

ABSTRACT

PRESENTER: Dr. Laurie Verzeaux

COMPANY: SILAB

JOB TITLE: Innovation Management Project Leader

Podium Title: *How deepen our knowledge on hair greying? A novel investigation by confocal Raman microspectroscopy*

Abstract

If there are many studies about greying at hair follicle level, there is a lack of information about greying in hair shaft. This study aimed to investigate greying within the hair shaft with Confocal Raman microspectroscopy to understand this phenomenon at the molecular level. For this, an automatic classification of Raman spectra with a Hierarchical Cluster Analysis was performed. Then, statistical analyses conducted on Raman spectra identified specific molecular signature of pigmented, grey and unpigmented hair. Very interestingly, spectral vibrations linked to trans/gauche lipid ratio and protein conformation were decreased, suggesting an alteration of barrier function as well as an impairment of biomechanical properties in greying hair shaft. This study also identifies 3 groups within grey hair and allows a more precise analysis of hair greying. Moreover, it supports the development of an innovative natural active ingredient, able to preserve hair pigmentation and improve structural quality of greying hair shaft.



Laurie Verzeaux is a graduate of the University of Reims Champagne-Ardenne, France. She defended her PhD in molecular and cellular biology in June 2015 within the UMR CNRS 7369. After 3 years as a project leader in scientific communication at SILAB, Laurie is now innovation management project leader, in charge of innovative conceptualization and scientific promotion of cosmetic ingredients.