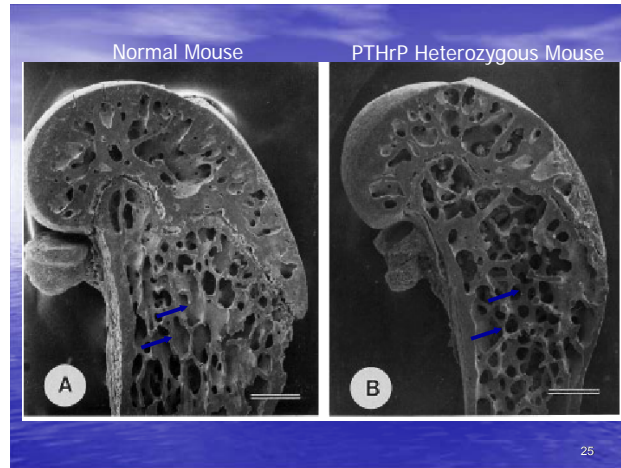


Transgenic Osteoporotic Mouse Model

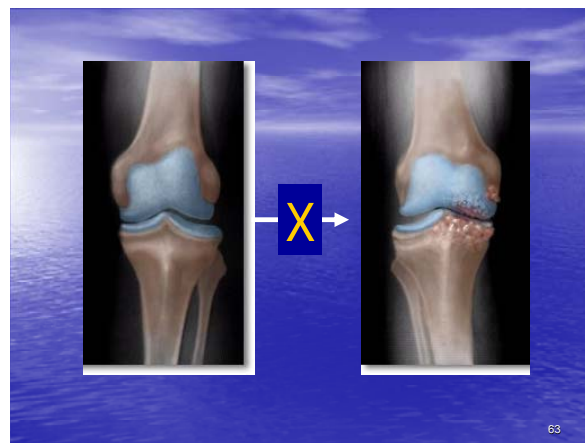
Osta's transgenic mouse model closely resembles the genetic form of human osteoporosis and is based on PTHrP gene knock out. Heterozygous PTHrP-null mice express less PTHrP in their skeleton and by very early adulthood, they develop a severe form of osteoporosis characterized by a marked decrease in trabecular bone thickness and connectivity (findings very characteristic of the human form of osteoporosis).



It is a model of primary age-dependent senile osteoporosis, which is due to a reduction in bone formation as a result of a decrease in the recruitment, or early apoptotic death of osteoblasts. Therefore it is a useful model to study the effect of anabolic agents rather than antiresorptives. It has no other associated problems related to premature ageing, as in the SAMP6 mouse.

Osteoarthritis Therapeutics

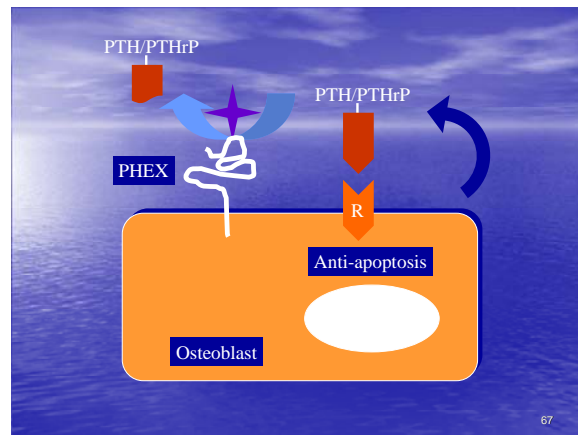
Osta's osteoarthritis ("OA") program is based on a novel therapeutic that is designed to prevent cartilage degeneration and promote cartilage regeneration.



Currently, there are no drugs commercially available that can prevent cartilage degeneration or promote new cartilage formation. All drugs currently on the market are either anti-inflammatory or pain killers.

Osteoporosis Therapeutics

Osta's osteoporosis therapeutic strategy for the development of an oral drug capable of promoting bone formation for the treatment of osteoporosis is based on inhibiting PHEX, a metalloendopeptidase enzyme expressed almost exclusively on osteoblast surface which cleaves critical bone anabolic agents, namely, PTH and PTHrP.



The majority of the currently marketed drugs focus on preventing bone loss and do not promote new bone formation and there is no oral bone anabolic agent yet on the market.