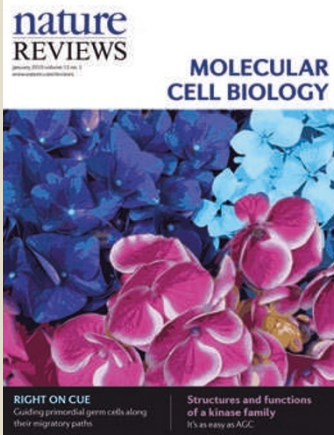




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► **COVER:** 'Hydrangeas' by Simon Fenwick, inspired by the Review on p50. Like the colour of Hydrangea flowers, many cellular processes are sensitive to changes in pH.



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The morphology of eukaryotic cells is regulated by a dynamic filamentous network of proteins in the cytoplasm known as the cytoskeleton, which acts as a scaffold to maintain cell structure.

Numerous proteins are involved in the regulation of the cytoskeleton. On page 62, Bruce L. Goode and colleagues discuss how one such protein family, the formin family, is regulated by various cellular factors to coordinate actin and microtubule dynamics by, for example, promoting actin filament elongation and assembly. Furthermore, the Research Highlight on page 6 discusses the newly described role of WASH, a nucleation-promoting factor that induces cytoskeletal rearrangements, in endocytosis.

As it is remodelled in response to internal and external cues, the cytoskeleton has a fundamental role in the regulation of cell migration, which is essential for several processes, including development and tissue homeostasis. Indeed, aberrant migration of primordial germ cells, which are precursors to sperm and eggs, leads to defects in fertility and could account for the incidence of extragonadal germ cell tumours in humans, as discussed by Brian E. Richardson and Ruth Lehmann on page 37.

In addition to regulating cell morphology, the cytoskeleton is also thought to act as a platform that integrates cell signalling pathways and controls the subcellular localization of proteins. On page 75, Seyun Kim and Pierre A. Coulombe discuss recent findings showing that the cytoskeleton interacts with proteins of the translational machinery, which have led to the hypothesis that the cytoskeleton has a role in the spatial organization and regulation of translation.

We thank our authors, referees and readers for their contributions and support over the past year and wish you a happy New Year, full of exciting new discoveries!

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Printed in Wales by Cambrian Printers

on acid-free paper