Highlights of This Issue 313

REVIEW

315 Genomic and Epigenomic Cross-talks in the Regulatory Landscape of miRNAs in Breast Cancer Devyani Samantarrai, Subhra Dash, Bini Chhetri, and Bibekanand Mallick

CELL CYCLE AND SENESCENCE

329 Inhibition of TWIST1 Leads to Activation of Oncogene-Induced Senescence in Oncogene-Driven Non–Small Cell Lung Cancer Timothy F. Burns, Irina Dobromilskaya, Sara C. Murphy, Rajendra P. Gajula, Saravanan Thiyagarajan, Sarah N.H. Chatley, Khaled Aziz, Yoon-Jae Cho, Phuoc T. Tran, and Charles M. Rudin

CELL DEATH AND SURVIVAL

339 Impaired Long-Term Expansion and Self-Renewal Potential of Pediatric Acute Myeloid Leukemia–Initiating Cells By PTK787/ZK 222584 Alida C. Weidenaar, Arja ter Elst, Kim R. Kampen, Tiny Meeuwsen-de Boer, Willem A. Kamps, Jan Jacob Schuringa, and Eveline S.J.M. de Bont

349 Alpha-CaMKII Plays a Critical Role in Determining the Aggressive Behavior of Human Osteosarcoma Paul G. Daft, Kaiyu Yuan, Jason M. Warram, Michael J. Klein, Gene P. Siegal, and Majd Zayzafoon

CHROMATIN, GENE, AND RNA REGULATION

360 NF-YA Underlies EZH2 Upregulation and Is Essential for Proliferation of Human Epithelial Ovarian Cancer Cells Azat Garipov, Hua Li, Benjamin G. Bitler, Roshan J. Thapa, Siddharth Balachandran, and Rugang Zhang

DNA DAMAGE AND REPAIR

370 Diminished Origin-Licensing Capacity Specifically Sensitizes Tumor Cells to Replication Stress Kristin M. Zimmerman, Rebecca M. Jones, Eva Petermann, and Penelope A. Jeggo

ONCOGENES AND TUMOR SUPPRESSORS

381 Effects of Simultaneous Knockdown of HER2 and PTK6 on Malignancy and Tumor Progression in Human Breast Cancer Cells Natalie Ladyga, Natasa Anastasiova, Michael Rosemann, Jana Seiler, Nadine Lohmann, Herbert Braselmann, Karin Mengele, Manfred Schmitt, Heinz Höfler, and Michaela Aubele

393 The HER2- and Heregulin β1 (HRG)–Inducible TNFR Superfamily Member FasL Promotes HRG-Driven Breast Cancer Cell Migration, Invasion, and MMP9 Expression Kaushal Asrani, Ruth A. Keri, Rebecca Galisteo, Sharron A.N. Brown, Sarah J. Morgan, Arundhati Ghosh, Nhan L. Tran, and Jeffrey A. Winkles

SIGNAL TRANSDUCTION

405 Targeting Constitutively Activated β1 Integrins Inhibits Prostate Cancer Metastasis Yu-Chen Lee, Jung-Kang Jin, Chien-Jui Cheng, Chih-Fen Huang, Jian H. Song, Miao Huang, Wells S. Brown, Sui Zhang, Li-Yuan Yu-Lee, Edward T. Yeh, Bradley W. McIntyre, Christopher J. Logothetis, Gary E. Gallick, and Sue-Hwa Lin

418 EpCAM Modulates NF-κB Signaling and Interleukin-8 Expression in Breast Cancer Narendra V. Sankpal, Timothy P. Fleming, and William E. Gillanders

427 Significance of Divergent Expression of Prostaglandin EP4 and EP3 Receptors in Human Prostate Cancer Hosea F. S. Huang, Ping Shu, Thomas F. Murphy, Seena Aisner, Valerie A. Fitzhugh, and Mark L. Jordan
ABOUT THE COVER

The integrin family is a large collection of cell surface glycoproteins that facilitate extracellular matrix (ECM) interactions and signaling. Integrin receptors, composed of α and β subunits, bind ECM ligands and regulate a repertoire of critical cellular processes, including angiogenesis, adhesion, migration/invasion and survival. As such, targeting specific integrins or the signaling systems they regulate is of clinical relevance. In the context of prostate cancer, a number of integrin combinations are known to be expressed, and evidence suggests that changes in integrin expression accompany metastatic progression. Importantly, integrin β1 has been implicated as a key mediator of the switch to metastasis in other cancer types. Lee and colleagues used immunohistochemistry to characterize elevated levels of integrin β1 and activation of the prominent downstream signaling molecule focal adhesion kinase (FAK) in human specimens of localized and metastatic prostate cancer. The authors further demonstrated preclinically that systemic administration of antibodies against integrin β1 blocked prostate cancer metastasis in vivo. The cover shows immunohistochemical staining of a human specimen with localized prostate cancer with low phosphorylated-FAK. For additional results and details, please see the article by Lee and colleagues on page 405 in this issue.