

# BMP7 as a multifactorial growth factor for cartilage homeostasis

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### **BMP7 as a Multifactorial Growth Factor for Cartilage Homeostasis**

Ellen G.J. Ripmeester

- 1) Development of an OA-associated chondrocyte phenotype can be the result of activation of one or multiple differential signaling pathways, all leading to the development and progression of OA (*this thesis*).
- 2) The fibrocartilage chondrocyte phenotype has a negative predictive value for OA and is an interesting target for the development of a novel disease-modifying OA drug (*this thesis*).
- 3) BMP7 influences the phenotype of chondrocytes in a ribosome biogenesis-dependent manner via key chondrocyte transcription factors (*this thesis*).
- 4) BMP7-derived peptides have the potential to become a novel disease-modifying treatment for OA (*this thesis*).
- 5) Besides its anti-hypertrophic properties, the BMP7-derived peptides also have potential for cartilage regenerative purposes.
- 6) Successful future clinical use of novel disease-modifying OA drugs will depend on the identification of specific OA phenotypes and their differential diagnosis.
- 7) Peptide library screenings have a high potential for the identification of future disease-modifying OA drugs.
- 8) The clinical implementation of disease modifying OA drugs is essential to avoid or postpone total joint-replacement surgery, especially for the growing population of young OA patients.
- 9) “Persistence guarantees that results are inevitable.” (*Paramahansa Yogananda*)
- 10) “Naet mier aan dinke, ’t haet toch gen nut, want vanaaf ’t begin zien dien kaartje geschud.” (*Rowwen Hèze – De neus umhoeg*)