Institut Européen de Chimie et Biologie

I E C B

Unraveling the C. elegans interactome underlying cell polarity.

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The ability to generate an axis of polarity is a fundamental property of animal cells. It is a prerequisite for cellular functions such as migration and asymmetric division, and for the functional specification of many cell types. Several key determinants of cell polarity have been identified, including the Par, Crumbs, and Scribble groups of cortical polarity regulators. However, we know comparatively little of the mechanisms through which cortical polarity is integrated with cellular events such as cytoskeletal rearrangement, organization of a polarized trafficking machinery, and morphogenesis.

In this seminar I will discuss efforts of our group to elucidate the network of protein-protein interactions that underlies cell polarity in the nematode *C. elegans* through a combination of interaction mapping by yeast two-hybrid, and *in vivo* analysis using various *C. elegans* models of cell polarity. In addition, I will focus on our technological developments, including CRISPR/Cas9 and the development of a tissue-specific protein complex purification method.

Group website: http://web.science.uu.nl/developmentalbiology/boxem/index.html