



nature publishing group



► **COVER:** 'The art of fluorescence imaging' by Vicky Summersby, inspired by the Innovation article on p749.



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This month, we have a group of articles that shed light on the dynamic architectural networks of the cell, the cytoskeleton and the nucleoskeleton. A key step in controlling the dynamics of microtubules, which are integral components of the cytoskeleton, is the nucleation of new filaments. On page 709, Agard and colleagues review the insights being gained, particularly from structural studies, into where and how the γ -tubulin ring complex (γ TuRC) drives microtubule formation.

Our appreciation of the structures that provide architecture in the nucleus has lagged grossly behind that of the cytoskeleton. On page 695, Simon and Wilson describe the different components that together form the nucleoskeleton, and highlight how their roles in controlling gene expression and genome organization may have been overlooked for want of a standard name for this field of research. They propose that wider adoption of the term nucleoskeleton will help the field to progress, in part by aiding visibility of its components in genome-wide analyses.

Our understanding of the protein networks regulating the cytoskeleton and other signalling processes has been greatly advanced by new imaging approaches. On page 749, Danuser, Hahn and colleagues outline the experimental and computational multiplexing techniques that are proving invaluable for the quantitative analysis of protein network dynamics.

This past month also saw well-deserved recognition of the important contributions made by Franz-Ulrich Hartl and Arthur L. Horwich, who received the 2011 Albert Lasker Basic Medical Research Award. The award pays tribute to their studies of protein folding control by chaperonins and the implications that their findings have for understanding the protein aggregation that occurs in neurodegenerative diseases — an advance that has changed the way we think about protein homeostasis.

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