Yue Wu, J Chromatogr Sep Tech 2017, 8:6 (Suppl)
DOI: 10.4172/2157-7064-C1-034

Mass spectrometry for understanding bio-nano interaction

Yue Wu
Georgia Institute of Technology, USA

The meeting of nanoscale materials with biology draws a great attention from the science world now. Numerous applications of nanoparticles (NPs) in biological systems for diagnosis and therapy are emerging to seek a solution to cure disease and understanding biological processes. On the other hand, fundamental questions such as how biological systems respond to NPs are urgently required to be answered, which is important for understanding the potential toxicity of NPs, as well as understanding corresponding physiological behavior. In our work, we studied some fundamental questions about bio-nano interactions with utilization of mass spectrometry (MS)-based proteomics and other biochemistry tools to study the cell response and apoptosis pathways during gold nanorods-assisted plasmonic photothermal therapy (PPTT) in cells and mice and to study the molecular mechanism of gold nanoparticles' effects on inhibiting cancer cell migration and invasion (Image). MS is a powerful and efficient tool for fundamental understanding of bio-nano interaction.

Biography

Yue Wu has received her BS in Chemistry from Zhejiang University of Technology, China in 2011. In 2014, she has received her MS in Analytical Chemistry in Dalian Institute of Chemical Physics, Chinese Academy of Sciences (with Prof. Hanfa Zou and Prof. Fangjun Wang), where she conducted several studies on mass spectrometry-based proteomics and protein structure analysis. She is currently a PhD candidate in Prof. Mostafa A. El-Sayed's Lab in Chemistry & Biochemistry Department in Georgia Institute of Technology. Her present research focuses on the nano-bio interaction and nanomedicine.

janewuyue@gmail.com

Notes: