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Are Lef/Tcf transcription factors involved in the progression of colorectal cancer?

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Mutations in the Wnt signalling components adenomatous polyposis coli (APC) and β -catenin frequently occur in sporadic colon cancer. These mutations lead to stabilisation of β -catenin that can associate with lymphoid enhancer factor (Lef)/ T cell factor (Tcf) transcription factors to activate target genes such as cyclin D1 and c-myc. There are four members of the Lef/Tcf family, although alternative promoters and splicing produce many more isoforms. Previous work from our group has shown that Lef-1, Tcf-1 and Tcf-3 can mediate tissue specific responses during *Xenopus* development.

Lef-1 is normally only embryonically expressed in the colon, however full-length Lef-1 isoforms are selectively expressed in colorectal cancer tissue and cell lines. Tcf-4 on the other hand is expressed in both the normal colon and in colorectal cancer. Using 'dominant-negative' Lef/Tcf constructs and siRNA we are investigating the effect that Lef-1 and Tcf-4 have on target genes such as cyclin D1 and c-myc.