

# nature

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### NATURE REVIEWS MOLECULAR CELL BIOLOGY

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In contrast to many organisms, the patterning of the mouse embryo is flexible rather than determinative. However, patterning does not occur in a random manner; instead, there is some bias that gradually directs development. But how do cells decide their fate and how do they communicate fate decisions to each other? In this month's article for our Article Series on Developmental Cell Biology (<http://www.nature.com/nrm/series/devcellbiol>), Magdalena Zernicka-Goetz (page 919) discusses recent insights into the mechanisms that regulate cleavage pattern and emerging asymmetry of the mouse embryo.

On the subject of asymmetry, a Research Highlight article on page 905 describes three recent *Nature Cell Biology* papers on the *Drosophila melanogaster* protein RIC-8, which is required for proper spindle orientation during asymmetric cell division. Researchers have now shown that RIC-8 is essential for the plasma-membrane localization of heterotrimeric G proteins, thereby pointing to possible novel roles for this protein during asymmetric cell division.

Sticking with spindles, on page 929, Tomoyuki U. Tanaka, Michael J.R. Stark and Kozo Tanaka review the molecular mechanisms that underlie kinetochore-microtubule interactions, by focusing on budding yeast and drawing comparisons with other organisms. Kinetochore capture is the first crucial step in chromosome segregation, and subsequent sister kinetochore bi-orientation is important for the equal segregation of genetic information into daughter cells.

Finally, print subscribers will find a 2006 calendar with their December issue, which has been created using some of the most memorable covers from the first five volumes of *Nature Reviews Molecular Cell Biology*.



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