

Author's Accepted Manuscript

A Novel Micro-to-Macro Structural Approach for Mechanical Characterization of Adipose Tissue Extracellular Matrix

Behzad Seyfi, Nasser Fatourae, Abbas Samani



PII: S1751-6161(17)30390-9
DOI: <http://dx.doi.org/10.1016/j.jmbbm.2017.09.006>
Reference: JMBBM2490

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

Received date: 17 July 2017
Revised date: 26 August 2017
Accepted date: 3 September 2017

Cite this article as: Behzad Seyfi, Nasser Fatourae and Abbas Samani, A Novel Micro-to-Macro Structural Approach for Mechanical Characterization of Adipose Tissue Extracellular Matrix, *Journal of the Mechanical Behavior of Biomedical Materials*, <http://dx.doi.org/10.1016/j.jmbbm.2017.09.006>

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.

A Novel Micro-to-Macro Structural Approach for Mechanical Characterization of Adipose Tissue Extracellular Matrix

Behzad Seyfi¹, Nasser Fatourae¹, Abbas Samani^{2,3,4}

1 Biomedical Engineering Department, Amirkabir University of Technology, Tehran,

Iran

2 Department of Electrical and Computer Engineering, University of Western Ontario,

London, Canada

3 Department of Medical Biophysics, University of Western Ontario, London, Canada

4 Graduate Program in Biomedical Engineering, University of Western Ontario, London,

Canada

Abstract

Mechanical characterization of adipose tissue micro-components is important for various biomedical applications such as tissue engineering and predicting adipose tissue response to forces involved in relevant medical intervention procedures (e.g. breast needle biopsy). For this characterization, we introduce a novel structural method for micromechanical modeling of the adipose tissue. The micromechanical model was developed using fluid-structure interaction (FSI) formulation. We

Download English Version:

<https://daneshyari.com/en/article/5020349>

Download Persian Version:

<https://daneshyari.com/article/5020349>

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