

## Performance-Based Standard for Frog Oocyte Harvest

### Overview:

Xenopus frogs may undergo oocyte harvest laparotomies no more frequently than every other week. Frogs should be individually identified to ensure the appropriate time interval has lapsed between surgeries. Beads sewn onto the skin have worked effectively to identify individual animals<sup>1</sup>. Laparotomies will not be performed on frogs with incision complications or poor body condition. The total number of laparotomies performed on each frog will be variable, not to exceed ten surgical interventions so that the frogs health and well-being is not compromised. The following are the guidelines for Xenopus oocyte harvest.

1. Five initial oocyte harvests are allowed with a minimum two week rest in between.
2. Evidence of surgery-related stress such as poor body condition, poor oocyte quantity or quality, and/or clinical disease will require an extended rest period of at least one month and may be extended based on recommendations from the Veterinary Clinical Services.
3. Five additional surgical harvests at two week intervals are permitted if:
  - The frog is identified as a "high performer" as determined by a history of high quality and quantity of oocytes
  - A minimum of a four week rest is provided after the first five surgical harvests
  - Frog body condition is not compromised
  - No history of disease or complications associated with surgical stress.
4. Request for greater than ten surgeries must be submitted to the IACUC with appropriate justification for consideration.

The rationale for allowing a performance based standard for oocyte harvest is as follows. Oocyte quality and quantity is a genetically determined trait among Xenopus. Once a "high performance" Xenopus is identified, maximal usage of this frog increases the uniformity and greatly reduces the frog numbers required for a given experiment. Furthermore, substandard oocyte quantity and quality is an early indicator of stressed frogs or frogs in poor health and often occurs prior to the onset of clinical disease. Thus, oocyte quality and yield act as an early biologic barometer of frog well-being and, therefore, is a reasonable parameter for basing Yale's oocyte harvest guidelines.

<sup>1</sup>Contact Veterinary Clinical Services (785-2501) for proper technique.

**REVIEWED AND APPROVED BY THE IACUC: JUNE 21, 2000**