Informal Seminars Supported by Laboratory for Developmental Genomics

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14:00 \sim 15:00 A5F Seminar Room

Molecular interactions among actin associated proteins that generate cortical actin dynamics in eukaryotic cells

Summary

The dynamic nature of the actin cytoskeleton plays crucial roles incellular organization, cell migration, and vesicle transport, thus is fundamentally important for the physiology and pathology of eukaryotic organisms. The concerted actions of potentially thousands of actin associated proteins generate actin dynamics within an individual cell, of which we still know few details.

This seminar features some of the recent progress in our understanding of the molecular interactions among actin associated proteins that play major roles in creating cortical actin dynamics in eukaryotic cells. Specifically, I will talk about the sequential interactions of two Arp2/3 activators, N-WASp and Cortactin, with the Arp2/3 complex in the formation of a highly branched actin filament network, and also the interaction of the hetero-dimeric capping protein and its newly identified antagonist CARMIL and related proteins in the regulation of actin filament turnover.

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