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**Cancer Research**

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**BREAKING ADVANCES**

1775  Highlights from Recent Cancer Literature

**REVIEWS**

1777  Nerve–Cancer Cell Cross-talk: A Novel Promoter of Tumor Progression

Phillip Jobling, Jay Pundavela, Sonia M.R. Oliveira, Séverine Roselli, Marjorie M. Walker, and Hubert Hondermarck

1782  Amino Acid Transporters in Cancer and Their Relevance to “Glutamine Addiction”: Novel Targets for the Design of a New Class of Anticancer Drugs

Yangzom D. Bhutia, Ellappan Babu, Sabarish Ramachandran, and Vadivel Ganapathy

**INTEGRATED SYSTEMS AND TECHNOLOGIES**

1789  Molecular Portraits of Epithelial, Mesenchymal, and Hybrid States in Lung Adenocarcinoma and Their Relevance to Survival


Précis: An integrative approach combining genomics and proteomics with functional profiling revealed an association between cytoskeletal and actin-binding proteins, a mesenchymal or hybrid EMT phenotype, and invasive properties of lung adenocarcinomas that impact overall survival in patients.

**MOLECULAR AND CELLULAR PATHOBIOLOGY**

1801  Lung Tumor Suppressor GPRC5A Binds EGFR and Restrains Its Effector Signaling

Shuangshuang Zhong, Huijing Yin, Yueling Liao, Feng Yao, Qi Li, Jie Zhang, Huike Jiao, Yongxiu Zhao, Dongliang Xu, Shuli Liu, Hongyong Song, Yong Gao, Jingyi Liu, Lina Ma, Zhi Pang, Ruixu Yang, Chengyi Ding, Beiwei Sun, Xiaofeng Lin, Xiaofeng Ye, Wenzheng Guo, Baohui Han, Binhuai P. Zhou, Y. Eugene Chin, and Jiong Deng

Précis: These results reveal how common loss of expression of a tumor suppressive C-protein coupled receptor during lung tumorigenesis promotes malignant development.

1815  Genomic and Functional Analysis of the E3 Ligase PARK2 in Glioma

De-Chen Lin, Liang Xu, Ye Chen, Haiyan Yan, Masaharu Hazawa, Nga Doan, Jonathan W. Said, Ling-Wen Ding, Li-Zhen Liu, Henry Yang, Shizhu Yu, Michael Kahn, Dong Yin, and H. Phillip Koeffler

Précis: An E3 ligase that targets both EGFR and β-catenin for destruction may offer a rational new theranostic target in the most deadly form of adult brain cancer.

1828  Spatially Resolved Metabolic Phenotyping of Breast Cancer by Desorption Electrospray Ionization Mass Spectrometry


Précis: In evaluating a new mass spectrometry-based tool to analyze breast tumor tissues, this study shows how it can rapidly infer tumor grade and hormone receptor status from the metabolic profile of fresh frozen sections of resected specimens.

1838  CDK4/6 Inhibitor PD 0332991 Sensitizes Acute Myeloid Leukemia to Cytarabine-Mediated Cytotoxicity

Chenyi Yang, Cynthia A. Boyson, Maurizio Di Liberto, Xiango Huang, Jeffrey Hannah, David C. Dorn, Malcolm A.S. Moore, Selina Chen-Kiang, and Pengbo Zhou

Précis: These findings have immediate clinical implications for the potential treatment of elderly patients with acute myeloid leukemia who are unable to tolerate standard high-dose regimens of Ara-C drug therapy.

1846  Aberrant Expression of proPTPRN2 in Cancer Cells Confers Resistance to Apoptosis

Alexey V. Sorokin, Binoj C. Nair, Yongkun Wei, Kathryn E. Aziz, Valentina Evdokimova, Mien-Chie Hung, and Junjie Chen

Précis: These results define a little studied protein tyrosine phosphatase receptor as a novel candidate biomarker and therapeutic target in cancer.
PREVENTION AND EPIDEMIOLOGY

1859 miR-21 Inhibition Reduces Liver Fibrosis and Prevents Tumor Development by Inducing Apoptosis of CD24+ Progenitor Cells
Jing Zhang, Jingjing Jiao, Silvia Cermelli, Kyle Muir, Kwang Hwa Jung, Ruhi Zou, Asif Rashid, Mihai Gagea, Sonya Zabludoff, Raghu Kalluri, and Laura Beretta
Précis: These findings highlight the function of a widely studied oncomiR in the survival of CD24+ tumor-initiating cells and reduced liver fibrosis.

THERAPEUTICS, TARGETS, AND CHEMICAL BIOLOGY

1868 Histone Deacetylase Inhibitors Repress Tumoral Expression of the Proinvasive Factor RUNX2
Valentina Sancisi, Greta Gandolfi, Davide Carlo Ambrosetti, and Alessia Ciarrocchi
Précis: These findings offer evidence that the cytotoxic activity of HDAC inhibitors against cancer cells relies not only on reactivating silenced tumor suppressor functions, as widely thought, but also on silencing oncogenes that drive cell survival and malignant progression.

TUMOR AND STEM CELL BIOLOGY

1883 RSPO2 Enhances Canonical Wnt Signaling to Confer Stemness-Associated Traits to Susceptible Pancreatic Cancer Cells
Matthias Ilmer, Alejandro Recio Boiles, Ivonne Regel, Kenji Yokoi, Christoph W. Michalski, Ignacio I. Wistuba, Jaime Rodriguez, Eckhard Alt, and Jody Vykoukal
Précis: These results show how blocking a stemness-promoting pathway in conjunction with established chemotherapy could help disrupt dynamic cancer stem-like cell processes and present novel therapeutic targets and strategies.

CORRECTION

1922 Correction: PTEN Loss Contributes to Erlotinib Resistance in EGFR-Mutant Lung Cancer by Activation of Akt and EGFR

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ABOUT THE COVER

GPRC5A was repressed, while EGFR was dysregulated, in inflammatory lung tissues ($n = 10$) in comparison with those in normal lung tissues ($n = 10$). The inverse correlation between EGFR and GPRC5A was complete, without one exception. IHC staining for GPRC5A in human inflammatory lung tissue is shown in the representative image. For details, see article by Zhong and colleagues on page 1801.