

**Retro-Orbital Blood
Collection in Mice
IACUC Standard Procedure
Effective Date: May 2016**



Description of procedure:

This procedure is to be performed by or under close supervision of experienced personnel. Whenever possible alternative methods* of blood collection such as sub-mandibular (preferred method) or saphenous sampling should be consider.

This technique may yield a large sample volume so will not be appropriate for frequent small blood volume collection. For information regarding maximum blood collection volume please refer to the [*UCSF Blood Collection Guidelines](#).

Supplies:

- Isoflurane anesthesia system
- Micro-hematocrit capillary tubes
- Blood collection tubes
- Gauze sponges
- Triple antibiotic ophthalmic ointment

Procedure Steps:

Episodes of retro-orbital bleeding should be every other week only. Repeated bleedings should use alternate eyes. The maximum number of bleeds per animal is two per eye.

Animals must be fully anesthetized. A drop of proparicaine topical ophthalmic anesthetic in each eye is recommended to minimize discomfort. Standard heparinized or non-heparinized micro-hematocrit capillary tubes can be used. The animal is held by the back of the neck and the loose skin of the head is tightened with thumb and middle finger to keep the animal stable. The tip of the capillary tube is placed at the medial canthus of the eye under the nictitating membrane.

With a gentle thrust and rotation motion past the eyeball the tube will enter the slightly resistant sinus membrane. The eyeball itself remains uninjured. As soon as the sinus is punctured, blood enters the tubing by capillary action. When the desired amount of blood is collected, the tube is withdrawn and slight pressure with a clean gauze pad on the eye is used to ensure hemostasis. Take care not to scratch the cornea with the gauze pad.

It is recommended that a small amount of triple antibiotic ophthalmic ointment be applied to the eye after the technique.

Image 1

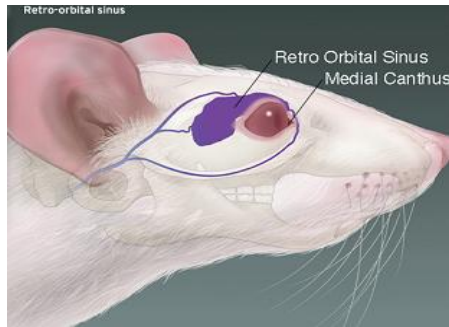


Image 2



Images supplied by: www.theodora.com/.../blood_collection.html

To become proficient at this technique, additional training outside the scope of this text is required.

Should you have any questions or would like training in the above technique, please contact the IACUC Training and Compliance staff by email at trainerIACUC@ucsf.edu or via phone at 476-2197.

Agents: This procedure requires anesthesia. All agents administered to animals should be listed in the “Agents” section of RIO

Potential adverse effects to be considered: Injury to the eye leading to blindness, ocular ulcerations, puncture wounds, loss of vitreous humor, keratitis, infection, excessive bleeding, transient pain