

HUSBANDRY PRACTICES FOR RANA PAPIENS  
FROGS THAT INFLUENCE HUMAN  
PREGNANCY TESTING

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**ABSTRACT.**—The success of the *Rana pipiens* male frog test for human pregnancy depends on specifying that the test frogs be held at low temperature, 5° C in these experiments.

Immunologic tests for human pregnancy involving detection of gonadotropin (Taylor, 1965; Greenhill, 1966) have been rapidly replacing biologic tests. In the frog test, the major responsible factor for its increasing discontinuance has involved the question of its reliability. Because the newer latex-antigen pregnancy testing might in some cases be influenced by drugs and disease, biologic testing is worthy of standby use. We have found that the *Rana pipiens* male frog can be a uniformly successful animal model for pregnancy testing if more specification of environmental factors, as noted below, is observed.

Of 65 male frogs held at 5° C for 10 days without feeding and injected with 3 to 5 ml of clean concentrated urine from women in 3 to 6 months of pregnancy, the frogs then being catheterized via the cloaca to check for an expected emission of their sperm, there were 64 true posi-

tive results and 1 false negative. Of 70 frogs held at 25°-27° C for 10 days with feeding, only 25 showed true positive results. Of 82 frogs held at 25°-27° C without feeding, only 38 showed true positive results. The difference between warm, fed and warm, unfed frogs was not significant ( $p < .16$ ). Non-feeding frogs in the cold were significantly different from the other groups ( $p < .001$ ).

Moderate warmth in the frog somehow depresses testicular function or responsiveness to gonadotropic agents. Withholding of food for 10 days does not produce any gonadal depression. As a general conclusion, temperature appears to be a particularly important factor in determining the usefulness of the frog as an animal model for certain testing.

LITERATURE CITED

- GREENHILL, J. P. 1965. *Obstetrics*. 13th ed. W. B. Saunders Co., Philadelphia. XVIII + 1246 pp.  
TAYLOR, E. S. 1966. *Beck's obstetrical practice*. 8th ed. The Williams and Wilkins Co., Baltimore. xii + 658 pp.

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