

## Special Issue: Proteomics in Europe

### Guest Editorial

- 1901 **PRIME-XS, a European Infrastructure for Proteomics**  
*Reinout Raijmakers, Jesper V. Olsen, Ruedi Aebersold, and Albert J. R. Heck*

### Articles

- 1905 **qcML: An Exchange Format for Quality Control Metrics from Mass Spectrometry Experiments**  
[S] ⌘ *Mathias Walzer, Lucia Espona Pernas, Sara Nasso, Wout Bittremieux, Sven Nahnsen, Pieter Kelchtermans, Peter Pichler, Henk W. P. van den Toorn, An Staes, Jonathan Vandebussche, Michael Mazanek, Thomas Taus, Richard A. Scheltema, Christian D. Kelstrup, Laurent Gatto, Bas van Breukelen, Stephan Aiche, Dirk Valkenburg, Kris Laukens, Kathryn S. Lilley, Jesper V. Olsen, Albert J. R. Heck, Karl Mechtler, Ruedi Aebersold, Kris Gevaert, Juan Antonio Vizcaino, Henning Hermjakob, Oliver Kohlbacher, and Lennart Martens*
- 1914 **Analytical Utility of Mass Spectral Binning in Proteomic Experiments by SPectral Immonium Ion Detection (SPIID)**  
[S] ⌘ *Christian D. Kelstrup, Christian Frese, Albert J. R. Heck, Jesper V. Olsen, and Michael L. Nielsen*
- 1925 **Absolute Proteome and Phosphoproteome Dynamics during the Cell Cycle of *Schizosaccharomyces pombe* (Fission Yeast)**  
[S] *Alejandro Carpy, Karsten Krug, Sabine Graf, André Koch, Sasa Popic, Silke Hauf, and Boris Macek*
- 1937 **A Foundation for Reliable Spatial Proteomics Data Analysis**  
[S] *Laurent Gatto, Lisa M. Breckels, Thomas Burger, Daniel J. H. Nightingale, Arnoud J. Groen, Callum Campbell, Nino Nikolovski, Claire M. Mulvey, Andy Christoforou, Myriam Ferro, and Kathryn S. Lilley*
- 1953 **Chasing Phosphoarginine Proteins: Development of a Selective Enrichment Method Using a Phosphatase Trap**  
[S] *Débora Broch Trentini, Jakob Fuhrmann, Karl Mechtler, and Tim Clausen*
- 1965 **Quantitative Phosphoproteome Analysis of *Bacillus subtilis* Reveals Novel Substrates of the Kinase PrkC and Phosphatase PrpC**  
[S] *Vaishnavi Ravikumar, Lei Shi, Karsten Krug, Abderahmane Derouiche, Carsten Jers, Charlotte Cousin, Ahasanul Kobir, Ivan Mijakovic, and Boris Macek*
- 1979 **Convergence of Ubiquitylation and Phosphorylation Signaling in Rapamycin-treated Yeast Cells**  
[S] ⌘ *Vytautas Iesmantavicius, Brian T. Weinert, and Chunaram Choudhary*
- 1993 **Global Analysis of Muscle-specific Kinase Signaling by Quantitative Phosphoproteomics**  
[S] *Gerhard Dürnberger, Bahar Z. Camurdanoglu, Matthias Tomschik, Michael Schutzbier, Elisabeth Roitinger, Otto Hudecz, Karl Mechtler, and Ruth Herbst*
- 2004 **Alterations in the Cerebellar (Phospho)Proteome of a Cyclic Guanosine Monophosphate (cGMP)-dependent Protein Kinase Knockout Mouse**  
[S] *Eleonora Corradini, Raghavan Vallur, Linsey M. Raaijmakers, Susanne Feil, Robert Feil, Albert J. R. Heck, and Arjen Scholten*

On the cover: This issue features research originating from the pan-European infrastructure for proteomics PRIME-XS. It is an accumulation of technology oriented projects resulting from the joint research initiatives, as well as research from users who were provided access to the infrastructure.

- 2017 **Phosphorylation Dependence and Stoichiometry of the Complex Formed by Tyrosine Hydroxylase and 14-3-3 $\gamma$**   
 [S]  $\times$  *Rune Kleppe, Sara Rosati, Ana Jorge-Finnigan, Sara Alvira, Sadaf Ghorbani, Jan Haavik, José María Valpuesta, Albert J. R. Heck, and Aurora Martinez*
- 2031 **A *Saccharomyces cerevisiae* Model Reveals *In Vivo* Functional Impairment of the Ogden Syndrome N-Terminal Acetyltransferase NAA10 Ser37Pro Mutant**  
 [S] *Petra Van Damme, Svein I. Støve, Nina Glomnes, Kris Gevaert, and Thomas Arnesen*
- 2042 **Daily Rhythms in the Cyanobacterium *Synechococcus elongatus* Probed by High-resolution Mass Spectrometry-based Proteomics Reveals a Small Defined Set of Cyclic Proteins**  
 [S] *Ana C. L. Guerreiro, Marco Benevento, Robert Lehmann, Bas van Breukelen, Harm Post, Piero Giansanti, A. F. Maarten Altelaar, Ilka M. Axmann, and Albert J. R. Heck*
- 2056 **Conserved Peptide Fragmentation as a Benchmarking Tool for Mass Spectrometers and a Discriminating Feature for Targeted Proteomics**  
 [S]  $\times$  *Umut H. Toprak, Ludovic C. Gillet, Alessio Maiolica, Pedro Navarro, Alexander Leitner, and Ruedi Aebersold*
- 2072 **Proteomic Analysis of Arginine Methylation Sites in Human Cells Reveals Dynamic Regulation During Transcriptional Arrest**  
 [S] *Kathrine B. Sylvestersen, Heiko Horn, Stephanie Jungmichel, Lars J. Jensen, and Michael L. Nielsen*
- 2089 **Phosphoproteome Dynamics in Onset and Maintenance of Oncogene-induced Senescence**  
 [S] *Erik L. de Graaf, Joanna Kaplon, Houjiang Zhou, Albert J. R. Heck, Daniel S. Peeper, and A. F. Maarten Altelaar*
- 2101 **Profiling the Secretome and Extracellular Proteome of the Potato Late Blight Pathogen *Phytophthora infestans***  
 [S] *Harold J. G. Meijer, Francesco M. Mancuso, Guadalupe Espadas, Michael F. Seidl, Cristina Chiva, Francine Govers, and Eduard Sabidó*
- 2114 **Early Targets of miR-34a in Neuroblastoma**  
 [S] *Pasqualino De Antonellis, Marianeve Carotenuto, Jonathan Vandenbussche, Gennaro De Vita, Veronica Ferrucci, Chiara Medaglia, Iolanda Boffa, Alessandra Galiero, Sarah Di Somma, Daniela Magliulo, Nadia Aiese, Alessandro Alonzi, Daniela Spano, Lucia Liguori, Cristina Chiarolla, Antonio Verrico, Johannes H. Schulte, Pieter Mestdagh, Jo Vandesompele, Kris Gevaert, and Massimo Zollo*
- 2132 **Proteomic Analysis of the Multimeric Nuclear Egress Complex of Human Cytomegalovirus**  
 [S] *Jens Milbradt, Alexandra Kraut, Corina Hutterer, Eric Sonntag, Cathrin Schmeiser, Myriam Ferro, Sabrina Wagner, Tihana Lenac, Claudia Claus, Sandra Pinkert, Stuart T. Hamilton, William D. Rawlinson, Heinrich Sticht, Yohann Couté, and Manfred Marschall*
- 2147 **Deciphering Thylakoid Sub-compartments using a Mass Spectrometry-based Approach**  
 [S] *Martino Tomizioli, Cosmin Lazar, Sabine Brugière, Thomas Burger, Daniel Salvi, Laurent Gatto, Lucas Moyet, Lisa M. Breckels, Anne-Marie Hesse, Kathryn S. Lilley, Daphné Seigneurin-Berny, Giovanni Finazzi, Norbert Rolland, and Myriam Ferro*

## AUTHOR INDEX

- Aebersold, Ruedi, 1901, 1905, 2056  
Aiche, Stephan, 1905  
Aiese, Nadia, 2114  
Alonzi, Alessandro, 2114  
Altelaar, A. F. Maarten, 2089  
Alvira, Sara, 2017  
Arnesen, Thomas, 2031  
Axmann, Ilka M., 2042
- Benevento, Marco, 2042  
Bittremieux, Wout, 1905  
Boffa, Iolanda, 2114  
Breckels, Lisa M., 1937, 2147  
Breukelen, Bas van, 1905  
Broch Trentini, Débora, 1953  
Brugière, Sabine, 2147  
Burger, Thomas, 1937, 2147
- Campbell, Callum, 1937  
Camurdanoglu, Bahar Z., 1993  
Carotenuto, Marianeve, 2114  
Carpay, Alejandro, 1925  
Chiarolla, Cristina, 2114  
Chiva, Cristina, 2101  
Choudhary, Chunaram, 1979  
Christoforou, Andy, 1937  
Claus, Claudia, 2132  
Clausen, Tim, 1953  
Corradini, Eleonora, 2004  
Cousin, Charlotte, 1965  
Couté, Yohann, 2132
- Dürnberger, Gerhard, 1993  
Damme, Petra Van, 2031  
De Antonellis, Pasqualino, 2114  
de Graaf, Erik L., 2089  
De Vita, Gennaro, 2114  
Derouiche, Abderahmane, 1965  
Di Somma, Sarah, 2114
- Espadas, Guadalupe, 2101
- Feil, Robert, 2004  
Feil, Susanne, 2004  
Ferro, Myriam, 2132, 1937, 2147  
Ferrucci, Veronica, 2114  
Finazzi, Giovanni, 2147  
Frese, Christian, 1914  
Fuhrmann, Jakob, 1953
- Galiero, Alessandra, 2114  
Gatto, Laurent, 1905, 1937, 2147  
Gevaert, Kris, 2031, 2114, 1905  
Ghorbani, Sadaf, 2017  
Giansanti, Piero, 2042
- Gillet, Ludovic C., 2056  
Glomnes, Nina, 2031  
Govers, Francine, 2101  
Graf, Sabine, 1925  
Groen, Arnoud J., 1937  
Guerreiro, Ana C. L., 2042
- Haavik, Jan, 2017  
Hamilton, Stuart T., 2132  
Hauf, Silke, 1925  
Heck, Albert J. R., 1901, 2004, 2089, 2017, 2042, 1905, 1914  
Herbst, Ruth, 1993  
Hermjakob, Henning, 1905  
Hesse, Anne-Marie, 2147  
Horn, Heiko, 2072  
Hudecz, Otto, 1993  
Hutterer, Corina, 2132
- Iesmantavicius, Vytautas, 1979
- Jensen, Lars J., 2072  
Jers, Carsten, 1965  
Jorge-Finnigan, Ana, 2017  
Jungmichel, Stephanie, 2072
- Kaplon, Joanna, 2089  
Kelchtermans, Pieter, 1905  
Kelstrup, Christian D., 1905, 1914  
Kleppe, Rune, 2017  
Kobir, Ahasanul, 1965  
Koch, André, 1925  
Kohlbacher, Oliver, 1905  
Kraut, Alexandra, 2132  
Krug, Karsten, 1925, 1965
- Laukens, Kris, 1905  
Lazar, Cosmin, 2147  
Lehmann, Robert, 2042  
Leitner, Alexander, 2056  
Lenac, Tihana, 2132  
Liguori, Lucia, 2114  
Lilley, Kathryn S., 1905, 1937, 2147
- Maarten Altelaar, A. F., 2042  
Macek, Boris, 1925, 1965  
Magliulo, Daniela, 2114  
Maiolica, Alessio, 2056  
Mancuso, Francesco M., 2101  
Marschall, Manfred, 2132  
Martens, Lennart, 1905  
Martinez, Aurora, 2017  
Mazanek, Michael, 1905  
Mechtler, Karl, 1905, 1993, 1953  
Medaglia, Chiara, 2114

Meijer, Harold J. G., 2101  
 Mestdagh, Pieter, 2114  
 Mijakovic, Ivan, 1965  
 Milbradt, Jens, 2132  
 Moyet, Lucas, 2147  
 Mulvey, Claire M., 1937  
  
 Nahnsen, Sven, 1905  
 Nasso, Sara, 1905  
 Navarro, Pedro, 2056  
 Nielsen, Michael L., 2072, 1914  
 Nightingale, Daniel J. H., 1937  
 Nikolovski, Nino, 1937  
  
 Olsen, Jesper V., 1901, 1905, 1914  
  
 Peeper, Daniel S., 2089  
 Pernas, Lucia Espona, 1905  
 Pichler, Peter, 1905  
 Pinkert, Sandra, 2132  
 Popic, Sasa, 1925  
 Post, Harm, 2042  
  
 Raaijmakers, Linsey M., 2004  
 Raijmakers, Reinout, 1901  
 Ravikumar, Vaishnavi, 1965  
 Rawlinson, William D., 2132  
 Roitinger, Elisabeth, 1993  
 Rolland, Norbert, 2147  
 Rosati, Sara, 2017  
  
 Sabidó, Eduard, 2101  
 Salvi, Daniel, 2147  
 Scheltema, Richard A., 1905  
 Schmeiser, Cathrin, 2132  
  
 Scholten, Arjen, 2004  
 Schulte, Johannes H., 2114  
 Schutzbier, Michael, 1993  
 Seidl, Michael F., 2101  
 Seigneurin-Berny, Daphné, 2147  
 Shi, Lei, 1965  
 Sonntag, Eric, 2132  
 Spano, Daniela, 2114  
 Staes, An, 1905  
 Sticht, Heinrich, 2132  
 Støve, Svein I., 2031  
 Sylvestersen, Kathrine B., 2072  
  
 Taus, Thomas, 1905  
 Tomizioli, Martino, 2147  
 Tomschik, Matthias, 1993  
 Toorn, Henk W. P. van den, 1905  
 Toprak, Umut H., 2056  
  
 Valkenborg, Dirk, 1905  
 Vallur, Raghavan, 2004  
 Valpuesta, José María, 2017  
 van Breukelen, Bas, 2042  
 Vandenbussche, Jonathan, 2114, 1905  
 Vandesompele, Jo, 2114  
 Verrico, Antonio, 2114  
 Vizcaíno, Juan Antonio, 1905  
  
 Wagner, Sabrina, 2132  
 Walzer, Mathias, 1905  
 Weinert, Brian T., 1979  
  
 Zhou, Houjiang, 2089  
 Zollo, Massimo, 2114