

LSUHSC Proteomics Core Facility

Applications Newsletter

No.1 (May 1st, 2005)

Greeting from LSUHSC Core Facility

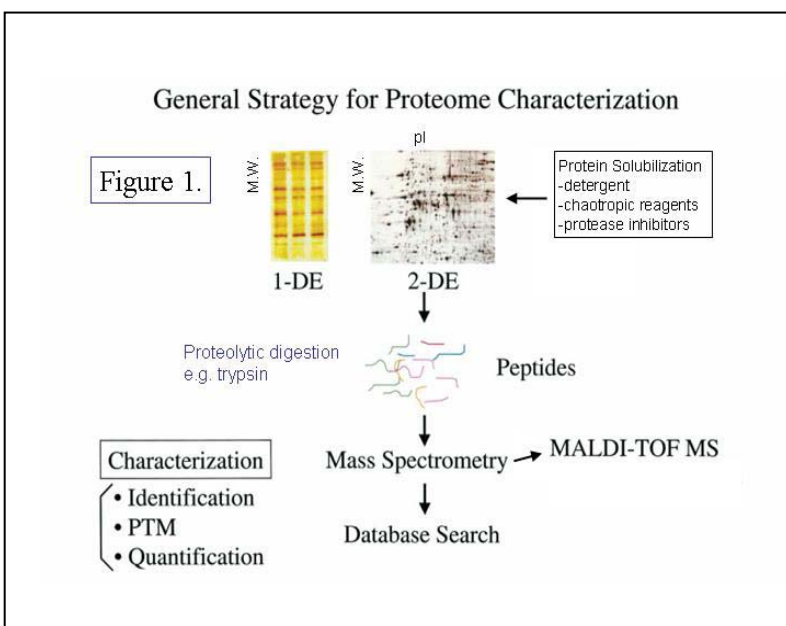
The LSU School of Medicine Proteomics Core Facility opened last year to support the proteomics needs of investigators at the LSU Health Sciences Center and neighboring institutions. We thank the many investigators from LSUHSC and Tulane HSC who have used our services during the last year. To better acquaint investigators with scope of the services provided and potential applications of these powerful techniques to their research, we are initiating an *Applications Newsletter* which will highlight research supported by the Facility. The Newsletter will be monthly distributed in PDF format via e-mail. If you have any suggestions, questions, or wish to be added to the mail list, please e-mail Dr. Chou at cchou@lsuhsc.edu. Please also visit our website at <http://www.medschool.lsuhs.edu/physiology/proteomics/>.

What is Proteomics?

Proteomics can be defined as *the qualitative and quantitative comparison of proteomes under different conditions to further unravel biological processes*. It includes a branch of bioanalytical technologies applied to molecular biology, biochemistry, and genetics to analyze the structure, function, and interactions of the proteins produced by the genes of a particular cell, tissue, or organism. Contemporary proteomics tools include modern 1D and 2D gel electrophoresis, 1D and 2D liquid chromatography, and mass spectrometry for the resolution and identification of proteins. The LSU School of Medicine Proteomics Core Facility has the instrumentation to conduct state-of-the-art identifications of unknown proteins present in samples from cell extracts as well as immunoprecipitations and other “pull-down” formats.

Services Provided By the Proteomics Core Facility

The figure below shows the general approach for proteome characterization. Currently, we provide the following services: sample extraction, sample cleanup, 1D and 2D gel electrophoresis, image analysis, and in gel trypsin digestion followed by MALDI-TOF analysis for protein spot identification. The Facility can also provide a total proteome analysis for more complex samples purified by investigators. Detailed protocols and services provided by the Core Facility can be found at our website or by request. Subsequent Newsletters will focus on specific applications of this technology.



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See the Proteomics Core Web site for more information:
<http://www.medschool.lsuhs.edu/physiology/proteomics/>