

MOLECULAR CANCER RESEARCH

# TABLE OF CONTENTS

## HIGHLIGHTS

- 541 **Selected Articles from This Issue**

## MINIREVIEW

- 543 **Phosphorylation and Driver Mutations in PI3K $\alpha$  and PTEN Autoinhibition**  
Ruth Nussinov, Mingzhen Zhang, Chung-Jung Tsai, and Hyunbum Jang

## REVIEWS

- 549 **Relevance of the Bruton Tyrosine Kinase as a Target for COVID-19 Therapy**  
Miran Rada, Zahraa Qusairy, Marta Massip-Salcedo, and Salvador Macip
- 555 **O-GlcNAc Transferase – An Auxiliary Factor or a Full-blown Oncogene?**  
Harri M. Itkonen, Massimo Loda, and Ian G. Mills

## *mcr*RapidIMPACT

- 565 **AraC-FdUMP[10] Is a Next-Generation Fluoropyrimidine with Potent Antitumor Activity in PDAC and Synergy with PARG Inhibition**  
Alex O. Haber, Aditi Jain, Chinnadurai Mani, Avinoam Nevler, Lebaron C. Agostini, Talia Golan, Komaraiah Palle, Charles J. Yeo, William H. Gmeiner, and Jonathan R. Brody

## CANCER GENES AND NETWORKS

- 573 **AKT1 E17K Inhibits Cancer Cell Migration by Abrogating  $\beta$ -Catenin Signaling**  
Sizhi Paul Gao, Amber J. Kiliti, Kai Zhang, Naresh Vasani, Ninghui Mao, Emmet Jordan, Hannah C. Wise, Tripti Shrestha Bhattarai, Wenhao Hu, Madeline Dorso, James A. Rodrigues, Kwanghee Kim, Aphrothiti J. Hanrahan, Pedram Razavi, Brett Carver, Sarat Chandarlapaty, Jorge S. Reis-Filho, Barry S. Taylor, and David B. Solit
- 585 **Suppression of MET Signaling Mediated by Pitavastatin and Capmatinib Inhibits Oral and Esophageal Cancer Cell Growth**  
Bo Xu, Tomoki Muramatsu, and Johji Inazawa

- 598 **Cell-Intrinsic Tumorigenic Functions of PPAR $\gamma$  in Bladder Urothelial Carcinoma**  
Danielle J. Sanchez, Rindert Missiaen, Nicolas Skuli, David J. Steger, and M. Celeste Simon

- 612 **Cross-talk between YAP and RAR-RXR Drives Expression of Stemness Genes to Promote 5-FU Resistance and Self-Renewal in Colorectal Cancer Cells**  
Marjolaine Bauzone, Mouloud Souidi, Anne-Frédérique Dessein, Maxence Wisztorski, Audrey Vincent, Jean-Pascal Gimeno, Didier Monté, Isabelle Van Seuningen, Christian Gespach, and Guillemette Huet

## CANCER "-OMICS"

- 623 **Genomic Alterations during the *In Situ* to Invasive Ductal Breast Carcinoma Transition Shaped by the Immune System**  
**A C** Anne Trinh, Carlos R. Gil Del Alcazar, Sachet A. Shukla, Koei Chin, Young Hwan Chang, Guillaume Thibault, Jennifer Eng, Bojana Jovanović, C. Marcelo Aldaz, So Yeon Park, Joon Jeong, Catherine Wu, Joe Gray, and Kornelia Polyak

## CELL FATE DECISIONS

- 636 **The Heme-Regulated Inhibitor Pathway Modulates Susceptibility of Poor Prognosis B-Lineage Acute Leukemia to BH3-Mimetics**  
**A C** Kaitlyn H. Smith, Amit Budhreja, John Lynch, Kathryn Roberts, John C. Panetta, Jon P. Connelly, Meghan E. Turnis, Shondra M. Pruetz-Miller, John D. Schuetz, Charles G. Mullighan, and Joseph T. Opferman
- 651 **Aberrant Induction of a Mesenchymal/Stem Cell Program Engages Senescence in Normal Mammary Epithelial Cells**  
Benjamin L. Bryson, Ilaria Tamagno, Sarah E. Taylor, Neetha Parameswaran, Noah M. Chernosky, Nikhila Balasubramaniam, and Mark W. Jackson

# TABLE OF CONTENTS

## METABOLISM

- 667**    **The Ubiquitin-Specific Peptidase USP18 Promotes Lipolysis, Fatty Acid Oxidation, and Lung Cancer Growth**  
Xi Liu, Yun Lu, Zibo Chen, Xiuxia Liu, Weiguo Hu, Lin Zheng, Yulong Chen, Jonathan M. Kurie, Mi Shi, Lisa Maria Mustachio, Thorkell Adresson, Stephen Fox, Jason Roszik, Masanori Kawakami, Sarah J. Freemantle, and Ethan Dmitrovsky

## RNA BIOLOGY

- 678**    **LncHAT Is Induced by Hypoxia-Inducible Factor 1 and Promotes Breast Cancer Progression**  
Lin Chen, Lei Bao, Yanling Niu, Jennifer E. Wang, Ashwani Kumar, Chao Xing, Yingfei Wang, and Weibo Luo

## SIGNAL TRANSDUCTION AND FUNCTIONAL IMAGING

- 688**    **Identification and Characterization of Cancer Cells That Initiate Metastases to the Brain and Other Organs**  
**A C** Anna. S. Berghoff, Yunxiang Liao, Matthia A. Karreman, Ayseguel Ilhan-Mutlu, Katharina Gunkel, Martin R. Sprick, Christian Eisen, Tobias Kessler, Matthias Osswald, Susanne Wünsche, Manuel Feinauer, Brunhilde Gril, Frederic Marmé, Laura L. Michel, Zuzanna Bago-Horvath, Felix Sahn, Natalia Becker, Michael O. Breckwoldt, Gergely Solecki, Miriam Gömmel, Lulu Huang, Petra Rübmann, Carina M. Thome, Miriam Ratliff, Andreas Trumpp, Patricia S. Steeg, Matthias Preusser, Wolfgang Wick, and Frank Winkler

## TUMOR MICROENVIRONMENT AND IMMUNOBIOLOGY

- 702**    **ILT3 (LILRB4) Promotes the Immunosuppressive Function of Tumor-Educated Human Monocytic Myeloid-Derived Suppressor Cells**  
Latika Singh, Eric S. Muise, Anannya Bhattacharya, Jeff Grein, Sarah Javaid, Peter Stivers, Jun Zhang, Yujie Qu, Barbara Joyce-Shaikh, Andrey Loboda, Chunsheng Zhang, Michael Meehl, Derek Y. Chiang, Sheila H. Ranganath, Michael Rosenzweig, and Philip E. Brandish
- 717**    **mDKN-01, a Novel Anti-DKK1 mAb, Enhances Innate Immune Responses in the Tumor Microenvironment**  
**A C** Michael S. Haas, Michael H. Kagey, Heidi Heath, Franziska Schuerpf, James B. Rottman, and Walter Newman
- 726**    **Exosomal Delivery of FTO Confers Gefitinib Resistance to Recipient Cells through ABCC10 Regulation in an m6A-dependent Manner**  
Peng Xiao, Yu-kang Liu, Wei Han, Yan Hu, Bo-you Zhang, and Wen-liang Liu

## CORRECTION

- 739**    **Correction: A Hypoxia-Inducible HIF1-GAL3ST1-Sulfatide Axis Enhances ccRCC Immune Evasion via Increased Tumor Cell-Platelet Binding**

## RETRACTION

- 740**    **Retraction: Protein Expression Profiling Identifies Cyclophilin A as a Molecular Target in Fhit-Mediated Tumor Suppression**

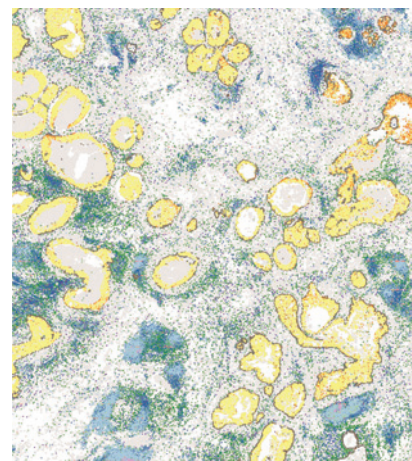
**A C** AC icon indicates AuthorChoice

For more information please visit [www.aacrjournals.org](http://www.aacrjournals.org)

# TABLE OF CONTENTS

## ABOUT THE COVER

Interactions between tumor cells and the immune system are manifold, but the consequences of these interactions on disease progression are not fully understood. The cover depicts a digitized image of immune infiltration within a ductal carcinoma *in situ* (DCIS) breast cancer sample as measured by cyclic immunofluorescence: cold colors indicate different immune cell subpopulations, warm colors mark tumor cells, and myoepithelial cells are shown in dark grey. The authors found that immune cells may play a key role in shaping the selection of genomic alterations within breast tumors and, consequently, progression from non-invasive DCIS to the more malignant invasive ductal carcinoma stage. For more information, see the Highlight on page 541 and the article on page 623.



# Molecular Cancer Research

19 (4)

*Mol Cancer Res* 2021;19:541-740.

**Updated version** Access the most recent version of this article at:  
<http://mcr.aacrjournals.org/content/19/4>

**E-mail alerts** [Sign up to receive free email-alerts](#) related to this article or journal.

**Reprints and Subscriptions** To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at [pubs@aacr.org](mailto:pubs@aacr.org).

**Permissions** To request permission to re-use all or part of this article, use this link <http://mcr.aacrjournals.org/content/19/4>. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.