CDB SEMINAR

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Monday, December 5, 2016
16:00~17:00 A7F Seminar Room

Investigating the interplay between obesity and cancer using *Drosophila*

Summary

The prevalence of obesity is increasing globally. Obesity and associated insulin resistance is a risk factor for health complications including type 2 diabetes, cardiovascular diseases and cancer. Furthermore, accumulating epidemiological evidence indicates that obesity not only leads to elevated risks of developing several types of cancers but also accelerates cancer progression. Despite the huge impact of the obesity-cancer connection on public health and its associated economic burden, the mechanisms that link obesity and cancer progression remain incompletely understood. The fruit fly Drosophila melanogaster has been increasingly used to model human diseases including obesity and cancer. Using Drosophila obesity and insulin resistance model induced by feeding animals a high-sugar diet, we showed that diet-induced obesity leads to a striking enhancement of tumour progression in a Ras/Src co-activated Drosophila tumour model. These fly models should provide useful paradigms to elucidate the biological mechanisms and therapeutic targets involved in the interplay between diet, obesity and cancer in a whole-animal context.

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