

OVARIAN RESPONSIVENESS TO A BRAIN HORMONE IN THE MOSQUITO, Aedes aegypti: THE ROLE OF JUVENILE HORMONE. Jeffrey P. Shapiro. Cornell University, Ithaca, New York.

This study examined the responsiveness of developing ovaries to extracts of heads from the mosquito Aedes aegypti and the regulation of responsiveness by juvenile hormone (JH). Ovaries of 3- to 4-day-old mosquitoes responded to saline extracts of heads in vitro by secreting ecdysone. Ovaries isolated from newly emerged females were unable to respond to extracts, but developed responsiveness in vivo during the previtellogenic phase of growth, 24 hr to 60 hr after emergence. Ovaries in abdomens which had been isolated from females soon after emergence did not grow or become responsive, but topical application to isolated abdomens of JH-I or an analogue (ZR-515) induced growth and responsiveness in ovaries, ZR-515 with greater effect than JH-I. Ovarian growth and responsiveness were functions of the dose of JH-I applied to abdomens.