Pro-B1X: The Creator of Bone

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AIM 1. Determine the role of Pro-B1X in homeostatic conditions

Figure 1. Pro-B1X increases trabecular parameters in vivo

Micro-CT images of trabecular bone from control mice and mice injected with Pro-B1X

AIM 2. Identify the therapeutic potential of Pro-B1X during inflammatory conditions such as RA.

We have identified a novel peptide, Pro-B1X, which may also have a role in strengthening bone in normal conditions and decreasing bone damage due to inflammatory diseases such as RA.

Wild-type mice were injected daily with Pro-B1X, Scrambled control or PBS for 2 weeks.

Bone homeostasis

Wild-type mice were injected daily with Pro-B1X, Scrambled control or PBS for 2 weeks.

Osteoclast staining

Sections were stained for Tartrate-resistant acid phosphatase (TRAP) and osteoclasts were counted

Micro-CT

Limb was micro-CT scanned and analysed for trabecular bone

Representative images of hind paws from PBS and Pro-B1X injected mice following micro-CT scanning.

CIA was initiated in WT mice. Upon first signs of inflammation, mice were daily injected with PBS, Scrambled control, or Pro-B1X for 2 weeks, after which the experiment was terminated. Hind limbs were inspected for bone erosion, sectioned and TRAP stained in order to count osteoclasts. Data are means +/- SE, analysed by two-way ANOVA, *p<0.05

References: