Modulation of the canonical Wnt signaling pathway in bone and cartilage

1. A tight Apc-mediated control of β-catenin levels is essential for differentiation of skeletal precursor cells as well as for the maintenance of a chondrocytic phenotype in a spatio-temporal regulated manner (this thesis).

2. Levels of functional Apc must be tightly controlled for proper modulation of the transcriptionally active β-catenin and BMP-signaling dosage required for multi-lineage SPC-differentiation in vitro (this thesis).

3. Patients with Familial adenomatous polyposis display a significantly higher than normal mean bone mineral density compared to age- and sex-matched healthy controls in the presence of a balanced bone turnover (this thesis).

4. By down-regulating β-catenin, Gsk3β preserves the chondrocytic phenotype, and is involved in maintenance of the cartilage extracellular matrix (this thesis).


7. The search for an APC mutation in patients with familial adenomatous polyposis, especially in patients without a family history of the disease, is important for defining the recurrence risk in their families (Friedl et al, Hered Cancer Clin Pract 2005, 15:95-114).

8. In addition to its ability to block differentiation of skeletal precursor cells into chondrocytes, activation of Wnt signaling also leads to chondrocyte dedifferentiation by downregulating type II collagen and by increasing extracellular matrix degradation (Ryu et al, Development 2002, 129: 5541–5550; Tamamura et al, J Biol Chem 2005, 280: 19185-19195).

9. To see far is one thing, going there is another (Constantin Brancusi).

10. Whatever doesn’t kill you just makes you stronger (Adapted from Nietzsche).
11. Age is an issue of mind over matter. If you don't mind, it doesn't matter (Mark Twain).

12. Be kind whenever possible. It is always possible (Dalai Lama).

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