

DC セミナー (国際交流基金セミナー)

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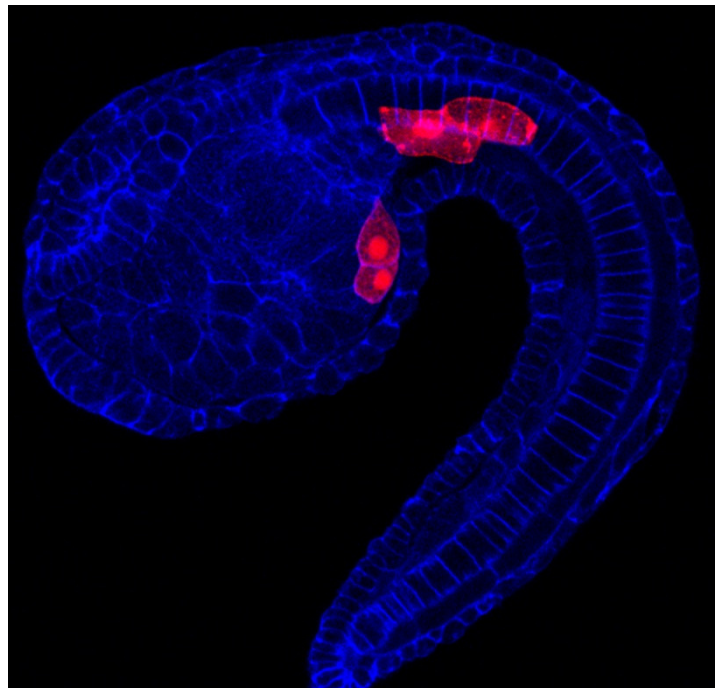
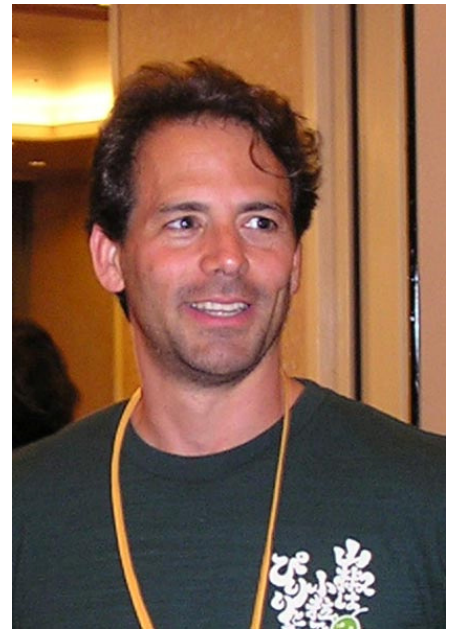
とき： 2月23日 15時00分

ところ： 総合研究棟 2階, 会議室 3

題目：

Setting the stage for heart formation; how growth factors and microenvironment shape initial heart cell identity

In vertebrate embryos, a complex set of signals including Fibroblast Growth Factor (FGF), Bone Morphogenetic Protein (BMP) and Wnt instruct initial heart cell identity but the manner in which these signals are integrated remains poorly characterized. To untangle this complex process, we are exploiting the genetic and cellular simplicity of the invertebrate chordate, *Ciona intestinalis*. In *Ciona* embryos, heart cell identity is initiated by FGF signaling within a group of four founder cells. Our findings indicate that heart founder cells refine their response to FGF based on their in-vivo microenvironment. In particular, it appears that contact with neighboring cells polarizes the founder cell cytoskeleton to localize their response to a crude signaling gradient. We are beginning to use live imaging techniques to characterize the precise, dynamic impact of micro-environmental cues on cytoskeletal polarity, growth factor uptake and heart fate specification.



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