

Editorial

Clinical Proteomics

From Discovery to Individual Therapy

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Proteins are highly evolved nanomachines that carry out the work of the cell. Biologic information is transmitted both by and through proteins. Just as proteins are the functional elements of the organism, the field of clinical proteomics is an effector arm of the upcoming revolution in molecular medicine. Recent advances in proteomic technology have yielded biologic discoveries and pathologic insights at a rapid pace. Proteomics has opened a treasure chest of candidate biomarkers that were never before known to exist in the blood. Protein-protein interactions, posttranslational modifications, and entire proteomic circuits have become the new scaffolding for drug target discovery. Investigators have graduated from tissue-culture cell lines, and are now routinely applying proteomics to human tissue samples. The mission of *Clinical Proteomics* is to provide a scholarly forum for

novel scientific research in the field of translational proteomics. The special emphasis of *Clinical Proteomics* is the application of proteomic technology to clinical research. Areas of emphasis will include the following:

- Clinical sample collection and handling to preserve proteins and posttranslational modifications.
- New technology for protein-based clinical bioassays and clinical chemistry assays.
- Translational pathology related to proteomics.
- Bioinformatic tools and protein circuit-building.
- Biomarker discovery and validation from clinical samples.
- Signal transduction pathway profiling in clinical tissue samples.
- Discovery of new drug targets from clinical samples.

- Use of proteomic technologies in the drug development pipeline (hit to lead screening and lead optimization and pre-clinical screening).
- Use of proteomic technologies to monitor prognosis, therapeutic end points, toxicity, and efficacy.
- Clinical trials using proteomic monitoring
- Clinical trials using proteomics to individualize therapy.

This inaugural issue of *Clinical Proteomics* is a showcase of scientific research spanning discovery, functional analysis and biomarker profiling.