Author's Accepted Manuscript

www.elsevier.com/locate/talanta

Raman spectroscopic techniques to detect ovarian cancer biomarkers in blood plasma

Maria Paraskevaidi, Katherine M. Ashton, Helen F. Stringfellow, Nicholas Wood, Patrick Keating, Anthony Rowbottom, Pierre L. Martin-Hirsch, Francis L. Martin

PII: S0039-9140(18)30690-8
DOI: https://doi.org/10.1016/j.talanta.2018.06.084
Reference: TAL18826

To appear in: *Talanta*

Received date: 23 June 2018
Accepted date: 27 June 2018

Cite this article as: Maria Paraskevaidi, Katherine M. Ashton, Helen F. Stringfellow, Nicholas Wood, Patrick Keating, Anthony Rowbottom, Pierre L. Martin-Hirsch and Francis L. Martin, Raman spectroscopic techniques to detect ovarian cancer biomarkers in blood plasma, *Talanta,* https://doi.org/10.1016/j.talanta.2018.06.084

Raman spectroscopic techniques to detect ovarian cancer biomarkers in blood plasma

Maria Paraskevaidi[a,*], Katherine M. Ashton[b], Helen F. Stringfellow[b], Nicholas Wood[c], Patrick Keating[c], Anthony Rowbottom[d], Pierre L. Martin-Hirsch[c] and Francis L. Martin[a,*]

[a]*School of Pharmacy and Biomedical Sciences, University of Central Lancashire, Preston PR1 2HE, UK*

[b]*Pathology Department, Lancashire Teaching Hospitals NHS Foundation Trust, Preston PR2 9HT, UK*

[c]*Department of Obstetrics and Gynaecology, Lancashire Teaching Hospitals NHS Foundation Trust, Preston PR2 9HT, UK*

[d]*Immunology Laboratory, Pathology Department, Lancashire Teaching Hospitals NHS Foundation Trust, Preston PR2 9HT, UK*

mparaskevaidi@uclan.ac.uk

flmartin@uclan.ac.uk

[*]To whom correspondence should be addressed. Tel: +44 (0) 1772 89 6482

Abstract

Robust diagnosis of ovarian cancer is crucial to improve patient outcomes. The lack of a single and accurate diagnostic approach necessitates the advent of novel methods in the field. In the present study, two spectroscopic techniques, Raman and surface-enhanced Raman spectroscopy (SERS) using silver nanoparticles, have been employed to identify signatures