BREAKING INSIGHTS

2795 Highlights from Recent Cancer Literature

OBITUARY

2797 Let’s Raise a Glass to Sydney: In Memoriam (1927-2019)
Ronald M. Evans

REVIEW

2798 Promises and Pitfalls of Using Liquid Biopsy for Precision Medicine
Giovanna Rossi and Michail Ignatiadis

CANCER RESEARCH HIGHLIGHTS

2805 Deciphering Mechanisms of UVR-Induced Tumoral Immune Checkpoint Regulation against Melanoma
Ravi P. Sahu
See related article, p. 2909

2808 The Achilles Heel of Malignant Rhabdoid Tumors
Jing Huang and Ji Luo
See related article by Howard and colleagues; Cancer Res 79(9):2404-14

2810 AQP4 and the Fate of Gliomas
Mahmood Amiry-Moghaddam
See related article by Simone and colleagues; Cancer Res 79(9):2182-94

PRIORITY REPORT

2812 N6-Methylation of Adenosine of FZD10 mRNA Contributes to PARP Inhibitor Resistance
Takeshi Fukumoto, Henggui Zhu, Timothy Nacarelli, Sergey Karakashev, Nail Fatkhutdinov, Shuai Wu, Pingyu Liu, Andrew V. Kossenkov, Louise C. Showe, Stephanie Jean, Lin Zhang, and Rugang Zhang
Significance: These findings elucidate a novel regulatory mechanism of PARP resistance in EOC by showing that m6A modification of FZD10 mRNA contributes to PARP resistance in BRCA-deficient EOC cells via upregulation of Wnt/β-catenin pathway.

2821 Long Noncoding RNA ELIT-1 Acts as a Smad3 Cofactor to Facilitate TGFβ/Smad Signaling and Promote Epithelial–Mesenchymal Transition
Satoshi Sakai, Tatsuya Ohhata, Kyoko Kitagawa, Chihiro Uchi, Takuya Aoshima, Hiroyuki Niida, Tetsuro Suzuki, Yasumichi Inoue, Keiji Miyazawa, and Masatoshi Kitagawa
Significance: This study identifies a novel lncRNA ELIT-1 and characterizes its role as a positive regulator of TGFβ/Smad signaling and EMT.

2839 DR4-Ser424 O-GlcNAcylation Promotes Sensitization of TRAIL-Tolerant Persisters and TRAIL-Resistant Cancer Cells to Death
Hyeonjeong Lee, Yumin Oh, Young-Jun Jeon, Song-Yi Lee, Hyeunjoo Kim, Ho-Jun Lee, and Yong-Keun Jung
Significance: This study reports that a novel posttranslational modification by O-GlcNAcylation of TRAIL-R1 (DR4) plays a crucial role in enabling both apoptotic and necroptotic cell death induction by TRAIL.

2853 Antagonism between HTRA3 and TGFβ1 Contributes to Metastasis in Non–Small Cell Lung Cancer
Jingya Zhao, Mingxiang Feng, Dong Liu, Haixia Liu, Mengmeng Shi, Jing Zhang, and Jieming Qu
Significance: This study provides new mechanistic insight of the interaction between HTRA3 and TGFβ in lung cancer by illustrating that HTRA3 is a novel mediator acting as a suppressor of TGFβ1-related oncogenic effects.

2865 Methylation of C/EBPα by PRMT1 Inhibits Its Tumor-Suppressive Function in Breast Cancer
Li-Ming Liu, Wen-Zheng Sun, Xue-Zhe Fan, Ya-Li Xu, Mo-Bin Cheng, and Ye Zhang
Significance: This study provides novel mechanistic insight of the role of the arginine methyltransferase PRMT1 in breast cancer pathogenesis.

2878 A Direct Podocalyxin–Dynamin-2 Interaction Regulates Cytoskeletal Dynamics to Promote Migration and Metastasis in Pancreatic Cancer Cells
Significance: These findings reveal that a novel interaction between podocalyxin and dynamin-2 promotes migration and metastasis of pancreatic cancer cells by regulating microtubule and focal adhesion dynamics.
2932 Inhibition of Ataxia-Telangiectasia Mutated and RAD3-Related (ATR) Overcomes Oxaliplatin Resistance and Promotes Antitumor Immunity in Colorectal Cancer

Significance: These findings demonstrate that resistance to oxaliplatin in colorectal cancer cells can be overcome with inhibitors of ATR and that combined treatment with both agents exerts synergistic antitumor effects.

2947 HDAC8 Regulates a Stress Response Pathway in Melanoma to Mediate Escape from BRAF Inhibitor Therapy

Significance: This study provides evidence that HDAC8 drives transcriptional plasticity in melanoma cells in response to a range of stresses through direct deacetylation of c-Jun.

CONVERGENCE AND TECHNOLOGIES

2962 Targeting the Temporal Dynamics of Hypoxia-Induced Tumor-Secreted Factors Halts Tumor Migration
Manjulata Singh, Xiao-Jun Tian, Vera S. Donnenberg, Alan M. Watson, JingYu Zhang, Laura P. Stabile, Simon C. Watkins, Jianhua Xing, and Shilpa Sani

Significance: This study uses state-of-the-art three-dimensional microtumor models and computational approaches to highlight the temporal dynamics of tumor-secreted microenvironmental factors in inducing tumor migration.

2978 MRI Imaging of the Hemodynamic Vasculature of Neuroblastoma Predicts Response to Antiangiogenic Treatment

Significance: This study shows that functional MRI predicts response to vascular-targeted therapy in a genetically engineered murine model of neuroblastoma.

POPULATION AND PREVENTION SCIENCE

2992 Analysis of the CDKN2A Gene in FAMMM Syndrome Families Reveals Early Age of Onset for Additional Syndromic Cancers
Candace D. Middlebrooks, Mark L. Stacey, Qing Li, Carrie Snyder, Trudy G. Shaw, Tami Richardson-Nelson, Marc Rendell, Claire Ferguson, Peter Silberstein, Murray J. Casey, Joan E. Bailey-Wilson, and Henry T. Lynch

Significance: This study shows that carriers of mutations in the CDKN2A gene in FAMMM syndrome are at increased risk for early onset of several cancer types beyond the known cancers.
RESOURCE REPORT

3001 The Cancer Editome Atlas: A Resource for Exploratory Analysis of the Adenosine-to-Inosine RNA Editome in Cancer
Chui-Hsien Lin and Sean Chun-Chang Chen
Significance: This user-friendly bioinformatic resource reduces the barrier to analyzing the huge and complex cancer RNA editome that cancer researchers face and facilitates the identification of novel therapeutic targets in cancer.

CORRECTION

3007 Correction: Negative Regulation of the Hippo Pathway by E3 Ubiquitin Ligase ITCH Is Sufficient to Promote Tumorigenicity
Zaidoun Salah, Gerry Melino, and Rami I. Aqeilan

RETRACTION

3008 Retraction: The E3-ligase E6AP Represses Breast Cancer Metastasis via Regulation of ECT2-Rho Signaling
Mariam Mansour, Sue Haupt, Ai-Leen Chan, Nathan Godde, Alexandra Rizzitelli, Sherene Loi, Franco Caramia, Siddhartha Deb, Elena A. Takano, Mark Risht, Cameron Johnstone, Brendon Monahan, Yara Levav-Cohen, Yong-Hui Jiang, Alpha S. Yap, Stephen Fox, Ora Bemd, Robin Anderson, and Ygal Haupt

ABOUT THE COVER

TGFβ is involved in various biological processes including epithelial-mesenchymal transition (EMT). A novel long noncoding RNA E2IT-1, which is induced by TGFβ, binds to Smad3 and facilitates recruitment of the complex to target genes of the TGFβ-Smad3 pathway. Using immunofluorescence, it was found that depletion of E2IT-1 inhibited perturbation of E-cadherin localization and actin stress fiber formation induced by TGFβ, suggesting that E2IT-1 participates in progression of EMT. For details, see article by Sakai and colleagues on page 2821.