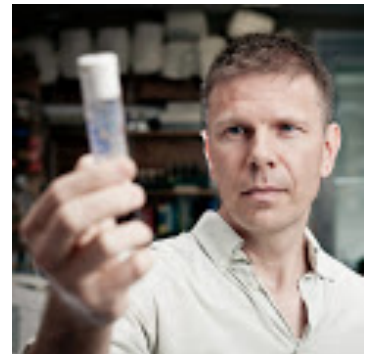


Signaling pathways that control steroid hormone pulses in *Drosophila*

ショウジョウバエのステロイドホルモンパルスを調節するシグナリング経路

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(筑波大学 総合研究棟A棟 A110講義室)

Steroid hormones are ancient signaling molecules that play fundamental roles in development and disease. Typically, steroid hormones are released as pulses, thereby orchestrating multiple physiological and developmental changes throughout the body. Hormone pulses must be regulated so that they have a defined beginning, peak and end.

In this presentation, I will focus on recently discovered signaling pathways that control the biosynthesis of the insect steroid hormone in the *Drosophila* prothoracic gland, the key endocrine tissue for larval steroid hormone production. In the first story, I will discuss how the circadian machinery may influence steroid hormone production. The second story centers on a new signaling pathway that controls heme biosynthesis in prothoracic glands, since heme is a critical cofactor in steroid hormone production.

Taken together these projects highlight the importance of the *Drosophila* prothoracic gland as a model for understanding endocrine control of steroid hormone biosynthesis in all animals.

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