

#### Strategic Leadership to Hasten Progress in Cancer Research

Report to the National Cancer Advisory Board

Peter A. Jones, Ph.D., D.Sc. President, AACR

Bethesda, MD February 7, 2006

#### **AACR Mission**

To Prevent and Cure Cancer
Through Research, Communications,
Education, and Collaborations

## **AACR's Unique Niche**

- World's collective brain trust in all areas of cancer research
- Leader and innovator in basic, translational, and clinical research, population science
- Facilitator of integrative cancer science and crossdisciplinary interactions
- Authoritative source and voice of cancer research worldwide

## **AACR Driving the Scientific Agenda**

- Identify and promote new promising research opportunities, interventions, and strategies to hasten progress
- Engage in synergistic partnerships, both national and international
- Foster creativity and innovation in cancer research through various mechanisms
  - Scientific Think Tanks

Annual Meetings

Task Forces

Special Conferences

Scientific Committees

Publications & Website

Scientific Working Groups



#### **Council of Scientific Advisors**

- 12-15 top scientists
- Charge:
  - Review the status of cancer research and evaluate progress to date
  - Identify scientific opportunities and challenges
  - Consider ways to address national policy impediments
  - Propose new strategies for implementation
- Make recommendations to the AACR Officers and Directors, and AACR Foundation Board of Trustees

#### **AACR and NCI**

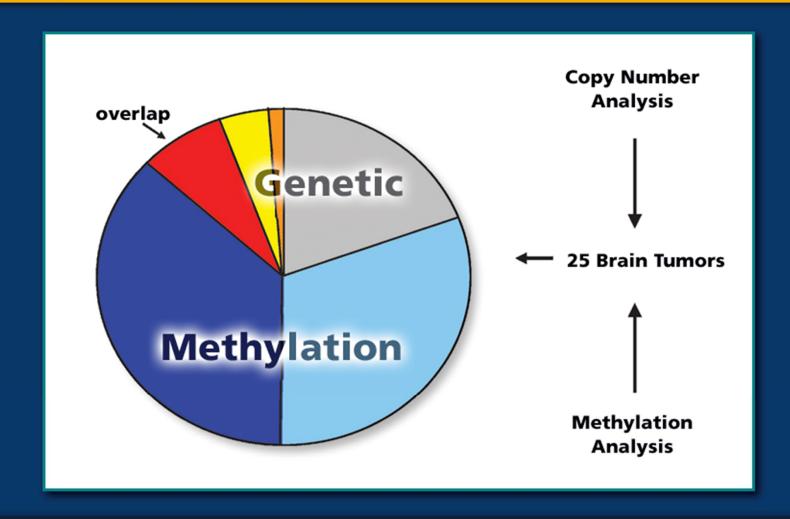
# A Shared Vision to Hasten Progress in Cancer Research

### **Human Epigenome**

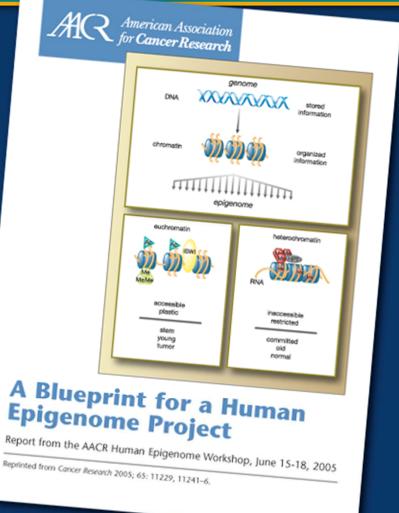
#### Human Epigenome Workshop - June 15-18, 2005 Peter A. Jones and Rob Martiennsen, Co-Chairpersons

- Epigenetic mechanisms outnumber the genetic mutations that lead to cancer
- High-throughput technologies are now available to examine epigenetic modifications on a genome-wide basis
- AACR is fostering progress by forming a Task Force to address this area internationally

## **Epigenetic Effects on Cancer**



# Blueprint for a Human Epigenome Project

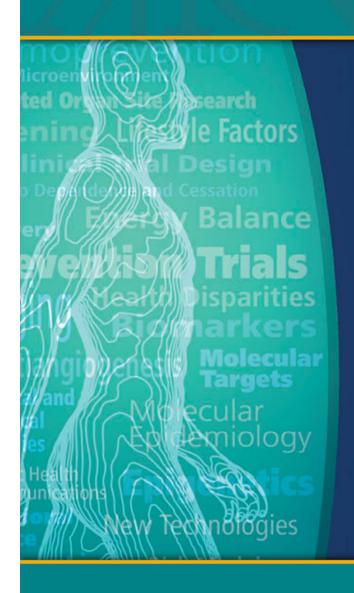


#### **Cancer Stem Cells**

#### Cancer Stem Cells Workshop - February 1-4, 2006 Michael F. Clarke and Geoffrey M. Wahl, Co-Chairpersons

- Goal: To uncover the relationship between stem cells and cancer and to identify opportunities for future development and clinical applications
- Topics included: cancer stem cell origin, identification, and assays; interactions with niche; mechanisms of plasticity; self-renewal pathways; genomics and epigenomics; targeting cancer stem cells with novel therapies

#### **Cancer Prevention**

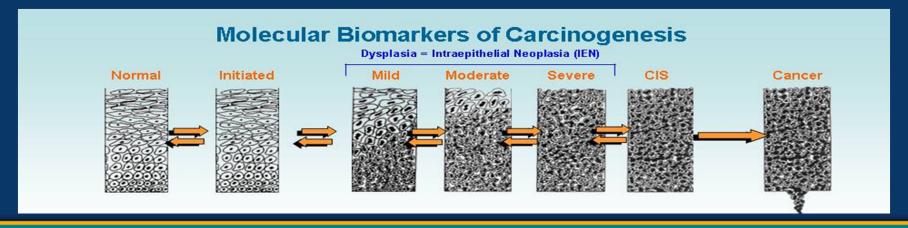


- AACR International Conference on Frontiers in Cancer Prevention Research, the world's most comprehensive, transdisciplinary cancer prevention meeting
- Cancer Epidemiology, Biomarkers & Prevention – 484 articles, 2,912 pages published in 2005
- Cancer Prevention Website in development
- Cancer Prevention Task Force

# Prevention of Precancers: A New Front in the War on Cancer

- First paper published in February 2002 in *Clinical* Cancer Research
- Sequel written by AACR
   Cancer Prevention Task
   Force to be submitted to
   Clinical Cancer Research in
   February 2006
- Title: Progress in Chemoprevention
   Drug Development: The Promise of
   Molecular Biomarkers for Treatment
   and Prevention of IEN and Prevention
   of Cancer

A Plan to Move Forward

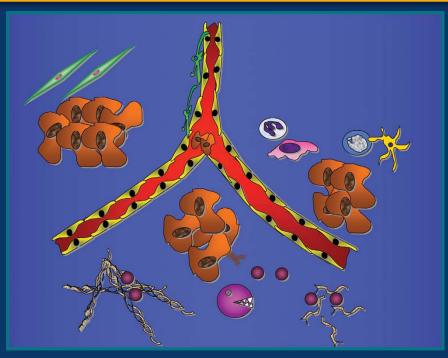


## Cancer Immunology

- Cancer Immunology Task Force
- AACR Special Conference on Tumor Immunology: An Integrated Perspective (October 4-8, 2006 in Miami, FL)
- Recently appointed a leading immunologist as liaison to the External Immunology Expert Steering Committee and NCI
- Planning a joint Think Tank with NCI on inflammation and cancer, possibly leading to a larger meeting

#### **Tumor Microenvironment**

- Several AACR conferences have covered this topic
- Tumor Microenvironment
   Working Group to be
   cosponsored by the
   International Cancer
   Microenvironment Society
   and the Metastasis Research
   Society
- 4th International Conference on Tumor Microenvironment, March 6-10, 2007
- A relationship with the AACR Tumor Microenvironment Working Group and NCI Tumor Microenvironment Network would be synergistic



#### Clinical and Translational Research

- Annual Meeting and other conferences
  - Translational Cancer Research Meeting in China (2006)
  - Organ site meetings in Japan (2006 and beyond)
  - Translational Cancer Medicine meeting in Singapore (2007)
- Chemistry in Cancer Research Working Group
- Biostatistics in Clinical Trials
  - Section in Clinical Cancer Research
  - Statistics in Cancer Medicine Task Force

#### Clinical and Translational Research

- Award for Outstanding Team Science
- Collaborations with industry opportunities for synergy
  - Industry Advisory Council (since 1998)
  - AACR-Industry Roundtable
- Clinical Translational Cancer Research Steering Committee – leading to the formation of AACR Clinical Translational Research Working Group
- AACR members serving on the NCI Clinical Trials Working Group and the NCI Translational Research Working Group

#### Other AACR Scientific Focus Areas

- Cancer Disparities
- Systems Biology
- Biomarkers
- Advanced technologies
- Standardization in bioinformatics

- Behavioral Science and Cancer
- Aging and Cancer
- Hematologic Malignancies
- Pediatric Oncology

## 97th AACR Annual Meeting

- The world's foremost venue for the presentation of cancer science and medicine
- Basic, translational, and prevention research
- New: Special Plenary Session on Breakthroughs in Clinical Research
- 17,000 attendees projected
- Unique opportunity for crossdisciplinary interactions and networking with colleagues

Daniel A. Haber, M.D., Ph.D.
Program Committee Chairperson
Professor of Medicine
Director, Massachusetts
General Hospital Cancer Center





Washington Convention Center Washington, DC April 1-5, 2006

# Intense Public Interest in the Annual Meeting

- Over 3,500 total reports
- Stories in the top 30 national daily newspapers
- Over 3.2 billion combined readership



# **AACR-NCI-EORTC International Conference Molecular Targets and Cancer Therapeutics**

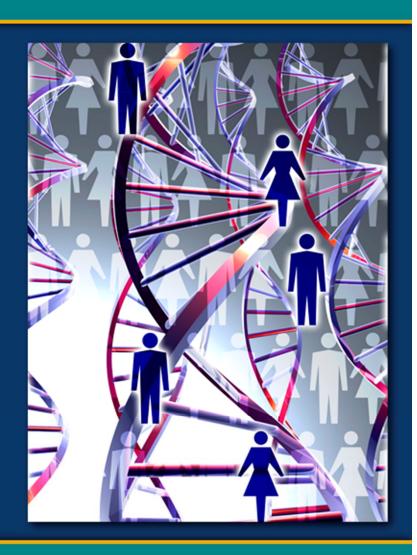
- Conference series started in 1999
- 3,300 attendees from around the world
- The world's most important translational cancer research meeting



Pennsylvania Convention Center
Philadelphia, PA
November 14-18, 2005

# New AACR Meeting: Molecular Diagnostics in Cancer Therapeutic Development

- David Sidransky, M.D.
   Chairperson, Program Committee
- September 12-15, 2006
   Hyatt Regency Chicago
   Chicago, IL
- Emphasis on maximizing opportunities for individualized treatment



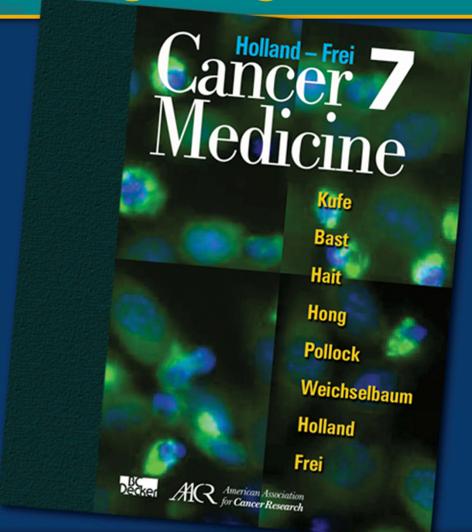
## AACR Special Conferences: Promoting New Directions in Science



#### Frontiers in Basic Cancer Science

- 2008 marks the 20<sup>th</sup> Anniversary of the Special Conference Series
- A new AACR meeting on Frontiers in Basic Cancer Science is scheduled to coincide with it
- Latest developments in basic science in all fields relevant to cancer
- Excellent networking opportunity for young investigators

# AACR Launches Book Publishing Program in 2006



## **AACR Educational Workshops**

- Methods in Clinical Cancer Research\*
- Molecular Biology in Clinical Oncology\*
- Pathobiology of Cancer\*
- Accelerating Anticancer Agent Development and Validation



- Science Driving New Therapies in Cancer Medicine
- Cancer Biostatistics (2007)
- Molecular Epidemiology (in development)

<sup>\*</sup>Supported by generous grants from the National Cancer Institute

## Partnerships with Cancer Survivors and Patient Advocates

- Scientist
   ← Survivor Program launched in 1997
- Special Educational Workshop for survivors and patient advocates launched in 2005
- Website portal for survivors and patient advocates
- AACR Consumer Cancer Magazine, *CR*—promotes collaborations
   between scientists and advocates that lead to results for cancer patients

Launch date: March 31, 2006



# AACR Science Policy and Legislative Affairs

- Advocate for sufficient appropriations to sustain scientific momentum
- Retain the authorities of the NCI
- Articulate the economic and human cost of cancer to legislators and the public
- Work with the FDA to achieve the goals of the Critical Path Initiative and the molecular assays project
- Develop position statements on science and policy issues e.g., Big science/small science
- DC office for government relations to be opened in 2006

Ensure that cancer remains a national priority!!

#### **AACR-LAF National Poll Results**

40% of all living Americans will have cancer in their lifetimes, increasing to 50% by 2010.

Are we doing enough to fund cancer research?

YES, we are doing enough 19%

NO, we are not doing enough 72%

Don't know/NA 9%

#### **AACR-LAF National Poll Results**

Would you favor or oppose increasing Federal funding for cancer research?

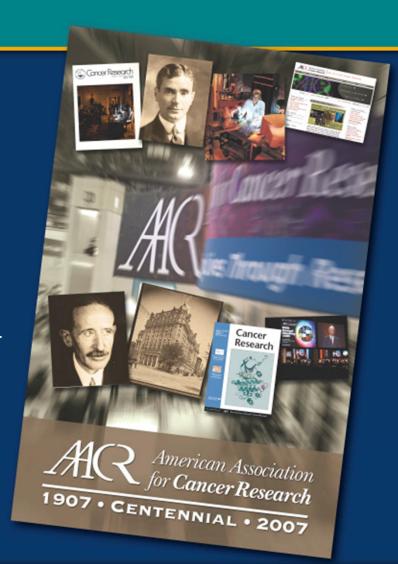
Strongly favor	52%
Somewhat favor	28%
Somewhat oppose	9%
Strongly oppose	8%
Don't know	4%

# New AACR Program: Expedited Funding for Innovative Cancer Research

- Place emphasis on projects of the highest payoff
- Offer a speedy and efficient peer review process
- Leverage significant new funding from industry and individuals for critical scientific projects
  - V Foundation-AACR Grants in Translational Cancer Research
  - New AACR-Jeannik M. Littlefield Fund for Metastatic Colon Cancer Research

#### **AACR Centennial**

- Established in 1907 as the first organization in the world dedicated to conquering cancer
- AACR Centennial in 2007 will mark the milestones of the last 100 years in cancer research
- Numerous national and international events for scientists, the public, cancer centers, and legislators are planned to emphasize the mission of the AACR
- Work with NCI to put the spotlight on the value of cancer research and its impact on the cancer patient/survivor



# AACR and NCI: A Shared Vision for Progress

- Major opportunities today for changing the face of cancer
- The pace of scientific discovery is remarkable
- We are now poised to engage in "breakthrough thinking" about the next wave of progress

We value our partnership with NCI and will work tirelessly to achieve our common goal to hasten the prevention and cure of cancer!!