Developmental Insights from the Study of Newly Emerging Model Species

Nipam H. Patel
Department of Molecular and Cell Biology
Department of Integrative Biology
University of California, Berkeley

A relatively small number of model species have provided the majority of our insights into the mechanisms that guide development. Recently, however, many of the tools developed in model species can now be applied to investigate the development of a wide range of species. These expanded studies have provided us with some remarkable insights into the evolution and flexibility of developmental systems. I will describe two examples of recent work from my lab where the study of new species has led to some especially unexpected discoveries regarding developmental evolution and the possible adaptive significance of developmental variation. First, the study of germline formation in the crustacean, *Parhyale*, suggests that post-embryonic replacement of the germline is possible, even in animals without extensive regenerative capabilities. Second, a bioinformatic approach to studying butterfly wing patterning reveals an unexpected subdivision of the traditional compartments of the wing during development.

Dr. Patel's presentation is scheduled for:

Friday, March 5, 2010
1:30 p.m.
Room 137, Waters Hall

Co-sponsored by the Department of Entomology