With so many recent advances in treating metastatic melanoma, including approaches like immunotherapies, targeted therapies, and combination therapies, melanoma research is at a critical point where it is extremely important for the field to have a continuous exchange of information. Despite the success of various “targeted” inhibitors, therapeutic responses in melanoma patients are often short-lived due to rapidly acquired drug resistance. Therefore, it is essential that melanoma researchers translate the novel understanding of melanoma biology to decipher the mechanisms of innate and acquired drug resistance for the development of improved therapeutic options. To bridge the gap between scientists and clinician-scientists’ professional practice, this Special Conference will provide a platform for discussion and potential collaborations for the discovery of new therapeutic targets.

The AACR would like to thank the following organizations for their generous support of this conference.

Professional Educational Grants
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Grants
Funding for this conference was made possible (in part) by (1R13CA189528-01) from the National Cancer Institute. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government.
Conference Program

Saturday, September 20

7:00 p.m.-8:00 p.m.  Welcome Remarks and Keynote Address
Commonwealth Hall
Session Chairperson: Suzanne L. Topalian, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD

BRAF and RAS signaling in melanoma: From biology to therapy
Richard Marais, Cancer Research UK Manchester Institute, Manchester, UK

8:00 p.m.-9:30 p.m.  Welcome Reception
Millennium Hall and Foyer area

Sunday, September 21

7:00 a.m.-8:00 a.m.  Continental Breakfast
Millennium Hall and Foyer area

8:00 a.m.-10:00 a.m.  Session 1: Advances in Melanoma Biology
Session Chairperson: Levi A. Garraway, Dana-Farber Cancer Institute, Boston, MA
Commonwealth Hall

8:00 a.m.  MicroRNA as prognostic tools and therapeutic targets in melanoma
Eva M. Hernando, New York University, New York, NY

8:30 a.m.  Epigenomic landscape of human melanoma
Lynda Chin, The University of Texas MD Anderson Cancer Center, Houston, TX

9:00 a.m.  Lineage-specific oncogenic pathways in melanoma progression and drug response
Maria S. Soengas, Spanish National Cancer Research Centre, Madrid, Spain

9:30 a.m.  Small RNAs reveal nuclear hormone receptor targeting as a novel therapy for melanoma
Sohail Tavazoie, Rockefeller University, New York, NY

10:00 a.m.-10:15 a.m.  Break
Commonwealth Foyer
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1: Advances in Melanoma Biology (continued)</th>
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<tbody>
<tr>
<td>10:15 a.m.</td>
<td>Genetic alterations in melanocytic neoplasia&lt;br&gt;Boris C. Bastian, University of California, San Francisco, CA</td>
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<td>10:45 a.m.</td>
<td>Metastasis in the zebrafish system&lt;br&gt;Richard M. White, Memorial Sloan Kettering Cancer Center, New York, NY</td>
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<tr>
<td>11:05 a.m.</td>
<td>Integrative analysis of functional genomics and copy number variation nominates potential therapeutic intervention targets for melanoma*&lt;br&gt;Banu Eskiocak, UT Southwestern Medical Center, Dallas, TX</td>
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<td>11:25 a.m.</td>
<td>Specific inhibition of hTERT expression in melanoma by targeting common promoter mutations which cause quadruplex DNA instability*&lt;br&gt;Donald M. Miller, University of Louisville, Louisville, KY</td>
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<td>11:45 a.m.</td>
<td>Principles of resistance to targeted therapy&lt;br&gt;Levi A. Garraway</td>
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<td>12:15 p.m.</td>
<td><strong>Poster Session A with Lunch</strong>&lt;br&gt;Millennium Hall</td>
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<tr>
<td>2:30 p.m.</td>
<td><strong>Session 2: Advances in Melanoma Pathogenesis and Risk</strong>&lt;br&gt;Session Chairperson: J. William Harbour, University of Miami, Miami, FL</td>
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<tr>
<td>2:30 p.m.</td>
<td>What’s new in melanoma etiology?&lt;br&gt;Margaret A. Tucker, National Cancer Institute, Bethesda, MD</td>
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<tr>
<td>3:00 p.m.</td>
<td>Molecular and genomic landscape of uveal melanoma&lt;br&gt;J. William Harbour&lt;br&gt;<em>Dr. Harbour’s talk is supported by the Ocular Melanoma Foundation.</em></td>
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<tr>
<td>3:30 p.m.</td>
<td>The genetic architecture of melanoma susceptibility&lt;br&gt;Nicholas K. Hayward, Queensland Institute of Medical Research, Herston, Australia</td>
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<tr>
<td>4:00 p.m.</td>
<td>Break and travel to the site of Joint Session with AACR Special Conference on Hematologic Malignancies: Translating Discoveries to Novel Therapies</td>
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</tbody>
</table>

*Short talks from proffered papers.
5:00 p.m.-7:30 p.m.  Joint Session: Clinical Science Intersections between Melanoma and Hematologic Malignancies  
Sheraton Philadelphia Downtown Hotel  
Liberty Ballroom AB (Ballroom Level)

Two melanoma experts will be joined by two speakers from the AACR Special Conference on Hematologic Malignancies: Translating Discoveries to Novel Therapies to create a unique session and an opportunity to interact with colleagues across disciplines. Overlapping themes in solid and blood cancers will be discussed in the areas of signaling, targeted therapy, and immunotherapy.

This session is generously supported by Celgene and the Melanoma Research Alliance.

5:00 p.m.  Introduction by Session Chairpersons  
Kenneth C. Anderson, Dana-Farber Cancer Institute, Boston, MA  
Levi A. Garraway, Dana-Farber Cancer Institute, Boston, MA

MRA: Powerful research, faster results  
Wendy K.D. Selig, President and CEO, Melanoma Research Alliance, Washington, DC

Research: Moving beyond hope to outcomes  
Elizabeth Thompson, CEO, Lymphoma Research Foundation, New York, NY

5:15 p.m.  Preclinical models for targeting oncogenic Ras signaling in cancer  
Kevin M. Shannon, University of California, San Francisco, CA

5:45 p.m.  Treatment of non-V600-mutated BRAF melanoma: A role for combination MEK and CDK4/6 inhibition  
Jeffrey A. Sosman, Vanderbilt University Medical Center, Nashville, TN

6:15 p.m.  PD-1 pathway immunotherapy  
Gordon J. Freeman, Dana-Farber Cancer Institute, Boston, MA

6:45 p.m.  Adoptive T cell therapy with CAR modified T cells: We have a model A Ford, can we build a Ferrari?  
Renier J. Brentjens, Memorial Sloan Kettering Cancer Center, New York, NY

7:15 p.m.  Panel Discussion

7:30 p.m.-9:00 p.m.  Reception for the attendees of both AACR Special Conferences  
Sheraton Philadelphia Downtown Hotel  
Liberty Ballroom Foyer and Liberty Ballroom D (Ballroom Level)
Monday, September 22

7:00 a.m.-8:00 a.m.  Continental Breakfast
Millennium Hall and Foyer area

8:00 a.m.-10:00 a.m.  Session 3: Principles of Response and Resistance to Therapy
Session Chairperson: Suzanne L. Topalian, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD
Commonwealth Hall

8:00 a.m.  A unified model for RAF activation and therapeutic inhibition in human tumors
Neal Rosen, Memorial Sloan Kettering Cancer Center, New York, NY

8:30 a.m.  Evolution of melanoma resistance to MAPK inhibition
Roger S. Lo, University of California, Los Angeles, CA

9:00 a.m.  Adoptive T-cell transfer for metastatic melanoma: What are the relevant antigens?
James C. Yang, National Cancer Institute, Bethesda, MD

9:30 a.m.  Response and resistance to PD-1 pathway blockade
Suzanne L. Topalian

10:00 a.m.-10:15 a.m.  Break
Commonwealth Foyer

10:15 a.m.-12:15 p.m.  Session 3: Principles of Response and Resistance to Therapy (continued)

10:15 a.m.  Targeting AMPK signaling in melanoma
Bin Zheng, Massachusetts General Hospital, Boston, MA

10:35 a.m.  CD8+ T-cell distribution and immunomodulator expression in BRAF-mutant melanoma affect the response to BRAF inhibitor and chemotherapy* (not designated for CME credit)
Matthew J. Wongchenko, Genentech, Inc., South San Francisco, CA

10:55 a.m.  CD40L- and IFNγ-mediated signaling is required for BRAF inhibitor-mediated anti-tumor immunity*
Susan M. Kaech, Yale University, New Haven, CT

11:15 a.m.  Skin pigmentation pathways and melanoma risk
David E. Fisher, Massachusetts General Hospital, Boston, MA

11:45 a.m.-2:00 p.m.  Lunch on Own/Free Time

*Short talks from proffered papers.
2:00 p.m.-4:00 p.m.  Session 4: Immunity and Microenvironment  
Session Chairperson: Meenhard Herlyn, The Wistar Institute, Philadelphia, PA  
Commonwealth Hall

2:00 p.m.  The immunobiology of the melanoma tumor microenvironment and efficacy of immunotherapies  
Thomas F. Gajewski, University of Chicago, Chicago, IL

2:30 p.m.  Using genomics to identify tumor specific antigens and inform cancer immunotherapy  
Robert D. Schreiber, Washington University School of Medicine, St. Louis, MO

3:00 p.m.  Mechanisms of protective tumor immunity  
Glenn Dranoff, Dana-Farber Cancer Institute, Boston, MA

3:30 p.m.  Macrophage and B cell support for melanoma cells  
Meenhard Herlyn

4:15 p.m.-5:15 p.m.  Panel Discussion  
Unmet Medical and Scientific Needs in Melanoma: What Are They Now?  
Moderator: Michael B. Atkins, Georgetown Lombardi Comprehensive Cancer Center, Washington, DC  
Commonwealth Hall

Panelists:

Ze’ev Ronai, Sanford-Burnham Medical Research Institute, La Jolla, CA

Andrew E. Aplin, Thomas Jefferson University Kimmel Cancer Center, Philadelphia, PA

Cyril Konto, Bristol-Myers Squibb, Wallingford, CT

Lynn Schuchter, University of Pennsylvania School of Medicine, Philadelphia, PA

John A. Thompson, University of Washington, Seattle, WA

Magdalena Thurin, DCTD, National Institutes of Health, Bethesda, MD

5:15 p.m.-7:30 p.m.  Poster Session B and Reception  
Millennium Hall

7:30 p.m. -  Evening on Own

Tuesday, September 23

7:00 a.m.-8:00 a.m.  Continental Breakfast  
Millennium Hall and Foyer area
8:00 a.m. - 10:00 a.m.  Session 5: Principles of Novel Therapeutics in Combinations
Session Chairperson: Keith T. Flaherty, Massachusetts General Hospital, Boston, MA
Commonwealth Hall

8:00 a.m.  Towards a unified model of RAF inhibitor sensitivity  
David B. Solit, Memorial Sloan Kettering Cancer Center, New York, NY

8:30 a.m.  Combination immunotherapy for melanoma  
Jedd D. Wolchok, Memorial Sloan Kettering Cancer Center, New York, NY

9:00 a.m.  Combinations with immune therapy  
F. Stephen Hodi, Dana-Farber Cancer Institute, Boston, MA

9:30 a.m.  PI3-kinase inhibition forestalls the onset of MEK1/2 inhibitor resistance in BRAFV600E/PTENNull melanoma  
Martin McMahon, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA

10:00 a.m. - 10:15 a.m.  Break  
Commonwealth Foyer

10:15 a.m. - 12:15 p.m.  Session 5: Principles of Novel Therapeutics in Combinations (continued)

10:15 a.m.  Combined targeted therapies: Where to next?  
Georgina V. Long, Melanoma Institute Australia and the University of Sydney, Sydney, Australia

10:45 a.m.  Combining targeted therapy and immune checkpoint blockade to improve responses  
Jennifer A. Wargo, The University of Texas MD Anderson Cancer Center, Houston, TX

11:05 a.m.  Combination therapy with anti-CTLA4 and anti-PD1 leads to distinct immunologic changes in vivo*  
Kavita Dhodapkar, Yale University, New Haven, CT

11:25 a.m.  Integrated epigenomic profiling reveals widespread demethylation in melanoma and reveals CSF-1 receptor as an aberrant regulator of malignant growth and invasion*  
Orsolya Giricz, Albert Einstein College of Medicine, Bronx, NY

11:45 a.m.  Prospects for personalizing combination therapy with predictive or early response biomarkers  
Keith T. Flaherty

12:15 p.m.  Closing Remarks and Departure  
Commonwealth Hall

Keith T. Flaherty, Massachusetts General Hospital, Boston, MA

*Short talks from proffered papers.

ADVANCES IN MELANOMA: FROM BIOLOGY TO THERAPY