

Oral presentation

## [G] Embryology, Genetics

Sun. Mar 31, 2024 1:30 PM - 2:45 PM Site G (Meeting Room 8)

---

1:45 PM - 2:00 PM

### [G-33]キイロショウジョウバエ個別別活動測定システムを用いた雌性先熟表現型の解析

○Ki-Hyeon Seong<sup>1</sup>, Siu Kang<sup>2</sup> (1. KUHS, 2. Yamagata Univ.)

We studied sex differences in the sexual maturation process of *Drosophila melanogaster* using our *Drosophila* Individual Activity Monitoring System (DIAMonDS). *Drosophila* exhibits a protogyny phenotype in which females eclose earlier than males, and we confirmed that the sex difference is about 4 hours. Genetic analysis revealed the involvement of a non-canonical Sxl function in the generation of the protogyny phenotype. Furthermore, the protogyny phenotype was associated with sex differences in pupal development, with differential rRNA up-regulation during this stage. *Drosophila* eclose as sexually immature adults, and we examined sex differences leading to first mating as an indicator of sexual maturation. The results showed no sex difference in time to first mating, determined solely by time since eclosion, unaffected by circadian rhythms or feeding experience. In addition, there was a sexual dimorphism in locomotor activity after eclosion, with females showing an earlier increase than males.