

Report

- 1625 **Realizing the Promise of Reverse Phase Protein Arrays for Clinical, Translational, and Basic Research: A Workshop Report**
The RPPA (Reverse Phase Protein Array) Society
Rehan Akbani, Karl-Friedrich Becker, Neil Carragher, Ted Goldstein, Leanne de Koning, Ulrike Korf, Lance Liotta, Gordon B. Mills, Satoshi S. Nishizuka, Michael Pawlak, Emanuel F. Petricoin III, Harvey B. Pollard, Bryan Serrels, and Jingchun Zhu

Research

- 1644 **Proteomic Analysis of the Epidermal Growth Factor Receptor (EGFR) Interactome and Post-translational Modifications Associated with Receptor Endocytosis in Response to EGF and Stress**
[S] *Jiefei Tong, Paul Taylor, and Michael F. Moran*
- 1659 **Identification of Small Ubiquitin-like Modifier Substrates with Diverse Functions Using the *Xenopus* Egg Extract System**
[S] *Li Ma, Aaron Aslanian, Huaiyu Sun, Mingji Jin, Yu Shi, John R. Yates III, and Tony Hunter*
- 1676 **The Intraviral Protein Interaction Network of Hepatitis C Virus**
[S] *Nicole Hagen, Karen Bayer, Kathrin Rösch, and Michael Schindler*
- 1690 **Ischemia in Tumors Induces Early and Sustained Phosphorylation Changes in Stress Kinase Pathways but Does Not Affect Global Protein Levels**
[S] *Philipp Mertins, Feng Yang, Tao Liu, D. R. Mani, Vladislav A. Petyuk, Michael A. Gillette, Karl R. Clauser, Jana W. Qiao, Marina A. Gritsenko, Ronald J. Moore, Douglas A. Levine, Reid Townsend, Petra Erdmann-Gilmore, Jacqueline E. Snider, Sherri R. Davies, Kelly V. Ruggles, David Fenyo, R. Thomas Kitchens, Shunqiang Li, Narciso Olvera, Fanny Dao, Henry Rodriguez, Daniel W. Chan, Daniel Liebler, Forest White, Karin D. Rodland, Gordon B. Mills, Richard D. Smith, Amanda G. Paulovich, Matthew Ellis, and Steven A. Carr*
- 1705 **Enhanced Prediction of Src Homology 2 (SH2) Domain Binding Potentials Using a Fluorescence Polarization-derived c-Met, c-Kit, ErbB, and Androgen Receptor Interactome**
[S] ✂ *Kin K. Leung, Ronald J. Hause, Jr., John L. Barkinge, Mark F. Ciaccio, Chih-Pin Chuu, and Richard B. Jones*
- 1724 **Modulation of the Chromatin Phosphoproteome by the Haspin Protein Kinase**
[S] *Alessio Maiolica, Maria de Medina-Redondo, Erwin M. Schoof, Apirat Chaikuad, Fabrizio Villa, Marco Gatti, Siva Jegannathan, Hua Jane Lou, Karel Novy, Simon Hauri, Umut H. Toprak, Franz Herzog, Patrick Meraldi, Lorenza Penengo, Benjamin E. Turk, Stefan Knapp, Rune Linding, and Ruedi Aebersold*

On the cover: **Top:** Taming the Eye of the beast. Melanoma cells were treated and stained with acridine orange to reveal heterogeneity in response. **Middle:** LC-MRM was performed using HSP90 client proteins as markers of response after treatment. Proteins that increased in expression are shown red and proteins that decreased in expression from treatment are shown green to reveal adaptive resistance mechanisms. **Bottom:** Information from LC-MRM was interpreted to design more effective combinatorial treatment strategies, which were validated in 3D organotypic culture. For details, see the article by Vito W. Rebecca *et al.*, pages 1844–1854.

- 1741 **Proteomic Analysis of Altered Extracellular Matrix Turnover in Bleomycin-induced Pulmonary Fibrosis**
 [S] ✎
Martin L. Decaris, Michelle Gatmaitan, Simplicia FlorCruz, Flora Luo, Kelvin Li, William E. Holmes, Marc K. Hellerstein, Scott M. Turner, and Claire L. Emson
- 1753 **Glycoproteomic Analysis of Prostate Cancer Tissues by SWATH Mass Spectrometry Discovers N-acylethanolamine Acid Amidase and Protein Tyrosine Kinase 7 as Signatures for Tumor Aggressiveness**
 [S] ✎
Yansheng Liu, Jing Chen, Atul Sethi, Qing K. Li, Lijun Chen, Ben Collins, Ludovic C. J. Gillet, Bernd Wollscheid, Hui Zhang, and Ruedi Aebersold
- 1769 **Proteomic Analysis of Intact Flagella of Procyclic *Trypanosoma brucei* Cells Identifies Novel Flagellar Proteins with Unique Sub-localization and Dynamics**
 [S]
Ines Subota, Daria Julkowska, Laetitia Vincensini, Nele Reeg, Johanna Buisson, Thierry Blisnick, Diego Huet, Sylvie Perrot, Julien Santi-Rocca, Magalie Duchateau, Véronique Hourdel, Jean-Claude Rousselle, Nadège Cayet, Abdelkader Namane, Julia Chamot-Rooke, and Philippe Bastin
- 1787 **Regulation Dynamics of *Leishmania* Differentiation: Deconvoluting Signals and Identifying Phosphorylation Trends**
 [S]
Polina Tsigankov, Pier Federico Gherardini, Manuela Helmer-Citterich, Gerald F. Späth, Peter J. Myler, and Dan Zilberstein
- 1800 **Stable Isotope Labeling with Amino Acids in Cell Culture (SILAC)-Based Strategy for Proteome-Wide Thermodynamic Analysis of Protein-Ligand Binding Interactions**
 [S]
Duc T. Tran, Jagat Adhikari, and Michael C. Fitzgerald
- 1814 **Ferritin Heavy Chain in Triple Negative Breast Cancer: A Favorable Prognostic Marker that Relates to a Cluster of Differentiation 8 Positive (CD8+) Effector T-cell Response**
 [S] ✎
Ning Qing Liu, Tommaso De Marchi, Annemieke M. Timmermans, Robin Beekhof, Anita M.A.C. Trapman-Jansen, Renée Foekens, Maxime P. Look, Carolien H. M. van Deurzen, Paul N. Span, Fred C.G.J. Sweep, Julie Benedicte Brask, Vera Timmermans-Wielenga, Reno Debets, John W. M. Martens, John A. Foekens, and Arzu Umar
- 1828 **The Membrane Proteome of Sensory Cilia to the Depth of Olfactory Receptors**
 [S]
Katja Kuhlmann, Astrid Tschapek, Heike Wiese, Martin Eisenacher, Helmut E. Meyer, Hanns H. Hatt, Silke Oeljeklaus, and Bettina Warscheid
- 1844 **Evaluating Melanoma Drug Response and Therapeutic Escape with Quantitative Proteomics**
 [S]
Vito W. Rebecca, Elizabeth Wood, Inna V. Fedorenko, Kim H. T. Paraiso, H. Eirik Haarberg, Yi Chen, Yun Xiang, Amod Sarnaik, Geoffrey T. Gibney, Vernon K. Sondak, John M. Koomen, and Keiran S. M. Smalley

Technological Innovation and Resources

- 1855 **Large Scale Analysis of Co-existing Post-translational Modifications in Histone Tails Reveals Global Fine Structure of Cross-talk**
 [S]
Veit Schwämmle, Claudia-Maria Aspalter, Simone Sidoli, and Ole N. Jensen
- 1866 **Cell-specific Labeling Enzymes for Analysis of Cell-Cell Communication in Continuous Co-culture**
 [S]
Christopher J. Tape, Ida C. Norrie, Jonathan D. Worboys, Lindsay Lim, Douglas A. Lauffenburger, and Claus Jørgensen
- 1877 **Functional Module Search in Protein Networks based on Semantic Similarity Improves the Analysis of Proteomics Data**
 [S]
Desislava Boyanova, Santosh Nilla, Gunnar W. Klau, Thomas Dandekar, Tobias Müller, and Marcus Dittrich

1890



Elevated Plasma Albumin and Apolipoprotein A-I Oxidation under Suboptimal Specimen Storage Conditions

Chad R. Borges, Douglas S. Rehder, Sally Jensen, Matthew R. Schaab, Nisha D. Sherma, Hussein Yassine, Boriana Nikolova, and Christian Breburda

Additions & Corrections

1900

High resolution quantitative proteomics of HeLa cells protein species using stable isotope labeling with amino acids in cell culture (SILAC), two-dimensional gel electrophoresis (2DE) and nano-liquid chromatography coupled to an LTQ-Orbitrap mass spectrometer

Bernd Thiede, Christian J. Koehler, Margarita Strozynski, Achim Treumann, Robert Stein, Ursula Zimny-Arndt, Monika Schmid, and Peter R. Jungblut

AUTHOR INDEX

- Adhikari, Jagat, 1800
Aebersold, Ruedi, 1724, 1753
Akbari, Rehan, 1625
Aslanian, Aaron, 1659
Aspalter, Claudia-Maria, 1855
- Barkinge, John L., 1705
Bastin, Philippe, 1769
Bayer, Karen, 1676
Becker, Karl-Friedrich, 1625
Beekhof, Robin, 1814
Benedicte Brask, Julie, 1814
Blisnick, Thierry, 1769
Borges, Chad R., 1890
Boyanova, Desislava, 1877
Breburda, Christian, 1890
Buisson, Johanna, 1769
- Carr, Steven A., 1690
Carragher, Neil, 1625
Cayet, Nadège, 1769
Chaikuad, Apirat, 1724
Chamot-Rooke, Julia, 1769
Chan, Daniel W., 1690
Chen, Jing, 1753
Chen, Lijun, 1753
Chen, Yi, 1844
Chuu, Chih-Pin, 1705
Ciaccio, Mark F., 1705
Clauser, Karl R., 1690
Collins, Ben, 1753
- Dandekar, Thomas, 1877
Dao, Fanny, 1690
Davies, Sherri R., 1690
de Koning, Leanne, 1625
De Marchi, Tommaso, 1814
de Medina-Redondo, Maria, 1724
Debets, Reno, 1814
Decaris, Martin L., 1741
Dittrich, Marcus, 1877
Duchateau, Magalie, 1769
- Eisenacher, Martin, 1828
Ellis, Matthew, 1690
Emson, Claire L., 1741
Erdmann-Gilmore, Petra, 1690
- Fedorenko, Inna V., 1844
Fenyo, David, 1690
Fitzgerald, Michael C., 1800
FlorCruz, Simplicia, 1741
Foekens, John A., 1814
Foekens, Renée, 1814
- Gatmaitan, Michelle, 1741
Gatti, Marco, 1724
Gherardini, Pier Federico, 1787
Gibney, Geoffrey T., 1844
Gillet, Ludovic C. J., 1753
Gillette, Michael A., 1690
Goldstein, Ted, 1625
Gritsenko, Marina A., 1690
- Haarberg, H. Eirik, 1844
Hagen, Nicole, 1676
Hatt, Hanns H., 1828
Hauri, Simon, 1724
Hause, Jr., Ronald J., 1705
Hellerstein, Marc K., 1741
Helmer-Citterich, Manuela, 1787
Herzog, Franz, 1724
Holmes, William E., 1741
Hourdel, Véronique, 1769
Huet, Diego, 1769
Hunter, Tony, 1659
- Jeganathan, Siva, 1724
Jensen, Ole N., 1855
Jensen, Sally, 1890
Jin, Mingji, 1659
Jones, Richard B., 1705
Jørgensen, Claus, 1866
Julkowska, Daria, 1769
Jungblut, Peter R., 1900
- Kitchens, R. Thomas, 1690
Klau, Gunnar W., 1877
Knapp, Stefan, 1724
Koehler, Christian J., 1900
Koomen, John M., 1844
Korf, Ulrike, 1625
Kuhlmann, Katja, 1828
- Lauffenburger, Douglas A., 1866
Leung, Kin K., 1705
Levine, Douglas A., 1690
Li, Kelvin, 1741
Li, Qing K., 1753
Li, Shunqiang, 1690
Liebler, Daniel, 1690
Lim, Lindsay, 1866
Linding, Rune, 1724
Liotta, Lance, 1625
Liu, Tao, 1690
Liu, Yansheng, 1753
Look, Maxime P., 1814
Lou, Hua Jane, 1724
Luo, Flora, 1741

Ma, Li, 1659
 Maiolica, Alessio, 1724
 Mani, D. R., 1690
 Martens, John W.M., 1814
 Meraldi, Patrick, 1724
 Mertins, Philipp, 1690
 Meyer, Helmut E., 1828
 Mills, Gordon B., 1625, 1690
 Moore, Ronald J., 1690
 Moran, Michael F., 1644
 Müller, Tobias, 1877
 Myler, Peter J., 1787

 Namane, Abdelkader, 1769
 Nikolova, Boriana, 1890
 Nilla, Santosh, 1877
 Nishizuka, Satoshi S., 1625
 Norrie, Ida C., 1866
 Novy, Karel, 1724

 Oeljeklaus, Silke, 1828
 Olvera, Narciso, 1690

 Paraiso, Kim H. T., 1844
 Paulovich, Amanda G., 1690
 Pawlak, Michael, 1625
 Penengo, Lorenza, 1724
 Perrot, Sylvie, 1769
 Petricoin, Emanuel F., III, 1625
 Petyuk, Vladislav A., 1690
 Pollard, Harvey B., 1625

 Qiao, Jana W., 1690
 Qing Liu, Ning, 1814

 Rebecca, Vito W., 1844
 Reeg, Nele, 1769
 Rehder, Douglas S., 1890
 Rodland, Karin D., 1690
 Rodriguez, Henry, 1690
 Rösch, Kathrin, 1676
 Rousselle, Jean-Claude, 1769
 Ruggles, Kelly V., 1690

 Santi-Rocca, Julien, 1769
 Sarnaik, Amod, 1844
 Schaab, Matthew R., 1890
 Schindler, Michael, 1676
 Schmid, Monika, 1900
 Schoof, Erwin M., 1724
 Schwämmle, Veit, 1855
 Serrels, Bryan, 1625
 Sethi, Atul, 1753

 Sherma, Nisha D., 1890
 Shi, Yu, 1659
 Sidoli, Simone, 1855
 Smalley, Keiran S. M., 1844
 Smith, Richard D., 1690
 Snider, Jacqueline E., 1690
 Sondak, Vernon K., 1844
 Span, Paul N., 1814
 Späth, Gerald F., 1787
 Stein, Robert, 1900
 Strozynski, Margarita, 1900
 Subota, Ines, 1769
 Sun, Huaiyu, 1659
 Sweep, Fred C.G.J., 1814

 Tape, Christopher J., 1866
 Taylor, Paul, 1644
 Thiede, Bernd, 1900
 Timmermans, Annemieke M., 1814
 Timmermans-Wielenga, Vera, 1814
 Tong, Jiefei, 1644
 Toprak, Umut H., 1724
 Townsend, Reid, 1690
 Tran, Duc T., 1800
 Trapman-Jansen, Anita M.A.C., 1814
 Treumann, Achim, 1900
 Tschapek, Astrid, 1828
 Tsigankov, Polina, 1787
 Turk, Benjamin E., 1724
 Turner, Scott M., 1741

 Umar, Arzu, 1814

 van Deurzen, Carolien H.M., 1814
 Villa, Fabrizio, 1724
 Vincensini, Laetitia, 1769

 Warscheid, Bettina, 1828
 White, Forest, 1690
 Wiese, Heike, 1828
 Wollscheid, Bernd, 1753
 Wood, Elizabeth, 1844
 Worboys, Jonathan D., 1866

 Xiang, Yun, 1844

 Yang, Feng, 1690
 Yassine, Hussein, 1890
 Yates, John R., III, 1659

 Zhang, Hui, 1753
 Zhu, Jingchun, 1625
 Zilberstein, Dan, 1787
 Zimny-Arndt, Ursula, 1900