.3 When the camera software window is open the system will be ready to begin examining the mouse of interest and capturing any images required for data collection.
- 9.4 Restrain the mouse firmly in one hand.
- 9.5 Hold the mouse in one hand in front of the chin rest and light beam. Using the other hand operate the joystick to move the slit lamp back, forth, left and right, until the eye is in focus. Alternatively hold the mouse in one hand using the other hand to open eyelids of the mouse and focus the field of view by moving the mouse.
- 9.6 Move the slit lamp from side to side to enable a view of the entire surface of the eye.
- 9.7 Capture any abnormalities digitally by pressing the button on top of the joystick, which is linked to the shutter of the camera.

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- 9.8 View a thumbnail of the image in the camera software window. To save this data, click on ‘acquire’ allowing the image to be transferred to the Photoshop window.
- 9.9 Close the camera software window to view the acquired image.
- 9.10 The image can be altered in Photoshop and stored in a variety of formats for distribution among other computers.
- 9.11 Archive the data by giving the image a name and date corresponding to the age, sex, strain and genotype of the mouse.

### **10.0 Supporting Information:**

- 10.1 Novel ENU-induced eye mutations in the mouse: models for human eye disease. Taung C, West K, Clark BJ, McKie L, Morgan JE, Arnold K, Nolan PM, Peters J, Hunter AJ, Brown SD, Jackson IJ, Cross SH. Hum Mol Genet. 2002 Apr 1;11(7):755-67.
- 10.2 Dominant cataract mutations detected in offspring of gamma-irradiated male mice. Kratochvilova J. J. Heredity 72: 1981, 302-307.

### **11.0 History Review:**

### **12.0 Emergency Procedures:**