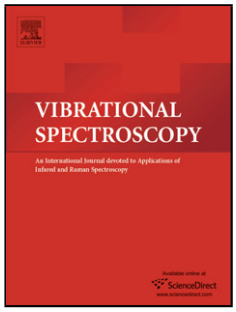

Title: Review of FTIR microspectroscopy applications to investigate biochemical changes in *C. elegans*

Authors: Amal Bouyanfif, Sumedha Liyanage, Eric Hequet, Naima Moustaid-Moussa, Noureddine Abidi

PII: S0924-2031(17)30345-4
DOI: https://doi.org/10.1016/j.vibspec.2018.03.001
Reference: VIBSPE 2782

To appear in: *VIBSPE*

Received date: 21-12-2017
Revised date: 1-2-2018
Accepted date: 2-3-2018

Please cite this article as: Bouyanfif A, Liyanage S, Hequet E, Moustaid-Moussa N, Abidi N, Review of FTIR microspectroscopy applications to investigate biochemical changes in *C. elegans*, *Vibrational Spectroscopy* (2010), https://doi.org/10.1016/j.vibspec.2018.03.001

Review of FTIR microspectroscopy applications to investigate biochemical changes in *C. elegans*

Amal Bouyanfif [a,b,c], Sumedha Liyanage[a], Eric Hequet[a], Naima Moustaid-Moussa[a,b,c], Noureddine Abidi[a,*]

[a] Fiber and Biopolymer Research Institute, Texas Tech University Lubbock, TX, USA

[b] Department of Nutritional Sciences, Texas Tech University Lubbock, TX, USA

[c] Obesity Research Cluster, Texas Tech University, Lubbock, TX, USA

*** Corresponding author:** Noureddine Abidi, Ph.D., 1001, East Loop 289, Lubbock, Texas 79403, USA.

Phone: 1-806-834-1221, Fax: 1-806-742-5343

Email: noureddine.abidi@ttu.edu

Abstract

Caenorhabditis elegans nematode has emerged as a model organism paving the ways for multidisciplinary research in biomedical, environmental toxicology, aging, metabolism, obesity, and drug discovery. The wide range of applications of this model organism are attributed to *C. elegans'* unique features: *C. elegans* are inexpensive, easy to grow and maintain in a laboratory, has a short lifespan, and has a small body size. With this increased interest, the need for analytical techniques to assess the biochemical information on intact worms continues to grow. Fourier Transform Infrared (FTIR) microspectroscopy is considered a powerful technique that can be used to determine the chemical structure and composition of various materials, including biological