

# Characterization of the osteoarthritic joint microenvironment

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**Characterization of the osteoarthritic joint microenvironment:  
from phenotype to endotype**

**Bas Housmans**

1. Cell-based assays can be developed towards clinical diagnostics for OA endotyping – *This thesis*
2. Chondrocyte dedifferentiation in response to osteoarthritic synovial fluid enables chondrocyte proliferation, a process involved in cartilage repair – *This thesis*
3. An altered joint microenvironment reflected in compositional changes of the synovial fluid promote OA-associated processes that accelerate cartilage degeneration – *This thesis*
4. Synovial fluid samples from minimally invasive joint aspiration can be used as indicator to subgroup OA patients – *This thesis*
5. Osteoarthritis is a whole joint disease that does not necessarily originate from a disturbance in cartilage – *Discipline*
6. Gaining knowledge on the systemic factors and influences that promote osteoarthritis, such as nutrition and co-morbidities, are vital for patient-profiling and future therapy – *Discipline*
7. Success in clinical biomarker discovery is greatly dependent on the classification of OA subgroups – *Discipline*
8. A detailed characterization of the existing OA endotypes that underlie patient-specific phenotypes are essential to guide both drug development and future precision medicine – *Impact of this thesis*
9. "If we consult the standard Chirurgical Writers from Hippocrates down to the present Age, we shall find, that an ulcerated Cartilage is universally allowed to be a very troublesome Disease; that it admits of a Cure with more Difficulty than carious Bone; and that, when destroyed, it is not recovered" – *William Hunter (1743)*
10. "It had to be good to get where it is" – *Coca Cola (1926)*
11. "Wisdom is the daughter of experience" – *Leonardo Da Vinci*