

Biomarkers in cartilage repair and osteoarthritis

Citation for published version (APA):

Haartmans, M. J. J. (2024). *Biomarkers in cartilage repair and osteoarthritis: mass spectrometry (imaging) for the detection of possible diagnostic and therapeutic biomarkers for cartilage repair and osteoarthritis development*. [Doctoral Thesis, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20240220mh>

Document status and date:

Published: 01/01/2024

DOI:

[10.26481/dis.20240220mh](https://doi.org/10.26481/dis.20240220mh)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

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Propositions accompanying the dissertation

Biomarkers in cartilage repair and osteoarthritis

Mass spectrometry (imaging) for the detection of possible diagnostic and therapeutic biomarkers for cartilage repair and osteoarthritis development

1. The incidence of osteoarthritis in the younger population rises alarmingly due to an increase in obesity and intra-articular trauma such as (osteo)chondral defects, ligament tears or patella luxation (*this thesis*)
2. Most likely, a group of molecules (proteins, lipids, metabolites and possibly other molecules combined) will give a better insight in the development of osteoarthritis and possible therapeutic targets (*this thesis*)
3. The infrapatellar fat pad is not commonly studied in osteoarthritis research, where the focus is predominantly on synovial fluid, cartilage, or synovial membrane (*this thesis*)
4. Standardization of protocols for biopsy taking, sample preparation and mass spectrometry analysis is necessary to combine and compare datasets of biomarkers (*this thesis*)
5. Life begins at forty, but so does arthritis, and the habit of telling the same story three times to the same person (*Sam Levenson*)
6. There is no cure for osteoarthritis (*Adapted from Maqbool, et al. Ann. med. surg. 72 (2021): 103077*)
7. 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*)
8. Understanding the molecular roots of a disease could advance (personalized) treatment, improve a patient's quality of life, and contribute to better (public) health care (*this thesis*)
9. There are in fact two things, science and opinion; the former begets knowledge, the latter ignorance (*Hippocrates*)
10. Progress is made by trial and failure; the failures are generally a hundred times more numerous than the successes, yet they are usually left unchronicled (*William Ramsay*)
11. Somewhere, something incredible is waiting to be known (*Carl Sagan*)

Mirella J.J. Haartmans