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## Genes repressed by GDNF

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Glial cell-line-derived neurotrophic factor (GDNF) has differential trophic effects on postnatal or embryonic dorsal root ganglion (DRG) cells. In the December 4 [Proceedings of the National Academy of Sciences](#), Linnarsson *et al.* from the [Karolinska Institute](#) in Stockholm, Sweden, describe the use of oligonucleotide microarrays to analyse gene regulation by GDNF signalling (*Proc Natl Acad Sci USA* 2001, **98**:14681-14686). They cultured DRGs from embryonic or postnatal mice and treated them with GDNF. Microarray analysis identified 195 genes that were regulated by GDNF. Linnarsson *et al.* also found 310 genes that changed more than five-fold between samples taken at embryonic day 14 and postnatal day 14 (39% of which were also GDNF-regulated). A number of genes related to the cytoskeleton or cell adhesion were down-regulated by GDNF at both ages. This result prompted Linnarsson *et al.* to measure the effect of GDNF on neurite extension, and they noted a marked suppression of neurite initiation and growth by the neurotrophic factor.

## References

1. GDNF - a stranger in the TGF-beta superfamily?
2. *Proceedings of the National Academy of Sciences*, [<http://www.pnas.org>]
3. Karolinska Institute , [<http://www.ki.se>]