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Adenoviral arrays

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The publication of the human genome sequence has increased the need for high-throughput approaches to tackle the challenge of **functional annotation**. In an Advanced Online Publication in *Nature Biotechnology*, Michiels *et al.* describe the use of arrayed expression libraries to screen for cellular functions (*Nature Biotechnology* 30 September 2002, doi:10.1038/nbt746). They constructed 'PhenoSelect'-arrays of replication-defective adenoviruses containing cDNA library clones (that they named libraries). The adenovirus system offers broad tropism, allowing the efficient delivery of cDNAs to different cell types for systematic screening based on cellular phenotypes. Michiels *et al.* demonstrated the power of this approach by screening for genes that affect osteoblast differentiation. They transduced primary human mesenchymal cells and screened for the induction of alkaline phosphatase activity. They isolated known (BMPs and FosB) and novel inducers of osteoblast differentiation. They conducted additional screens to isolate genes involved in metastasis and angiogenesis phenotypes.

References

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2. *Nature Biotechnology* , [<http://www.nature.com/nbt>]