## Schedule at a Glance

### Tuesday, October 16

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<td>12:00 p.m.-1:30 p.m.</td>
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<td>Chairperson: Steven M. Dubinett, Pacific Ballroom B, p. 21</td>
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<td>1:30 p.m.-3:00 p.m.</td>
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<td>How Can We Use Mouse Models for Prevention Research?</td>
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<td>Noncoding RNAs: New Players in the Cancer Prevention Field</td>
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#### 6:30 p.m.-8:30 p.m. Opening Plenary Session
- Pacific Ballroom C, p. 25
- **Welcome and Opening Remarks**
  - Cory Abate-Shen, Columbia University Herbert Irving Comprehensive Cancer Center
  - New York, NY, Scientific Program Committee Chairperson
- **Opening Remarks**
  - Margaret Foti, American Association for Cancer Research, Philadelphia, PA
- **Keynote Lecture**
  - Global Initiatives in Prevention Research
  - William G. Nelson, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD
- **Keynote Lecture**
  - Accelerating Cancer Prevention Through Individual Behavior and Public Health Approaches
  - Graham A. Colditz, Washington University, St. Louis, MO
- **Distinguished Lecture on Targets for Cancer Prevention**
  - PI3-Kinase, AMPK, and Cancer
  - Lewis C. Cantley, Beth Israel Deaconess Medical Center, Boston, MA

#### 8:30 p.m.-10:30 p.m. Opening Reception
- Pacific Ballroom D, p. 25
Wednesday, October 17

7:00 a.m.-8:00 a.m.  Forum 1
Overscreening, Overdiagnosis, and Overtreatment in Cancer: The Prostate Example
Chairperson: Ernest T. Hawk, Pacific Ballroom C, p. 26

8:00 a.m.-10:00 a.m.  Plenary Session 1
Prevention Across the Lifecourse
Chairperson: Cheryl Lyn Walker, Pacific Ballroom C, p. 27

10:15 a.m.-12:00 p.m.  Concurrent Sessions 1-2
Intersection Between Cancer and Other Diseases: COPD, HIV, and Autoimmune Diseases
Chairperson: Phillip A. Dennis, Pacific Ballroom A, p. 28
Risk Assessment
Chairperson: Xifeng Wu, Pacific Ballroom C, p. 28

12:00 p.m.-2:30 p.m.  Poster Session A/Lunch
Pacific Ballroom D, p. 29

2:30 p.m.-3:30 p.m.  Special Session
Cancer Prevention Trials
Chairperson: Eva Szabo, Pacific Ballroom C, p. 36

3:30 p.m.-5:30 p.m.  Plenary Session 2
Inflammation and Cancer
Chairperson: Andrew J. Dannenberg, Pacific Ballroom C, p. 37

5:30 p.m.-6:30 p.m.  AACR-Prevent Cancer Foundation Award Lecture
Pacific Ballroom C, p. 38

Thursday, October 18

7:00 a.m.-8:00 a.m.  Forum 2
Cancer Prevention: Lessons Learned and Prospects for Future Drug Development
Co-Chairpersons: Victoria M. Richon and Jaye L. Viner, Pacific Ballroom C, p. 39

8:00 a.m.-10:00 a.m.  Plenary Session 3
Obesity, Diabetes, and Metabolic Syndrome
Chairperson: Reuben J. Shaw, Pacific Ballroom C, p. 40

10:15 a.m.-12:00 p.m.  Concurrent Sessions 3-4
Current Controversies in Cancer Screening
Chairperson: Electra D. Paskett, Pacific Ballroom A, p. 41
NSAIDs and Beyond
Chairperson: Ernest T. Hawk, Pacific Ballroom C, p. 41
Schedule at a Glance

12:00 p.m.-2:30 p.m.  
**Poster Session B/Lunch**  
Pacific Ballroom D, p. 42

2:30 p.m.-4:15 p.m.  
**Concurrent Sessions 5-6**

**Global Challenges: Environmental Changes**  
Chairperson: Thomas W. Kensler, Pacific Ballroom A, p. 50

**Recent Results on Mechanisms and Prevention of Tobacco-Induced Cancers**  
Chairperson: Stephen S. Hecht, Pacific Ballroom C, p. 50

4:15 p.m.-6:15 p.m.  
**Plenary Session 4**

**Genomics and Prevention: Will Genomics Lead to Optimized Cancer Prevention?**  
Chairperson: Timothy R. Rebbeck, Pacific Ballroom C, p. 51

6:30 p.m.-8:00 p.m.  
**Town Meetings/Networking Events**

**Molecular Epidemiology Working Group Town Meeting and Reception**  
Pacific Ballroom B, p. 52

**Behavioral Science in Cancer Research Working Group Networking Event**  
California Ballroom B, p. 52
Friday, October 19

7:00 a.m.-8:00 a.m.  Forum 3

How to Gain Access to Worldwide Cohorts
Chairperson: Mary Beth Terry, Pacific Ballroom C, p. 53

8:00 a.m.-10:00 a.m.  Plenary Session 5

Risk Assessment and Early Detection
Chairperson: Samir M. Hanash, Pacific Ballroom C, p. 54

10:15 a.m.-12:00 p.m.  Concurrent Sessions 7-8

Targeting Tumor-Initiating Cells
Chairperson: Robert Benezra, Pacific Ballroom C, p. 55

Molecular Targets for Cancer Prevention
Chairperson: Ziang Dong, Pacific Ballroom A, p. 55

12:00 p.m.-12:15 p.m.  Closing Remarks
Pacific Ballroom C

About Image:
Fluorescence image (courtesy of Drs. Xiaoqi Xie and Eileen White) of a representative melanoma (UACC903) spheroid (a colony of cells growing in three dimensions in vitro and simulating tumor growth) after treatment with the mammalian target of rapamycin (mTOR) inhibitor and autophagy stimulator CCI-779 (temsirolimus) and with the autophagy inhibitor hydroxychloroquine. Can Prev Res, July 2011 4 (7).
2012-2013 Upcoming Conferences

Fifth AACR Conference on The Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved
Co-Chairpersons: William G. Nelson and Christopher I. Li
October 27-30, 2012 • San Diego, CA

AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics
Scientific Committee Co-Chairpersons: Stefan Sleijfer, James H. Doroshow, and Kenneth C. Anderson
November 6-9, 2012 • Dublin, Ireland

Post-GWAS Horizons in Molecular Epidemiology: Digging Deeper into the Environment
Co-Chairpersons: Shelley S. Tvoroger and Cornelia M. Ulrich
November 11-14, 2012 • Hollywood, FL

Tumor Immunology: Multidisciplinary Science Driving Basic and Clinical Advances
Co-Chairpersons: Glenn Dranoff, Elizabeth M. Jaffee, and Stanley Riddell
December 2-5, 2012 • Miami, FL

Tumor Invasion and Metastasis
Co-Chairpersons: Bruce R. Zetter and Zena Werb
January 20-23, 2013 • San Diego, CA

Ninth AACR-JCA Joint Conference: Breakthroughs in Basic and Translational Cancer Research
Co-Chairpersons: Tyler Jacks and Kohei Miyazono
February 21-25, 2013 • Maui, HI

AACR-SNMMI Joint Conference on State-of-the-Art Molecular Imaging in Cancer Biology
Co-Chairpersons: David Pwnica-Worms and Carolyn Anderson
February 27-March 2, 2013 • San Diego, CA

AACR Annual Meeting 2013
Program Committee Chairperson: José Baselga
April 6-10, 2013 • Washington, DC

Synthetic Lethal Approaches to Cancer Vulnerabilities
Co-Chairpersons: William C. Hahn, Louis Staudt, and Sebastian Nijman
May 17-20, 2013 • Bellevue, WA

Chromatin and Epigenetics in Cancer
Co-Chairpersons: Suzanne J. Baker and Charles W. M. Roberts
June 19-22, 2013 • Atlanta, GA

Frontiers in Basic Cancer Research
Co-Chairpersons: Scott W. Lowe, Hans Clevers, Joan Brugge, and David Ruggero
September 18-22, 2013 • National Harbor, MD

Advances in Ovarian Cancer Research:
From Concept to Clinic
Co-Chairpersons: Douglas A. Levine, David G. Huntsman, and Sandra Orsulic
September 18-21, 2013 • Miami, FL

Advances in Breast Cancer Research
Co-Chairpersons: Carlos L. Arteaga, Jeffrey M. Rosen, Jane E. Visvader, and Douglas Yee
October 3-6, 2013 • San Diego, CA

AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics
Scientific Committee Co-Chairpersons: Jeffrey A. Engleman, James H. Doroshow, and Sabine Teijpar
October 19-23, 2013 • Boston, MA

Twelfth Annual International Conference on Frontiers in Cancer Prevention Research
Chairperson: Paul Limburg
October 27-30, 2013 • National Harbor, MD

Pediatric Cancer
Co-Chairpersons: John M. Maris, Lee J. Helman, Michael B. Kastan, James R. Downing, and Stella M. Davies
November 3-6, 2013 • San Diego, CA

Animal Models of Cancer
Co-Chairpersons: A. Thomas Look, Cory Abate-Shen, and Terry A. van Dyke
November 5-8, 2013 • San Diego, CA

Please visit www.aacr.org/meetingcalendar for additional conferences and program updates.
Professional Advancement Session
Tuesday, October 16 • 12:00 p.m.-1:30 p.m.

Pacific Ballroom B

Chairperson: Steven M. Dubinett, David Geffen School of Medicine at UCLA, Los Angeles, CA

This networking and career development session typically draws 75-100 junior investigators (although it is open to all conference attendees) who are eager to meet leading prevention researchers in a small, less formal atmosphere. The session will begin with brief comments from Dr. Steven M. Dubinett followed by short talks from Drs. Ernest T. Hawk and Scott M. Lippman (all previous Chairpersons of this conference). The last hour of the session will be devoted to roundtable discussions where discussants will lead discussion and answer questions on various aspects of career development such as work-life balance; social media/how social media affects us; grant writing rejection – now what; grant writing in today’s environment and getting funded; how to be a good mentor; and prevention career paths.

Attendees are free to ask questions and move tables to meet other leaders in the prevention field, but should keep their questions “nonscientific” as the session is geared toward professional development topics such as those above. The room will be set-up as a series of roundtables, with one discussant/mentor and seating for nine junior investigators.

Invited Talks:

C³ = Success

Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

Finessing the review process: Success in getting published

Scott M. Lippman, Moores Cancer Center, University of California, La Jolla, CA

Discussants:

Jonathan Braun, UCLA Medical Center, Los Angeles, CA

Nancy H. Colburn, National Cancer Institute, Bethesda, MD

Andrew J. Dannenberg, Weill Medical College of Cornell University, New York, NY

Phillip A. Dennis, Johns Hopkins University, Baltimore, MD

Steven M. Dubinett

Ernest T. Hawk

Dimitrios Iliopoulos, David Geffen School of Medicine at UCLA, Los Angeles, CA

Scott M. Lippman
Educational Sessions 1-2
Tuesday, October 16 • 1:30 p.m.-3:00 p.m.

Educational Session 1
Design and Execution of Cancer Prevention Studies
Pacific Ballroom A

Chairperson: J. Jack Lee, The University of Texas MD Anderson Cancer Center, Houston, TX

Prevention and early detection are preferable means for fighting cancer compared to treating the disease in a late stage. Prevention studies, however, can be more challenging than treatment trials due to the unique features of enrolling, screening, and treating individuals without active disease, many of whom may not develop cancer in their lifetime. Special considerations need to be addressed in identifying high-risk individuals, recruiting participants, using and validating surrogate endpoints for cancer development, and conducting interim analyses and long-term follow-up surveillance, as well as in the areas of compliance, toxicity-efficacy tradeoff, risk-benefit ratio, and early stopping rules, etc.

In this session, we will discuss the unique features of cancer prevention studies and their implications on study design, conduct, and analysis. A report card of chemoprevention trials conducted during the past three decades will be presented. Complex study designs, cost-effectiveness considerations, study implementation, data analysis, modeling, and intriguing findings will be illustrated by reviewing the Women's Health Initiative (WHI) study and the National Lung Screening Trial (NLST). More effective future prevention studies can be designed and implemented through the lessons learned.

Report card for chemoprevention trials: The good, the bad, and the ugly – How can we do better?

J. Jack Lee

Methodologic considerations for large-scale prevention trials: Lessons from the Women’s Health Initiative

Garnet L. Anderson, Fred Hutchinson Cancer Research Center, Seattle, WA

Planning, design, and execution of cancer screening and early detection trials: Application to the National Lung Screening Trial (NLST)

Ping Hu, National Cancer Institute, Bethesda, MD

Educational Session 2
How Can We Use Mouse Models for Prevention Research?
Pacific Ballroom C

Session Chairperson: Leisa Johnson, Genentech, Inc., South San Francisco, CA

This session will cover recent and innovative advances that demonstrate how genetically engineered mouse models (GEMMs) can be applied to facilitate cancer prevention research, from novel model generation and target discovery to therapeutic intervention. Dr. Dinulescu will describe a novel mutant Brca-driven GEMM of serous ovarian cancer, its application to elucidate the tumor cell of origin within the fallopian tube, and the potential impacts this finding may have on preserving fertility as well as delaying or preventing BRCA-positive patients from experiencing premature menopause. Dr. Jackson will share her findings interrogating tumor-initiating cells in a mutant Kras-driven GEMM of non-small cell lung cancer, and how they can be exploited to identify and validate new chemopreventative targets/pathways. Dr. Rao will discuss the pros and cons of various pancreatic cancer mouse models, the application of whole pancreatic transcriptome approaches to identify druggable targets relevant to early-stage pancreatic lesions (PanINs) and cancer prevention, and finally, nutritional approaches to pancreatic cancer prevention exploring mutant Kras; Fat1 transgenic mice. Dr. Liby will close the session describing their use of both breast and pancreatic GEMMs to develop new drugs and therapeutic combinations/strategies, with insights into anti-inflammatory agents and PARP inhibitors.

Introduction

Leisa Johnson

Defining the site of origin and precursor lesions for high-grade serous ovarian cancer

Daniela M. Dinulescu, Brigham and Women's Hospital, Boston, MA

Notch defines the tumor-initiating cell in non-small cell lung cancer

Erica L. Jackson, Genentech, Inc., South San Francisco, CA

Animal models for human pancreatic cancer prevention

Chinthalapally V. Rao, University of Oklahoma Health Sciences Center, Oklahoma City, OK

Using mouse models to develop new drugs and strategies for prevention

Karen T. Liby, Geisel School of Medicine at Dartmouth, Hanover, NH
Educational Session 3
New Approaches for Biomarker Discovery

Pacific Ballroom A

Chairperson: Nancy H. Colburn, National Cancer Institute, Frederick, MD

Progress in cancer prevention calls for identifying predictive biomarkers. Instead of waiting for cancer endpoints that require months in mouse models and years in humans, we need short-term reliable indicators of efficacy. Also needed are indicators of compliance (uptake) for both drug and dietary interventions as humans are not always compliant and information from dietary questionnaires has limited accuracy. Finally, risk indicators are important. In some cases, but not always, indicators of efficacy are also risk indicators. Particularly valuable are biomarkers that can be followed in both mice and humans. These biomarkers may be serum proteins, serum metabolites, or molecules from tissue obtained noninvasively. This session will focus on methods for discovering and validating biomarkers and for appropriate statistical analysis. Pitfalls and how to avoid them will be discussed. Applications will be drawn from actual intervention studies in mice and humans.

Introduction: How to identify biomarkers that predict compliance and efficacy

Nancy H. Colburn

Biomarker statistical designs

Ziding Feng, Fred Hutchinson Cancer Research Center, Seattle, WA

Dietary interventions to prevent colon cancer and discover biomarkers in mice and humans

Nancy H. Colburn

Educational Session 4
Characterizing and Monitoring the Microbiome as a Modifiable Disease Factor

Pacific Ballroom C

Chairperson: Jonathan Braun, UCLA Medical Center, Los Angeles, CA

The composition and function of the microbiome is emerging as a major factor in local and systemic physiology, and as a susceptibility factor to a range of diseases including cancer. This session is designed to provide a state-of-art update on the microbiome and cancer, new concepts on microbial ecology and pathogenesis, and practical methods to characterize and monitor the microbiome. These concepts and methods illuminate how the microbiome can mediate environmental factors in cancer risk, and to develop and monitor microbiome-targeted interventions in cancer prevention and therapy.

Defining and monitoring microbial networks

Jonathan Braun

Diet and the gut microbiome: Who’s feeding who?

Johanna W. Lampe, Fred Hutchinson Cancer Research Center, Seattle, WA

Genomic profiles of infection-related cancers in Asia

Patrick B. Tan, Duke-NUS Graduate Medical School, Cancer Science Institute of Singapore, Genome Institute of Singapore, Singapore
Educational Sessions 5-6
Tuesday, October 16 • 4:50 p.m.-6:20 p.m.

Educational Session 5
How to Establish Transdisciplinary Research Teams

Pacific Ballroom A

Chairperson: Stephen D. Hursting, University of Texas, Austin, TX

Cancer can be characterized as a complex set of diseases, each with multifactorial etiologies and each requiring alterations in individual and population-level behaviors for their prevention. Despite tremendous progress over the past several decades in our understanding of the biological, clinical, epidemiological, environmental, behavioral, and societal aspects of many types of cancer, the human and economic burden of cancer continues to rise in the U.S. and throughout the world. An estimated 50% of cancers occurring today are thought to be preventable if we could significantly accelerate the translation of our current knowledge regarding smoking, nutrition, obesity, and physical inactivity, genetics, health disparities, and other known cancer risk factors through transdisciplinary, multilevel research and practice.

The purpose of this session is to examine and discuss three approaches to building transdisciplinary research teams to accelerate progress in cancer prevention. The first approach involves bridging animal model and molecular studies with clinical trials for the prevention of obesity-related breast cancers; the second involves building clinical translational chemoprevention research teams and infrastructure, including a focus on training the next generation of transdisciplinary researchers; and the third will explore the development of transdisciplinary research teams investigating multilevel factors related to disparate health outcomes and using community-based participatory research to address cancer health disparities.

Diet, physical activity, and the prevention of obesity-related breast cancer: Lessons learned from transdisciplinary research

Stephen D. Hursting

The Clinical and Translational Science Award Program:
Transdisciplinary teams in cancer prevention research

Steven M. Dubinett, David Geffen School of Medicine at UCLA, Los Angeles, CA

Building transdisciplinary teams to address cancer health disparities: The Centers for Population Health and Health Disparities experience

Electra D. Paskett, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Educational Session 6
Noncoding RNAs: New Players in the Cancer Prevention Field

Pacific Ballroom C

Chairperson: Dimitrios Iliopoulos, David Geffen School of Medicine at UCLA, Los Angeles, CA

This session will cover recent advances in the role of noncoding RNAs in the cancer prevention field. microRNAs are noncoding RNAs that have been involved in the pathogenesis of different cancer types and have been identified to correlate with clinicopathological parameters and treatment responses. Here, we will describe how microRNAs contribute to cellular transformation and oncogenesis through activation of feedback loop circuits. Furthermore, evidence will be provided regarding the use of microRNAs as preventive agents in cancer mouse models. Finally, we will discuss circulating microRNAs (e.g., cell-free microRNAs present in plasma or serum) as a promising new class of blood-based biomarkers for cancer. Data will be reviewed describing the discovery of circulating microRNAs and mechanisms responsible for their unexpected stability in the ribonuclease-rich environment of plasma, as well as challenges and opportunities in this area for application to clinical use.

Noncoding RNA feedback loop circuits in oncogenesis

Dimitrios Iliopoulos

microRNAs and cancer progression

Carlo M. Croce, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Circulating microRNAs as cancer biomarkers

Muneesh Tewari, Fred Hutchinson Cancer Research Center, Seattle, WA
Opening Plenary Session
Tuesday, October 16 • 6:30 p.m.-8:30 p.m.

Pacific Ballroom C

Welcome and Opening Remarks

Cory Abate-Shen, Columbia University Herbert Irving Comprehensive Cancer Center, New York, NY, Scientific Program Committee Chairperson

Margaret Foti, American Association for Cancer Research, Philadelphia, PA

Keynote Lecture
Global Initiatives in Prevention Research

William G. Nelson, Johns Hopkins Kimmel Comprehensive Cancer Center, Baltimore, MD

Keynote Lecture
Accelerating Cancer Prevention Through Individual Behavior and Public Health Approaches

Graham A. Colditz, Siteman Cancer Center, Washington University in St. Louis, St. Louis, MO

Distinguished Lecture on Targets for Cancer Prevention
PI3-Kinase, AMPK, and Cancer

Lewis C. Cantley, Beth Israel Deaconess Medical Center, Boston, MA

Opening Reception
Tuesday, October 16 • 8:30 p.m.-10:30 p.m.

Pacific Ballroom D
Overscreening, Overdiagnosis, and Overtreatment in Cancer: The Prostate Example

Pacific Ballroom C

Chairperson: Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

Technological advances in screening and prevention are essential for progress, but incorporation of such advances into useful clinical practice is often challenging and requires careful consideration of all potential risks and benefits. Nowhere has this become more evident than around use of the PSA test for prostate cancer screening, where enthusiasm for the PSA in reducing cancer mortality may have exceeded that allowed for by the actual data. In any situation in which there is a screenable disease that is prevalent but potentially indolent, there is the potential for overscreening, overdiagnosis, and overtreatment, resulting in a range of personal and social costs that may ultimately outweigh the intended benefits.

In this session, we will explore the case of prostate cancer screening, focusing on data from recent screening randomized controlled trials and recent guideline panel recommendations, as well as their implications from the perspective of two leading authorities in the field. Issues discussed will revolve around the best application of the data to benefit and avoid harming people at risk. Additionally, we will explore remaining questions that ongoing or future research efforts might address to improve our understanding and practice.

Estimating how many prostate cancers are overdiagnosed: Overcoming challenges and avoiding mistakes

Ruth Etzioni, Fred Hutchinson Cancer Center, Seattle, WA

Finding common ground on the prostate cancer screening controversy

E. David Crawford, University of Colorado, Denver, CO

Discussion/Q & A
Plenary Session 1
Wednesday, October 17 • 8:00 a.m.-10:00 a.m.

Prevention Across the Lifecourse

Pacific Ballroom C

Chairperson: Cheryl Lyn Walker, Texas A&M University Health Science Center, Houston, TX

The role of telomeres and telomerase in aging and cancer
Jerry W. Shay, University of Texas Southwestern Medical Center, Dallas, TX

Early life environmental exposures, sentinel reproductive events, and cancer risk in women
Michele R. Forman, University of Texas, Austin, TX

Developmental reprogramming of cancer susceptibility
Cheryl Lyn Walker

Stress and the social environment: Impact on cancer risk
Suzanne D. Conzen, University of Chicago, Chicago, IL
Concurrent Sessions 1-2  
Wednesday, October 17 • 10:15 a.m.-12:00 p.m.

**Concurrent Session 1**
**Intersection Between Cancer and Other Diseases: COPD, HIV, and Autoimmune Diseases**

Pacific Ballroom A

**Chairperson:** Phillip A. Dennis, Johns Hopkins University, Baltimore, MD

Cancer often develops in the presence of other chronic diseases such as COPD, HIV infection, and autoimmune diseases. Patients who have these illnesses have an increased incidence of cancer. This session will explore clinical features and molecular mechanisms that may underlie the development of cancer, and may provide insight into new approaches for cancer prevention.

Inflammation links COPD/emphysema and lung cancer

**A. McGarry Houghton,** Fred Hutchinson Cancer Research Center, Seattle, WA

Epidemiology and pathogenesis of cancer in the setting of HIV infection

**Corey Casper,** Fred Hutchinson Cancer Research Center, Seattle, WA

Autoimmune rheumatic diseases and cancer: Not just chance?

**Antony Rosen,** Johns Hopkins University, Baltimore, MD

Systemic inhibition of receptor tyrosine kinase signaling by metformin*

**Brendan J. Quinn,** Johns Hopkins University, Baltimore, MD

**Concurrent Session 2**
**Risk Assessment**

Pacific Ballroom C

**Chairperson:** Xifeng Wu, The University of Texas MD Anderson Cancer Center, Houston, TX

With the increasing global burden of cancer and the ever-mounting costs of contemporary therapies and prolonged medical care, it is essential that we effectively implement proactive strategies to minimize risk of cancer and malignant progression. This session will highlight innovative and ongoing approaches in translational population studies and public health genomics that address global issues in cancer risk assessment and early detection. Instrumental to these efforts is the construction of improved integrative risk prediction models that better enable triage of individuals to appropriate risk-reduction programs and/or stratification to personalized preventive and therapeutic interventions. Empowering development of such clinically applicable tools is the establishment of prospective and well-characterized high-risk cohorts coupled with advances in "omics" technologies. Importantly, as robust risk-prediction models emerge, it becomes crucial to engage the public in appreciation of fundamental risks, exposures, and modifiable lifestyle factors that impact the cancer continuum and canvas for appropriate changes in public health policy.

Health screening cohort: A new avenue for risk prediction, prevention, and early detection research

**Xifeng Wu**

Malignant risk prediction for patients with oral premalignant lesions

**Miriam P. Rosin,** BC Cancer Agency, Vancouver, BC, Canada

Genomic-targeted approach to PSA screening and chemoprevention of prostate cancer

**Jianfeng Xu,** Wake Forest University School of Medicine, Winston-Salem, NC

Breast cancer risk assessment: Genetic and nongenetic risk factors contributing to differential model performance*

**Mary Beth Terry,** Columbia University, New York, NY

*Short talks from proffered papers*
Poster Session A
Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Behavioral and Social Science

Diet, Physical Activity, and Energy Balance


Quality of Life/Late Effects/Survivorship

A08 Weight, inflammation, cancer-related symptoms and health-related quality of life among breast cancer survivors. Ikuyo Imayama, Anne McTiernan, Catherine M. Alfano, Marian L. Neuhouser, Stephanie M. George, Ashley Wilder Smith, Richard N. Baumgartner, Kathy B. Baumgartner, Leslie Bernstein, Rachel Ballard-Barbash.

A09 Adherence to the WCRF/AICR recommendations for cancer prevention is associated with all-cause and cancer mortality among elderly female cancer survivors. Maki Inoue-Choi, DeAnn Lazovich, Kim Robien.


Diffusion and Dissemination


A03 Understanding cervical cancer screening among lesbians: A national survey. J. Kathleen Tracy.


Health Disparities


A07 Lifestyle modifications and use of complementary and alternative medicine in relation to perceived and model-based breast cancer risk among women at high risk of developing breast cancer. Cristina Valdovinos, Mary Beth Terry, Yuyan Liao, Ann Johnston, Heather Greenlee.

Health Economics, Policy, and Outcomes


Biologics and Early Detection Research


Prevention Behaviors

Biomarkers and Early Detection Research

Bioinformatics and Omics

A12 Web-based tools for visualization of the human papillomavirus genome dynamics: A computational approach to cancer prevention and control. Rafael Guerrero-Preston, Michael McClelland, David Sidransky, Liliana Florea.

A13 Applied the proteomics characteristics to detect the inherited colorectal adenomas. Yu Jiekai, Huang Yanqin, Lin Chen, Yuan Ying, Zheng Shu.
Poster Session A  
Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

**Biomarkers of Cancer Susceptibility**


A22 Associations between dietary intake and novel genotoxic estrogen biomarkers implicated in breast cancer risk. **Xiang Shu**, Meng Chen, Yuanqing Ye, Maosheng Huang, Jian Gu, Christopher G. Wood, Xifeng Wu.


A25 Genetic variants in 15q25.1 and age onset of pancreatic cancer. **Chongjuan Wei**, Yu-jing Huang, Jane Chen, Mala Pande, Chris Amos, Marsha Frazier.

A26 Dietary intake and C-peptide levels in adolescent girls: Results from the Dietary Intervention Study in Children (DISC). **Zhenzhen Zhang**, Jean M. Kerver, Joseph C. Gardiner, Joanne F. Dorgan, Ellen M. Vele.

**Biomarkers of Premalignant Lesions**


A29 Ductal carcinoma in situ lesions commonly exhibit heterogeneity within individuals. **Zhengyu Jiang**, Dana Pape-Zambito, Hong Wu, Karthik Devarajan, Carolyn M. Slater, Kathy Q. Cai, Arthur Patchefsky, Mary B. Daly, Xiaowei Chen.

A30 DNA methylation field defects in colorectal cancer patients. **Xifeng Wu**, Yulan Cheng, Yulan Cheng, Stephen Meltzer, Yuriko Mori.

**Carcinogenesis**

**Animal Models of Carcinogenesis and Chemoprevention**

A31 Targeting oncogenic Ras activation for cancer prevention. **Ji Baoran**, Huang Haojie, Liu Yan, Daniluk Jaroslaw, Logsdon Craig.

Poster Session A
Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D


A37 Beta-cryptoxanthin restores nicotine-reduced lung SIRT1 to normal levels and inhibits nicotine-promoted lung tumorigenesis and emphysema in A/J mice. Anita Iskandar, Chun Liu, Donald Smith, Kang-Quan Hu, Sang-Woon Choi, Lynne Ausman, Xiang-Dong Wang.


A39 Dietary supplementation with curcumin enhances metastatic growth of Lewis lung carcinoma in mice. Lin Yan.

A40 Inhibition of 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP)-induced prostate and colon carcinogenesis in hCYP1A mice by tocopherols. Guangxun Li, Yu-Kuo Chen, Hong Wang, Anna B. Liu, Chen X. Chen, Xiangyi Guo, Xi Zheng, Nanjoo Suh, Chung S. Yang.

Tumor Promotion and Progression

A41 Butyl benzyl phthalate induces metastasis and angiogenesis of hepatocellular carcinoma through a nongenomic AhR/G protein signaling. Eing-Mei Tsai, Cheng-Fang Tsai.

A42 Estradiol induced prostaglandin E2 expression to regulate cell proliferation through MAPK/PI3K/COX2 signal pathway in Her2/neu breast cancer cell. Eing-Mei Tsai, Tsung-Hua Hsieh.

Cell, Molecular, and Tumor Biology

Angiogenesis and Invasion

A45 Overexpression of miR-145 blocks glioma cell malignant phenotype. Yong Lu, Michael Chopp, Xuguang Zheng, Mark Katakoski, Benjamin Buller, Feng Jiang.

A46 Role of the endocytic adaptor Epsin in cancer cell migration. Kayalvizhi Madhivanan, R. Claudio Aguilar.

A47 MiR-15b and miR-152 reduce glioma cells invasion and angiogenesis via NR-2 and MMP-3. Xuguang Zheng, Michael Chopp, Yong Lu, Ben Buller, Feng Jiang.

Cancer Genetics/Gene Expression


Cell Death

A50 PAR-4 (prostate apoptosis response-4) modulates cell survival and chemosensitivity to docetaxel in MCF-7 breast cancer cells. Michelly C. Pereira, Simone A. de Bessa-Garcia, Maria A. Nagai.

Poster Session A
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Pacific Ballroom D

Cell Growth Signaling Pathways

A53 Crosstalk between IGFR and MET in prostate cancer. Andreas S. Varkaris, Sanchaika Gaur, Nila Parikh, Christopher Logothetis, Gary E. Gallick.

DNA Methylation/Epigenetics and Chromatin Regulation


A57 DNA methylation-based biomarkers in serum of patients with breast cancer and association with molecular phenotypes. Joaquina Martinez-Galan, Juan Ramon Delgado, Blanca Torres-Torres, Sandra Rios, M. Isabel Nuñez.

Chemoprevention and Biological Therapies

Chemoprevention


A59 Combination of quercetin and tannic acid as a potential proteasome inhibitor for cancer chemoprevention. Tsui-Ling Chang, Chi-Hsien Wang.

A60 Late-stage intestinal polyps in ApcMin/+ mice are resistant to treatment with retinoids and TRAIL due to upregulation of pro-survival proteins. Jennifer S. Davis, Shaoyi Huang, Xiaoyang Ren, Zhengming Xu, Ernest Hawk, Xiangwei Wu.

A61 Ischemic preconditioning agents sensitize cancer cells to oxidative stress. Shaileja Kesariju, Arunodoy Sur, Kasirajan Ayyanathan, Herbert Weissbach.

A62 Combination of BXL-0124, a vitamin D analog, and LG100268 for the prevention of ER-negative breast cancer. Abhijit Mazumdar, Yun Zhang, Jamal Hill, Nanjoo Suh, Powel Brown.


A65 Activation of ERK1/2 using combination of aspirin, curcumin, and sulfaphenamine regimen leads to NF-κB inhibition and apoptosis in pancreatic cancer cells. Arvind Thakkar, Dhruvitkumar Sutaria, Karthik Grandhi, Ying Huang, Jeffrey Wang, Sunil Prabhu.

Differentiation Therapy


Drug Design and Optimization

A67 Syntheses and antitumor activities on NCI-60 human tumor cell line protocol of novel N-hydroxyethyl-4-aza-didehydropodophyllotoxin derivatives with halo substitutions on ring-E. Ajay Kumar, Vineet Kumar, Antonio E. Alegria, Malhotra V. Sanjay.


Foods and Their Bioactive Components


A70 Ginger phytochemicals exhibit robust synergy to inhibit prostate cancer cell proliferation. Sushma Reddy Gundala, Meera Brahmabh, Ritu Aneja.

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Pacific Ballroom D

A72  Efficacy and safety of multiple doses of polyphenon E in prostate cancer using TRAMP mice.  Jick Hwan Ha, Seung Joon Kim, Hea Yon Lee, Chang Dong Yeo, Chan Kwon Park, Sang Haak Lee, Jong Y. Park.


A74  Grape seed extract induces antiproliferative and apoptotic effects on human non-small cell lung cancer and bronchial premalignant cell lines: The role of microRNA.  Jenny T. Mao, Bingye Xue, Jane Smoake, Kenneth J. Serio.

A75  Metabolites of ginger component [6]-shogaol remain bioactive in cancer cells and have low toxicity in normal cells: Biotransformation, chemical synthesis, and biological evaluation.  Huadong Chen, Yingdong Zhu, Dominique Soroka, Renaud Warin, Shengmin Sang.

A76  Diet versus drug paradigm for the prevention of colorectal cancer: Isorhamnetin and resveratrol versus sulindac and DFMO.  Shakir Saud, Young Kim, Gerd Bobe, Nancy H. Colburn, Matthew R. Young.


A78  Broccoli-derived compounds downregulate C-C chemokine ligand 2 expression and monocyte attraction through androgen-dependent pathway in LNCaP prostate cancer cells.  Thomas Wang, Eun-Kyung Kim, John Milner, Young Kim.

Mechanisms of Chemoprevention


A83  Inhibition of hypoxia-inducible factor alpha and astrocyte elevated gene-1 mediates cryptotanshinone-induced antitumor activity in hypoxic PC-3 cells.  Sung Hoon Kim, Hyojeong Lee, Hanna Hyun Kim, Deok Beom Jung, Eunjung Sohn.

A84  ω3 rich diet protects against Kras-induced metaplasia via repression of NF-κB.  Daniel R. Principe, Windel Emman T. Mascarinas, Chintan Chheda, Kevin Adrian, Riley Mangan, Lindsay C. Boven, Paul J. Grippo.


Epidemiology/Lifestyle Factors

Behavioral Epidemiology

A88  Depression and short telomere length increased mortality in bladder cancer patients.  Meng Chen, Jie Lin, Jan Blalock, Lorenzo Cohen, Paul M. Cinciripini, Xifeng Wu.

A89  Prediagnostic lifestyle factors and five-year survival after colon and rectal cancer diagnosis in the NIH-AARP Diet and Health Study.  Colleen Pelszer, Hannah Arem, Pfeiffer Ruth, Joanne Elena, Catherine Alfano, Albert Hollenbeck, Yikyung Park.

Poster Session A
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Pacific Ballroom D

Cancer in Aging Populations


A92 Oral bisphosphonate use and colorectal cancer incidence in the Women’s Health Initiative. Michael N. Passarelli, Polly A. Newcomb, Andrea Z. LaCroix, Dorothy S. Lane, Gloria Y.F. Ho, Rowan T. Chlebowski.

A93 Genetic variations in aging-related genes/pathways and colorectal cancer risk. Fanmao Zhang, Cathy Eng, Moubin Lin, Michelle A.T. Hildebrandt, Yonggang He, Jie Lin, Maosheng Huang, Jian Gu, Xifeng Wu.

Cancer in Minority and Medically Underserved Populations

A94 Missed opportunities: Racial and socioeconomic disparities in emergency presentation of colorectal cancer. Sandi L. Pruitt, Nicholas O. Davidson, Samir Gupta, Yan Yan, Mario Schootman.

Diet and Cancer

A95 Prostatic alpha-linolenic acid (ALA) is positively associated with aggressive prostate cancer: A relationship which may depend on genetic variation in ALA metabolism. Maria Azrad, Robert W. Hardy, Wendy Demark-Wahnefried, Kui Zhang, Robin T. Vollmer, John Madden, Thomas Polascik, Denise C. Snyder, Mack T. Ruffin, Judd Moul, Dean Brenner.


A98 Short-term changes in dietary carbohydrate intake and prognosis among postmenopausal breast cancer survivors. Jennifer A. Emond, Ruth E. Patterson, Loki Natarajan, John P. Pierce.


A100 Adherence to the WHO’s Healthy Diet Indicator and overall cancer risk in the Dutch part of the European Prospective Investigation into Cancer and Nutrition (EPIC-NL) cohort. Anne M. May, Nina E. Berentzen, Joline W.J. Beulens, Marieke P. Hoevenaar-Blom, Ellen Kampman, H.B. Bueno-de-Mesquita, Dora Romaguera, Petra H.M. Peeters.


A102 Longer formula feeding and later age at introduction of solids increase the odds ratio of pediatric acute lymphoblastic leukemia. Jeremy Schraw, Yong Q. Dong, Michael E. Scheurer, Steven Hirschfeld, M. Fatih Okcu, Michele R. Forman.


A105 Intakes of folate, methionine, and vitamin B6 and B12 and risk of esophageal and gastric cancer in a large cohort study. Qian Xiao, Jiiansong Ren, Christian Abnet, Yikyung Park.
Poster Session A
Wednesday, October 17 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Familial and Genetic Epidemiology


A107  Variation in the prolactin and prolactin receptor genes and familial breast cancer. Shehnaz K. Hussain, Mary Sehl, Daniel Conn, Janet S. Sinsheimer, Uma Dandekar, Jeanette Papp, Zuo-Feng Zhang, Patricia A. Ganz.


General Epidemiology and Biostatistics

A111  The awareness of loop electrosurgical excision procedure as a strategy for reducing the incidence and mortality of cervical cancer among Nigerian market women. Olubunmi Olabisi Adetule.

A112  Time trend and spatial pattern in the use of hormone replacement therapy in Taiwan before and after WHI trial report. Po-Huang Chiang, Eng-Mei Tsai, Yen-Chen Chang.


Other Risk Factors

Special Session
Wednesday, October 17 • 2:30 p.m.-3:30 p.m.

Cancer Prevention Trials

Pacific Ballroom C

Chairperson: Eva Szabo, National Cancer Institute, Bethesda, MD

The translation of promising mechanistic, epidemiologic, and preclinical data into strategies that prevent cancer in human beings requires the performance of clinical trials that carefully assess the utility of specific approaches in well-defined participant cohorts. A multidisease approach to prevention, with the aim of preventing multiple chronic diseases (both cancer and non-cancer), is particularly appealing. This session will report the primary and/or secondary endpoint results of recently completed innovative phase II and III trials that employed interventions targeting multiple health concerns.

Metformin effects on breast preneoplasia
Andrea DeCensi, E.O. Ospedali Galliera, Genoa, Italy

The Costa Rica HPV Vaccine Trial: Vaccine efficacy against oral HPV infection and other novel findings
Aimée R. Kreimer, National Cancer Institute, Rockville, MD

A randomized trial of a multivitamin in the prevention of cancer in men: The Physicians’ Health Study II
J. Michael Gaziano, Brigham and Women’s Hospital, Boston, MA
Plenary Session 2
Wednesday, October 17 • 3:30 p.m.-5:30 p.m.

Inflammation and Cancer

Pacific Ballroom C

Chairperson: Andrew J. Dannenberg, Weill Medical College of Cornell University, New York, NY

Chronic inflammation is well recognized to increase the risk of multiple malignancies. Numerous factors including infection, tobacco smoke exposure, and obesity cause chronic inflammation. The identification of the causes of chronic inflammation has been associated with the successful development of risk reduction interventions such as the hepatitis B vaccine. Use of medications that target inflammation, including aspirin and selective COX-2 inhibitors, reduce the risk of some types of neoplasia. This session will include talks focused on cancers of the stomach, colon, and breast. Evidence linking inflammation, stem cells, and cancer will be reviewed. Different mechanisms underlying the inflammation-cancer connection will be discussed highlighting the opportunity to develop evidence-based risk reduction strategies.

Inflammation, stem cells, and cancer

Timothy C. Wang, Columbia University Medical Center, New York, NY

Helicobacter gastritis, metaplasia, and gastric cancer

Juanita L. Merchant, University of Michigan, Ann Arbor, MI

Inflammatory mediators, NSAIDs, and colorectal cancer

Raymond N. DuBois, The University of Texas MD Anderson Cancer Center, Houston, TX

The obesity-inflammation connection: Implications for breast carcinogenesis

Andrew J. Dannenberg
The Eleventh Annual AACR-Prevent Cancer Foundation Award for Excellence in Cancer Prevention Research

Pacific Ballroom C

The Eleventh Annual AACR-Prevent Cancer Foundation Award for Excellence in Cancer Prevention Research is given to a scientist residing in any country in the world for his or her seminal contributions to the field of cancer prevention. Such investigations must have been conducted in basic, translational, clinical, epidemiological, or behavioral science in cancer prevention research. Further, these studies must have had not only a major impact on the field, but must also have stimulated new directions in this important area. The 2012 recipient was not available at the time of this publication printing.

Previous Recipients:

2011  Andrew J. Dannenberg
2010  John D. Groopman
2009  Mark W. Schiffman
2008  Frank L. Meyskens
2007  Leslie Bernstein
2006  Stephen S. Hecht
2005  Scott M. Lippman
2004  David S. Alberts
2003  Waun Ki Hong
2002  Michael B. Sporn

If you would like to nominate a colleague for an AACR Scientific Achievement Award, please e-mail awards@aacr.org for more details.
Forum 2
Thursday, October 18 • 7:00 a.m.-8:00 a.m.

Cancer Prevention: Lessons Learned and Prospects for Future Drug Development

Pacific Ballroom C

Co-Chairpersons: Victoria M. Richon, Epizyme, Inc., Cambridge, MA, and Jaye L. Viner, Millennium Pharmaceuticals, Cambridge, MA

To date, a vaccine against an infectious agent, hepatitis B virus, is the only chemopreventive intervention that has broadly translated into improvements in public health. By contrast, use of tamoxifen and raloxifene by women at high risk for breast cancer has remained uniformly low. Given increasingly high research costs, the therapeutic impact of promising agents must not only outweigh potential toxicities but also assure patient and payer acceptability, otherwise the developmental risks may be too great. This session will highlight lessons learned from studies that have led to regulatory approval and present a critical evaluation of our current drug development pathway for chemoprevention agents

Lessons learned from 20 years of chemoprevention research
Victor G. Vogel, Geisinger Health Systems, Danville, PA

What are the hurdles for moving approved drugs into the prevention setting?
Pamela M. Munster, University of California, San Francisco, CA

Discussion/Q & A
Plenary Session 3  
Thursday, October 18 • 8:00 a.m.-10:00 a.m.  

**Obesity, Diabetes, and Metabolic Syndrome**  
Pacific Ballroom C  

**Chairperson: Reuben J. Shaw,** Salk Institute for Biological Studies, La Jolla, CA  

Studies across the past decade have led to a reemergence of our understanding of how oncogene and tumor suppressor mutations lead to changes in cellular metabolism during tumorigenesis. Importantly, the field is still in the early years of defining the critical metabolic enzymes and metabolic pathways that contribute to tumor biology in different cancers. Here we explore four central pathways involved in metabolic control that are deregulated in cancer: the mTOR pathway, the AMPK pathway, mitochondrial sirtuin pathway, and the autophagy pathway.  

The nutrient-sensing mTOR pathway in cancer initiation and progression  
**Brendan D. Manning,** Harvard School of Public Health, Boston, MA  

Regulation of tumor metabolism by sirtuins  
**Marcia Haigis,** Harvard Medical School, Boston, MA  

The LKB1-AMPK pathway coordinates metabolic reprogramming with growth control  
**Reuben J. Shaw**  

Role of autophagy in cancer  
**Eileen P. White,** UMDNJ-The Cancer Institute of New Jersey, New Brunswick, NJ
Concurrent Sessions 3-4
Thursday, October 18 • 10:15 a.m.-12:00 p.m.

Concurrent Session 3
Current Controversies in Cancer Screening

Pacific Ballroom A

Chairperson: Electra D. Paskett, The Ohio State University Comprehensive Cancer Center, Columbus, OH

Cancer screening examinations have been, for the most part, shown to reduce mortality; however, there exists a lot of controversy over the optimal screening test intervals for some cancers, whether to screen for other cancers, and how to increase utilization of those tests that truly reduce death. This session will explore some of these controversies as well as discuss how advances in technology—genetic, imaging, and media—can be used to promote uptake of screening. Lastly, the impact of changes to screening test guidelines has had on uptake will examine the effects of health policy on cancer care.

Introduction

Electra D. Paskett

Predictors of change in colorectal cancer screening decision stage among participants in a randomly controlled trial of genetic and environmental risk assessment

Ronald E. Myers, Thomas Jefferson University, Philadelphia, PA

Is newer better? Use of technology to encourage cancer screening among various populations

Celette Skinner, University of Texas Southwestern Medical Center, Dallas, TX

Cost-effectiveness of lung cancer screening

James L. Mulshine, Rush Medical College, Rush University, Chicago, IL

The effect of the new screening guidelines on uptake of screening tests

Stephen H. Taplin, National Cancer Institute, Rockville, MD

Concurrent Session 4
NSAIDs and Beyond

Pacific Ballroom C

Chairperson: Ernest T. Hawk, The University of Texas MD Anderson Cancer Center, Houston, TX

NSAIDs are one of the most powerful and broadly applicable classes of drugs available and are already in broad clinical use for a variety of conditions. They have proven efficacy in cancer chemoprevention for colorectal and skin cancers, and preclinical and observational data suggest they may also confer reduced risks for lung, breast, prostate, bladder, and esophageal cancers. However, in addition to their long-established gastrointestinal and renal toxicities, at least some members of this class may confer increased risk of cardiovascular events. Therefore, various attempts to improve the risk:benefit balance of NSAIDs are ongoing.

This session will explore important remaining questions around the use of NSAIDs in cancer chemoprevention by highlighting the work of investigators actively engaged in addressing these questions through more careful selection of agents, more comprehensive considerations of risks and benefits for these agents, novel imaging strategies that allow for more specific targeting of pathways or populations, and agent combinations.

Aspirin for cancer prevention: Are we ready?
Andrew T. Chan, Harvard Medical School/Massachusetts General Hospital, Boston, MA

A novel approach to biomolecular imaging of COX-2

Jashim Uddin, Vanderbilt University School of Medicine, Nashville, TN

Development of NSAID eflornithine combinations for treating cancer risk factors

Eugene W. Gerner, University of Arizona Cancer Center, Oro Valley, AZ

Aspirin-mediated downregulation of Warburg kinase AKT1 in patients with Barrett’s esophagus: Implications in neoplastic transformation*

Catherine J. DeMars, Mayo Clinic, Rochester, MN

*Short talk from proffered paper
Poster Session B
Thursday, October 18 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

**Behavioral and Social Science**

**Diffusion and Dissemination**


**Screening and Early Detection**

B02 Modeling the natural history and detection of lung cancer. **Xing Chen**, Millennia Foy, Marek Kimmel, Olga Y. Gorlova.

B03 Perceived causality of cancer and screening behaviors. **François Eisinger**, Jean-François Morère, Chantal Touboul, Xavier Pivot, Yvan Coscas, Jean-Yves Blay, Christine Lhomel, Jérôme Viguier.


B06 Screening patterns within organized programs of Italian women with invasive cervical cancer. **Antonella Zucchetto**, Guglielmo Ronco, Zambon Paola, Federico Massimo, Diego Serraino, Working Group Impatto Cervice, Paolo Giorgi Rossi, Stefano Ferretti, Marco Zappa, Franco Antonella, Falcini Fabio, Zanetti Roberto, Biavati Patrizia, Stracci Fabrizio.

**Tobacco**


B08 Effectiveness of team-based financial incentives for smoking cessation in the workplace. **Lee Sang Haak**, Yeo Chang Dong, Kim In Kyong, Kang Hye Sun, Lee Hwa Young, Park Chan Kwon, Kim Myung Sook.

**Biomarkers and Early Detection Research**

**Biomarkers of Premalignant Lesions**

B09 Promoter CPG island methylation during progression of atypical hyperplasia to breast cancer. **Joaquina Martinez-Galan**, Juan Ramon Delgado, Rosario Del Moral, Blanca Torres-Torres.

**Cancer Surveillance and Screening**

B10 Design of the DENSE trial: MRI as an additional screening modality to detect breast cancer in women aged 50-75 years with extremely dense breasts. **Marleen Emaus**, Wouter Veldhuis, Marije Bakker, Evelyn Monninkhof, Nico Karssemeijer, Maurice van den Bosch, Petra Peeters, Willem Mali, Carla van Gils.


B13 High-risk patients found affected with breast cancer during a multimodality screening program: Triple negative versus non-triple negative breast cancers. **Filippo Santoro**, Siranoush Manoukian, Clelia de Giacomi, Laura Cortesi, Lorenzo Preda, Stefano Corcione, Francesco Sardanelli.

Poster Session B
Thursday, October 18 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

**Intervention Studies**

**B17** Phase I prevention study of atorvastatin in women at increased risk for breast cancer. Banu Arun, Terri Cornelison, Gabriel N. Hortobagyi, Scott Lippman, Powel H. Brown, nour sneige, Yun Gong, Diane Liu, Jennifer Litton, Angelica Gutierrez-Barrera, Blessy Sajan, Jack J. Lee, Lana A. Vornik.

**B18** Curcum in is an effective chemopreventive substance for betel quid chewer’s oral precancer in Sri Lanka. Itsuo Chiba, Maiko Takeshima, Yoshihiro Abiko, Hiroshi Kobayashi, Malsantha Muthumala, Chihiro Sugiura, Makiko Onodera, Shibata Toshiyuki, Hirofumi Matsuoka, Naoki Kakudate, Shunichi Fukuhara, Toshio Takiguchi.

**Molecular Diagnostics**


**B21** Comparative analysis of peptide nucleic acid (PNA)-mediated real-time PCR clamping and DNA direct sequencing for KRAS mutation detection in malignant effusion. Chan Kwon Park, Chang Dong Yeo, Sang Haak Lee, Hyoung Kyu Yoon, Seung Joon Kim.

**Cell, Molecular, and Tumor Biology**

**Gene Regulation and Transcriptional Control**

**B22** Molecular oncogenesis of NANOG in castration-resistant prostate cancer. Collene R. Jeter, Yue Lu, Bigang Liu, Sally Gaddis, Shoudan Liang, Dean G. Tang.

**B23** Sulforaphenase isofrom 1A1 (SULT1A1) gene expression is regulated by transcription factor NF1 in human breast cancer cell lines. Aiwei Yao-Borengassar, Lora Rogers, Vinay Raj, Susan Kadlubar.


**Inflammation and Cancer Initiation and Promotion**

**B25** Inflammation and cancer: Standardizing biomarkers criteria (data elements) as foundation of a database. M-CSF used as prototype to test data elements. Mahin Khatami.


**Microenvironment**

**B27** Osteoprotegerin’s key role in inflammatory breast cancer: Bane or boon. Sudeshna Goswami, Neelam Sharma-Walia.


**Oncogenes/Tumor Suppressor Genes**

Poster Session B  
Thursday, October 18 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D

Stem Cell Biology


Other

B32 Role of megalin in uptake of 1α,25(OH)2D in colon cancer cells. Elizabeth A. Hibler, Elizabeth T. Jacobs, Peter W. Jurutka.

Chemoprevention and Biological Therapies

Anti-inflammatory Therapy


Biological Agents

B36 Transcriptional targeting of tumor cells with AAV vectors carrying diphtheria toxin A fragment. Hai Feng Chen.


Natural Product-Based Agents


B39 Farnesol blocks STAT3 signaling, proliferation, and survival of multiple myeloma through the protein tyrosine phosphatase SHP-2. Jonghyun Lee, Chulwon Kim, Dongwoo Nam, Hyeung-Jin Jang, Seok-Geun Lee, Won-Seek Chung, Kwang Seok Ahn.


B44 Carnosic acid from rosemary induces degradation of androgen receptor and is critically regulated by the ER stress protein CHOP. Sakina M. Petiwala, Gongbo Li, Jeremy J. Johnson.

B46 The synthesis and evaluation of quinol-containing natural products as cancer chemopreventive agents. Gavin Jones, Geoff Wells.


B48 Anticancer effect of guava leaves (Psidium guajava L.) in prostate cancer cells. Woong Mo Yang, Mi Hye Kim, Sang-Yoon Park, Kwang Seok Ahn, Seok-Geun Lee.


B51 Brassinin suppresses growth and induces apoptosis of prostate cancer through the suppression of PI3K/Akt/mTOR/S6K1 signaling cascades. Min-Ho Nam, Sung-Moo Kim, Dongwoo Nam, Hyeung-Jin Jang, Seok-Geun Lee, Kwang Seok Ahn.

B52 Hydroxychavicol, a major Piper betel constituent, significantly inhibits prostate tumour growth in vitro and in vivo models. Rutugandha Deepak Paranjpe, Sushma Reddy Gundala, Ritu Aneja.


New Molecular Targets/Mechanisms of Drug Action


B56 Activation of Chk1 by Piperine causes cell cycle arrest and apoptosis in melanoma cells. Neel Fofaria, Sanjay K. Srivastava.

B57 STAT3 as a cancer prevention target in colorectal cancer cells. Li Lin, Wenying Yu, Hui Xiao, Wenlong Wang, Chongqiang Zhao, Jiagao Lu, Chenglong Li, Jiayuh Lin.

B58 Dehydroepiandrosterone inhibits the proliferation and migration of cell lines derived from cervical cancer. Yasmin Nansi Ortega Calderon, Piedad del Carmen Gomez Contreras, Rebeca Lopez-Marure.


B61 Paving the way to personalized medicine: Diagnosis, prevention, and treatment of early-stage bone metastatic disease in prostate cancer patients with theranostic radiopharmaceuticals. Suresh C. Srivastava.

B62 microRNAs involve inhibition of tumor progression by nonsteroidal anti-inflammatory drugs. Xiaobo Li, Elizabeth Ezell, Mary M. Fontenot, Gary A. Piazza, Yaguang Xi.

B63 Developing novel STAT3 inhibitors for the treatment and prevention of cancer. Zhengduo Yang, Haijun Chen, Lili Chu, Yusong Zhang, Chunyong Ding, Kristin Terry, Jia Zhou, Qiang Shen.
Poster Session B
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Pacific Ballroom D

Clinical Prevention Trials

Breast Cancer


Colon and Other Gastrointestinal Cancers


Prostate and Other Genitourinary Tract Cancers


Trials in Progress: Clinical Intervention Trials


Epidemiology/Lifestyle Factors

General Epidemiology and Biostatistics

B71 Does hormone replacement therapy or mammography screening affect breast cancer incidence rates in Taiwan? A nationwide cohort study. Eng-Mei Tsai, Po-Huang Chiang, Yen-Chen Chang.

Obesity, Metabolism, and Cancer


B73 Caloric restriction reverses obesity-induced mammary gland inflammation in mice. Priya Bhardwaj, Andrew J. Dannenberg, Baoheng Du, Xi Kathy Zhou, Erika Sue, Michael D. Harbus, Dilip Giri, Clifford A. Hudis, Kotha Subbaramaiah.

B74 Raising healthy youth: Using the Manitoba Youth Health Survey to identify predictive factors of childhood obesity. Jane Griffith, Tannis Erickson, Katherine Fradette, Oliver Bucher, Carly Leggett, Kate McGarry, Elizabeth Harland.
Poster Session B  
Thursday, October 18 • 12:00 p.m.-2:30 p.m.

Pacific Ballroom D


**B78** Adiposity and the IGF-axis in girls during pubertal development. Ellen M. Velie, Zhenzhen Zhang, Jean M. Kerver, Joseph C. Gardiner, Clifford J. Rosen, Joanne F. Dorgan.

**Tobacco and Cancer**


**B81** Risk assessment of tobacco types and oral cancer. Madhuri Taranikanti, Bablu Das.


**Other Molecular Epidemiology**


**B86** Estrogen metabolism and postmenopausal breast cancer risk in the B~FIT cohort. Cher M. Dallas, Ruth Pfeiffer, Barbara J. Fuhrman, Timothy D. Veenstra, Xia Xu, Louise A. Brinton, Jeffrey A. Tate, Diana S.M. Buist, Douglas C. Bauer, James V. Lacey, Jane A. Cauley, Trisha F. Hue, Andrea LaCroix, Roni Falk.

**B87** Acute-phase proteins (C-reactive protein and Serum Amyloid A) and post-diagnosis mammographic density in breast cancer survivors. Anne Dee, Roberta McKeen-Cowdin, Anne McTieman, Richard N. Baumgartner, Kathy B. Baumgartner, Rachel Ballard-Barbash, Leslie Bernstein.

**B88** Common, germline genetic variants in the Wnt/beta-catenin signaling pathway and colorectal cancer susceptibility. Michelle A.T. Hildebrandt, Moubin Lin, Cathy Eng, Scott Kopetz, Yonggang He, Sonny Nguyen, Wenjie Sun, Jie Lin, Ernest Hawk, Xifeng Wu.

**B89** Endogenous hormone levels and lobular involution of the breast among healthy, postmenopausal women in the Komen Tissue Bank Study. Zeina G. Khodr, Daniel Visscher, Carolyn Mies, Stephen Hewitt, Anna Maria Storniolo, Jonine D. Figueroa, Mark E. Sherman, Ruth M. Pfeiffer, Gretchen L. Gierach, Louise A. Brinton, Roni T. Falk, Deesha Patel, Laura Linville, Susan E. Clare.

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Pacific Ballroom D

B91 Genetic variations in the JAK-STAT pathway are associated with postoperative pulmonary complications after lobectomy in lung cancer patients. Xia Pu, Michelle A.T. Hildebrandt, Jae Y. Kim, Yuanqing Ye, Arlene M. Correa, Stephen G. Swisher, Jack A. Roth, Xifeng Wu.


Other Risk Factors

B93 Nonsteroidal anti-inflammatory drugs and all-cause mortality, cancer mortality, and cardiovascular mortality in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial. Sarah E. Daugherty, Sonja I. Berndt, Mark Purdue, Wen-yi Huang.

B94 Hay fever and asthma as markers of atopic immune response and risk of colorectal cancer in three large cohort studies. Eric J. Jacobs, Susan M. Gapstur, Christina C. Newton, Michelle C. Turner, Peter T. Campbell.

B95 Higher breast density is positively associated with larger tumor size and lymph node metastasis: A cross-sectional study of 910 Korean breast cancer patients. Jong won Lee, Ja Young Cho, Sei-hyun Ahn.

B96 Age-related changes in mammographic density and breast cancer risk. Mariette Lokate, Rebecca Stellato, Wouter Veldhuis, Petra Peeters, Carla van Gils.

B97 Vitamin D and mammographic density in postmenopausal women: A cohort study nested within the NCIC CTG MAP3 chemoprevention trial. Melanie Walker, Harriet Richardson, Susan Ellard, Amanda Hey, Andrew Cooke, Andrea Eisen, Shailendra Verma, Lavina Lickley, Dongsheng Tu, Karen Gelmon, Ralph Meyer, Will King, Paul Goss, Doris Jabs, Glinville Jones, Martin Kaufmann, Jean Wachawski-Wende, Angela Cheung, Eric Winquist, Silvana Spadafora.


Other


Preclinical and Translational Prevention Studies

Breast Cancer


B103 Expression of n-3 fatty acid desaturase suppresses tamoxifen-resistant breast cancer in vitro and in fat-1 transgenic mice. Raghunatha Reddy, Ian Bayles, Qiuhong He.

B104 Expressions of PCNA in triple negative breast cancers and their clinical significance. Peng Jiaping, Meng Dun.

B105 Postmenopausal plasma sex hormone levels and subsequent risk of breast cancer over 20 years of follow-up. Xuehong Zhang, Shelley S. Tworoger, A. Heather Eliassen, Susan E. Hankinson.

Colon and Other Gastrointestinal Cancers


Poster Session B
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Pacific Ballroom D


Head and Neck Cancers


Lung Cancer


Pancreatic Cancer

B113 High-fat diet accelerates development of precancerous lesions and fibrosis in mice expressing mutant K-Ras in pancreatic acinar cells. Zobeida Cruz-Monserrate, Bincy Philips, Baoan Ji, Jaroslaw Daniluk, Craig D. Logsdon.


Concurrent Sessions 5-6  
Thursday, October 18 • 2:30 p.m.-4:15 p.m.

Concurrent Session 5  
Global Challenges: Environmental Changes

Pacific Ballroom A

**Chairperson: Thomas W. Kensler**, University of Pittsburgh, Pittsburgh, PA

It is predicted that cancers across the world will increase from about 13 million cases per year now to over 22 million cases per year by 2030. Most of these cancers will occur in Asia and Africa. This rising number of cases is attributable in part to environmental exposures, changing dietary and lifestyle factors, and increasing overall life expectancy. Moreover, patterns of cancer types are changing rapidly in Asia, especially among younger birth cohorts, providing opportunities to better understand their etiologies and approaches for prevention.

This session will bring together experts utilizing population-based cohorts to probe the roles of hepatitis B virus infection and dietary aflatoxin exposure in changing rates of primary liver cancer in the endemic region of Qidong, China; metabolic syndrome, inflammation, and gene-environment interactions in biliary tract cancers in Shanghai, China; and factors influencing the association between chronic arsenic exposure in drinking water and increased incidence of precancerous skin lesions in Bangladesh. Pathways to prevention of these diseases will be highlighted.

**Viral and dietary factors in declining liver cancer mortality in Qidong, China**

**Thomas W. Kensler**

**Arsenic carcinogenesis**

**Maria Argos**, University of Chicago, Chicago, IL

Lifestyle, infection, and genetic factors in relation to biliary tract cancer

**Ann W. Hsing**, Cancer Prevention Institute of California, Fremont, CA

Curcumin is an effective chemopreventive substance for betel quid chewer’s oral precancer in Sri Lanka*

**Itsuo Chiba**, Health Sciences University of Hokkaido, Sapporo, Japan

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Concurrent Session 6  
Recent Results on Mechanisms and Prevention of Tobacco-Induced Cancer

Pacific Ballroom C

**Chairperson: Stephen S. Hecht**, University of Minnesota Masonic Cancer Center, Minneapolis, MN

This session will summarize some important new data that could have significant implications in approaches to prevention of cancers caused by tobacco products. Dr. Hecht will present results of a study in rats that demonstrate the strong oral cavity carcinogenicity of (S)-N’-nitrosonornicotine, a component of smokeless tobacco products, widely used in many parts of the world and significantly penetrating the U.S. market. Dr. Belinsky will discuss epigenetic deregulation of microRNAs during tobacco carcinogen-induced transformation of bronchial epithelial cells, work that provides new insights on mechanisms of lung cancer induction by cigarette smoking. Dr. Spira will present recent results on the effects of cigarette smoking on gene expression in cells of the upper airways, a cutting edge approach to defining interindividual responses to tobacco carcinogens.

**Induction of oral cavity cancer in rats by (S)-N’-Nitrosonornicotine, a constituent of smokeless tobacco**

**Stephen S. Hecht**

Epigenetic deregulation of microRNAs during tobacco carcinogen-induced transformation of bronchial epithelial cells

**Steven A. Belinsky**, Lovelace Respiratory Research Institute, Albuquerque, NM

Translating airway gene-expression into biomarkers of smoking and lung cancer

**Avrum E. Spira**, Boston University School of Medicine, Boston, MA

Exposure to tobacco smoke from husband and breast cancer risk in Japanese women*

**Keiko Wada**, Gifu University Graduate School of Medicine, Gifu, Japan

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*Short talks from proffered papers
Plenary Session 4
Thursday, October 18 • 4:15 p.m.-6:15 p.m.

Genomics and Prevention: Will Genomics Lead to Optimized Cancer Prevention?

Pacific Ballroom C

Chairperson: Timothy R. Rebbeck, University of Pennsylvania School of Medicine, Philadelphia, PA

Enormous progress has been made using leaps in genomic technology, multicenter collaborative research, and knowledge of human genomic variation. Hundreds of validated cancer risk loci have been identified using genome-wide association studies; these data have revealed novel etiological pathways for many cancers. Genomics research has also identified biomarkers that could be used to inform cancer etiology, prognosis, and treatment. Despite this success, there has been concern that genomic information may have limited clinical utility.

In this session, we will explore the potential for genomic information to inform cancer prevention strategies, and identify approaches that may be best suited to optimize the public health impact of genomic information.

The promise of GWAS studies to assess cancer prevention
Stephen J. Chanock, National Cancer Institute, Bethesda, MD

Insights on cancer risk from normal breast tissue gene expression
Melissa Troester, University of North Carolina Lineberger Comprehensive Cancer Center, Chapel Hill, NC

SERM breast cancer prevention pharmacogenomics: Beyond biomarkers
Richard M. Weinshilboum, Mayo Clinic College of Medicine, Rochester, MN

How will genomic information be useful to limit cancer risk behaviors?
Christopher I. Amos, Geisel School of Medicine, Dartmouth College, Lebanon, NH
MEG Town Meeting and Reception
Thursday, October 18 • 6:30 p.m.-8:00 p.m.

Molecular Epidemiology Working Group (MEG)
Town Meeting and Reception

Pacific Ballroom B

Chairperson: James R. Cerhan, Mayo Clinic College of Medicine, Rochester, MN

This is an opportunity for all conference attendees to learn how to become involved in consortia and other large-scale projects, as well as to be updated on the current funding situation for epidemiological studies. Stephen J. Chanock, M.D., Director, Cancer Genomics Research Laboratory, National Cancer Institute, National Institutes of Health, will discuss Involvement in Consortia and Major Projects, particularly for junior professionals. Deborah M. Winn, Ph.D., Deputy Director, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, will provide an update on Funding Opportunities for New and Early-Stage Investigators. Come learn about these and other important MEG initiatives, meet members of the working group and steering committee, in addition to taking advantage of the opportunity to join the MEG Working Group. A networking reception will follow the discussion period.

Speakers:
Stephen J. Chanock, National Cancer Institute, Bethesda, MD
Deborah M. Winn, National Cancer Institute, Rockville, MD

About the AACR’s Molecular Epidemiology Working Group (MEG):
The MEG Working Group is composed of epidemiologists, molecular biologists and geneticists, biochemists, toxicologists, nutritionists, clinical and translational researchers, pathologists, biostatisticians, ethicists, and researchers from any other relevant scientific discipline who are interested in a multidisciplinary approach to the study of cancer and chronic disease etiology, thereby promoting the cure and prevention of cancer and the improvement of public health. The working group promotes the incorporation of molecular and biochemical concepts and techniques into well-designed epidemiologic studies by providing an ongoing forum for the scholarly discussion and development of sound approaches to the conduct and interpretation of molecular epidemiologic studies; by sponsoring scientific and educational programs and activities that will advance the field; and by fostering partnerships and collaborations among scientists in a variety of disciplines encompassed in and related to molecular epidemiology.

BSCR Networking Event
Thursday, October 18 • 6:30 p.m.-8:00 p.m.

Behavioral Science in Cancer Research Working Group Networking Event

California Ballroom B

Members of the Behavioral Science in Cancer Research Working Group (BSCR) and those interested in the field are invited to attend this networking event. Attendees can learn about membership in BSCR and network with colleagues.

About BSCR:
The Behavioral Science in Cancer Research Working Group (BSCR) promotes the scholarly discussion of the role of behavioral science research and the importance of interdisciplinary collaborations in cancer control by bringing together scientists from behavioral science and all cancer research disciplines. Membership in BSCR is open to individuals from any scientific discipline who are interested in working together to increase knowledge about behavioral science as it relates to cancer.
Forum 3
Friday, October 19 • 7:00 a.m.-8:00 a.m.

How to Gain Access to Worldwide Cohorts

Pacific Ballroom C

Chairperson: Mary Beth Terry, Columbia University School of Public Health, New York, NY

Ever want to replicate your exciting finding in 50 people prospectively in 500,000 people? This session will provide an overview on existing cohorts throughout the world for epidemiologic research in cancer. The panel represents and will provide perspectives from the National Cancer Institute and research foundations, as well as users’ perspectives. The scientists will highlight ways to gain access and enhance collaborations with cohorts funded through the National Cancer Institute, initiating studies within existing registries, and accessing resources and cohorts outside of the United States.

Cancer epidemiology consortia and international cohorts: Challenges and opportunities
Daniela Seminara, National Cancer Institute, Bethesda, MD

Worldwide collaborations: The experience of EPIC
Timothy Key, Oxford University, Oxford, United Kingdom

An efficient resource to accelerate research into the cause and prevention of breast cancer: The Love/Avon Army of Women
Leah Wilcox Eshraghi, Dr. Susan Love Research Foundation, Santa Monica, CA

Discussion/Q & A
Plenary Session 5
Friday, October 19 • 8:00 a.m.-10:00 a.m.

Risk Assessment and Early Detection

Pacific Ballroom C

Chairperson: Samir M. Hanash, Fred Hutchinson Cancer Research Center, Seattle, WA

Major inroads to reduce cancer mortality will require a better ability to identify subjects at increased risk of developing cancer, leading to preventive interventions and to the application of effective screening modalities for early detection. Innovations in risk assessment and early detection research through integration of subjects’ characteristics with molecular profiles will be addressed in this session.

A mouse-to-human search for early detection markers
Samir M. Hanash

Translational epidemiology: Towards personalized cancer risk assessment, prevention, and therapy
Xifeng Wu, The University of Texas MD Anderson Cancer Center, Houston, TX

Phenotypic stochasticity and implications for prevention and therapy
Thea Tlsty, UCSF School of Medicine, San Francisco, CA

Pancreatic cancer: The future of risk assessment and early detection
Gloria M. Petersen, Mayo Clinic College of Medicine, Rochester, MN
Concurrent Sessions 7-8
Friday, October 19 • 10:15 a.m.-12:00 p.m.

Concurrent Session 7
Targeting Tumor-Initiating Cells
Pacific Ballroom C

Chairperson: Robert Benezra, Memorial Sloan-Kettering Cancer Center, New York, NY

Cancer heterogeneity has been shown in a number of different tumor types to produce a subset of cells capable of reinitiating disease and recapitulating the original tumor cell diversity, properties which have been likened to bone fide stem cells. In some cases these tumor initiating cells have been shown to be resistant to various modes of therapeutic intervention and therefore represent important targets in the search for more effective treatments.

In this session we will examine and contrast the nature of this tumor cell hierarchy in three different tumor types (glioma, medulloblastoma, and breast) and outline strategies to utilize this information in new drug development schemes.

Understanding the role of stem-like tumor cells in proneural glioma
Robert Benezra

Targeting tumor-initiating cells in medulloblastoma
Robert J. Wechsler-Reya, Sanford-Burnham Medical Research Institute, La Jolla, CA

Chemical-genetic dissection of cancer stem cell biology
Piyush Gupta, Whitehead Institute, Cambridge, MA

Targeting breast cancer stem cells using cancer preventive rexinoids
Powel H. Brown, The University of Texas MD Anderson Cancer Center, Houston, TX

*Short talk from proffered paper

Concurrent Session 8
Molecular Targets for Cancer Prevention
Pacific Ballroom A

Chairperson: Zigang Dong, University of Minnesota Hormel Institute, Austin, MN

Although successful for a limited number of tumor types, the efficacy of cancer therapies remains poor overall. Many believe that this could be avoided by focusing on cancer prevention. During the process of identifying preventive agents, dietary phytochemicals, which are thought to be safe for human use, have emerged as modulators of key cellular signaling pathways. This session will focus on understanding how these chemicals perturb these pathways by modeling their interactions with their target proteins.

Computerized approaches to molecularly-designed drugs and target identification for cancer prevention
Zigang Dong

New strategies for cancer chemoprevention
Vernon E. Steele, National Cancer Institute, Bethesda, MD

Targeting molecular pathways in the tumor microenvironment: A holistic approach for cancer chemotherapy
Rajesh Agarwal, University of Colorado Denver, Aurora, CO

Novel Gemini vitamin D compounds for prevention of breast cancer by targeting stem cells
Nanjoo Suh, Rutgers University Laboratory for Cancer Research, Piscataway, NJ

Closing Remarks
Friday, October 19 • 12:00 p.m.-12:15 p.m.

Pacific Ballroom C