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M E M O R A N D U M

To: Dissertation Award Committee
From: Linda Spear, Professor of Psychology *Linda Spear*
Date: April 9, 1997
Subject: Nomination of Gerald S. Hecht for a Distinguished
Dissertation Award

It is with great pleasure that I nominate the dissertation of Gerald S. Hecht for a Distinguished Dissertation Award. In my 20 years here at Binghamton University, about a dozen students have received their Ph.D.s under my direction. Gerry Hecht is the first of this group of meritorious individuals that I am nominating for a Distinguished Dissertation Award. As outlined below, his dissertation is of outstanding quality in all respects.

For his dissertation, Gerry undertook an important and challenging question -- how are the reinforcing effects of cocaine and cocaine self-administration influenced by two quite different life history events: (a) the physiological/hormonal changes associated with pregnancy and lactation; and (b) the long-term impact of prior exposure to cocaine during the fetal period (via maternal cocaine use)? Both of these issues have quite important potential implications with regard to the current population of pregnant women who use cocaine as well as their offspring. The work that Gerry designed and conducted carefully examined both of these issues and, as discussed further below, the results were quite clear-cut and impressive.

These projects were technically quite difficult and required substantial surgical skills and technical innovations to accomplish the surgical preparations. For Experiment 1, it was necessary for intravenous (i.v.) catheters to be implanted into the jugular vein in such a manner that (a) the catheters would withstand the rigors of mating and (b) would remain viable and unclogged for the 6+ weeks required to maintain the dams (through pre-pregnancy establishment of the operant schedule and determination of estrous cycle effects; mating; pregnancy; and over a week of lactational testing). Accomplishing these feats required technical innovations and were quite time consuming. For instance, among the modifications of typical i.v. catheter implantation procedures that Gerry innovated were exit of the catheter in a "hat" on the top of the skull rather than the typical exit point at the back of the neck (an area that is subject to trauma by male rats grabbing the female during mating). He also discovered that the catheter tubing length had to be increased and carefully coiled inside the body to accommodate the rapid weight gain during pregnancy without