**This week in therapeutics**

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| Breast cancer | Tripartite motif containing 37 (TRIM37) | *In vitro* and mouse studies suggest inhibiting TRIM37 could help treat breast cancer. TRIM37 is located within 17q23, a chromosomal region frequently amplified in breast cancers. In human breast cancer cell lines, TRIM37 ubiquitinated histone H2A and silenced tumor suppressor genes. In mice bearing 17q23-amplified xenograft breast tumors, tumor-targeted shRNA against TRIM37 decreased tumor formation and growth compared with an inactive control shRNA. In mouse embryonic fibroblasts, ectopic expression of wild-type TRIM37 induced tumor formation, whereas a catalytically dead mutant TRIM37 did not. Next steps could include designing and testing a TRIM37 inhibitor. | Patent and licensing status unavailable | Bhatnagar, S. *et al.* *Nature*; published online Nov. 24, 2014; doi:10.1038/nature13955  
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