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Myc targets

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Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

There is intense effort to identify transcriptional targets of the **c-Myc** proto-oncogene that can account for its role in cell growth and division. In the January 16 **Nature** Gomez-Roman *et al.* report that c-Myc directly activates transcription by RNA polymerase III (pol III) (*Nature* 2003, **421**:290-294). Analysis of human fibroblasts and cells from *c-myc* knockout mice, showed that c-Myc is important for the transcription of pol-III-regulated genes, such as the B2 repetitive gene family, 5S rRNA and tRNA genes. Chromatin immunoprecipitation experiments showed that c-Myc is associated with pol III target genes *in vivo*. Gomez-Roman *et al.* report a direct interaction between the regulatory domain of c-Myc and TFIIB, a pol-III-specific general transcription factor. These new Myc targets help explain how c-Myc regulates growth by activating pol-II- and pol-III-dependant transcriptional programs.

References

1. Cell growth: downstream of Myc - to grow or to cycle?
2. *Nature*, [<http://www.nature.com>]