



## PhD in Biomedical Sciences

Research Area: Biomedicine/Pathology

**Title:** Long-term effects of altered bone turnover on glucose metabolism

The relationship between diabetes and osteoporosis is complex. It is well established that diabetes can be detrimental to bone health and its chronic complications have been associated with an increased risk of osteoporotic fracture. However, the skeleton has proved to be a reliable tool in a whole-organism approach to physiology, given the roles of insulin and osteocalcin in these pathways. Recent findings take bone beyond its functions of body support and organ protection, being possibly both a target of diabetic complications and a potential pathophysiologic factor in the disease itself. The aim of the study is to investigate the long-term effects of altered bone turnover on glucose metabolism, using an animal model for osteopenia.

**Keywords:** bone turnover, glucose metabolism, biomarkers, elemental composition

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