

## Review

- 1752 **Identification of Protein Interactions Involved in Cellular Signaling**  
*Jukka Westermarck, Johanna Ivaska, and Garry L. Corthals*

## Research

- 1764 **Membrane Glucocorticoid Receptor Activation Induces Proteomic Changes Aligning with Classical Glucocorticoid Effects**  
[S] *Sara Vernocchi, Nadia Battello, Stephanie Schmitz, Dominique Revets, Anja M. Billing, Jonathan D. Turner, and Claude P. Muller*
- 1780 **Deep Proteome Coverage Based on Ribosome Profiling Aids Mass Spectrometry-based Protein and Peptide Discovery and Provides Evidence of Alternative Translation Products and Near-cognate Translation Initiation Events**  
[S] *Gerben Menschaert, Wim Van Crielinge, Tineke Notelaers, Alexander Koch, Jeroen Crappé, Kris Gevaert, and Petra Van Damme*
- 1791 **Disparate Proteome Responses of Pathogenic and Nonpathogenic Aspergilli to Human Serum Measured by Activity-Based Protein Profiling (ABPP)**  
[S] *Susan D. Wiedner, Charles Ansong, Bobbie-Jo Webb-Robertson, LeeAnna M. Pederson, Suereta Fortuin, Beth A. Hofstad, Anil K. Shukla, Ellen A. Panisko, Richard D. Smith, and Aaron T. Wright*
- 1806 **Extending the Mannose 6-Phosphate Glycoproteome by High Resolution/Accuracy Mass Spectrometry Analysis of Control and Acid Phosphatase 5-Deficient Mice**  
[S] *David E. Sleat, Pengling Sun, Jennifer A. Wiseman, Ling Huang, Mukarram El-Banna, Haiyan Zheng, Dirk F. Moore, and Peter Lobel*
- 1818 ***Dermatophagoides farinae* Allergens Diversity Identification by Proteomics**  
[S] *Su An, Lingling Chen, Chengbo Long, Xiaoyu Liu, Xuemei Xu, Xingre Lu, Mingqiang Rong, Zhigang Liu, and Ren Lai*
- 1829 **The Human Leukocyte Antigen-presented Ligandome of B Lymphocytes**  
[S] *Chopie Hassan, Michel G. D. Kester, Arnoud H. de Ru, Pleun Hombrink, Jan Wouter Drijfhout, Harm Nijveen, Jack A. M. Leunissen, Mirjam H. M. Heemskerk, J. H. Frederik Falkenburg, and Peter A. van Veelen*
- 1844 **Significant Modifications of the Salivary Proteome Potentially Associated with Complications of Down Syndrome Revealed by Top-down Proteomics**  
[S] *Tiziana Cabras, Elisabetta Pisano, Caterina Montaldo, Maria Rita Giuca, Federica Iavarone, Giuseppe Zampino, Massimo Castagnola, and Irene Messina*
- 1853 **The Effect of Proteasome Inhibition on the Generation of the Human Leukocyte Antigen (HLA) Peptidome**  
[S] *Elena Milner, Lilach Gutter-Kapon, Michal Bassani-Strenberg, Eilon Barnea, Ilan Beer, and Arie Admon*

On the cover: A multidisciplinary approach for refining target specificity of peptide aptamers. A dual-specificity peptide aptamer was subjected to random mutagenesis within the variable loop (Pink) followed by determination of target binding by an array-based yeast two-hybrid analysis. Binding phenotype and sequence data were used to qualify various conformers derived by biomolecular computer simulation on the French supercomputing network "GENCI". Differential activity of the refined peptide aptamers was validated in functional studies in cells. For details, see the article by Silvia Dibenedetto, *et al.*, pages 1939–1952.

- 1865 **iTRAQ Based Quantitative Proteomics Approach Validated the Role of Calcyclin Binding Protein (CacyBP) in Promoting Colorectal Cancer Metastasis**  
 [S] *Dipanjana Ghosh, Zhihan Li, Xing Fei Tan, Teck Kwang Lim, Yubin Mao, and Qingsong Lin*
- 1881 **Squeezers and Leaf-cutters: Differential Diversification and Degeneration of the Venom System in Toxiciferan Reptiles**  
 [S] *Bryan G. Fry, Eivind A. B. Undheim, Syed A. Ali, Timothy N. W. Jackson, Jordan Debono, Holger Scheib, Tim Ruder, David Morgenstern, Luke Cadwallader, Darryl Whitehead, Rob Nabuurs, Louise van der Weerd, Nicolas Vidal, Kim Roelants, Iwan Hendriks, Sandy Pineda Gonzalez, Ivan Koludarov, Alun Jones, Glenn F. King, Agostinho Antunes, and Kartik Sunagar*
- 1900 **Integrative Omics Analysis Reveals the Importance and Scope of Translational Repression in microRNA-mediated Regulation**  
 [S] ✖ *Qi Liu, Patrick J. Halvey, Yu Shyr, Robbert J. C. Slebos, Daniel C. Liebler, and Bing Zhang*
- 1912 **Identification of a Chloroplast Ribonucleoprotein Complex Containing *Trans*-splicing Factors, Intron RNA, and Novel Components**  
 [S] *Jessica Jacobs, Christina Marx, Vera Kock, Olga Reifschneider, Benjamin Fränzel, Christoph Krisp, Dirk Wolters, and Ulrich Kück*
- 1926 **Proteomic Identification of VEGF-dependent Protein Enrichment to Membrane Caveolar-raft Microdomains in Endothelial Progenitor Cells**  
*Anastasia Chillà, Francesca Magherini, Francesca Margheri, Anna Laurenzana, Tania Gamberi, Luca Bini, Laura Bianchi, Giovanna Danza, Benedetta Mazzanti, Simona Serrati, Alessandra Modesti, Mario Del Rosso, and Gabriella Fibbi*
- 1939 **Calcineurin A versus NS5A-TP2/HD Domain Containing 2: A Case Study of Site-directed Low-frequency Random Mutagenesis for Dissecting Target Specificity of Peptide Aptamers**  
 [S] ✖ *Silvia Dibenedetto, David Cluet, Pierre-Nicolas Stebe, Véronique Baumle, Jérémie Léault, Raphaël Terreux, Marc Bickle, Benoit D. E. Chassey, Ivan Mikaelian, Pierre Colas, Martin Spichthy, Michele Zoli, and Brian B. Rudkin*
- 1953 **TvMP50 is an Immunogenic Metalloproteinase during Male Trichomoniasis**  
 [S] *Laura Itzel Quintas-Granados, José Luis Villalpando, Laura Isabel Vázquez-Carrillo, Rossana Arroyo, Guillermo Mendoza-Hernández, and María Elizabeth Álvarez-Sánchez*
- 1965 **Protein Sets Define Disease States and Predict *In Vivo* Effects of Drug Treatment**  
 [S] *David Meierhofer, Christopher Weidner, Ludger Hartmann, Johannes A. Mayr, Chung-Ting Han, Frank C. Schroeder, and Sascha Sauer*
- 1980 **Wnt3a-dependent and -independent Protein Interaction Networks of Chromatin-bound  $\beta$ -catenin in Mouse Embryonic Stem Cells**  
 [S] *Toma Yakulov, Angelo Raggioli, Henriette Franz, and Rolf Kemler*
- 1995 **Native SILAC: Metabolic Labeling of Proteins in Prototroph Microorganisms Based on Lysine Synthesis Regulation**  
 [S] *Florian Fröhlich, Romain Christiano, and Tobias C. Walther*
- 2006 **Proteomic Differences Between Hepatocellular Carcinoma and Nontumorous Liver Tissue Investigated by a Combined Gel-based and Label-free Quantitative Proteomics Study**  
 [S] *Dominik A. Megger, Thilo Bracht, Michael Kohl, Maike Ahrens, Wael Naboulsi, Frank Weber, Andreas-Claudius Hoffmann, Christian Stephan, Katja Kuhlmann, Martin Eisenacher, Jörg F. Schlaak, Hideo A. Baba, Helmut E. Meyer, and Barbara Sitek*

## Technological Innovation and Resource

- 2021 **Defining, Comparing, and Improving iTRAQ Quantification in Mass Spectrometry Proteomics Data**  
 [S] *Lina Hultin-Rosenberg, Jenny Forshed, Rui M. M. Branca, Janne Lehtiö, and Henrik J. Johansson*

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