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## New, tacky oncogenes

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Tudor P Toma

Email: t.toma@ic.ac.uk

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The  $\beta$  and  $\gamma$  catenins both mediate cell-to-cell adhesion, with  $\beta$  catenin also being involved in a signal transduction cascade that promotes cell proliferation, but their role in tumorigenesis has been unclear. In the August 15 *Genes & Development*, Maralice Conacci-Sorrell and colleagues at [The Weizmann Institute of Science](#), Rehovot, Israel, show that both  $\beta$  and  $\gamma$  catenins induce transcription of Nr-CAM (a neuronal cell adhesion molecule) and play a role in melanoma and colon cancer tumorigenesis, probably by promoting cell growth and motility (*Genes Dev* 2002, **16**:2058-2072).

Conacci-Sorrell *et al.* used DNA microarrays to analyze human carcinoma cell lines and observed that expression of Nr-CAM was dramatically increased by  $\beta$  and  $\gamma$  catenin. Nr-CAM expression in mouse fibroblast cells caused rapid proliferation in cell culture, and when these cells were injected into nude mice they produced rapidly developing tumors. In addition Conacci-Sorrell *et al.*, showed that Nr-CAM is highly expressed in murine and human melanoma cells and human colon cancer tissue, but not in normal colon tissue and melanocytes.

Because Nr-CAM is a molecule expressed on the outer surface of cells, the team suggest that new anti-cancer therapies based on Nr-CAM targeting could be more effective than those that focus on molecules expressed inside the cell.

## References

1. Conacci-Sorrell ME, Ben-Yedidia T, Shtutman M, Feinstein E, Einat P, Ben-Ze'ev A: Nr-CAM is a target gene of the  $\beta$ -catenin/LEF-1 pathway in melanoma and colon cancer and its expression enhances motility and confers tumorigenesis. *Genes Dev* 2002, 16:2058-2072., [<http://www.genesdev.org/cgi/content/abstract/16/16/2058>]
2. The Weizmann Institute of Science, [<http://www.weizmann.ac.il/>]