IN BRIEF

SIGNALLING

Translational repression of p53 by RNPC1, a p53 target overexpressed in lymphomas

Zhang, J. *et al. Genes Dev.* **25**, 1528–1543 (2011)

Zhang and colleagues showed that RNA-binding region-containing protein 1 (RNPC1; also known as RBM38) binds to the 3′ and 5′ untranslated regions of mRNA that encodes p53. This binding prevented the translation of p53 in normal conditions and after DNA damage. Loss of RNPC1 expression in mouse embryonic fibroblasts increased p53 expression and induced premature senescence. Moreover, RNPC1 was overexpressed in lymphomas from dogs, and this correlated with decreased expression of p53. As RNPC1 is also induced by p53, this paper identifies a new autoregulatory mechanism of p53 expression.

THERAPY

An orthosteric inhibitor of the Ras-Sos interaction

Patgiri, A. *et al. Nature Chem. Biol.* 17 July 2011 (doi:10.1038/nchembio.612)

The guanine nucleotide exchange factor SOS activates RAS by catalysing the exchange of GDP for GTP, and this is a rate-limiting step in receptor tyrosine kinase-mediated activation of the RAS pathway. Based on the crucial interfaces that promote this exchange between SOS and RAS these authors generated a synthetic α-helix that was cell permeable and inhibited RAS–GDP exchange and ERK phosphorylation. This peptide inhibitor may therefore pave the way to target RAS activation in tumours.

TUMOUR SUPPRESSORS

Germline mutations in *RAD51D* confer susceptibility to ovarian cancer

Loveday, C. *et al. Nature Genet.* 7 Aug 2011 (doi:10.1038/ng.893)

Patients with inherited breast and ovarian cancer (HBOC) seem to commonly inherit defects in members of certain DNA damage response pathways, particularly homologous recombination, including BRCA1, BRCA2 and RAD51C. This paper investigates whether RAD51D, another member of the homologous recombination pathway, is associated with HBOC. By sequencing *RAD51D* in 911 unrelated HBOC samples they found eight inactivating mutations. Moreover, knockdown of RAD51D sensitized cells to the poly(ADP ribose) polymerase inhibitor olaparib, consistent with its role in homologous recombination.

BIOMARKERS

Urine TMPRSS2:ERG fusion transcript stratifies prostate cancer risk in men with elevated serum PSA

Tomlins, S. A. *et al. Sci. Trans. Med.* **3**, 94ra72 (2011)

The use of prostate-specific antigen (PSA) to stratify men with prostate cancer seems to lack specificity; so, Tomlins and colleagues looked for a way to effectively stratify patients with increased PSA levels. As the *TMPRSS2–ERG* fusion is often associated with prostate cancer the authors quantitatively measured its presence — and that of prostate cancer antigen 3 (*PCA3*) — in urine samples from 1,312 men using a transcription-mediated amplification assay. They found that measuring the levels of *TMPRSS2–ERG* and *PCA3* improved risk stratification and the ability to predict the presence of clinically relevant disease compared with measuring PSA alone.