**GIP/GLP-2 dual targeting**

- A new and safe treatment for osteoporosis

**Background**

**Osteoporosis: The silent killer**

- Osteoporosis is an age-related disease
- One in 2 women and 1 in 5 men over the age of 50 years will suffer from an osteoporotic fracture and thereby increased risk of complications and death

**Aim**

By targeting the GIP and the GLP-2 receptor at the same time, we aim to develop a new and safe treatment for osteoporosis.

**Natural selectivity - in vitro**

GIP & GLP-2 are selective towards own receptor

**Value Proposition**

- GIP and GLP-2 are natural human hormones, i.e. no immunological side effects
- Both have already been used in numerous human studies
- No observed adverse effects in humans
- PK/PD: Established in vivo pharmacokinetic properties and mechanisms of action

**Commercial Perspectives**

Worldwide, 9 million osteoporotic fractures occurs every year, resulting in annual direct medical costs estimated at $18 billion in the United States and €36 billion in Europe, and these costs are set double by 2050.

The market for osteoporosis drugs has a value around $11 billion with expensive branded products like Prolia and Forteo each creating revenues in the range of $2 billion per year.

**Technology Summary**

We have performed a proof of concept study in humans showing pronounced effect of GLP-2 and GIP on bone resorption. We expect that co-activation of both receptors will result in an even more pronounced inhibition of bone resorption. Based on knowledge of ligand binding-modes to the GIP and GLP-2 receptors, we have developed GIPR/GLP-2R co-agonists.

**Development Phase**

At present, we have human data supporting a synergistic effect of the two hormones on bone resorption and we are now studying the effect on bone remodelling in osteoporotic women. In addition, we have designed single molecule, dual agonists capable of activating both the GIPR and GLP-2R with a very high potency and we have developed analogues with high affinity and prolonged T½.

**The inventors**

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