MOLECULAR CANCER RESEARCH

TABLE OF CONTENTS

HIGHLIGHTS
933  Selected Articles from This Issue

REVIEW
935  Exosomes in Breast Cancer – Mechanisms of Action and Clinical Potential
Tiantong Liu, Jagmohan Hooda, Jennifer M. Atkinson, Theresa L. Whiteside, Steffi Oesterreich, and Adrian V. Lee

PERSPECTIVE
946  A Parathyroid–Gut Axis: Hypercalcemia and the Pathogenesis of Gastrinoma in Multiple Endocrine Neoplasia 1
Wenzel M. Hackeng, Koen M.A. Dreijerink, G. Johan A. Offerhaus, and Lodewijk A.A. Brosens

RAPID IMPACT
950  Radiomics Biomarkers Correlate with CD8 Expression and Predict Immune Signatures in Melanoma Patients

CANCER GENES AND NETWORKS
957  Proteomic Analysis of Src Family Kinase Phosphorylation States in Cancer Cells Suggests Deregulation of the Unique Domain
Ana Ruiz-Saenz, Farima Zahedi, Elliott Peterson, Ashley Yoo, Courtney A. Dreyer, Danislas S. Spassov, Juan Oses-Prieto, Alma Burlingame, and Mark M. Moasser

968  L-Plastin Promotes Gastric Cancer Growth and Metastasis in a Helicobacter pylori cagA-ERK-SP1-Dependent Manner
Yong-Sheng Teng, Wan-Yan Chen, Zong-Bao Yan, Yi-Pin Lv, Yu-Gang Liu, Fang-Yuan Mao, Yong-Liang Zhao, Liu-Sheng Peng, Ping Cheng, Mu-Bing Duan, Weisan Chen, Yu Wang, Ping Luo, Quan-Ming Zou, Jun Chen, and Yuan Zhuang

CANCER “-OMICS”
979  Loss of 9p21 Regulatory Hub Promotes Kidney Cancer Progression by Upregulating HOXB13
Maria Francesca Baietti, Peihua Zhao, Jonathan Crowther, Raj Nayan Sewduth, Linde De Troyer, Maria Debiec-Rychter, and Anna A. Sablina

991  Meta-Analysis and Systematic Review of the Genomics of Mucosal Melanoma
Natasa Broit, Peter A. Johansson, Chloe B. Rodgers, Sebastian T. Walpole, Felicity Newell, Nicholas K. Hayward, and Antonia L. Pritchard

CELL FATE DECISIONS
1005  The Hippo Pathway Effector YAP Promotes Ferroptosis via the E3 Ligase SKP2
Wen-Hsuan Yang, Chao-Chieh Lin, Jianli Wu, Pei-Ya Chao, Kuan Chen, Po-Han Chen, and Jen-Tsan Chi

GENOME MAINTENANCE
1015  Comprehensive Mutational Analysis of the BRCA1-Associated DNA Helicase and Tumor-Suppressor FANCJ/BACHI/BRIP1
Jennifer A. Calvo, Briana Fritchman, Desiree Hernandez, Nicole S. Persky, Cory M. Johansson, Federica Piccioni, Brian A. Kelch, and Sharon B. Cantor
NEW HORIZONS IN CANCER BIOLOGY

1026 Development and Characterization of Novel Endoxifen-Resistant Breast Cancer Cell Lines Highlight Numerous Differences from Tamoxifen-Resistant Models
Calley J. Jones, Malayannan Subramaniam, Michael J. Emch, Elizabeth S. Bruinsma, James N. Ingle, Matthew P. Goetz, and John R. Hawse

1040 Circulating Tumor Cell Genomic Evolution and Hormone Therapy Outcomes in Men with Metastatic Castration-Resistant Prostate Cancer
Santosh Gupta, Susan Halabi, Gabor Kemeny, Monika Anand, Paraskevi Giannakakou, David M. Nanus, Daniel J. George, Simon G. Gregory, and Andrew J. Armstrong

SIGNAL TRANSDUCTION AND FUNCTIONAL IMAGING

1051 Paracrine Placental Growth Factor Signaling in Response to Ionizing Radiation Is p53-Dependent and Contributes to Radioreistance
Tamara Kazimova, Fabienne Tschanz, Ashish Sharma, Irma Telarovic, Marco Wachtel, Gloria Pedot, Beat Schafer, and Martin Pruscher

1063 RAF-Mutant Melanomas Differentially Depend on ERK2 Over ERK1 to Support Aberrant MAPK Pathway Activation and Cell Proliferation
Matthew S. Crowe, Tatiana Zavorotinskaya, Charles F. Voliva, Matthew D. Shirley, Yanquin Wang, David A. Ruddy, Daniel P. Rakic, Jeffery A. Engelman, Darrin D. Stuart, and Alyson K. Freeman

TUMOR MICROENVIRONMENT AND IMMUNOBIOLOGY

1076 QA-1β Modulates Resistance to Anti-PD-1 Immune Checkpoint Blockade in Tumors with Defects in Antigen Processing
Xiao Zhang, Erich Sabio, Chirag Krishna, Xiaoxiao Ma, Jingming Wang, Hui Jiang, Jonathan J. Havel, and Timothy A. Chan

1085 Neoadjuvant Chemotherapy Induces IL34 Signaling and Promotes Chemoresistance via Tumor-Associated Macrophage Polarization in Esophageal Squamous Cell Carcinoma
Shotaro Nakajima, Kosaku Mimura, Katsuharu Saito, Aung Kyi Thar Min, Eisei Endo, Leo Yamada, Koji Kase, Naoto Yamauchi, Takuro Matsumoto, Hiroshi Nakano, Yasuyuki Kanke, Hirokazu Okayama, Motonobu Saito, Prajwal Neupane, Zenichiro Saze, Yohei Watanabe, Hiroyuki Hanayama, Suguru Hayase, Akinao Kaneta, Tomoyuki Momma, Shinji Ohki, Hiromasa Ohira, and Koji Kono

EDITOR’S NOTE

1096 Editor’s Note: Focal Adhesion Kinase Controls Aggressive Phenotype of Androgen-Independent Prostate Cancer

ABOUT THE COVER

Pathological assessment of the tumor-immune microenvironment is a key step in the development of a therapeutic approach for metastatic melanoma, which can respond to targeted therapy or immune checkpoint blockade depending on the specific features of the tumor. However, biopsy of metastatic lesions is invasive, and the localization of metastatic lesions to difficult-to-access sites complicates the sampling process. The cover depicts multiplex immunofluorescence of a melanoma biopsy (PD-L2/FITC in green, PD-L1/Cy3 in yellow, CD4/Cy5 in red, and CD8/Cy7 in purple). In their report, Aoude and colleagues demonstrate a novel radiomics approach to reliably qualify the molecular features of melanoma metastases normally assessed by biopsy, demonstrating that PET/CT imaging markers correlate with known biomarkers of patient response to targeted therapy and immune checkpoint blockade. The authors argue that this approach presents a noninvasive and cost-effective method to establish prognoses for metastatic melanoma patients. For more information, see the article on page 950.