Zahra Mojtahedi, J Mol Biomark Diagn 2011, 2:4
doi: http://dx.doi.org/10.4172/2155-9929.S1.5

OMICS Group Conferences
Accelerating Scientific Discovery

2nd World Congress on
Biomarkers & Clinical Research

12-14 September 2011 Baltimore, USA

Secretome analysis of large cell lung cancer cell lines using two-dimensional electrophoresis coupled to mass spectrometry

Zahra Mojtahedi

Shiraz University of Medical Sciences, Iran

The secretome of cancer cells is a valuable source of biomarkers that can ultimately reach the serum or other body fluids. Cancer biomarkers can facilitate early disease detection and monitoring, contribute to our understanding of the biology of cancer, and support the development of more efficient therapies. Recently, high-throughput proteomic analysis of the conditioned media of cancer cell lines has shown potential to identify novel biomarkers in cancer. We used two-dimensional electrophoresis coupled to liquid chromatography tandem mass spectrometry to identify the proteomes of the large cell lung cancer cell lines QU-DB and Mehr-80. A total of 130 distinct protein species were identified. Of these, 79 were previously found in serum or other body fluids, the membrane compartment or conditioned media of other cancer cell lines. Some of the proteins that we identified, e.g. IL-6, ubiquitincarboxyl-terminal hydrolase isozyme L1 (PGP9.5), α-enolase, peroxiredoxin-1 are known putative serum markers for lung cancer, whereas others might be candidate markers for further validation in lung cancer body fluids such as epidermal fatty acid-binding protein, peptidyl-prolyl cis-trans isomerase A, chloride intracellular channel protein 1 and 4.

Biography

Zahra Mojtahedi has completed her medical doctor in 1998 and Ph.D in 2008 from Shiraz University of Medical Sciences. She has published more than 20 articles, and she is the director of Proteomics Lab in Shiraz Institute for Cancer Research, in Shiraz, Iran.