

Micro- and nano-mechanics of osteoarthritic cartilage: the effects of tonicity and disease severity

P.R. Moshtagh, B. Pouran, J. van Tiel, J. Rauker, M.R. Zuiddam, V. Arbabi, N.M. Korthagen, H. Weinans, A.A. Zadpoor



PII: S1751-6161(16)30029-7
DOI: <http://dx.doi.org/10.1016/j.jmbbm.2016.03.009>
Reference: JMBBM1842

To appear in: *Journal of the Mechanical Behavior of Biomedical Materials*

Received date: 17 November 2015

Revised date: 23 February 2016

Accepted date: 9 March 2016

Cite this article as: P.R. Moshtagh, B. Pouran, J. van Tiel, J. Rauker, M.R. Zuiddam, V. Arbabi, N.M. Korthagen, H. Weinans and A.A. Zadpoor, Micro- and nano-mechanics of osteoarthritic cartilage: the effects of tonicity and disease severity, *Journal of the Mechanical Behavior of Biomedical Materials* <http://dx.doi.org/10.1016/j.jmbbm.2016.03.009>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Micro- and nano-mechanics of osteoarthritic cartilage: the effects of tonicity and disease severity

P.R. Moshtagh^{a,b}, B. Pouran^{a,b}, J. van Tiel^d, J. Rauker^a, M.R. Zuiddam^e, V. Arbabi^a, N.M. Korthagen^{b,f}, H. Weinans^{a,b,c}, A.A. Zadpoor^a

^a*Faculty of Mechanical, Maritime, and Materials Engineering, Delft University of Technology (TU Delft), Mekelweg 2, Delft 2628 CD, The Netherlands*

^b*Department of Orthopaedics, University Medical Center Utrecht, Utrecht, the Netherlands*

^c*Department of Rheumatology, University Medical Center Utrecht, Utrecht, the Netherlands*

^d*Department of Orthopaedics and Radiology, Erasmus Medical Centre, Rotterdam, The Netherlands*

^e*Kavli Institute of Nanoscience, Delft University of Technology, Lorentzweg 1, 2628 CJ Delft, The Netherlands*

^f*Department of Equine Sciences, Faculty of Veterinary Medicine, Utrecht University, Utrecht, the Netherlands*

Email address of the authors:

Parisa Rahnamay Moshtagh P.Rahnamaymoshtagh@umcutrecht.nl

Behdad Pouran B.Pouran@umcutrecht.nl

Jasper Van Tiel J.Vantiel@erasmusmc.nl

Josip Rauker J.rauker@m3dd.com

Marc Zuiddam M.R.Zuiddam@tudelft.nl

Vahid Arbabi V.arbabi-21@tudelft.nl

Nicoline Korthagen N.M.Korthagen@uu.nl

Harrie Weinans H.H.Weinans@umcutrecht.nl

Amir Abbas Zadpoor A.A.Zadpoor@tudelft.nl

Corresponding author: Parisa Rahnamay Moshtagh

PhD student in Regenerative Medicine

Department of Orthopaedics, UMC Utrecht

Department of Biomechanical Engineering, Faculty of 3ME, TU Delft.

UMC Utrecht, dept. Orthopaedics, Q.03.2.103-1 | Heidelberglaan 100, 3584 CX Utrecht, The Netherlands. PO Box 85500, 3508 GA, Utrecht, NL.

Phone: +31-623721926 Email: P.Rahnamaymoshtagh@umcutrecht.nl

Download English Version:

<https://daneshyari.com/en/article/7208133>

Download Persian Version:

<https://daneshyari.com/article/7208133>

[Daneshyari.com](https://daneshyari.com)