The Journal of Biological Chemistry

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 Also classified as Signal Transduction
- 1994 CXCR4 Receptor Overexpression in Mesenchymal Stem Cells Facilitates Treatment of Acute Lung Injury in Rats. Jing-Xian Yang, Nan Zhang, Han-Wei Wang, Peng Gao, Qing-Ping Yang, and Qing-Ping Wen Also classified as Immunology
- 2086 Molecular Determinants of Phosphatidylinositol 4,5-Bisphosphate (PI(4,5)P₂) Binding to Transient Receptor Potential V1 (TRPV1) Channels. Horacio Poblete, Ingrid Oyarzún, Pablo Olivero, Jeffrey Comer, Matías Zuñiga, Romina V. Sepulveda, David Báez-Nieto, Carlos González Leon, Fernando González-Nilo, and Ramón Latorre Also classified as Lipids
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- 2189 Glucagon-CREB/CRTC2 Signaling Cascade Regulates Hepatic BMAL1 Protein. Xiujie Sun, Fabin Dang, Deyi Zhang, Yuan Yuan, Cui Zhang, Yuting Wu, Yiguo Wang, and Yi Liu Also classified as Gene Regulation
- 2289 Aip1 Promotes Actin Filament Severing by Cofilin and Regulates Constriction of the Cytokinetic Contractile Ring.

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- 2431 The Cdc20-binding Phe Box of the Spindle Checkpoint Protein BubR1 Maintains the Mitotic Checkpoint Complex During Mitosis. Laura A. Diaz-Martinez, Wei Tian, Bing Li, Ross Warrington, Luying Jia, Chad A. Brautigam, Xuelian Luo, and Hongtao Yu Also classified as DNA and Chromosomes

DEVELOPMENTAL BIOLOGY

2007 The Short Stature Homeobox 2 (Shox2)-bone Morphogenetic Protein (BMP) Pathway Regulates Dorsal Mesenchymal Protrusion Development and Its Temporary Function as a Pacemaker during Cardiogenesis. Cheng Sun, Diankun Yu, Wenduo Ye, Chao Liu, Shuping Gu, Nathan R. Sinsheimer, Zhongchen Song, Xihai Li, Chun Chen, Yingnan Song, Shusheng Wang, Laura Schrader, and YiPing Chen

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- 2405 Insights into the Role of the Unusual Disulfide Bond in Copper-Zinc Superoxide Dismutase. Kevin Sea, Se Hui Sohn, Armando Durazo, Yuewei Sheng, Bryan F. Shaw, Xiaohang Cao, Alexander B. Taylor, Lisa J. Whitson, Stephen P. Holloway, P. John Hart, Diane E. Cabelli, Edith Butler Gralla, and Joan Selverstone Valentine
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- 2444 Probing Substrate Interactions in the Active Tunnel of a Catalytically Deficient Cellobiohydrolase (Cel7). Francieli Colussi, Trine H. Sørensen, Kadri Alasepp, Jeppe Kari, Nicolaj Cruys-Bagger, Michael S. Windahl, Johan P. Olsen, Kim Borch, and Peter Westh Also classified as Molecular Biophysics

GENE REGULATION

- 2264 Epigenetic Modification of Histone 3 Lysine 27. MEDIATOR SUBUNIT MED25 IS REQUIRED FOR THE DISSOCIATION OF POLYCOMB REPRESSIVE COMPLEX 2 FROM THE PROMOTER OF CYTOCHROME P450 2C9. Neal A. Englert, George Luo, Joyce A. Goldstein, and Sailesh Surapureddi Also classified as DNA and Chromosomes
- 2279 Wilms Tumor Suppressor, WT1, Suppresses Epigenetic Silencing of the β-Catenin Gene. Murielle M. Akpa, Diana M. Iglesias, Lee Lee Chu, Marta Cybulsky, Cristina Bravi, and Paul R. Goodyer Also classified as Molecular Bases of Disease

On The Cover

Using a single molecule "tightrope" assay we can follow eGFP-tagged myosin binding to actin thin filaments. When myosin binds, it activates the thin filaments leading to further myosin binding. Image deconvolution provides information on how myosin, calcium, and ATP configure the extent of activation, depicted here by the lighter patch of actin. For details see the article by Desai et al., pages 1915–1925.

♦ Paper of the Week

※ Author's Choice

⑤ Article contains supplemental material



2508 Dual Roles of Histone H3 Lysine 9 Acetylation in Human **Embryonic Stem Cell Pluripotency and Neural Differentiation.** Yunbo Qiao, Ran Wang, Xianfa Yang, Ke Tang, and Naihe Jing Also classified as Cell Biology

GENOMICS AND PROTEOMICS

2198 Identification and Pharmacological Inactivation of the MYCN

 ⊠ Gene Network as a Therapeutic Strategy for Neuroblastic Tumor Cells. Olesya Chayka, Cosimo Walter D'Acunto, Odette Middleton, Maryam Arab, and Arturo Sala

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2137 Impaired O-Linked N-Acetylglucosaminylation in the Endoplasmic Reticulum by Mutated Epidermal Growth Factor (EGF) Domainspecific O-Linked N-Acetylglucosamine Transferase Found in Adams-Oliver Syndrome. Mitsutaka Ogawa, Shogo Sawaguchi, Takami Kawai, Daita Nadano, Tsukasa Matsuda, Hirokazu Yagi, Koichi Kato, Koichi Furukawa, and Tetsuya Okajima Also classified as Molecular Bases of Disease

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2334 A Revised Mechanism for the Activation of Complement C3 ★ S to C3b. A MOLECULAR EXPLANATION OF A DISEASE-ASSOCIATED POLYMORPHISM. Elizabeth Rodriguez, Ruodan Nan, Keying Li, Jayesh Gor, and Stephen J. Perkins

Also classified as Molecular Bases of Disease

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- 2477 LDL Receptor and ApoE Are Involved in the Clearance of **ApoM-associated Sphingosine 1-Phosphate.** Makoto Kurano, Kazuhisa Tsukamoto, Masumi Hara, Ryunosuke Ohkawa, Hitoshi Ikeda, and Yutaka Yatomi

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2166 The PDZ Motif of the α_{10} Subunit Is Not Required for Surface Trafficking and Adrenergic Modulation of Ca_V1.2 Channel in the Heart. Lin Yang, Alexander Katchman, Richard L. Weinberg, Jeffrey Abrams, Tahmina Samad, Elaine Wan, Geoffrey S. Pitt, and Steven O. Marx

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2235 Membrane Topology of Hedgehog Acyltransferase. Armine Matevossian and Marilyn D. Resh Also classified as Cell Biology

2303 Functional Characterization of 5-Oxoproline Transport via SLC16A1/MCT1. Shotaro Sasaki, Yuya Futagi, Masaki Kobayashi, Jiro Ogura, and Ken Iseki

Also classified as Neurobiology

2496 Intramembrane Aromatic Interactions Influence the Lipid Sensitivities of Pentameric Ligand-gated Ion Channels. Casey L. Carswell, Jiayin Sun, and John E. Baenziger Also classified as Neurobiology

SASBMB

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- 2034 Heart Mitochondrial TTP Synthesis and the Compartmentalization of TMP. Vasudeva G. Kamath, Chia-Heng Hsiung, Zachary J. Lizenby, and Edward E. McKee Also classified as Enzymology
- 2244 In Vivo Kinetics of Formate Metabolism in Folate-deficient and Folate-replete Rats. Gregory P. Morrow, Luke MacMillan, Simon G. Lamarre, Sara K. Young, Amanda J. MacFarlane, Margaret E. Brosnan, and John T. Brosnan

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2466 Prolonged Fasting Identifies Heat Shock Protein 10 as a Sirtuin 3 **Substrate.** ELUCIDATING A NEW MECHANISM LINKING MITOCHONDRIAL PROTEIN ACETYLATION TO FATTY ACID OXIDATION ENZYME FOLDING AND FUNCTION. Zhongping Lu, Yong Chen, Angel M. Aponte, Valentina Battaglia, Marjan Gucek, and Michael N. Sack

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- 2351 The Mycobacterium tuberculosis Clp Gene Regulator Is Required for in Vitro Reactivation from Hypoxia-induced Dormancy. Amanda McGillivray, Nadia A. Golden, and Deepak Kaushal Also classified as Gene Regulation
- 2379 The C-terminal 50 Amino Acid Residues of Dengue NS3 Protein Are Important for NS3-NS5 Interaction and Viral Replication. Moon Y. F. Tay, Wuan Geok Saw, Yongqian Zhao, Kitti W. K. Chan, Daljit Singh, Yuwen Chong, Jade K. Forwood, Eng Eong Ooi, Gerhard Grüber, Julien Lescar, Dahai Luo, and Subhash G. Vasudevan Also classified as RNA

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2042 Progranulin and a Five Transmembrane Domain-Containing Receptor-like Gene Are the Key Components in Receptor Activator of Nuclear Factor KB (RANK)-dependent Formation of Multinucleated Osteoclasts. Jaemin Oh, Ju-Young Kim, Han-Soo Kim, Justin Cheesung Oh, Yoon-Hee Cheon, Jongtae Park, Kwon-Ha Yoon, Myeung Su Lee, and Byung-Soo Youn Also classified as Developmental Biology

- 2069 The MicroRNA-130/301 Family Controls Vasoconstriction in **Pulmonary Hypertension.** Thomas Bertero, Katherine Cottrill, Adrienn Krauszman, Yu Lu, Sofia Annis, Andrew Hale, Balkrishen Bhat, Aaron B. Waxman, B. Nelson Chau, Wolfgang M. Kuebler, and Stephen Y. Chan Also classified as RNA
- 2150 Molecular Basis of the Dominant Negative Effect of a Glycine Transporter 2 Mutation Associated with Hyperekplexia. Esther Arribas-González, Jaime de Juan-Sanz, Carmen Aragón, and Beatriz López-Corcuera

Also classified as Protein Structure and Folding

2213 Constitutive Activation of Epidermal Growth Factor Receptor Promotes Tumorigenesis of Cr(VI)-transformed Cells through **Decreased Reactive Oxygen Species and Apoptosis Resistance Development.** Donghern Kim, Jin Dai, Leonard Yenwong Fai, Hua Yao, Young-Ok Son, Lei Wang, Poyil Pratheeshkumar, Kazuya Kondo, Xianglin Shi, and Zhuo Zhang Also classified as Cell Biology

2395 The H50Q Mutation Induces a 10-fold Decrease in the Solubility \mathbb{X} of α -Synuclein. Riccardo Porcari, Christos Proukakis, Christopher A. Waudby, Benedetta Bolognesi, P. Patrizia Mangione, Jack F. S. Paton, Stephen Mullin, Lisa D. Cabrita, Amanda Penco, Annalisa Relini, Guglielmo Verona, Michele Vendruscolo, Monica Stoppini, Gian Gaetano Tartaglia, Carlo Camilloni, John Christodoulou, Anthony H. V. Schapira, and Vittorio Bellotti

Also classified as Protein Structure and Folding

2419 The Src Homology and Collagen A (ShcA) Adaptor Protein Is

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1915 Using Fluorescent Myosin to Directly Visualize Cooperative ◆ ※ Activation of Thin Filaments. Rama Desai, Michael A. Geeves, and Neil M. Kad

Also classified as Enzymology

2251 Differential Ubiquitin Binding by the Acidic Loops of Ube2g1 and Ube2r1 Enzymes Distinguishes Their Lys-48-ubiquitylation Activities. Yun-Seok Choi, Yun-Ju Lee, Seo-Yeon Lee, Lei Shi, Jung-Hye Ha, Hae-Kap Cheong, Chaejoon Cheong, Robert E. Cohen, and Kyoung-Seok Ryu

Also classified as Protein Synthesis and Degradation

NEUROBIOLOGY

1966 A Food and Drug Administration-approved Asthma Therapeutic Agent Impacts Amyloid β in the Brain in a Transgenic Model of **Alzheimer Disease.** Yukiko Hori, Shuko Takeda, Hansang Cho, Susanne Wegmann, Timothy M. Shoup, Kazue Takahashi, Daniel Irimia, David R. Elmaleh, Bradley T. Hyman, and Eloise Hudry

Also classified as Molecular Bases of Disease

2521 The Anoctamin Family Channel Subdued Mediates Thermal Nociception in Drosophila. Wijeong Jang, Ji Young Kim, Shanyu Cui, Juyeon Jo, Byoung-Cheol Lee, Yeonwoo Lee, Ki-Sun Kwon, Chul-Seung Park, and Changsoo Kim

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PLANT BIOLOGY

1898 A Lettuce (Lactuca sativa) Homolog of Human Nogo-B Receptor Interacts with cis-Prenyltransferase and Is Necessary for Natural Rubber Biosynthesis. Yang Qu, Romit Chakrabarty, Hue T. Tran, Eun-Joo G. Kwon, Moonhyuk Kwon, Trinh-Don Nguyen, and Dae-Kyun Ro Also classified as Metabolism

PROTEIN STRUCTURE AND FOLDING

1979 Significantly Enhanced Heme Retention Ability of Myoglobin Engineered to Mimic the Third Covalent Linkage by Nonaxial Histidine to Heme (Vinyl) in Synechocystis Hemoglobin. Sheetal Uppal, Shikha Salhotra, Nitika Mukhi, Fatima Kamal Zaidi, Manas Seal, Somdatta Ghosh Dey, Rajiv Bhat, and Suman Kundu Also classified as Molecular Biophysics

2126 Crystal Structure of BamB Bound to a Periplasmic Domain Fragment of BamA, the Central Component of the β -Barrel Assembly Machine. Katarina Bartoš Jansen, Susan Lynn Baker, and Marcelo Carlos Sousa

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PROTEIN SYNTHESIS AND DEGRADATION

2489 Atypical Ubiquitylation in Yeast Targets Lysine-less Asi2 for X Proteasomal Degradation. Mirta Boban, Per O. Ljungdahl, and Roland Foisner

SIGNAL TRANSDUCTION

1927 SUMOylation Attenuates Human β -Arrestin 2 Inhibition of IL-1R/TRAF6 Signaling. Ning Xiao, Hui Li, Wenhan Mei, and Jinke Cheng

Also classified as Gene Regulation

1936 Generation and Characterization of ATP Analog-specific **Protein Kinase Cδ.** Varun Kumar, Yi-Chinn Weng, Werner J. Geldenhuys, Dan Wang, Xiqian Han, Robert O. Messing, and Wen-Hai Chou Also classified as Protein Structure and Folding

2024 Inhibition of Polo-like Kinase 1 (Plk1) Enhances the Antineoplastic Activity of Metformin in Prostate Cancer. Chen Shao, Nihal Ahmad, Kurt Hodges, Shihuan Kuang, Tim Ratliff, and Xiaoqi Liu Also classified as Cell Biologoy

2099 Extracellular Signal-regulated Kinase Mediates Expression of Arginase II but Not Inducible Nitric-oxide Synthase in Lipopolysaccharide-stimulated Macrophages. Yi Jin, Yusen Liu, and Leif D. Nelin

2112 Arg Kinase-binding Protein 2 (ArgBP2) Interaction with $oxedsymbol{\square}$ α -Actinin and Actin Stress Fibers Inhibits Cell Migration. Praju Vikas Anekal, Jeffery Yong, and Ed Manser Also classified as Cell Biology

2312 Liver Kinase B1 Suppresses Lipopolysaccharide-induced Nuclear Factor κΒ (NF-κΒ) Activation in Macrophages. Zhaoyu Liu, Wencheng Zhang, Miao Zhang, Huaiping Zhu, Cate Moriasi, and Ming-Hui Zou

Also classified as Molecular Bases of Disease

2321 Phosphorylation and Inactivation of Glycogen Synthase Kinase 3β (GSK3 β) by Dual-specificity Tyrosine Phosphorylationregulated Kinase 1A (Dyrk1A). Woo-Joo Song, Eun-Ah Christine Song, Min-Su Jung, Sun-Hee Choi, Hyung-Hwan Baik, Byung Kwan Jin, Jeong Hee Kim, and Sul-Hee Chung

2455 Crystal Structure of LGR4-Rspo1 Complex. INSIGHTS INTO THE DIVERGENT MECHANISMS OF LIGAND RECOGNITION BY LEUCINE-RICH REPEAT G-PROTEIN-COUPLED RECEPTORS (LGRs). Jin-Gen Xu, Chunfeng Huang, Zhengfeng Yang, Mengmeng Jin, Panhan Fu, Ni Zhang, Jian Luo, Dali Li, Mingyao Liu, Yan Zhou, and Yongqun Zhu Also classified as Protein Structure and Folding

ADDITIONS AND CORRECTIONS

2301 The Hog1 stress-activated protein kinase targets nucleoporins to control mRNA export upon stress. VOLUME 288 (2013) PAGES 17384-17398. Sergi Regot, Eulàlia de Nadal, Susana Rodríguez-Navarro, Alberto González-Novo, Jorge Pérez-Fernandez, Olivier Gadal, Gerhard Seisenbacher, Gustav Ammerer, and Francesc Posas

2302 Interaction of the human prostacyclin receptor with Rab11. **CHARACTERIZATION OF A NOVEL Rab11 BINDING DOMAIN** WITHIN lpha-HELIX 8 THAT IS REGULATED BY PALMITOYLATION. VOLUME 285 (2010) PAGES 18709 – 18726. Helen M. Reid, Eamon P. Mulvaney, Elizebeth C. Turner, and B. Therese Kinsella



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