Highlights of This Issue 261

COMMENTARY
263 Mitogen-Activated Protein Kinases Inhibitors: Potential Therapeutic Agents for Cancer Cachexia
Vickie E. Baracos

REVIEW
265 Strategies to Overcome Bypass Mechanisms Mediating Clinical Resistance to EGFR Tyrosine Kinase Inhibition in Lung Cancer
Hatim Husain, Michael Scir, Ayesha Murtuza, Nam Bui, Brian Woodward, and Razelle Kurzrock

SMALL MOLECULE THERAPEUTICS
273 A Novel LSD1 Inhibitor T-3775440 Disrupts GFI1B-Containing Complex Leading to Transdifferentiation and Impaired Growth of AML Cells
Yoshinori Ishikawa, Kanae Gamo, Masato Yabuki, Shinji Takagi, Kosei Toyoshima, Kazuhide Nakayama, Akiko Nakayama, Megumi Morimoto, Hitoshi Miyashita, Ryo Dairiki, Yukiko Hikichi, and Kaori Kurzrock

LARGE MOLECULE THERAPEUTICS
312 Blocking the CCL2–CCR2 Axis Using CCL2-Neutralizing Antibody Is an Effective Therapy for Hepatocellular Cancer in a Mouse Model
Kun-Yu Teng, Jianfeng Han, Xiaoli Zhang, Shu-Hao Hsu, Shun He, Nissar A. Wani, Juan M. Barajas, Linda A. Snyder, Wendy L. Frankel, Michael A. Calliguri, Samson T. Jacob, Jianhua Yu, and Kalpana Ghoshal

323 Dual-Targeting Nanoparticles for In Vivo Delivery of Suicide Genes to Chemotherapy-Resistant Ovarian Cancer Cells
Emiliano Cocco, Yang Deng, Erik M. Shapiro, Ileana Bortolomai, Salvatore Lopez, Ken Lin, Stefania Bellone, Raul Cu, Gulden Menderes, Jonathan D. Black, Carlton L. Schwab, Elena Bonazzoli, Pan Yang, Federica Pedrellini, Luca Zammataro, Gary Altwege, Christopher de Haydu, Mitchell Clark, Julio Alvarenga, Elana Ratner, Masoud Azodi, Dan-Arin Silasti, Peter E. Schwartz, Babak Litkouhi, W. Mark Saltzman, and Alessandro D. Santin

CANCER BIOLOGY AND SIGNAL TRANSDUCTION
334 Selumetinib Attenuates Skeletal Muscle Wasting in Murine Cachexia Model through ERK Inhibition and AKT Activation
Yang Quan-Jun, Huo Yan, Han Yong-Long, Wei Li-Li, Li Jie, Huang Jin-Lu, Lu Jin, Chen Peng Guo, Guan Run, and Guo Cheng

344 Dual Inhibition of MEK and PI3K/Akt Rescues Cancer Cachexia through both Tumor-Extrinsic and -Intrinsic Activities
Erin E. Talbert, Jennifer Yang, Thomas A. Mace, Matthew R. Farren, Alton B. Farris, Gregory S. Young, Omar Elagatti, Zheng Che, Cynthia D. Timmers, Priyani Rajasekera, Jennifer M. Maskarinec, Mark Bloomston, Tanios Bekaii-Saab, Denis C. Guttridge, and Gregory B. Lesinski
See related article, p. 357

357 Characterization of EGFR T790M, L792F, and C797S Mutations as Mechanisms of Acquired Resistance to Afatinib in Lung Cancer
Yoshihisa Kobayashi, Koichi Azuma, Hiroki Nagai, Young Hak Kim, Yusuke Takashita, Yuichi Sesumi, Masato Chiba, Masaki Shimoji, Kazuaki Sato, Kenji Tomizawa, Toshihiko Takemoto, Kazuto Nishio, and Tetsuya Mitsudomi
See related article, p. 344
### Table of Contents

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>365</td>
<td>Imatinib Spares cKit-Expressing Prostate Neuroendocrine Tumors, whereas Kills Seminal Vesicle Epithelial-Stromal Tumors by Targeting PDGFR-β</td>
<td>Elena Jachetti, Alice Rigoni, Lucia Bongiovanni, Ivano Arioli, Laura Botti, Mariella Parenza, Valeria Cancila, Claudia Chiodoni, Fabrizio Festinese, Matteo Bellone, Regina Tardanico, Claudio Tripodo, and Mario P. Colombo</td>
</tr>
<tr>
<td>376</td>
<td>Microdose-Induced Drug–DNA Adducts as Biomarkers of Chemotherapy Resistance in Humans and Mice</td>
<td>Maike Zimmermann, Si-Si Wang, Hongyong Zhang, Tau-yn Lin, Michael Malfatti, Kurt Haack, Ted Ognibene, Hongyuan Yang, Susan Airhart, Kenneth W. Tutteltaub, George D. Cimino, Clifford G. Tepper, Alexandra Drakaki, Karim Chamie, Ralph de Yere White, Chong-xian Pan, and Paul T. Henderson</td>
</tr>
<tr>
<td>388</td>
<td>HEXIM1 as a Robust Pharmacodynamic Marker for Monitoring Target Engagement of BET Family Bromodomain Inhibitors in Tumors and Surrogate Tissues</td>
<td>Xiaoyu Lin, Xiaoli Huang, Tamar Uziel, Paul Hessler, Daniel H. Albert, Lisa A. Roberts-Rapp, Keith F. McDaniel, Warren M. Kati, and Yu Shen</td>
</tr>
<tr>
<td>397</td>
<td>Repositioning FDA-Approved Drugs in Combination with Epigenetic Drugs to Reprogram Colon Cancer Epigenome</td>
<td>Noël J.-M. Raynal, Elodie M. Da Costa, Justin T. Lee, Vasganush Gharibyan, Saira Ahmed, Hsianghang Zhang, Takahiro Sato, Gabriel G. Malouf, and Jean-Pierre J. Issa</td>
</tr>
<tr>
<td>408</td>
<td>Near Infrared Photoimmunotherapy in a Transgenic Mouse Model of Spontaneous Epidermal Growth Factor Receptor (EGFR)-expressing Lung Cancer</td>
<td>Yuko Nakamura, Zoe Weaver Ohler, Deborah Householder, Tadanobu Nagaya, Kazuhide Sato, Shuhei Okuyama, Fusa Ogata, Dagane Daar, Tieu Hoa, Peter L. Choyke, and Hisataka Kobayashi</td>
</tr>
</tbody>
</table>

*AC icon indicates Author Choice
For more information please visit [www.aacrjournals.org](http://www.aacrjournals.org)*
ABOUT THE COVER

The cover shows a crystal structure of EGFR protein with afatinib, 2nd generation EGFR-tyrosine kinase inhibitor. Amino acid residues of the novel L792F and C797S, in addition to the conventional T790M, mutations as the mechanisms of acquired resistance against afatinib are colored. For details, see the article by Kobayashi and colleagues on page 357 of this issue.