



## Table of Contents

This issue and full Instructions to Authors are available in electronic form at <http://www.mcponline.org>

### Editorial

- 2071 **New Guidelines for Clinical Proteomics Manuscripts**  
*Julio E. Celis, Steven A. Carr, and Ralph A. Bradshaw*

### Research

- 2073 **Revealing the Dynamics of the 20 S Proteasome Phosphoproteome: A Combined CID and Electron Transfer Dissociation Approach**  
[S] *Haojie Lu, Chenggong Zong, Yueju Wang, Glen W. Young, Ning Deng, Pete Souda, Xiaohai Li, Julian Whitelegge, Oliver Drews, Peng-Yuan Yang, and Peipei Ping*
- 2090 **A Proteomics Analysis of Yeast Mot1p Protein-Protein Associations: Insights into Mechanism**  
[S] *Diana R. Arnett, Jennifer L. Jennings, David L. Tabb, Andrew J. Link, and P. Anthony Weil*
- 2107 **The Ubiquitin-Proteasome System Is a Key Component of the SUMO-2/3 Cycle**  
[S] *Joost Schimmel, Katja M. Larsen, Ivan Matic, Martijn van Hagen, Jürgen Cox, Matthias Mann, Jens S. Andersen, and Alfred C. O. Vertegaal*
- 2123 **Proteomics Analysis Identifies Phosphorylation-dependent  $\alpha$ -Synuclein Protein Interactions**  
[S] *Melinda A. McFarland, Christopher E. Ellis, Sanford P. Markey, and Robert L. Nussbaum*
- 2138 **An Integrated, Directed Mass Spectrometric Approach for In-depth Characterization of Complex Peptide Mixtures**  
[S] *Alexander Schmidt, Nils Gehlenborg, Bernd Bodenmiller, Lukas N. Mueller, Dave Campbell, Markus Mueller, Ruedi Aebersold, and Bruno Domon*
- 2151 **Lamellar Bodies of Human Epidermis: Proteomics Characterization by High Throughput Mass Spectrometry and Possible Involvement of CLIP-170 in their Trafficking/Secretion**  
[S] *Anne-Aurélie Raymond, Anne Gonzalez de Peredo, Alexandre Stella, Akemi Ishida-Yamamoto, David Bouyssié, Guy Serre, Bernard Monsarrat, and Michel Simon*
- 2176 **Comparative Phosphoproteomics of Zebrafish Fyn/Yes Morpholino Knockdown Embryos**  
[S] *Simone Lemeer, Chris Jopling, Joost Gouw, Shabaz Mohammed, Albert J. R. Heck, Monique Slijper, and Jeroen den Hertog*
- 2188 **Profiling the Phospho-status of the BK<sub>Ca</sub> Channel  $\alpha$  Subunit in Rat Brain Reveals Unexpected Patterns and Complexity**  
[S] *Jiusheng Yan, Jesper V. Olsen, Kang-Sik Park, Weiyan Li, Wolfgang Bildl, Uwe Schulte, Richard W. Aldrich, Bernd Fakler, and James S. Trimmer*

On the cover, characterization by nano-LC-MS/MS of a fraction enriched in human epidermal lamellar bodies allowed identifying 984 proteins. CLIP-170 is localized along microtubules in cultured keratinocytes (*upper right*), and in the cytoplasm of differentiated keratinocytes in the upper epidermis (*lower left*). CLIP-170 is proposed to be involved in the trafficking of cathepsin D-containing lamellar bodies, in a complex with the proteins Cdc42 and Rab7. For details, see the article by *Raymond et al.*, pages 2151–2175.

- 2199 **Proteomics Identification of Nuclear Ran GTPase as an Inhibitor of Human VRK1 and VRK2 (Vaccinia-related Kinase) Activities**  
 [S] %  
*Marta Sanz-García, Inmaculada López-Sánchez, and Pedro A. Lazo*
- 2215 **Novel MMP-9 Substrates in Cancer Cells Revealed by a Label-free Quantitative Proteomics Approach**  
 [S]  
*Danmei Xu, Naoko Suenaga, Mariola J. Edelmann, Rafael Fridman, Ruth J. Muschel, and Benedikt M. Kessler*
- 2229 **Identification of Structural and Functional O-Linked N-Acetylglucosamine-bearing Proteins in *Xenopus laevis* Oocyte**  
 [S]  
*Vanessa Dehennaut, Marie-Christine Slomianny, Adeline Page, Anne-Sophie Vercoutter-Edouart, Catherine Jessus, Jean-Claude Michalski, Jean-Pierre Vilain, Jean-François Bodart, and Tony Lefebvre*
- 2246 **Cell-free Co-expression of Functional Membrane Proteins and Apolipoprotein, Forming Soluble Nanolipoprotein Particles**  
 [S]  
*Jenny A. Cappuccio, Craig D. Blanchette, Todd A. Sulchek, Erin S. Arroyo, Joel M. Kralj, Angela K. Hinz, Edward A. Kuhn, Brett A. Chromy, Brent W. Segelke, Kenneth J. Rothschild, Julia E. Fletcher, Federico Katzen, Todd C. Peterson, Wieslaw A. Kudlicki, Graham Bench, Paul D. Hoeprich, and Matthew A. Coleman*
- 2254 **Extensive Analysis of the Cytoplasmic Proteome of Human Erythrocytes Using the Peptide Ligand Library Technology and Advanced Mass Spectrometry**  
 [S]  
*Florence Roux-Dalvai, Anne Gonzalez de Peredo, Carolina Simó, Luc Guerrier, David Bouyssié, Alberto Zanella, Attilio Citterio, Odile Burtet-Schiltz, Egisto Boschetti, Pier Giorgio Righetti, and Bernard Monsarrat*
- 2270 **MRMer, an Interactive Open Source and Cross-platform System for Data Extraction and Visualization of Multiple Reaction Monitoring Experiments**  
 [S] %  
*Daniel B. Martin, Ted Holzman, Damon May, Amelia Peterson, Ashley Eastham, Jimmy Eng, and Martin McIntosh*
- 2279 **A Fluorescent Two-hybrid Assay for Direct Visualization of Protein Interactions in Living Cells**  
 [S]  
*Kourosh Zolghadr, Oliver Mortusewicz, Ulrich Rothbauer, Regina Kleinhans, Heike Goehler, Erich E. Wanker, M. Cristina Cardoso, and Heinrich Leonhardt*

## HUPO Views

- 2288 **Meeting Report on the 7th World Congress of the Human Proteome Organization (HUPO) in Amsterdam: Proteome Biology**  
*Anne-Claude Gavin, Ruedi Aebersold, and Albert J. R. Heck, Chairs*

## Information

- 2292 **Calendar**