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Aphrodisiac Effect of p-Chlorophenylalanine

Two recent reports by Whalen and Luttge (*1*) and by Zitrin *et al.* (*2*) dispute the view that a *p*-chlorophenylalanine (PCPA) is an aphrodisiac for male animals. Since the above authors refer repeatedly to one of our previous works (*3*) and since a negative conclusion on a drug possessing such a unique pharmacological action should be inferred with great care, we were prompted to offer the following comments.

Whalen and Luttge (*1*) deny that PCPA is an aphrodisiac for rats and cats and suggest that it "merely" alters the male's ability to adequately distinguish appropriate sexual partners. We are unaware of any definitions of an aphrodisiac more specific than those given by Webster's *New International Dictionary* (second edition): "that (as a drug or certain foods) which excites to venery" or by Dorland's *Illustrated Medical Dictionary*: "exciting the sexual impulse; any drug that arouses the sexual instinct." Whalen and Luttge's statement that PCPA and the combination of PCPA and pargyline are not aphrodisiac since they do not prolong or intensify male-female sexual interactions is therefore arbitrary. The only conclusion that can be drawn from their study is that PCPA does not enhance maximal performance. In fact, the seven rats used by these authors in their study were "known to be vigorous copulators"; without PCPA they exhibited an average of 7 ± 0.9 ejaculations during a single test. If one accepts the dictionaries' definitions of aphrodisiac, studying an aphrodisiac in "vigorous copulators" is no more logical than screening antidepressant drugs in normally happy subjects. Since Whalen and Luttge do not present an upper limit for the numbers of ejaculations, it is not certain whether this performance could possibly have been exceeded even with the help of drugs.

A similar criticism can be raised about the report of Zitrin *et al.* (*2*). In addition, before treatment all 12 male cats used in their study copulated with receptive females and 10 of them mounted normal and even anesthetized males. Before the experimentation, the cats were tested several times a week for a period of several weeks, in order to establish a stable base-line measure of behavior. It is possible that the repeated testings produced a Pavlovian conditioned sexual reflex so that the animals would mount not only females but also males or anesthetized animals, provided the stimulus animal was introduced to the alcoves through the same sliding window. A valuable insight to this problem would have been offered by the latency scores for the first mount or grip after the stimulus animals were introduced into the males' cages. Although the authors state that the general behavior failed to indicate any heightened sexual interest in the cats as a result of treatment, they give no quantitative values for parameters other than frequency of intromission. On the other hand, the fact that the cats did not mount a toy either before or after administration of PCPA indicates that PCPA did not merely alter the male's ability to adequately distinguish appropriate sexual partners (*1*). We have shown that PCPA and the combination of PCPA and pargyline increase the heterosexual copulatory performance of male rats when the experimental subjects, unlike the above studies, are chosen among sexually sluggish animals (*4–6*).

Moreover, the fact that the administration of pargyline alone completely suppresses the sexual behavior and that this is restored by PCPA (*5*) offers indirect evidence that PCPA has a true aphrodisiac effect, provided the males are not selected from animals with high levels of sexual activity. Finally, we believe that one need only witness the violent and persistent manner in which an adult male rat, treated with PCPA, struggles to mount a nonreceptive female to be convinced that the drug enhances sexual motivation.

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Hemoglobin Polymorphism

Crawford (*1*) reported a hemoglobin polymorphism in a laboratory population of pigtail macaques (*Macaca nemestrina*) consisting of two common types of hemoglobins and three phenotypes, one similar to human A, one faster, and a third consisting of both components.

Similar results were found by Ishimoto *et al.* (*2*) who reported polymorphism in the pigtail macaques, but noted that the variants found were limited only to the Thailand subspecies. However, it appears that the very high frequency of the variants found by Crawford is anomalous, at least, judging from the findings of Nute and Stamatoyannopoulos (*3*) who failed to demonstrate such a polymorphism in their sample. The high frequency reported by Crawford (*1*) was probably due either to an unusual captive sample or the misclassification of several of the monkeys used in the study.

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