Meta-analysis in basic biology

THE AUTHOR FILE: Alipasha Vaziri

Temporal accumulation analysis provides simplified artifact-free analysis of membrane-protein nanoclusters
Christoph Spahn, Frank Herrmannsdörfer, Thomas Kuner & Mike Heilemann

moFF: a robust and automated approach to extract peptide ion intensities

OmniPath: guidelines and gateway for literature-curated signaling pathway resources
Dénes Türei, Tamás Korcsmáros & Julio Saez-Rodriguez

A blood less primitive

Single-molecule force analysis, unplugged

REXER helps design bacterial genomes

Proteome quantification compared

METHODS IN BRIEF

TOOLS IN BRIEF

A pluripotent approach

Extending super-resolution’s FOV

Microscopy: OpenSPIM 2.0

CRISPR-Cas9-AID base editor is a powerful gain-of-function screening tool
Cem Kuscu & Mazhar Adli

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BRIEF COMMUNICATIONS

985 Bright photoactivatable fluorophores for single-molecule imaging

989 Simultaneous dual-color fluorescence lifetime imaging with novel red-shifted fluorescent proteins
Tal Laviv, Benjamin B Kim, Jun Chu, Amy J Lam, Michael Z Lin & Ryohei Yasuda

993 Fluorescent indicators for simultaneous reporting of all four cell cycle phases
Bryce T Bajar, Amy J Lam, Ryan K Badiee, Young-Hee Oh, Jun Chu, Xin X Zhou, Namdo Kim, Benjamin B Kim, Mingyu Chung, Arielle L Yablonovitch, Barney F Cruz, Kanokwan Kalatert, Jacqueline J Tao, Tobias Meyer, Xiao-Dong Su & Michael Z Lin

997 Genetic code expansion for multiprotein complex engineering
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1001 Random-access scanning microscopy for 3D imaging in awake behaving animals

1005 Comparison of high-throughput sequencing data compression tools
Ibrahim Numanagić, James K Bonfield, Faraz Hach, Jan Voges, Jörn Ostermann, Claudio Alberti, Marco Mattavelli & S Cenk Sahinalp

ARTICLES

1013 ATAC-seq reveals the accessible genome by transposase-mediated imaging and sequencing
Xingyi Chen, Ying Shen, Will Draper, Jason D Buenrostro, Ulrike Litzenburger, Seung Woo Cho, Ansuman T Saipathy, Ava C Carter, Rajarshi P Ghosh, Alexandra East-Seletsky, Jennifer A Doudna, William J Greenleaf, Jan T Liphardt & Howard Y Chang

1021 Fast volumetric calcium imaging across multiple cortical layers using sculpted light

1029 Targeted AID-mediated mutagenesis (TAM) enables efficient genomic diversification in mammalian cells
Yunqing Ma, Jiayuan Zhang, Weijie Yin, Zhenchao Zhang, Yan Song & Xing Chang see news and views page 983

1036 Directed evolution using dCas9-targeted somatic hypermutation in mammalian cells
Gaelen T Hess, Laure Frésard, Kyuho Han, Cameron H Lee, Amy Li, Karlene A Cimprich, Stephen B Montgomery & Michael C Bassik see news and views page 983

1043 Complex transcriptional modulation with orthogonal and inducible dCas9 regulators
Yuchen Gao, Xin Xiong, Spencer Wong, Emeric J Charles, Wendell A Lim & Lei S Qi

1050 Phased diploid genome assembly with single-molecule real-time sequencing
Chen-Shan Chin, Paul Peluso, Fritz J Sedlazeck, Maria Nattestad, Gregory T Concepcion, Alicia Clun, Christopher Dunn, Ronan O’Malley, Rosa Figueroa-Balderas, Abraham Morales-Cruz, Grant R Cramer, Massimo Delledonne, Chongyang Luo, Joseph R Ecker, Dario Cantu, David R Rank & Michael C Schatz

ERRATA

1055 i Robotic Microscopy with the Nikon Ti2 for high-content analysis applications
Nikon Instruments, Inc., Melville, New York, USA