



nature publishing group



► **COVER:** 'Connections and Control' by Lara Crow, inspired by the Review on p389 and the Perspective on p435, which discuss RNA networks in cells and connections between cells.



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MicroRNAs (miRNAs; small, non-coding RNAs) have progressed from relative obscurity to prime movers in cancer research in less than 10 years. The interest in miRNAs stems from their capacity to modify the expression of mRNAs that are crucial for cell homeostasis and recent data indicating their possible therapeutic use in the treatment of cancer.

In this issue, Curtis Harris and colleagues review new variations in miRNA networks that look set to further influence our understanding of how cancer develops and progresses. On page 389, they discuss small nucleotide polymorphisms (SNPs) in miRNAs and their mRNA targets and how these can alter miRNA–mRNA interactions. Moreover, SNPs that occur in components of the miRNA processing machinery can also influence the numbers of mature miRNAs that are produced.

The analysis of such complex networks often reveals cell type-specific effects. But what if the cell type that a researcher is using is not what the culture flask label indicates? On page 441, the American Type Culture Collection Standards Development Organization Workgroup ASN-0002 discuss the cost to research of incorrectly identified cell lines. They propose that short tandem repeat DNA profiling should be routinely used to verify a cell line and wipeout, once and for all, incorrect data generated as a result of cell line misidentification.

Verification of cell line identity is also essential if we are to clearly understand the cell type-specific effects of new anticancer drugs, such as those that target the DNA damage response pathways — the subject of this month's free Poster. Copies of this Poster, by Jiri Bartek and Jiri Lukas, can be found at www.nature.com/nrc/posters/dnadamage thanks to support from KuDOS and AstraZeneca.

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