

Antisclerostin antibody

M. Atteritano, Clinical and Experimental Medicine University of Messina, Messina

Osteoporosis is a skeletal disorder characterized by bone loss, which results in architectural deterioration of the skeleton, compromised bone strength and an increased risk of fragility fractures. Most current therapies for osteoporosis stabilize the skeleton by inhibiting bone resorption (antiresorptive agents), but the development of anabolic therapies that can increase bone formation and bone mass is of great interest. Wnt signalling induces differentiation of bone-forming cells (osteoblasts) and suppresses the development of bone-resorbing cells (osteoclasts). The Wnt pathway is controlled by antagonists that interact either directly with Wnt proteins or with Wnt co-receptors (Canalis et al 2013). Romosozumab an investigational monoclonal antibody that increases bone formation and decreases bone resorption, reduces vertebral fracture rates by 75% compared with placebo at the end of 1 year (Cosman et al 2016).

Canalis E (2013). Wnt signalling in osteoporosis: mechanisms and novel therapeutic approaches. *Nat Rev Endocrinol.* 2013 Oct;9(10):575-83.

Cosman F et al (2016) Romosozumab Treatment in Postmenopausal Women with Osteoporosis. *N Engl J Med.* 2016 Oct 20;375(16):1532-1543.