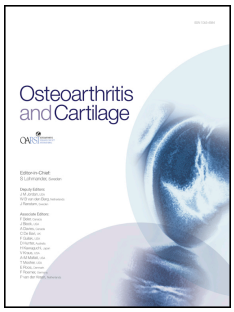
Accepted Manuscript



Electromechanical Properties of Human Osteoarthritic and Asymptomatic Articular Cartilage are Sensitive and Early Detectors of Degeneration

I.Hadjab, S. Sim, S.S. Karhula, S. Kauppinen, M. Garon, E. Quenneville, P. Lavigne, P.P. Lehenkari, S. Saarakkala, M.D. Buschmann

PII: S1063-4584(17)31357-2

DOI: 10.1016/j.joca.2017.12.002

Reference: YJOCA 4130

To appear in: *Osteoarthritis and Cartilage*

Received Date: 25 April 2017

Revised Date: 18 November 2017

Accepted Date: 4 December 2017

Please cite this article as: I.Hadjab Sim S, Karhula SS, Kauppinen S, Garon M, Quenneville E, Lavigne P, Lehenkari PP, Saarakkala S, Buschmann MD, Electromechanical Properties of Human Osteoarthritic and Asymptomatic Articular Cartilage are Sensitive and Early Detectors of Degeneration, *Osteoarthritis and Cartilage* (2018), doi: 10.1016/j.joca.2017.12.002.

Electromechanical Properties of Human Osteoarthritic and Asymptomatic Articular Cartilage are Sensitive and Early Detectors of Degeneration

I.Hadjab[1,2], S. Sim[1,2], S.S. Karhula[3,4], S. Kauppinen[3], M. Garon[2], E. Quenneville[2], P. Lavigne[5], P.P. Lehenkari[3,6], S. Saarakkala[3,7,8], and M.D. Buschmann[1*]

[1]Biomedical Engineering Institute, Polytechnique Montreal, Montreal, QC, Canada; [2]Biomomentum Inc., 970 Michelin St., Suite 200, Laval, Quebec H7L 5C1, Canada; [3]Research Unit of Medical Imaging, Physics and Technology, Faculty of Medicine, University of Oulu [4]Infotech Oulu, University of Oulu, Finland [5]Department of Surgery, University of Montreal, Montreal, QC, Canada; [6]Department of Surgery and Intensive Care, University of Oulu and Oulu University Hospital, Finland; [7]Department of Diagnostic Radiology, Oulu University Hospital, Oulu, Finland; [8]Medical Research Center Oulu, Oulu University Hospital and University of Oulu, Finland

Running Title: Performance of Electromechanical Properties in Early OA Degeneration

Email addresses of all contributors:

Insaf Hadjab: insaf.hadjab@polymtl.ca

Sotcheadt Sim: sotcheadt.sim@polymtl.ca

Sakari S. Karhula: Sakari.Karhula@oulu.fi

Sami Kauppinen: sami.kauppinen@oulu.fi

Martin Garon: garon@biomomentum.com

Eric Quenneville: quenneville@biomomentum.com