

Research

- 2042 **Functional Proteomics Identifies Acinus L as a Direct Insulin- and Amino Acid-Dependent Mammalian Target of Rapamycin Complex 1 (mTORC1) Substrate**
[S] *Jennifer Jasmin Schwarz, Heike Wiese, Regine Charlotte Tölle, Mostafa Zarei, Jörn Dengjel, Bettina Warscheid, and Kathrin Thedieck*
- 2056 **A Systems Approach to Elucidate Heterosis of Protein Abundances in Yeast**
[S] *Mélisande Blein-Nicolas, Warren Albertin, Telma da Silva, Benoît Valot, Thierry Balliau, Isabelle Masneuf-Pomarède, Marina Bely, Philippe Marullo, Delphine Sicard, Christine Dillmann, Dominique de Vienne, and Michel Zivy*
- 2072 **Biochemical Large-Scale Interaction Analysis of Murine Olfactory Receptors and Associated Signaling Proteins with Post-Synaptic Density 95, Drosophila Discs Large, Zona-Occludens 1 (PDZ) Domains**
[S] *Fabian Jansen, Benjamin Kalbe, Paul Scholz, Benjamin Fränzel, Markus Osterloh, Dirk Wolters, Hanns Hatt, Eva Maria Neuhaus, and Sabrina Osterloh*
- 2085 **A Combined Omics Approach to Generate the Surface Atlas of Human Naive CD4⁺ T Cells during Early T-Cell Receptor Activation**
[S] *Anke Graessel, Stefanie M. Hauck, Christine von Toerne, Edda Kloppmann, Tatyana Goldberg, Herwig Koppensteiner, Michael Schindler, Bettina Knapp, Linda Krause, Katharina Dietz, Carsten B. Schmidt-Weber, and Kathrin Suttner*
- 2103 **Tissue-Specific Glycosylation at the Glycopeptide Level**
[S] *Katalin F. Medzihradzsky, Krista Kaasik, and Robert J. Chalkley*
- 2111 **Bisecting Galactose as a Feature of N-Glycans of Wild-type and Mutant *Caenorhabditis elegans***
[S] *Shi Yan, Lothar Brecker, Chunsheng Jin, Alexander Titz, Martin Dragosits, Niclas G. Karlsson, Verena Jantsch, Iain B. H. Wilson, and Katharina Paschinger*
- 2126 **Dynamic Proteome Response of *Pseudomonas aeruginosa* to Tobramycin Antibiotic Treatment**
[S] *Xia Wu, Kiara Held, Chunxiang Zheng, Benjamin J. Staudinger, Juan D. Chavez, Chad R. Weisbrod, Jimmy K. Eng, Pradeep K. Singh, Colin Manoil, and James E. Bruce*
- 2138 **The Human Pathogen *Streptococcus pyogenes* Releases Lipoproteins as Lipoprotein-rich Membrane Vesicles**
[S] *Massimiliano Biagini, Manuela Garibaldi, Susanna Aprea, Alfredo Pezzicoli, Francesco Doro, Marco Becherelli, Anna Rita Taddei, Chiara Tani, Simona Tavarini, Marirosa Mora, Giuseppe Teti, Ugo D'Oro, Sandra Nuti, Marco Soriani, Immaculada Margarit, Rino Rappuoli, Guido Grandi, and Nathalie Norais*

On the cover: Shown are four images from a time lapse movie of HeLa cells expressing Tubulin GFP (green) and Histone H2B mCherry (red). These cells were arrested in metaphase with the proteasome inhibitor MG132, and then treated with the Cdk1 inhibitor RO3306, producing a synchronized, phosphatase dependent form of mitotic exit. For details, see the article by Rachael A. McCloy, *et al.*, pages 2194–2212.

- 2150 **Development of Diagnostic Fragment Ion Library for Glycated Peptides of Human Serum Albumin: Targeted Quantification in Prediabetic, Diabetic, and Microalbuminuria Plasma by Parallel Reaction Monitoring, SWATH, and MS^E**
 Arvind M. Korwar, Garikapati Vannuruswamy, Mashanipalya G. Jagadeeshaprasad, Ramesha H. Jayaramaiah, Shweta Bhat, Bhaskaran S. Regin, Sureshkumar Ramaswamy, Ashok P. Giri, Viswanathan Mohan, Muthuswamy Balasubramanyam, and Mahesh J. Kulkarni
- 2160 **Profiling the Proteome of *Mycobacterium tuberculosis* during Dormancy and Reactivation**
 Vipin Gopinath, Sajith Raghunandan, Roshna Lawrence Gomez, Leny Jose, Arun Surendran, Ranjit Ramachandran, Akhil Raj Pushparajan, Sathish Mundayoor, Abdul Jaleel, and Ramakrishnan Ajay Kumar
- 2177 **Tripeptidyl Peptidase II Mediates Levels of Nuclear Phosphorylated ERK1 and ERK2**
 Anne Wiemhoefer, Anita Stargardt, Wouter A. van der Linden, Maria C. Renner, Ronald E. van Kesteren, Jan Stap, Marcel A. Raspe, Brigitta Tomkinson, Helmut W. Kessels, Huib Ovaa, Herman S. Overkleeft, Bogdan Florea, and Eric A. Reits
- 2194 **Global Phosphoproteomic Mapping of Early Mitotic Exit in Human Cells Identifies Novel Substrate Dephosphorylation Motifs**
 Rachael A. McCloy, Benjamin L. Parker, Samuel Rogers, Rima Chaudhuri, Velimir Gayevskiy, Nolan J. Hoffman, Naveid Ali, D. Neil Watkins, Roger J. Daly, David E. James, Thierry Lorca, Anna Castro, and Andrew Burgess
- 2213 **Proteomic Identification of Cysteine Cathepsin Substrates Shed from the Surface of Cancer Cells**
 Barbara Sobotič, Matej Vizovišek, Robert Vidmar, Petra Van Damme, Vasilena Gocheva, Johanna A. Joyce, Kris Gevaert, Vito Turk, Boris Turk, and Marko Fonović
- 2229 **Proteomic Analysis of Interaction between a Plant Virus and Its Vector Insect Reveals New Functions of Hemipteran Cuticular Protein**
 Wenwen Liu, Stewart Gray, Yan Huo, Li Li, Taiyun Wei, and Xifeng Wang
- 2243 **Quantitative Circadian Phosphoproteomic Analysis of Arabidopsis Reveals Extensive Clock Control of Key Components in Physiological, Metabolic, and Signaling Pathways**
 Mani Kant Choudhary, Yuko Nomura, Lei Wang, Hirofumi Nakagami, and David E. Somers

Technological Innovation and Resources

- 2261 **Peptide Immunoaffinity Enrichment and Targeted Mass Spectrometry Enables Multiplex, Quantitative Pharmacodynamic Studies of Phospho-Signaling**
 Jeffrey R. Whiteaker, Lei Zhao, Ping Yan, Richard G. Ivey, Uliana J. Voytovich, Heather D. Moore, Chenwei Lin, and Amanda G. Paulovich
- 2274 **Unveiling Contacts within Macromolecular Assemblies by Solving Minimum Weight Connectivity Inference (MWC) Problems**
 Deepesh Agarwal, Christelle Caillouet, David Coudert, and Frederic Cazals
- 2285 **Structural Analysis of PTM Hotspots (SAPH-ire) – A Quantitative Informatics Method Enabling the Discovery of Novel Regulatory Elements in Protein Families**
 Henry M. Dewhurst, Shilpa Choudhury, and Matthew P. Torres

Additions & Corrections

- 2298 **N-linked (N-) Glycoproteomics of Urinary Exosomes**
 Mayank Saraswat, Sakari Joenväära, Luca Musante, Hannu Peltoniemi, Harry Holthofer, and Risto Renkonen
- 2299 **Antibody Profiling of Bipolar Disorder Using *Escherichia coli* Proteome Microarrays**
 Po-Chung Chen, Guan-Da Syu, Kuo-Hsuan Chung, Yu-Hsuan Ho, Feng-Hsiang Chung, Pao-Huan Chen, Jyun-Mu Lin, Yi-Wen Chen, Shang-Ying Tsai, and Chien-Sheng Chen

AUTHOR INDEX

- Agarwal, Deepesh, 2274
Albertin, Warren, 2056
Ali, Naveid, 2194
Aprea, Susanna, 2138
- Balasubramanyam, Muthuswamy, 2150
Balliau, Thierry, 2056
Becherelli, Marco, 2138
Bely, Marina, 2056
Bhat, Shweta, 2150
Biagini, Massimiliano, 2138
Blein-Nicolas, Mélisande, 2056
Breckler, Lothar, 2111
Bruce, James E., 2126
Burgess, Andrew, 2194
- Caillouet, Christelle, 2274
Castro, Anna, 2194
Cazals, Frederic, 2274
Chalkley, Robert J., 2103
Chaudhuri, Rima, 2194
Chavez, Juan D., 2126
Chen, Chien-Sheng, 2299
Chen, Pao-Huan, 2299
Chen, Po-Chung, 2299
Chen, Yi-Wen, 2299
Choudhary, Mani Kant, 2243
Choudhury, Shilpa, 2285
Chung, Feng-Hsiang, 2299
Chung, Kuo-Hsuan, 2299
Coudert, David, 2274
- Daly, Roger J., 2194
Dengjel, Jörn, 2042
de Vienne, Dominique, 2056
Dewhurst, Henry M., 2285
Dietz, Katharina, 2085
Dillmann, Christine, 2056
Doro, Francesco, 2138
D'Oro, Ugo, 2138
Dragosits, Martin, 2111
- Eng, Jimmy K., 2126
- Florea, Bogdan, 2177
Fonović, Marko, 2213
Fränzel, Benjamin, 2072
- Garibaldi, Manuela, 2138
Gayevskiy, Velimir, 2194
Gevaert, Kris, 2213
Giri, Ashok P., 2150
Gocheva, Vasilena, 2213
Goldberg, Tatyana, 2085
Gopinath, Vipin, 2160
- Graessel, Anke, 2085
Grandi, Guido, 2138
Gray, Stewart, 2229
- Hatt, Hanns, 2072
Hauck, Stefanie M., 2085
Held, Kiara, 2126
Ho, Yu-Hsuan, 2299
Hoffman, Nolan J., 2194
Holthofer, Harry, 2298
Huo, Yan, 2229
- Jagadeeshaprasad, Mashanipalya G., 2150
Jaleel, Abdul, 2160
James, David E., 2194
Jansen, Fabian, 2072
Jantsch, Verena, 2111
Jasmin Schwarz, Jennifer, 2042
Jayaramaiah, Ramesha H., 2150
Jin, Chunsheng, 2111
Joenväära, Sakari, 2298
Jose, Leny, 2160
Joyce, Johanna A., 2213
- Kaasik, Krista, 2103
Kalbe, Benjamin, 2072
Karlsson, Niclas G., 2111
Kessels, Helmut W., 2177
Kloppmann, Edda, 2085
Knapp, Bettina, 2085
Koppensteiner, Herwig, 2085
Korwar, Arvind M., 2150
Krause, Linda, 2085
Kulkarni, Mahesh J., 2150
Kumar, Ramakrishnan Ajay, 2160
- Lawrence Gomez, Roshna, 2160
Li, Li, 2229
Lin, Jyun-Mu, 2299
Liu, Wenwen, 2229
Lorca, Thierry, 2194
- Manoil, Colin, 2126
Margarit, Immaculada, 2138
Marullo, Philippe, 2056
Masneuf-Pomarède, Isabelle, 2056
McCloy, Rachael A., 2194
Medzihradzky, Katalin F., 2103
Mohan, Viswanathan, 2150
Mora, Marirosa, 2138
Mundayoor, Sathish, 2160
Musante, Luca, 2298
- Nakagami, Hirofumi, 2243
Neil Watkins, D., 2194

Neuhaus, Eva Maria, 2072
 Nomura, Yuko, 2243
 Norais, Nathalie, 2138
 Nuti, Sandra, 2138

 Osterloh, Markus, 2072
 Osterloh, Sabrina, 2072
 Ovaa, Huib, 2177
 Overkleeft, Herman S., 2177

 Parker, Benjamin L., 2194
 Paschinger, Katharina, 2111
 Peltoniemi, Hannu, 2298
 Pezzicoli, Alfredo, 2138
 Pushparajan, Akhil Raj, 2160

 Raghunandanan, Sajith, 2160
 Ramachandran, Ranjit, 2160
 Ramaswamy, Sureshkumar, 2150
 Rappuoli, Rino, 2138
 Raspe, Marcel A., 2177
 Regin, Bhaskaran S., 2150
 Reits, Eric A., 2177
 Renkonen, Risto, 2298
 Renner, Maria C., 2177
 Rogers, Samuel, 2194

 Saraswat, Mayank, 2298
 Schindler, Michael, 2085
 Schmidt-Weber, Carsten B., 2085
 Scholz, Paul, 2072
 Sicard, Delphine, 2056
 Silva, Telma da, 2056
 Singh, Pradeep K., 2126
 Sobotič, Barbara, 2213
 Somers, David E., 2243
 Soriani, Marco, 2138
 Stap, Jan, 2177
 Stargardt, Anita, 2177
 Staudinger, Benjamin J., 2126
 Surendran, Arun, 2160

 Suttner, Kathrin, 2085
 Syu, Guan-Da, 2299

 Taddei, Anna Rita, 2138
 Tani, Chiara, 2138
 Tavarini, Simona, 2138
 Teti, Giuseppe, 2138
 Thedieck, Kathrin, 2042
 Titz, Alexander, 2111
 Tölle, Regine Charlotte, 2042
 Tomkinson, Brigitta, 2177
 Torres, Matthew P., 2285
 Tsai, Shang-Ying, 2299
 Turk, Boris, 2213
 Turk, Vito, 2213

 Valot, Benoît, 2056
 Van Damme, Petra, 2213
 van der Linden, Wouter A., 2177
 van Kesteren, Ronald E., 2177
 Vannuruswamy, Garikapati, 2150
 Vidmar, Robert, 2213
 Vizovišek, Matej, 2213
 von Toerne, Christine, 2085

 Wang, Lei, 2243
 Wang, Xifeng, 2229
 Warscheid, Bettina, 2042
 Wei, Taiyun, 2229
 Weisbrod, Chad R., 2126
 Wiemhoefer, Anne, 2177
 Wiese, Heike, 2042
 Wilson, Iain B. H., 2111
 Wolters, Dirk, 2072
 Wu, Xia, 2126

 Yan, Shi, 2111

 Zarei, Mostafa, 2042
 Zheng, Chunxiang, 2126
 Zivy, Michel, 2056