

Studies on the ultrasonic vocalization (USV)  
during the copulatory behavior in the male rodent:  
Role of the USV after the ejaculation of the male  
rat

Abstract of Doctoral Thesis

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In rodent (such as the rat and the mouse) the ultrasonic vocalization (USV) can be detected at their mating behavior (before and after mounting, during mounting behavior and ejaculation). In both sex animal, the USV can be detected just before copulatory behavior. Thus, the USV was considered act as the important communication tool for sexual behavior of the rodents. However, the physiologic significance of the USV observed after ejaculation is still unclear. So, in this study, we examined the physiological significance of the USV at the mating behavior of the rat, mouse and the syrian hamster. Moreover, we also examined the USV of the after ejaculation at the male rat.

The USV was observed at the before and after mounting in all three species. On the other, the USV of the rat can be recorded at after ejaculation was characteristic than other two kinds of species. Thus, we examined physiologic significance of this USV. At first, we examined the possibility that the ejaculation was act as the trigger of the USV. The male which administered *p*-Chloroamphetamine (PCA) could not observed USV in all cases (10/10). From this result, it seems that there is no possibility of the trigger of USV observed after male ejaculation, Next, we examined the possibility that the female presence in the sexual absolute refractory phase was trigger. This USV were act as inhibit female invitation behavior. So, we removed a female after ejaculation promptly, but the restraint of male USV impossible. Thus, it seems that there is no possibility of the trigger of the USV after male ejaculation in the female presence after the ejaculation. Finally, we examined the possibility of the act as the trigger of USV after the ejaculation. As a result the activity of the preoptic area was important area as the trigger of the USV after ejaculation of the rat.