

Proteomics of Disease

Julio E. Celis and Murray Korc, Guest Editors

Currently we are experiencing important changes in the way we study disease. The availability of novel and powerful technologies derived from proteomics and functional genomics has added new dimensions to the analyses of clinically relevant samples and promises to revolutionize the way diseases will be treated and managed in the future. However, there are many challenges associated with the implementation of these technologies to the study of complex and heterogeneous tissue samples and biofluids. As a result, one often must rely on pilot projects to optimize procedures and assess their potential and limitations, as well as on “proof-of-concept” studies that make use of a small, but well-selected, set of matched clinical samples. Only after this has been accomplished does one usually consider embarking on a systematic and lengthy study that likely requires resources and clinical infrastructures, which are essential for optimal study design.

Molecular & Cellular Proteomics recognized early on the importance that clinical proteomics has in the present study of disease and has been committed to nurturing its development by publishing special issues that highlight the use of new technologies in a preclinical and clinical setting, discuss their advantages and limitations, and bring forward examples of

what has been achieved to date in different pathological situations. In this special issue, which is dedicated to the proteomics of disease, we have selected some technologies that we believe are emerging as the tools of the future, and present some applications to diseases to which they are being targeted. Clearly, cancer is still the major focus for these efforts, but as illustrated in this issue, we are beginning to see more and more studies directed toward the analysis of other diseases. Thus, this issue includes invited reviews and articles, as well as three manuscripts selected from direct submissions to the journal. In total, eight different disease states and/or medical conditions are addressed, and these are only a limited sampling of what is occurring in the clinical research arena. Future articles and special issues will amplify on these applications.

We would like to thank the contributors to this issue for their willingness to provide the manuscripts and the staff of *Molecular & Cellular Proteomics* for their expeditious and efficient handling of the articles. We hope these articles provide new and stimulating insights into the opportunities that clinical proteomics continues to hold for the future of medicine.