

# Molecular Origins of Lung Cancer: Prospects for Personalized Prevention and Therapy

## Conference Program

### Monday, January 11

**6:00 p.m.-7:30 p.m. Opening Session**

*Commodore ABCD*

**6:00 Welcome and Opening Remarks**

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

**David P. Carbone**, Vanderbilt-Ingram Cancer Center,  
Nashville, TN

**Roy S. Herbst**, UT M. D. Anderson Cancer Center,  
Houston, TX

**6:30 Keynote Address**

*Studying Tumor Evolution in Mouse Models of Lung Cancer*

**Tyler Jacks**, Massachusetts Institute of Technology,  
Cambridge, MA

**7:30 p.m.-8:30 p.m. Welcome Reception**

*Bay Terrace*

### Tuesday, January 12

**7:00 a.m.-8:00 a.m.**

**Continental Breakfast**

*Bay Terrace*

**8:00 a.m.-10:00 a.m.**

**Plenary Session 1**

*Commodore ABCD*

***Tyrosine Kinase Signaling and Targeted Therapy***

Co-Chairpersons: **Matthew L. Meyerson**, Dana-Farber  
Cancer Institute, Boston, MA, and **William Pao**, Vanderbilt  
University, Nashville, TN

**8:00**

*Introduction*

**Matthew L. Meyerson**

**8:15**

*Discovery and clinical application of a novel oncogene, EML4-ALK, in lung cancer*

**Hiroyuki Mano**, Jichi Medical University, Tochigi, Japan

- 8:45      *Overcoming acquired resistance to EGFR inhibitors*  
**Jeffrey A. Engelman**, Massachusetts General Hospital, Charlestown, MA
- 9:15      *Targeting the insulin and insulin-like growth factor receptors: Efficacy and biology*  
**Michael Pollak**, McGill University, Montreal, Quebec
- 9:45      *\*Activation of c-Met by EGFR modulates invasive phenotypes in NSCLC*  
**Austin M. Dulak**, University of Pittsburgh, Pittsburgh, PA

**10:00 a.m.-10:30 a.m.    Break** *Commodore Foyer*

**10:30 a.m.-12:30 p.m.    Plenary Session 2** *Commodore ABCD*  
***Early Detection for Premalignant Lesions and Field Cancerization***  
*Co-Chairpersons: Denise R. Aberle, UCLA David Geffen School of Medicine, Los Angeles, CA, and Elisabeth M. P. Brambilla, Hôpital A. Michallon, Grenoble, France*

- 10:30      *NLST update and biospecimen opportunity*  
**Denise R. Aberle**
- 11:00      *Airway gene expression as a biomarker for lung cancer*  
**Avrum E. Spira**, Boston University Medical Center, Boston, MA
- 11:30      *Histone modification as an early mark of epigenetic change*  
**Elisabeth M.P. Brambilla**, Hôpital A. Michallon, Grenoble, France
- 12:00      *\*Sniffing NSCLC and SCLC using nanoparticle based artificial olfactory system NanoNose*  
**Nir Peled**, University of Colorado Cancer Center, Aurora, CO
- 12:15      *\*Blood-based biomarker profiles for detecting lung cancer*  
**Gina Lee**, David Geffen School of Medicine at UCLA, Los Angeles, CA

**12:30 p.m.-2:30 p.m.    Poster Session A and Lunch** *Commodore E*

**2:30 p.m.-4:30 p.m.    Concurrent Session 1** *Constellation A*  
***Detection and Prevention: From Mouse to Man***  
*Co-Chairpersons: Steven M. Dubinett, UCLA David Geffen School of Medicine, Los Angeles, CA, and Jonathan M. Kurie, UT M. D. Anderson Cancer Center, Houston, TX*

- 2:30 *Personalized, targeted chemoprevention for lung cancer: Is it possible?*  
**Steven M. Dubinett**
- 3:00 *Moving prognostic epigenetic markers for lung cancer into the clinic*  
**Malcolm V. Brock**, Johns Hopkins University, Baltimore, MD
- 3:30 *Preclinical lung cancer chemoprevention models*  
**Robert L. Keith**, University of Colorado Health Sciences Center, Denver, CO
- 4:00 *Novel targets in metastasis prevention*  
**Jonathan M. Kurie**

**2:30 p.m.-4:30 p.m. Concurrent Session 2** *Constellation B*  
**Other Thoracic Cancers (Mesothelioma, Thymic, Neuroendocrine)**  
*Co-Chairpersons: Pierre P. Massion, Vanderbilt-Ingram Cancer Center, Nashville, TN, and Valerie W. Rusch, Memorial Sloan-Kettering Cancer Center, New York, NY*

- 2:30 *Copy number alterations in the pathogenesis of small cell lung cancer*  
**Pierre P. Massion**
- 3:00 *Personalizing novel mesothelioma treatments for conventional and novel therapies*  
**Steven M. Albelda**, University of Pennsylvania, Philadelphia, PA
- 3:30 *Current insights into thymoma and thymic carcinoma*  
**Valerie W. Rusch**
- 4:00 *\*Mouse models to study roles of TSG and signaling pathway in SCLC development*  
**Kwon-Sik Park**, Stanford University, Stanford, CA.
- 4:15 *\*Matching phenotype-genotype interactions identifies mTOR as a druggable molecule in malignant pleural mesothelioma targeted therapeutic approach*  
**Giulia M. Stella**, University of Pavia and Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

**2:30 p.m.-4:30 p.m.**      **Concurrent Session 3**      *Commodore ABCD*  
***JAK/STAT Pathways as Therapeutic Targets***  
*Co-Chairpersons: Eric B. Haura, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, and Tetsuya Mitsudomi, Aichi Cancer Center Research Institute, Nagoya, Japan*

2:30      *Targeting JAK/STAT signaling for cancer therapy*  
**Richard Jove**, City of Hope, Duarte, CA

3:00      *Targeting EGFR, Src, and Stat3 pathway for cancer therapy*  
**James Turkson**, University of Central Florida, Orlando, FL

3:30      *Targeting STATs for the molecular therapy of lung cancer: Translation from the lab to the clinic*  
**David A. Frank**, Dana-Farber Cancer Institute, Boston, MA

4:00      *JAK activation as a mechanism for resistance to c-Src inhibition in NSCLC*  
**Faye M. Johnson**, UT M. D. Anderson Cancer Center, Houston, TX

**4:30 p.m.-6:00 p.m.**      **Advocacy, Regulatory, and Funding Issues**      *Commodore ABCD*  
*Co-Chairpersons: Kim Norris, Lung Cancer Foundation of America, Palos Verdes Estates, CA, and Debra A. Violette, Dana-Farber Lung SPORE, Lung Cancer Alliance, Augusta, ME*

4:30      *Title TBD*  
**Lori Monroe**, Lung Cancer Foundation of America, Bowling Green, KY

5:00      Panel Discussion

## Wednesday, January 13

**7:00 a.m.-8:00 a.m.**      **Continental Breakfast**      *Bay Terrace*

**8:00 a.m.-10:00 a.m.**      **Plenary Session 3**      *Commodore ABCD*  
***Cancer Stem Cells***  
*Co-Chairpersons: Stephen B. Baylin, Sydney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD, and John D. Minna, UT Southwestern Medical Center, Dallas, TX*

- 8:00      *Lung cancer stem cells: Identification and translation to the clinic*  
**John D. Minna**
- 8:30      *Epigenetic therapy, cancer self-renewing cells, and lung cancer*  
**Stephen B. Baylin**
- 9:00      *Lung cancer stem cells and the cytokine network*  
**Vera Levina**, University of Pittsburgh Cancer Institute, Pittsburgh, PA
- 9:30      *\*Lung cancer cells asymmetrically divide their template DNA strands during cell division*  
**Brid M. Ryan**, National Cancer Institute, Bethesda, MD
- 9:45      *\*Targeting Rac1 GTPase benefits both human lung adenocarcinoma stem cell and non-stem cell therapies*  
**Shailaja Akunuru**, Children's Hospital Research Foundation, University of Cincinnati, Cincinnati, OH

**10:00 a.m.-10:30 a.m.    Break**

*Commodore Foyer*

**10:30 a.m.-12:30 p.m.    Plenary Session 4**

*Commodore ABCD*

***Genome-wide Approaches to Risk***

*Co-Chairpersons: Bruce A. J. Ponder, CRUK, Cambridge Research Institute, Cambridge, UK, and Margaret R. Spitz, UT M. D. Anderson Cancer Center, Houston, TX*

- 10:30      *Genome-wide approaches to risk: Lessons from breast and prostate*  
**Bruce A. J. Ponder**
- 11:00      *Convergence of genetic findings for nicotine dependence and lung cancer*  
**Laura J. Bierut**, Washington University School of Medicine, St. Louis, MO
- 11:30      *COPD Gene: Risk factors for COPD and lung cancer*  
**James D. Crapo**, University of Colorado Health Sciences Center, Denver, CO
- 12:00      *Identifying causal factors for lung cancer by genome wide studies*  
**Christopher I. Amos**, UT M. D. Anderson Cancer Center, Houston, TX

**12:30 p.m.-2:30 p.m.                      Lunch (on own)**

**2:30 p.m.-4:30 p.m.**      **Concurrent Session 4**      *Constellation A*  
***Lung Cancer Profiling with microRNAs***  
Co-Chairpersons: Glen J. Weiss, Translational Genomics  
Research Institute, Phoenix, AZ, and Ignacio I. Wistuba, UT  
M. D. Anderson Cancer Center, Houston, TX

- 2:30      *Application of miRNAs in the treatment of lung cancer*  
**Glen J. Weiss**
- 3:00      *MicroRNA alterations in the pathogenesis of lung cancers*  
**Takashi Takahashi**, Nagoya University Graduate School of Medicine,  
Nagoya, Japan
- 3:30      *MicroRNA binding site SNPs and lung cancer risk*  
**Joanne B. Weidhaas**, Yale University School of Medicine, New Haven,  
CT
- 4:00      *\*The role of microRNA 125a-3P in the pathogenesis of lung cancer*  
**Saswati Hazra**, David Geffen School of Medicine at UCLA, Los Angeles, CA
- 4:15      *\*MicroRNA affinity assay*  
**Simon Spivack**, Albert Einstein College of Medicine, Bronx, NY

**2:30 p.m.-4:30 p.m.**      **Concurrent Session 5**      *Constellation B*  
***Mouse Models of Lung Cancer***  
Chairperson: Kwok-kin Wong, Dana-Farber Cancer Institute,  
Boston, MA

- 2:30      *The use of genetically engineered mouse lung cancer models for  
preclinical testing of novel therapeutics*  
**Kwok-kin Wong**
- 3:00      *The multiple roles of Kras in mouse epithelial cancer development*  
**Minh D. To**, UCSF Comprehensive Cancer Center, San Francisco, CA
- 3:30      *Preclinical evaluation of genetically engineered mouse models of NSCLC  
and SCLC*  
**Leisa Johnson**, Genentech, Inc., South San Francisco, CA
- 4:00      *\*BRAF deletion and pharmacologic inhibition enhance KRAS-driven  
tumorigenesis*  
**Christopher L. Murriel**, Genentech, Inc., South San Francisco, CA
- 4:15      *\*Novel lung cancer model mediated by lentiviral gene delivery*  
**Yifeng Xia**, Salk Institute for Biological Studies, La Jolla, CA

**2:30 p.m.-4:30 p.m.**      **Concurrent Session 6**      *Commodore ABCD*  
***Other Biomarkers***  
*Co-Chairpersons: David P. Carbone, Vanderbilt-Ingram Cancer Center, Nashville, TN, and Fred R. Hirsch, University of Colorado Cancer Center, Aurora, CO*

- 2:30      *Proteomics-based biomarker development in NSCLC*  
**David P. Carbone**
- 3:00      *Gene copy number for EGFR and IGF-1R: Clinical implications*  
**Fred R. Hirsch**
- 3:30      *Prognostic and predictive biomarkers for adjuvant chemotherapy*  
**Ming Sound Tsao**, Princess Margaret Hospital, Toronto, Canada
- 4:00      *\*High-throughput protein biomarker discovery and translation into clinical diagnostics for oncology using the SomaLogic SOMAmer-based assay*  
**Rachel Ostroff**, SomaLogic, Inc., Boulder, CO
- 4:15      *\*Gene expression changes in the bronchial airway epithelium of smokers with lung cancer may reflect common pathways of tobacco-related carcinogenesis*  
**Adam C. Gower**, Boston University, Boston, MA

**4:30 p.m.-6:30 p.m.**      **Poster Session B and Reception**      *Commodore E*

## Thursday, January 14

**7:00 a.m.-8:00 a.m.**      **Continental Breakfast**      *Bay Terrace*

**8:00 a.m.-10:00 a.m.**      **Plenary Session 5**      *Commodore ABCD*  
***Angiogenesis and the Tumor Microenvironment***  
*Co-Chairpersons: Roy S. Herbst, UT M. D. Anderson Cancer Center, Houston, TX, and Joan H. Schiller, UT Southwestern Medical Center, Dallas, TX*

- 8:00      *Antiangiogenic agents in the clinic: Are we there yet?*  
**Joan H. Schiller**
- 8:30      *Molecular signature for bevacizumab in E4599*  
**Heinz-Josef Lenz**, USC/Norris Comprehensive Cancer Center, Los Angeles, CA



- 9:00      *Contrasting effects of different antiangiogenic drugs (TKIs and antibodies) on early- vs. late-stage metastatic disease*  
**Robert S. Kerbel**, Sunnybrook Health Sciences Centre, Toronto, Canada
- 9:30      *\*Phase II studies of ASA404 (vadimezan, DMXAA) plus carboplatin and paclitaxel in advanced squamous and nonsquamous non-small cell lung cancer: Blood and lymphatic adverse events*  
**M. J. McKeage**, The University of Auckland, Auckland, New Zealand
- 9:45      *\*Identification of tumor cell-derived factors associated with resistance to anti-VEGF therapy in non-small cell lung cancer*  
**Laura A. Sullivan**, University of Texas Southwestern Medical Center, Dallas, TX

**10:00 a.m.-10:30 a.m.    Break**

*Commodore Foyer*

**10:30 a.m.-12:30 p.m.    Plenary Session 6**

*Commodore ABCD*

***Drug Design and New Targets***

*Co-Chairpersons: Nagahiro Saijo, Kinki University School of Medicine, Osaka-Sayama, Japan, and David R. Gandara, UC Davis Cancer Center, Sacramento, CA*

- 10:30      *Personalized therapeutic approaches for advanced NSCLC: The MDACC BATTLE program*  
**Roy S. Herbst**, UT M. D. Anderson Cancer Center, Houston, TX
- 11:00      *Personalizing chemotherapy for advanced NSCLC*  
**David R. Gandara**
- 11:30      *New targets for chemoprevention and therapy for lung cancer*  
**Scott M. Lippman**, UT M. D. Anderson Cancer Center, Houston, TX
- 12:00      *New target discovery: A drug company perspective*  
**Mace L. Rothenberg**, Pfizer, Inc., San Diego, CA

\*Indicates proffered presentation from selected abstracts