### Microenvironment and Immunology

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<td>Metastatic Cells Can Escape the Proapoptotic Effects of TNF-α through Increased Autocrine IL-6/STAT3 Signaling</td>
<td>Shun Li, Ni Wang, and Pnina Brodt</td>
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### Clinical Studies

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<td>N-Myc Regulates Expression of the Detoxifying Enzyme Glutathione Transferase GSTP1, a Marker of Poor Outcome in Neuroblastoma</td>
<td>Jamie I. Fletcher, Samuele Gherardi, Jayne Murray, Catherine A. Burkart, Amanda Russell, Emanuele Valli, Janice Smith, André Oberthuer, Lesley J. Ashton, Wendy B. London, Glenn M. Marshall, Murray D. Norris, Giovanni Petini, and Michelle Haber</td>
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<td>Sarah E. Bohndiek, Mikko I. Kettunen, De-en Hu, and Kevin M. Brindle</td>
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### MEETING REPORT

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<td>Twenty-Third Annual Pezcoller Symposium: Engineering Influences in Cancer Research</td>
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MOLECULAR AND CELLULAR PATHOBIOLOGY

939 Regulation of Monocarboxylate Transporter MCT1 Expression by p53 Mediates Inward and Outward Lactate Fluxes in Tumors
Romain Boidot, Frédérique Végran, Aline Meulle, Aude Le Breton, Chantal Dessy, Pierre Sonveaux, Sarah Lizard-Nacol, and Olivier Feron

948 miR-20a Encoded by the miR-17–92 Cluster Increases the Metastatic Potential of Osteosarcoma Cells by Regulating Fas Expression
Gangzong Huang, Kazumasa Nishimoto, Zhichao Zhou, Dennis Hughes, and Eugenie S. Kleinerman

958 Immune Inhibitory Molecules LAG-3 and PD-1 Synergistically Regulate T-cell Function to Promote Tumoral Immune Escape
Seng-Ryoung Woo, Meghan E. Turnis, Monica V. Goldberg, Jaishree Bankoti, Mark Selby, Christopher J. Nirschl, Matthew L. Bettini, David M. Gravano, Peter Vogel, Chih Long Liu, Stephanie T. Kung, and Joseph F. Grosso

969 Antigen-Specific CD8+ T Cells Regulate T Cells in Cancer via Retrograde MHC Class II Signaling
Srinivas Nagaraj, Allison Nelson, Je-in Youn, Pingyan Cheng, David Quiceno, and Dmitry I. Gabrilovich

979 Resistance to Selective BRAF Inhibition Can Be Mediated by Modest Upstream Pathway Activation
Fei Su, William D. Bradley, Qiongqing Wang, Hong Yang, Lizhong Xu, Brian Higgins, Kenneth Kolinsky, Kathryn Packman, Min Jung Kim, Kerstine Trunzer, Richard J. Lee, Kathleen Schostack, Jade Carter, Thomas Albert, Soren Germer, Jim Rosinski, Mitchell Martin, Mary Ellen Simcox, Brian Lestini, David Heimbrook, and Gideon Bollag

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

949 Myc Posttranscriptionally Induces HIF1 Protein and Target Gene Expression in Normal and Cancer Cells
Megan R. Doe, Janice M. Ascana, Mandee Kaur, and Michael D. Cole

958 A Positive Feedback Signaling Loop between ATM and the Vitamin D Receptor Is Critical for Cancer Chemoprevention by Vitamin D
Huei-Ju Ting, Sayeda Yasmin-Karim, Shian-Jang Yan, Jong-Wei Hsu, Tsu-Hua Lin, Wei-Zeng, James Messing, Tsong-Jeng Sheu, Bo-Ying Bao, Willis X. Li, Edward Messing, and Yi-Fen Lee

969 Potentiation of the Novel Topoisomerase 1 Inhibitor Indenoisoquinoline LMP-400 by the Cell Checkpoint and Chk1-Chk2 Inhibitor AZD7762
Sheena M. Aris and Yves Pommier

MOLECULAR AND CELLULAR PATHOBIOLOGY

938 Précis: Findings demonstrate a novel role for hedgehog signaling in osteoclast function and demonstrate that hedgehog inhibitors reduce tumor burden through direct effects on tumor cells, osteoclasts, and stromal cells within the tumor microenvironment.

948 miR-20a Encoded by the miR-17–92 Cluster Increases the Metastatic Potential of Osteosarcoma Cells by Regulating Fas Expression
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949 Précis: This study identifies the lactate transporter MCT1 as a critical mediator of p53-driven metabolic controls on glycolysis and respiration, and thus also potentially critical for supporting malignant progression of p53-deficient cancers.

958 Précis: Findings suggest that vitamin D prevents cancer by stimulating a positive feedback signaling loop from the vitamin D receptor to the DNA repair machinery, increasing its efficiency.

969 Précis: Findings address a controversy regarding how myeloid-derived suppressor cells augment the immunosuppressive effects of myeloid-tumor antigen receptors can produce powerful antitumor effects, in essence, by correcting immune escape.

979 Précis: This study addresses the present clinical challenge to prevent or reverse acquired resistance to mutant BRAF inhibition, which can produce powerful but only transient therapeutic responses in melanoma.

949 Précis: Findings provide insights into the means by which bone cancers gain access to the lung, by modulating expression of a microRNA program that permits cancer cell survival in the lung microenvironment.

958 Précis: Findings demonstrate a novel role for vitamin D in preventing cancer by stimulating a positive feedback signaling loop from the vitamin D receptor to the DNA repair machinery, increasing its efficiency.

969 Précis: This study identifies the lactate transporter MCT1 as a critical mediator of p53-driven metabolic controls on glycolysis and respiration, and thus also potentially critical for supporting malignant progression of p53-deficient cancers.

979 Précis: Findings address the present clinical challenge to prevent or reverse acquired resistance to mutant BRAF inhibition, which can produce powerful but only transient therapeutic responses in melanoma.
990 Histone Deacetylase Inhibition Increases Levels of Choline Kinase α and Phosphocholine Facilitating Noninvasive Imaging in Human Cancers
Mounia Beloueche-Babari, Vaitha Arunan, Helen Troy, Robert H. te Poele, Anne-Christine Wong Te Fong, L. Elizabeth Jackson, Geoffrey S. Payne, John R. Griffiths, Ian R. Judson, Paul Workman, Martin O. Leach, and Yuen-Li Chung

Precis: Noninvasive biomarkers offer critical tools for clinical trials of targeted drugs, as illustrated in this study providing mechanistic support for the use of phosphocholine as a candidate noninvasive biomarker for imaging the pharmacodynamic response to HDAC inhibitors.

1001 Dysregulation of Ezrin Phosphorylation Prevents Metastasis and Alters Cellular Metabolism in Osteosarcoma
Ling Ren, Sung-Hyeok Hong, Qing-Rong Chen, Joseph Briggs, Jessica Cassavanaugh, Satish Srivivasan, Michael M. Lizardo, Arnulfo Mendoza, Ashley Y. Xia, Narayan Avadhani, Javed Khan, and Chand Khanna

Precis: This study offers mechanistic insights into the role of a pivotal regulator of metastasis that links the plasma cell membrane to the actin cytoskeleton, and that may act in part by linking metabolic and respiratory capacity to metastatic capability.

1013 Hedgehog and Notch Signaling Regulate Self-Renewal of Undifferentiated Pleomorphic Sarcomas
Chang Ye Yale Wang, Qingsxia Wei, Ilkyu Han, Shingo Sato, Ronak Ghanbari-Azarnier, Heather Whetstone, Raymond Poon, Jiayi Hu, Feifei Zheng, Phil Zhang, Weishi Wang, Jay S. Wunder, and Benjamin A. Alman

Precis: Findings suggest not only novel treatment strategies for a soft tumor subtype seen almost exclusively in the elderly, but also possible insights into its enigmatic origins of development, which have been historically controversial.

LETTERS TO THE EDITOR
Impact of Epithelial Organization on Myc Expression and Activity—Letter
Johanna I. Partanen and Juha Klefstrom

Impact of Epithelial Organization on Myc Expression and Activity—Response
David Simpson Senthil Muthuswamy, and William P. Tansey

CORRECTIONS
Correction: Long Noncoding RNA HOTAIR Regulates Polycomb-Dependent Chromatin Modification and Is Associated with Poor Prognosis in Colorectal Cancers