

## Dr. Buzz Baum

*Senior Group Leader  
Laboratory for Molecular Cell Biology,  
University College, London*



### **Tissue refinement and the development of a robust, well-ordered tissue organisation**

My group is interested in the role of the actin cytoskeleton and mechanics in cell and tissue morphogenesis. Here I will present recent work in which we have used the dorsal thorax of the fly pupa as an experimental system in which to follow the process of tissue refinement at the end of development. Surprisingly, this has revealed a set of stochastic and noisy cell biological processes that contribute to the development of a well-ordered tissue from messy beginnings. This includes a role for filopodia-mediated signalling in the generation of a well-ordered bristle pattern and a role for cell delamination in relieving local tissue overcrowding to generate uniform cell packing across the tissue. I will discuss the implications of these findings for our understanding of tissue homeostasis and disease.