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## N-myctargets

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Members of the [myconco gene](#) family are often amplified or mutated in human tumours. In the March 15 *EMBO Journal*, Boon *et al.* described the use of a [neuroblastoma cell line](#) with an inducible N-*myc* allele to identify genes regulated by N-*myc* (*EMBO Journal* 2001, **20**:1383-1393). They performed serial analysis of gene expression ([SAGE](#)) to detect over a hundred genes up-regulated upon N-*myc* expression. The target genes included over 50 encoding ribosomal proteins, as well as key genes in rRNA maturation and ribosome assembly. Boon *et al.* also found a 45% higher rRNA content in cells expressing N-*myc*. Many of the identified N-*myc* target genes are also up-regulated in neuroblastomas with N-*myc* amplifications, and about 40% are also upregulated by the related c-*myc* transcription factor. Induction of the protein synthesis machinery by *myc* oncogenes may explain their role in regulating [cell size](#).

## References

1. Function of the c-Myc oncogenic transcription factor.
2. *EMBO Journal*, [<http://www.emboj.org>]
3. Conditional expression of N-*myc* in human neuroblastoma cells increases expression of alpha-prothymosin and ornithine decarboxylase and accelerates progression into S-phase early after mitogenic stimulation of quiescent cells.
4. Serial analysis of gene expression.
5. c-Myc enhances protein synthesis and cell size during B lymphocyte development.