

Title: Interfacing chip-based nanofluidic-systems to surface-desorption mass spectrometry

Type: Postdoc

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Description: Proteomics provides new understanding of cellular mechanisms that genomic information alone does not explain. However, unlike DNA analysis, the analysis proteins are a much more complex problem due to the variety of proteins present and low concentration. To meet the high separation capacity and ultrasensitivity requirements, we propose to develop a robust method to interface a chip-based protein separation method to surface-desorption mass spectrometry. Successful development of an interface will accommodate high data throughput required in cell lysate protein separation, be compatible with the vacuum environment for mass spectrometric analysis, and allow minimal sample cross contamination.