

## **Revising the sexual behavior of naive and experienced male Sprague Dawley Rats**

### **Abstract**

Objective: The sexual behavior of male rats are complicated, challenging and require further explorations. Influence of drugs and the exposure to polluted substances making this field more important to be studied. Research into sexual behavior seems to be based on data involving experienced male Sprague Dawley (SD) rats and very little involving naive male SD rats. The purpose of this study is to evaluate and compare the sexual behavior in naive and experienced male SD rats. Findings of this study could be valuable in determining dosages and developing experimental models involving male sexual behavior in rats. Design: The study was of prospectus design that involved video recording of male SD rats for 30 minutes for the first time maters (naive) and 30 more minutes for experienced maters after a gap of three days. Materials and Methods: Using an optimized method (i.e., that is without the use of ovariectomy and/or hormonal injection), female rats in proestrus were selected and mated to randomized naive male SD rats. The mating activities were videotaped and later analyzed. The videotaping method was convenient and enabled a correct observation and evaluation of different components of mating behaviors. It also fosters animal welfare by avoiding the need of surgery. and the outcomes can be kept as permanent documentation. Results: Out of 17 adult male rats that were the first time maters, 14 of them were selected subsequently as experienced maters. Only 3 first mater. male rats (17.65%) ejaculated during the session while the remaining 14 male rats (82.35%) did not ejaculate. During the second session of mating, 6 male SD rats or 42.86% ejaculated while 8 rats (57.14 %) did not ejaculate. Both mount latency (sec) and intromission latency (sec) were found to decrease during the second time mating exposure. However, ejaculation latency (minutes) was lower compared to the first time maters. The sexual behavior of naive male SD rats showed more variability than that of experienced male SD rats.

Conclusion: The non-invasive and convenient assessment (video recording of natural mating behavior) serves many advantages and can be a basis for future research in Malaysia. It was found that experienced male SD rats are better than naive rats in sexual behavior parameters, at least in this study. The possible reasons for this are discussed accordingly.