



▲ **Microbubbles in medical imaging: current applications and future directions.** Lindner, J. R. *Nature Reviews Drug Discovery* June (2004)

● **Fatal liaisons of p53 with Bax and Bak.**

Perfettini, J.-L., Kroemer, R. T. & Kroemer, G.

Nature Cell Biology May (2004)

This News and Views article discusses two recent papers showing that, as well as triggering apoptosis through its effects on transcription, p53 also promotes cell death by interacting with the BCL2-family members BAX and BAK to bring about mitochondrial permeabilization.

● **Polo-like kinases and the orchestration of cell division.**

Barr, F. A., Silljé, H. H. W. & Nigg, E. A.

Nature Reviews Molecular Cell Biology June (2004)

Polo-like kinases (PLKs) are increasingly becoming recognized as important regulators of cell division, and changes in their expression have been implicated in tumorigenesis. This review discusses the structure and regulation of these proteins, and their different functions during mitosis.

● **A Bit-role for integrins in apoptosis.**

Stupack, D. G. & Cheresch, D. A.

Nature Cell Biology May (2004)

Loss of integrin-mediated adhesion is already known to promote apoptosis through a mechanism that involves caspase activation. This News and Views article highlights a study revealing a new link between integrins and apoptosis, in which disruption of integrin–substrate attachment triggers release of the mitochondrial protein BIT1.

◀ **Antibody-directed radiation cancer therapy.**

Milenic, D. E., Brady, E. D. & Brechbiel, M. W.

Nature Reviews Drug Discovery June (2004)

● **Thumbs up for inactivation.**

Rehmann, H. & Bos, J. L.

Nature 13 May (2004)

Like other members of the RAS family, RAP1 is negatively regulated by a GTPase-activating protein (GAP). This News and Views article discusses a study describing the crystal structure of RAP1GAP, which suggests that the inhibitory activity of this protein is different from that of other RAS-family GAPs.

● **Targeted therapies for brain tumours.**

Lesniak, M. S. & Brem, H.

Nature Reviews Drug Discovery June (2004)

▼ **A fine balance for life and death decisions.**

Schreder, B. A. & Nambu, J. R.

Nature Structural & Molecular Biology May (2004)

Apoptosis is tightly regulated by complex interactions between caspases, inhibitor of apoptosis (IAP) proteins and IAP inhibitors. Structural studies now provide an insight into the interactions between these three classes of protein in *Drosophila*, as discussed in this News and Views article, revealing both similarities and differences between apoptosis in flies and mammals.

