

Molecular & Cellular Biology Faculty Search

*“The long and short of
embryonic axis extension”*

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Hosted By: Lisa Nagy



Formation of the animal body plan is achieved through repeated, combinatorial execution of a few highly conserved morphogenetic modules – programs of collective cell behavior - that shape embryonic tissues. These modules are determined by the identity and position of cells within an embryo, but the molecular basis of this coordination between patterning and morphogenesis is poorly understood. Using zebrafish gastrulation as a model, I have described local and global patterning cues that promote cell behaviors underlying the essential morphogenetic module of convergence & extension (C&E), which drives elongation of the primary body axis and numerous embryonic tissues. By intersecting analysis of zebrafish embryos with a simplified ex vivo model of C&E morphogenesis, I have identified several candidate molecules with the potential to translate complex patterning information into instructions for morphogenetic cell behaviors.

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