

## Mini Review

- 2048 **Proteomics Identifies Golgi phosphoprotein 3 (GOLPH3) with A Link Between Golgi Structure, Cancer, DNA Damage and Protection from Cell Death**  
*John J. M. Bergeron, Catherine E. Au, David Y. Thomas, and Louis Hermo*

## Research

- 2055 **Multiplexed Temporal Quantification of the Exercise-regulated Plasma Peptidome**  
[S] *Benjamin L. Parker, James G. Burchfield, Daniel Clayton, Thomas A. Geddes, Richard J. Payne, Bente Kiens, Jørgen F. P. Wojtaszewski, Erik A. Richter, and David E. James*
- 2069 **Identification of Serological Biomarkers for Early Diagnosis of Lung Cancer Using a Protein Array-Based Approach**  
[S] ✎ *Jianbo Pan, Guang Song, Dunyan Chen, Yadong Li, Shuang Liu, Shaohui Hu, Christian Rosa, Daniel Eichinger, Ignacio Pino, Heng Zhu, Jiang Qian, and Yi Huang*
- 2079 **Identifying Host Factors Associated with DNA Replicated During Virus Infection**  
[S] *Emigdio D. Reyes, Katarzyna Kulej, Neha J. Pancholi, Lisa N. Akhtar, Daphne C. Avgousti, Eui Tae Kim, Daniel K. Bricker, Lynn A. Spruce, Sarah A. Koniski, Steven H. Seeholzer, Stuart N. Isaacs, Benjamin A. Garcia, and Matthew D. Weitzman*
- 2098 **Unique Interactome Network Signatures for Peroxisome Proliferator-activated Receptor Gamma (PPAR $\gamma$ ) Modulation by Functional Selective Ligands**  
[S] *Vinh Q. Lam, Jie Zheng, and Patrick R. Griffin*
- 2111 **The Antibody Repertoire of Colorectal Cancer**  
[S] *Seong Won Cha, Stefano Bonissone, Seungjin Na, Pavel A. Pevzner, and Vineet Bafna*
- 2125 **A *Varroa destructor* protein atlas reveals molecular underpinnings of developmental transitions and sexual differentiation**  
[S] ✎ *Alison McAfee, Queenie W. T. Chan, Jay Evans, and Leonard J. Foster*
- 2138 **Calcineurin-mediated Dephosphorylation of Acetyl-coA Carboxylase is Required for Pheromone Biosynthesis Activating Neuropeptide (PBAN)-induced Sex Pheromone Biosynthesis in *Helicoverpa armigera***  
[S] *Mengfang Du, Xiaoguang Liu, Nana Ma, Xiaoming Liu, Jizheng Wei, Xinming Yin, Shutang Zhou, Ada Rafaeli, Qisheng Song, and Shiheng An*
- 2153 **Proteomic Signature Reveals Modulation of Human Macrophage Polarization and Functions Under Differing Environmental Oxygen Conditions**  
[S] *Magali Court, Graciane Petre, Michèle EL Atifi, and Arnaud Millet*

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On the cover: QconCATs are designer proteins, normally expressed in bacteria, that are concatenations of peptides as standards for absolute quantification. This paper demonstrates that QconCATs can also be made in a wheat germ cell free synthesis at a higher success rate than obtained by expression *in vivo*. Synthesis *in vitro* also allows multiplexed synthesis of multiple QconCATs and reduces proteolytic damage. The method is named 'MEERCAT' (Multiplexed Efficient cell free Expression of Recombinant QconCATs for large scale absolute proteome quantification). For details see the article by Nobuaki Takemori, *et al*, pages 2169–2183.

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- 2169 **MEERCAT: Multiplexed Efficient Cell Free Expression of Recombinant QconCATs For Large Scale Absolute Proteome Quantification**  
 [S] ✎  
*Nobuaki Takemori, Ayako Takemori, Yuki Tanaka, Yaeta Endo, Jane L. Hurst, Guadalupe Gómez-Baena, Victoria M. Harman, and Robert J. Beynon*
- 2184 **Quantitative Analysis of Proteome Modulations in Alveolar Epithelial Type II Cells in Response to Pulmonary *Aspergillus fumigatus* Infection**  
 [S]  
*Pegah Seddigh, Thilo Bracht, Valérie Molinier-Frenkel, Flavia Castellano, Olaf Kniemeyer, Marc Schuster, Juliane Weski, Anja Hasenberg, Andreas Kraus, Gernot Poschet, Thomas Hager, Dirk Theegarten, Christiane A. Opitz, Axel A. Brakhage, Barbara Sitek, Mike Hasenberg, and Matthias Gunzer*
- 2199 **Capturing the Asc1p/Receptor for Activated C Kinase 1 (RACK1) Microenvironment at the Head Region of the 40S Ribosome with Quantitative BioID in Yeast**  
 [S]  
*Nadine Opitz, Kerstin Schmitt, Verena Hofer-Pretz, Bettina Neumann, Heike Krebber, Gerhard H. Braus, and Oliver Valerius*
- 2219 **Identification of a Novel *Salmonella* Type III Effector by Quantitative Secretome Profiling**  
 [S]  
*Sen Cheng, Lu Wang, Qian Liu, Linlu Qi, Kaiwen Yu, Zhen Wang, Mei Wu, Yanhua Liu, Jiaqi Fu, Mo Hu, Min Li, Daoguo Zhou, and Xiaoyun Liu*
- 2229 **METTL21B Is a Novel Human Lysine Methyltransferase of Translation Elongation Factor 1A: Discovery by CRISPR/Cas9 Knockout**  
 [S]  
*Joshua J. Hamey, Beeke Wienert, Kate G. R. Quinlan, and Marc R. Wilkins*
- 2243 **Systematic Identification of *Mycobacterium tuberculosis* Effectors Reveals that BfrB Suppresses Innate Immunity**  
 [S]  
*Xiang He, He-wei Jiang, Hong Chen, Hai-nan Zhang, Yin Liu, Zhao-wei Xu, Fan-lin Wu, Shu-juan Guo, Jing-li Hou, Ming-kun Yang, Wei Yan, Jiao-yu Deng, Li-jun Bi, Xian-en Zhang, and Sheng-ce Tao*

## Technological Innovation and Resources

- 2254 **Prediction of Protein Complexes in *Trypanosoma brucei* by Protein Correlation Profiling Mass Spectrometry and Machine Learning**  
 [S] ✎  
*Thomas W. M. Crozier, Michele Tinti, Mark Larance, Angus I. Lamond, and Michael A. J. Ferguson*
- 2268 **Advancing a High Throughput Glycotope-centric Glycomics Workflow Based on nanoLC-MS<sup>2</sup>-product Dependent-MS<sup>3</sup> Analysis of Permethylated Glycans**  
 [S]  
*Cheng-Te Hsiao, Po-Wei Wang, Hua-Chien Chang, Yen-Ying Chen, Shui-Hua Wang, Yijuang Chen, and Kay-Hooi Khoo*
- 2281 **Converging Small Ubiquitin-like Modifier (SUMO) and Ubiquitin Signaling: Improved Methodology Identifies Co-modified Target Proteins**  
 [S] ✎  
*Sabine A. G. Cuijpers, Edwin Willemstein, and Alfred C. O. Vertegaal*
- 2296 **Optimization of Experimental Parameters in Data-Independent Mass Spectrometry Significantly Increases Depth and Reproducibility of Results**  
 [S] ✎  
*Roland Bruderer, Oliver M. Bernhardt, Tejas Gandhi, Yue Xuan, Julia Sondermann, Manuela Schmidt, David Gomez-Varela, and Lukas Reiter*

## AUTHOR INDEX

- An, Shiheng, 2139  
Akhtar, Lisa N., 2079  
Atifi, Michèle EL, 2153  
Au, Catherine E., 2048  
Avgousti, Daphne C., 2079
- Bafna, Vineet, 2111  
Bergeron, John J. M., 2048  
Bernhardt, Oliver M., 2296  
Beynon, Robert J., 2169  
Bi, Li-jun, 2243  
Bonissone, Stefano, 2111  
Bracht, Thilo, 2184  
Brakhage, Axel A., 2184  
Braus, Gerhard H., 2199  
Bricker, Daniel K., 2079  
Bruderer, Roland, 2296  
Burchfield, James G., 2055
- Castellano, Flavia, 2184  
Chan, Queenie W. T., 2125  
Chang, Hua-Chien, 2268  
Chen, Dunyan, 2069  
Chen, Hong, 2243  
Chen, Yen-Ying, 2268  
Cheng, Sen, 2219  
Chern, Yijuang, 2268  
Clayton, Daniel, 2055  
Court, Magali, 2153  
Crozier, Thomas W. M., 2254  
Cuijpers, Sabine A. G., 2281
- Deng, Jiao-yu, 2243  
Du, Mengfang, 2138
- Eichinger, Daniel, 2069  
Endo, Yaeta, 2169  
Evans, Jay, 2125
- Ferguson, Michael A. J., 2254  
Fu, Jiaqi, 2219  
Foster, Leonard J., 2125
- Gandhi, Tejas, 2296  
Garcia, Benjamin A., 2079  
Geddes, Thomas A., 2055  
Gomez-Varela, David, 2296  
Gómez-Baena, Guadalupe, 2169  
Griffin, Patrick R., 2098  
Gunzer, Matthias, 2184  
Guo, Shu-juan, 2243
- Hager, Thomas, 2184  
Hamey, Joshua J., 2229  
Harman, Victoria M., 2169
- Hasenberg, Anja, 2184  
Hasenberg, Mike, 2184  
He, Xiang, 2243  
Hermo, Louis, 2048  
Hofer-Pretz, Verena, 2199  
Hou, Jing-li, 2243  
Hsiao, Cheng-Te, 2268  
Huang, Yi, 2069  
Hurst, Jane L., 2169  
Hu, Mo, 2219  
Hu, Shaohui, 2069
- Isaacs, Stuart N., 2079
- James, David E., 2055  
Jiang, He-wei, 2243
- Khoo, Kay-Hooi, 2268  
Kiens, Bente, 2055  
Kniemeyer, Olaf, 2184  
Koniski, Sarah A., 2079  
Kraus, Andreas, 2184  
Krebber, Heike, 2199  
Kulej, Katarzyna, 2079
- Lam, Vinh Q., 2098  
Lamond, Angus I., 2254  
Larance, Mark, 2254  
Li, Min, 2219  
Li, Yadong, 2069  
Liu, Qian, 2219  
Liu, Shuang, 2069  
Liu, Xiaoguang, 2138  
Liu, Xiaoming, 2138  
Liu, Xiaoyun, 2219  
Liu, Yanhua, 2219  
Liu, Yin, 2243
- Ma, Nana, 2138  
McAfee, Alison, 2125  
Millet, Arnaud, 2153  
Molinier-Frenkel, Valérie, 2184
- Na, Seungjin, 2111  
Neumann, Bettina, 2199
- Opitz, Christiane A., 2184  
Opitz, Nadine, 2199
- Pan, Jianbo, 2069  
Pancholi, Neha J., 2079  
Parker, Benjamin L., 2055  
Payne, Richard J., 2055  
Petre, Graciane, 2153  
Pevzner, Pavel A., 2111

Pino, Ignacio, 2069  
 Poschet, Gernot, 2184

Qi, Linlu, 2219  
 Qian, Jiang, 2069  
 Quinlan, Kate G. R., 2229

Rafaeli, Ada, 2138  
 Reiter, Lukas, 2296  
 Reyes, Emigdio D., 2079  
 Richter, Erik A., 2055  
 Rosa, Christian, 2069

Schmidt, Manuela, 2296  
 Schmitt, Kerstin, 2199  
 Schuster, Marc, 2184  
 Seddigh, Pegah, 2184  
 Seeholzer, Steven H., 2079  
 Sitek, Barbara, 2184  
 Sondermann, Julia, 2296  
 Song, Guang, 2069  
 Song, Qisheng, 2139  
 Spruce, Lynn A., 2079

Tae Kim, Eui, 2079  
 Takemori, Ayako, 2169  
 Takemori, Nobuaki, 2169  
 Tanaka, Yuki, 2169  
 Tao, Sheng-ce, 2243  
 Theegarten, Dirk, 2184  
 Thomas, David Y., 2048  
 Tinti, Michele, 2254

Valerius, Oliver, 2199  
 Vertegaal, Alfred C. O., 2281

Wang, Lu, 2219  
 Wang, Po-Wei, 2268  
 Wang, Shui-Hua, 2268  
 Wang, Zhen, 2219  
 Wei, Jizheng, 2138  
 Weitzman, Matthew D., 2029  
 Weski, Juliane, 2184  
 Wienert, Beeke, 2229  
 Willemstein, Edwin, 2281  
 Wilkins, Marc R., 2229  
 Wojtaszewski, Jørgen F. P., 2055  
 Won Cha, Seong, 2111  
 Wu, Fan-lin, 2243  
 Wu, Mei, 2219

Xu, Zhao-wei, 2243  
 Xuan, Yue, 2296

Yan, Wei, 2243  
 Yang, Ming-kun, 2243  
 Yin, Xinming, 2138  
 Yu, Kaiwen, 2219

Zhang, Hai-nan, 2243  
 Zhang, Xian-en, 2243  
 Zheng, Jie, 2098  
 Zhou, Daoguo, 2219  
 Zhou, Shutang, 2138  
 Zhu, Heng, 2069