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SÉMINAIRE

Goals for Evo-Devo, with an Example and A New Theory for the Origin of Sepals and Petals

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Evo-devo has generated great excitement in recent years, but of late the excitement seems to be waning. In part this is due to exaggerated expectations, but I think the problem has been exacerbated by poorly chosen projects. Unlike molecular taxonomy or genetics, that almost always generate publishable results from the usual experiments, poorly chosen evo-devo projects can take a great deal of work but generate no useful results. A good project tests a hypothesis, rather than simply gathering data. Projects of gradate students and post docs must safe, that is, virtually certain to generate publishable results. Systems with known genes at several levels of genetic control are safest. There are, in fact, many excellent projects, and some will be mentioned. Developmental homeostasis should be considered in evaluating genetic results. New technology is greatly enhancing the power of evo-devo. I illustrate recommendations for evo-devo with work by Kate Warner that has generated a theory for the origin of distinct sepals and petals.

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