

Evolutionary Divergence in the Hedgehog Pathway

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I like this paper because the findings that it reports took me completely by surprise—and serve as a constant reminder of the fallibility of my own scientific logic! A few years earlier, Rune Toftgård had invited me to give a talk at the Karolinska Institute about our analysis of the Hedgehog (HH) signaling pathway in *Drosophila*. During the course of my visit, Rune told me that he and his colleagues were planning to make a mouse knockout mutation of the *Suppressor of fused (SUFU)* gene, an exercise that I opined would be of only marginal value, given the dispensable nature of the orthologous gene in *Drosophila*. Indeed, my skepticism seemed well placed when we subsequently found that morpholino-mediated knockdown of SUFU has a rather subtle effect on HH signaling in zebrafish. But clearly undeterred by my advice, Toftgård and colleagues proceeded to generate a *SUFU* null mutation, the phenotype of which demonstrates its pivotal role in mammalian HH signaling!

This PaperPick refers to “Genetic Elimination of Suppressor of Fused Reveals an Essential Repressor Function in the Mammalian Hedgehog Signaling Pathway,” by J. Svärd, K. Heby-Henricson, M. Persson-Lek, B. Rozell, M. Lauth, A. Bergström, J. Ericson, R. Toftgård, and S. Teglund, published in February 2006.