Leading Scientist Seminar

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June 4th (Wed) 2025, 10:30~12:00 am JPT
@ room 119, Research building No 1, #32

Mechanobiology of apoptotic cell clearance

Abstract

Apoptotic cells are physically removed from tissue to prevent further inflammation. Previous research, including our own, has shown that this can occur through the contraction of an actomyosin cable formed in both the dying cell and neighboring cells. Macrophages are another key player in apoptotic cell clearance. While it is well understood that apoptotic cells are recognized by "eat-me" signals and then engulfed by immune cells, it remains unclear how large dead cells are collectively cleared by smaller macrophages. Typically, macrophages engage in contact inhibition of locomotion (CIL), where cells repel each other after contact. This behavior is useful for surveillance under normal conditions but is suspended during processes like wound healing and apoptotic cell clearance. However, the mechanisms behind CIL suspension are not fully understood. In this presentation, I'll discuss our current understanding of how macrophages suspend CIL during apoptotic cell clearance and explore the role of microtubules in this process.

Spoken language: English

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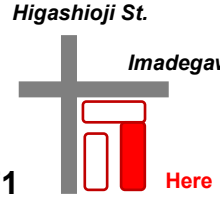

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