CONTENTS

CANCER DISCOVERY JUNE 2012

VOLUME 2
NUMBER 6

IN THIS ISSUE
Highlighted research articles

NEWS IN BRIEF
Important news stories affecting the community

NEWS IN DEPTH
Q&A: Lisa Coussens on Immune Reprogramming
The Right Roadmap for Personalized Tests
Do Ask, Don’t Tell?

RESEARCH WATCH
Selected highlights of recent articles of exceptional significance from the cancer literature

ONLINE
For more News and Research Watch, visit Cancer Discovery online at http://CDnews.aacrjournals.org

REVIEW
ALKoma: A Cancer Subtype with a Shared Target
H. Mano

RESEARCH BRIEF
Evolutionary Pathways in BRCA1-Associated Breast Tumors
Précis: BRCA1 loss of heterozygosity is frequently preceded by PTEN loss or TP53 mutation in BRCA1-mutant breast cancers.

RESEARCH ARTICLES
Modulation of Activation-Loop Phosphorylation by JAK Inhibitors Is Binding Mode Dependent
Précis: Type II JAK inhibition prevents the sustained activation loop phosphorylation observed after treatment with type I ATP-competitive JAK inhibitors.

IN THIS ISSUE

VIEWS
In The Spotlight
Tracking Evolution of BRCA1-Associated Breast Cancer
J. Jonkers
Commentary on Martins et al., p. 503

miR-23a, a Critical Regulator of "migR”ation and Metastasis in Colorectal Cancer
Z. Wang, W. Wei, and F.H. Sarkar
Commentary on Jahid et al., p. 540

Apples to Origins: Identifying Brain Tumor Stem Cell Genes by Comparing Transcriptomes of Normal and Cancer Stem Cells
M. Wortham and H. Yan
Commentary on Corno et al., p. 554

In The Spotlight
Tracking Evolution of BRCA1-Associated Breast Cancer
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Commentary on Corno et al., p. 554
Forced Mitotic Entry of S-Phase Cells as a Therapeutic Strategy Induced by Inhibition of WEE1


Précis: In combination with chemotherapy, WEE1 inhibitors can force cancer cells with incompletely replicated DNA into mitosis, leading to abnormal mitoses and cell death.

miR-23a Promotes the Transition from Indolent to Invasive Colorectal Cancer


Précis: Upregulation of miR-23a in the early stages of colorectal cancer stimulates cell migration and invasion.

Gene Signatures Associated with Mouse Postnatal Hindbrain Neural Stem Cells and Medulloblastoma Cancer Stem Cells Identify Novel Molecular Mediators and Predict Human Medulloblastoma Molecular Classification


Précis: Murine medulloblastoma cancer stem cells that recapitulate distinct human molecular medulloblastoma subtypes can be valuable preclinical models.

ON THE COVER

Martins and colleagues determined the order of BRCA1 LOH, PTEN loss, and TP53 mutation in single cells from breast tumors with germline BRCA1 mutations. Surprisingly, BRCA1 LOH was rarely the initiating event, and wild-type BRCA1 expression was not lost in every cell within a tumor. Instead, PTEN loss occurred first in the majority of cases, particularly in basal-like tumors, and TP53 mutation was the initiating event in most luminal tumors. These findings provide insight into the evolution of BRCA1-mutant breast cancers and suggest that BRCA1 loss is not a rate-limiting step in breast tumorigenesis. For details, please see the article by Martins and colleagues on page 503.

ON THE COVER

For more News and Research Watch, visit Cancer Discovery online at http://CDnews.aacrjournals.org. Online-only News stories include the following:

• Nanoparticles Could Pinpoint Brain Tumors
• Modified T Cells Survive Over Decade
• Gene Expression Signature Predicts Lung Cancer Relapse
• Assay Could Identify Indolent Prostate Cancers