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WELCOME

## DELIVERING CURES THROUGH CANCER SCIENCE

We are pleased to present the 2016 Annual Report of the American Association for Cancer Research (AACR). The report highlights the AACR's steadfast progress during the past year in support of our mission: to prevent and cure cancer through research, education, communication, and collaboration. The theme of the AACR Annual Meeting 2016, "Delivering Cures through Cancer Science," is also the theme of this report. The report outlines all of the ways in which AACR programs and initiatives support the full spectrum of cancer research and focus the efforts of the entire cancer community on improving the lives of cancer patients.

By any measure, 2016 was a spectacular year for the AACR. Throughout the year, leading AACR members provided thought leadership to Vice President Joe Biden's National Cancer Moonshot Initiative. The AACR Annual Meeting 2016 was the largest ever, as more than 19,400 members of the cancer community gathered in

New Orleans to share the latest advances across the full spectrum of cancer research. AACR Project GENIE delivered on its promise to catalyze clinical and translational cancer research through data sharing, making freely available one of the largest real-world cancer genomic data sets ever released. And AACR's scientific publishing program celebrated 100 years of disseminating the most innovative cancer science.

As we look back on a year of exciting progress against cancer, we thank the members of the cancer community who worked together with the AACR in pursuit of our mission. And as we prepare to celebrate the AACR's 110th anniversary in 2017, we look forward to continuing these collaborations in the coming year and beyond.

We are driving progress against cancer. We are realizing the promise of research. We are delivering cures through cancer science.

NANCY E. DAVIDSON, MD AACR President 2016-2017

MARGARET FOTI, PHD, MD (HC)

JOSÉ BASELGA, MD, PHD, FAACR



Left to right:

#### PROGRESS AGAINST CANCER IN 2016

## DRIVEN BY RESEARCH

"Everything we know today about how to take care of people with cancer is built on decades of research. Today's research is the foundation for tomorrow's standard therapy," explained 2016-2017 AACR President Nancy E. Davidson, MD, in the AACR Cancer Progress Report 2016.

Basic research deepens our fundamental understanding of the complexities of cancer, establishing a vital foundation for future progress. It improves survival and quality of life for people around the world because it powers the development of new and better ways to prevent, detect, diagnose, treat, and cure many of the diseases known as cancer. As a result of research advances, the U.S. Food and Drug Administration (FDA) approved seven new medical products for use in oncology—three new anticancer therapeutics, one new cancer screening test, one new diagnostic test, and two new diagnostic imaging agents—in 2016 alone. During this time, the FDA also approved new uses for 10 previously approved anticancer therapeutics.

Five of the FDA approvals in 2016 were for drugs that harness the power of a patient's immune system to treat his or her cancer. These revolutionary treatments are improving survival for patients with an increasingly diverse array of cancers, including Bob Ribbans (near right) Philip **Prichard** (far right). In 2016, the FDA doubled the number of cancers for which immunotherapeutics that release brakes on

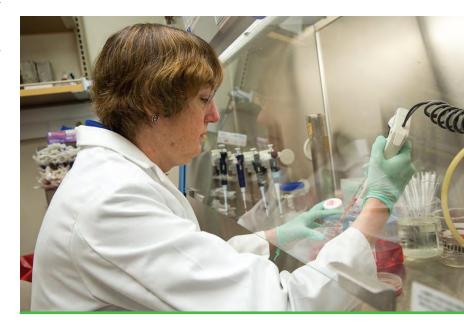
the immune system are approved treatments As of December 31, 2016, these therapies are approved for treating bladder cancer, head and neck cancer, Hodgkin lymphoma, kidney cancer, lung cancer, and melanoma.

Seven of the FDA approvals in 2016 were for drugs that target specific molecules involved in cancer, referred to as molecularly targeted therapeutics. Two of these drugs olaratumab (Lartruvo) and venetoclax (Venclexta)—target cancer in new ways. These approvals highlight how an increasing knowledge of cancer biology can lead to new treatment approaches, providing more patients the opportunity to live longer, higher-quality lives after a cancer diagnosis than ever before.

The AACR is proud to have helped catalyze the progress made against cancer in 2016 through its many programs, services, and initiatives. For example, results from the clinical trial that led to the November 2016 FDA approval of the immunotherapeutic nivolumab (Opdivo) for treating certain patients with head and neck cancer were first disseminated among scientists at the AACR Annual Meeting 2016.

With the number of cancer cases diagnosed in the United States rising every year, it is vital that the AACR increases public awareness about cancer and the importance of research for improving health and saving lives from cancer. The annual AACR Cancer Progress Report is a cornerstone of these educational efforts and the AACR's work to advocate for increased funding for the federal agencies that are vital for fueling progress against cancer, in particular, the National Institutes of Health (NIH), National Cancer Institute (NCI), and FDA.

The AACR Cancer Progress Report 2016 achieves these goals by chronicling how federally funded research fueled progress against cancer in 2016. The report also highlights key recommendations of the National Cancer Moonshot Initiative Blue Ribbon Panel for accelerating the pace of progress in cancer research in the future.



As Dr. Davidson noted in the AACR Cancer Progress Report 2016, "This is an amazing time scientifically for us; the momentum couldn't be greater."



PHILIP PRICHARD Cancer Survivor

A featured survivor in the *AACR* Cancer Progress Report 2016, Philip Prichard was diagnosed with kidney cancer that eventually spread throughout his body. Surgery to remove a tumor on his adrenal gland had to be canceled when the surgeon discovered additional tumors in his abdomen and liver and around his vena cava.

It looked as if chemotherapy was my only option, but it offered me no hope. So my wife and I decided we would get a second opinion....[The doctor] told us about a clinical trial testing a new drug that would turn on my immune system to fight the cancer.... I started receiving nivolumab...and was treated every two weeks. Within a month or so, I began feeling better.... After the first 3 months, scans showed that the tumors had reduced by 30 percent.... My spirit has lifted even more with every scan since, because each one showed that the tumors were shrinking more and more.

> I'm living proof that immunotherapy works, and I can't stress enough how much the research funding that led to drugs like nivolumab means to me. Nivolumab gave me hope again. I can live life and see the future.



## NATIONAL CANCER MOONSHOT INITIATIVE BRINGING AACR THOUGHT LEADERSHIP TO THE MOONSHOT



The progress and promise of cancer research were focal points of the national conversation throughout 2016—and the AACR was the authoritative voice in that conversation. The discussion was sparked by Vice President Joe Biden, whose son, Beau, died of brain cancer in May 2015. In October of that year, Biden announced that he would forgo a run for the presidency in order to dedicate his energy to "a moonshot in this country to cure cancer... an absolute national commitment to end cancer as we know it today."

Inspired by the vice president's passion, President Obama announced the launch of the National Cancer Moonshot Initiative in his January 2016 State of the Union address and appointed Biden to lead it. Galvanized by this challenge from the White House, the cancer research community spent 2016 engaging with the vice president to determine how national resources could best be applied to foster a decade's worth of progress against cancer in five years.

Even before the announcement of the National Cancer Moonshot Initiative, the AACR provided thought leadership to the White House on the current state of cancer research, on ways to advance regulatory science to speed innovation, on efforts to make more therapies available to more patients, and on the importance of cancer prevention and detection. Since the launch

of Biden's initiative, AACR members, leaders, and staff have worked to shape and realize the vice president's vision.

#### TIMELINE: THE AACR'S SUPPORT OF THE CANCER **MOONSHOT**

• January 8: AACR Leaders Visit Vice **President's Office.** The week before the State of the Union Address, a group of 15 AACR members—led by 2015-2016 AACR President José Baselga, MD, PhD, FAACR, and comprising several AACR board members and leaders from 10 of the top cancer centers and medical institutions in the U.S.—met with Vice President Biden's senior staff. The agenda included a discussion of the state of cancer research and the vice president's commitment to ending cancer.





## "I believe we need a moonshot in this country to cure cancer[,] ...

## an absolute national commitment to end cancer as we know it today.

- VICE PRESIDENT JOE BIDEN ROSE GARDEN ADDRESS, OCTOBER 21, 2015

- January 12: President Obama Announces
  Cancer Moonshot Initiative. During
  his State of the Union Address, President
  Obama announced the launch of a "new
  national effort" to cure cancer. He also
  stated that the initiative would be led by
  Vice President Biden.
- January 19: AACR Leaders Participate in "A Call to Action." Vice President Biden convened a special session at the World Economic Forum in Davos, Switzerland, Titled "Cancer Moonshot: A Call to Action," the session brought together international leaders in the cancer community to discuss opportunities to advance the pace of progress in the fight against cancer. The panel discussion, moderated by NIH Director Francis S. Collins, MD, PhD, featured the 2015-2016 president of the AACR, José Baselga, MD, PhD, FAACR, and two AACR past presidents, Charles L. Sawyers, MD, FAACR, and Nobel Laureate Elizabeth Blackburn, PhD, FAACR. Vice President Biden highlighted the importance of datasharing initiatives to the mission of the Moonshot, citing AACR Project GENIE during his opening remarks at the session.



 April 4: AACR Members Are Appointed to Blue Ribbon Panel. The NCI established a Blue Ribbon Panel to inform the scientific direction and goals under the vice president's national cancer initiative. The panel was established as a working group of the presidentially appointed National Cancer Advisory Board to provide scientific guidance from thought leaders in the cancer community. The 28-member panel included 20 members of the AACR, including two past presidents, three fellows of the AACR Academy, and three members of the board of directors. The AACR also hosted one of the first meetings of the panel at AACR Annual Meeting 2016.

- April 20: Vice President Biden Addresses AACR Annual Meeting.
- Vice President Biden addressed more than 4,000 attendees at the closing of the AACR Annual Meeting 2016, thanking the assembled researchers for devoting their lives to cancer research and encouraging them to share their ideas to accelerate progress against cancer. Biden discussed the importance of removing barriers, fostering collaboration, and realigning incentives in cancer research to better serve patients.
- June 1: AACR Provides Guidance to Blue Ribbon Panel. The AACR organized a special session that connected AACR leaders—including young and early-stage investigators and minority researchers—with members of the NCI Blue Ribbon Panel. Moderated by 2016-2017 AACR President Nancy E. Davidson, MD, the session gave these underrepresented members of the cancer research community an opportunity to share their perspectives with the panel.



• June 28: AACR Hosts Congressional Briefing. To inform lawmakers about the progress of the Cancer Moonshot Initiative, the AACR hosted a congressional briefing in the Dirksen Senate Office Building. Titled "Seizing Today's Opportunities to Accelerate Cancer Research," the briefing featured remarks by AACR CEO Margaret Foti, PhD, MD (hc), AACR President Nancy Davidson, MD, and NCI Acting Director Douglas Lowy, MD. The briefing also featured a panel discussion in which five early-career investigators discussed ways to achieve the Moonshot's goal of accomplishing a decade's worth of progress against cancer in five years.



• June 29: AACR Leaders Attend Cancer Moonshot Summit. AACR President Nancy E. Davidson, MD, and CEO Margaret Foti, PhD, MD (hc) participated in the Cancer Moonshot Summit at the White House. During the summit, the U.S. Food and Drug Administration (FDA) announced that it would establish an Oncology Center of Excellence (OCE) and appointed Richard Pazdur, MD, as its acting director. On behalf of the AACR membership, Drs. Davidson and Foti applauded the announcement and called for the FDA to appoint Dr. Pazdur as the OCE's permanent director.



• September 7: Blue Ribbon Panel Report Is Released. The Cancer Moonshot Blue Ribbon Panel released its report during the National Cancer Institute's National Cancer Advisory Board Meeting. The report outlined 10 programs and initiatives "that are poised for acceleration and that could unleash new cancer

- breakthroughs if implemented." The AACR expressed its support for the report's recommendations and called on Congress and the administration to begin the work of securing the funding necessary to support these significant scientific opportunities.
- October 17: President Obama Receives
  Moonshot Report. Vice President Biden
  delivered the Cancer Moonshot report
  to President Obama in the Oval Office
  and presented it to the American public.
  In a ceremony at the White House, the
  vice president and his wife, Dr. Jill Biden,
  also addressed individuals representing
  the federal and private sector cancer
  communities, many of whom contributed
  new efforts to advance progress toward
  Moonshot goals. CEO Margaret Foti,
  PhD, MD (hc), represented the AACR's
  members and leadership at the event.
- December 7: Funding Is Approved for the "Beau Biden Cancer Moonshot." Funding for the National Cancer Moonshot Initiative was secured when the U.S. Senate approved the 21st Century Cures Act. President Obama signed the Act into law on December 13, in a ceremony attended by AACR

CEO Margaret Foti, PhD, MD (hc). The legislation establishes an NIH Innovation Account that includes \$1.8 billion in supplemental funding over seven years to fund Moonshot projects and initiatives. The first installment of \$300 million from 21st Century Cures has been provided as part of the fiscal year 2017 continuing resolution. An amendment to the legislation prior to Senate approval renamed the cancer portion of the law the Beau Biden Cancer Moonshot in honor of the vice president's son, Beau.



## LOCAL OUTREACH, GLOBAL IMPACT



The AACR Annual Meeting is the critical driver of scientific progress against cancer. For the fourth consecutive year, the meeting hosted a record number of attendees. More than 19,400 scientists, clinicians, patients, and advocates from 74 countries gathered in New Orleans to define and discuss the frontiers of innovative cancer science for the benefit of cancer patients.

#### BRINGING THE CANCER RESEARCH COMMUNITY TO **NEW ORLEANS**

The host city for the 2016 Annual Meeting—New Orleans, Louisiana—is burdened with high cancer incidence

and mortality. The AACR reached out to patients, advocates, and other members of the New Orleans community to address this burden with an educational event titled "Progress and Promise Against Cancer." Moderated by AACR President

Nancy Davidson, MD, the event featured respected speakers from the Annual Meeting program and local experts from cancer centers educating local residents on topics such as cancer health disparities, prevention, clinical trials, and immunotherapy.



#### LAUNCHPAD FOR THE **CANCER MOONSHOT**

The Annual Meeting also showcased the AACR's pivotal role in the National Cancer Moonshot Initiative. The National Cancer Advisory Board's Blue Ribbon Panel on the Cancer Moonshot held its first in-person meeting at the Annual Meeting, as most of the panel's members had gathered with the cancer community in New Orleans. In addition, Vice President Joe Biden addressed more than 4,000 attendees on the final day of the meeting, thanking them for their dedication to the cause of "ending cancer as we know it." The Vice President discussed the importance of removing political barriers, fostering collaborations and data sharing, and realigning priorities in cancer research to better serve patients.



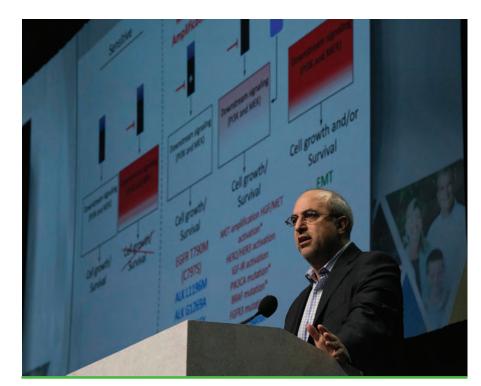
There is more brain power in this room than exists in many countries. And we need you. You're the very best we have.

> - VICE PRESIDENT JOE BIDEN AACR ANNUAL MEETING APRIL 20, 2017





## INNOVATIVE CANCER SCIENCE



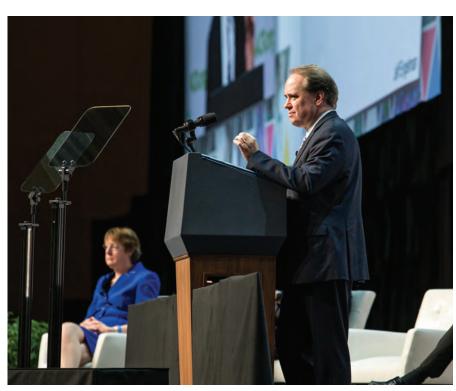
Jeffrey A. Engelman, MD, PhD, discusses "The evolution of cancer in response to targeted therapies" at a plenary session during the AACR Annual Meeting 2016.

The theme of the AACR Annual Meeting 2016, *Delivering Cures through Cancer Science*, emphasizes how advances in patient care and public health are dependent on discoveries in all areas of cancer research. In keeping with this, the multidisciplinary program featured researchers from across the continuum of cancer research and representing all stages of a research career.

Highlights of the cutting-edge research presented at the meeting were summarized by AACR leaders in a wrap-up plenary session.

During the closing plenary, Scott A.
Armstrong, MD, PhD, chair of the 2016
Annual Meeting Program Committee,
discussed key basic and translational
research presentations. He opened by
focusing on several presentations in the field
of epigenetics, i.e., research into mechanisms
that control gene expression. Some of these
presentations outlined new insights into
the ways in which disruption of epigenetic

mechanisms controlling gene expression can lead to activation of oncogenes—genes that have the potential to cause cancer—while others focused on the potential for therapeutic targeting of epigenetic genecontrol mechanisms. Armstrong also highlighted a number of genomics research presentations investigating the genetic diversity among different cells isolated from a single cancer. He emphasized the critical value of mapping this genetic heterogeneity and understanding how it evolves because the information is vital to identifying optimal therapeutic targets.



José Baselga, MD, PhD, FAACR, 2015-2016 AACR president, gave an overview of some of the groundbreaking clinical research presented at the meeting, focusing on three main areas. He opened by highlighting a prospective clinical trial that he said had the potential to change clinical practice. The trial, which was presented in a clinical trials plenary session by Martine Piccart, MD, PhD, showed that using the MammaPrint genetic test can reduce the use of adjuvant chemotherapy (chemotherapy given postsurgery) among early-stage breast cancer patients. The second topic addressed by Baselga was the use of new investigational precision therapeutics to target cancers fueled by specific gene alterations. In particular, he highlighted results from two early-stage clinical trials showing high response rates among patients with cancers fueled by TRK gene alterations after treatment with TRK targeted therapeutics. Baselga wrapped up his comments by reviewing a number of presentations detailing the promise of immunotherapy for treating patients with an increasing number of types of cancer, including head and neck cancer and Merkel cell carcinoma

Elaine R. Mardis, PhD, a member of the AACR Board of Directors, highlighted a range of presentations on cancer preventio and early detection research. She opened by focusing on several presentations of studies using new technologies to enhance early detection. Among these

presentations were several that focused on detailing the genomic mutations that characterize precancers at several anatomic sites, understanding how these genomic landscapes differ from those of invasive cancers at the same sites, and investigating whether the genomic changes that signify precancer's progression to invasive cancer can be detected by liquid biopsies. Mardis then discussed a presentation about a low-cost, high-resolution microendoscope imaging system that researchers have shown can accurately identify precancerous lesions of the cervix before concluding her comments by highlighting a forum on the nascent field of digital exposomics. Mardis explained that digital exposomics refers to the digital measurement of environmental exposures and other personalized metrics during critical or general periods of life and to the linking of these data to molecular changes with the overarching goal of understanding how environmental exposures affect risk of developing cancer.

Nancy E. Davidson, MD, 2016-2017
AACR president, concluded the session
by highlighting four ways in which we
can rise to the challenge presented by
the increase in global cancer incidence:
identify new approaches to cancer
prevention; advance efforts in cancer
screening and early detection; develop
new and better ways to treat patients; and
optimize the use of the tools we already
have for cancer prevention, detection,
diagnosis, and treatment.



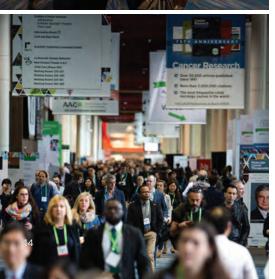




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## ANNUAL MEETING

## AT A GLANCE

19,400

People attended the meeting. The Annual Meeting 2016 was the largest in the history of the AACR.

74

Countries were represented at the meeting, including seven countries in Africa.

The inaugural AACR Travel Awards for African Cancer Researchers supported the attendance of five African investigators at the meeting.

5,649

Papers were presented in poster sessions or minisymposia.

255

Scientific sessions showcased the latest cancer science, including 48 major symposia, five plenary sessions, and 30 recent advances sessions focusing on breakthroughs in prevention, diagnostics, therapeutics, and organ site research. The program also promoted discussion of open questions in cancer science. In addition to 11 forum sessions on controversial issues facing investigators, the 2016 Annual Meeting featured a new Cancer Dialogue session titled "Maximizing Cancer Cures: How Do We Get There?". Moderated by 2015-2016 AACR President José Baselga, MD, PhD, FAACR, the session featured a panel of experts from academia, industry,

and government discussing the challenges and opportunities that face the cancer research community.

9

Regulatory science and science policy sessions held during the meeting. The AACR's Office of Science Policy and Government Affairs brought together regulators and academic and industry scientists to discuss ways to streamline the drug discovery and development pipeline.

138

Clinical trials were presented, the largest number of trials ever presented at an AACR Annual Meeting. Several high-impact trials were presented in four special plenary sessions, including two trials with the potential to change clinical practice.

The results of the MINDACT trial demonstrated that the MammaPrint genetic test can identify early-stage breast cancer patients for whom adjuvant chemotherapy is not necessary, improving their quality of life after surgery.

The results of the CheckMate-141 trial indicated that treatment with the immunotherapeutic nivolumab (Opdivo) improved survival for patients with recurrent or metastatic head and neck squamous cell carcinoma that progressed after platinum-based chemotherapy, as compared with single-agent chemotherapy.

These results—which were first disseminated to the cancer community at the AACR Annual Meeting—led to the November 2016 FDA approval of nivolumab for treating certain head and neck cancer patients.

23

Career development sessions offered to early-career scientists during the meeting. Organized by Minorities in Cancer Research, Women in Cancer Research, and the Associate Member Council, these sessions used formal programs and informal networking opportunities to support emerging generations of cancer researchers.

at ımab

32

News releases were distributed.

ANNUAL MEETING

MEDIA COVERAGE

210

Reporters registered to cover the meeting.

coverage and social media activity.

1,800

Media stories were generated.

29,944

Tweets mentioned the Annual Meeting.

7,955

Unique users joined the social media conversation.

541

News from the AACR Annual Meeting 2016 spread around the world, as the

authoritative cancer research meeting produced a significant amount of news

Scientists, clinicians, patients, and advocates participated in the third annual ABC News Twitter chat from the Annual Meeting—including Program Committee Chair Scott A. Armstrong, MD, PhD, and AACR Board of Directors member George D. Demetri, MD.

People viewed the AACR's Facebook Live

8,153

broadcasts during the Annual Meeting. Less than two weeks after Facebook launched its new live-streaming application, the AACR premiered two live broadcasts. In addition to Vice President Biden's address to meeting attendees, the AACR live-streamed interviews with cancer experts on the topic of "Accelerating Progress against Cancer." Moderated by AACR President Nancy Davidson, MD, the broadcast featured Program Committee Chair Scott A. Armstrong, MD, PhD, and AACR Board of Directors members George D. Demetri, MD, and Drew M. Pardoll, MD, PhD.

AMONG THE MANY NEWS
ORGANIZATIONS COVERING
THE ANNUAL MEETING WERE
THE FOLLOWING MAJOR

MEDIA OUTLETS:

The Washington Post THE WALL STREET JOURNAL.



**Forbes** 

©CBS NEWS

U.S.News

BBC

Atlantic POLITICO







SCIENTIFIC PUBLISHING

## A CENTURY OF DISSEMINATING WORLD-CLASS CANCER RESEARCH



In 1916, the Editorial Committee of the AACR launched *The American* Journal of Cancer, the first cancer journal published in English. Over the past hundred vears, the AACR scientific publishing program has provided a forum for the most innovative cancer science, expanding to eight journals to encompass the full spectrum of basic, translational, clinical, and epidemiological research.

## CELEBRATING THE AACR'S SCIENTIFIC PUBLISHING CENTENNIAL

AACR journals commemorated a century of scientific publishing in 2016 with a special walk-through exhibit at the Annual Meeting in New Orleans. The display featured classic historical articles from the first few decades of AACR publications, highlighting the AACR's role in establishing the foundations of cancer science. Landmark studies published in the early editions of AACR journals included the following:

- An extensive study of a family with a high degree of cancer occurrence that established the inheritability of some cancers, such as colorectal and endometrial cancer (Warthin, 1925).
- The first paper published in the cancer literature identifying substances in tar that cause cancer (Burrows, et al., 1932).
- The first English-language reports of estrogen inducing mammary tumors in mice (Lacassagne, 1936).

## CANCER RESEARCH: THE VOICE OF THE CANCER COMMUNITY FOR 75 YEARS

The AACR also marked the 75th anniversary of its flagship journal, *Cancer Research*, in 2016. This milestone was

commemorated with a special historical publication distributed to attendees of the Annual Meeting. The journal also published



commentaries throughout the year on seminal articles published in the journal that arguably formed the basis of modern cancer research, including the following:

- One of the first studies to report that the tumor-promoting effects of a high-fat diet could be directly attributed to caloric intake (Lavik and Baumann, 1943).
- A paper that provided the critical link between cancer incidence and smoking (Wynder et al., 1953).
- An analysis of United Nations research on the consequences of atomic testing a year before the United States, United Kingdom, and Soviet Union signed the Limited Test Ban Treaty (Upton, 1962).
- A critical paper demonstrating the importance of the vasculature to tumor growth, focusing the cancer community on the concept of tumor angiogenesis (Folkman, 1974).

 A review of the "two-hit hypothesis" of carcinogenesis, which posited that cancer is caused not only by activating mutations but also by the inactivation of "antioncogenes" the genetic basis for understanding cancer etiology (Knudson, 1985).

#### CANCER IMMUNOLOGY RESEARCH: EXPLORING THE NEWEST FRONTIER OF CANCER SCIENCE

While celebrating its primary role in the history of cancer research, the AACR continued to define the rapidly expanding frontiers of cancer immunology and immunotherapy through its newest journal, *Cancer Immunology Research*. Led by new Editors-in-Chief Robert D. Schreiber, PhD, and Philip D. Greenberg, MD, the journal was ranked 20th out of 213 oncology journals with regard to impact factor in its fourth year of publication.

#### **AACR JOURNALS ONLINE**

As part of its commitment to the most effective dissemination of high-quality cancer science worldwide, the AACR migrated to a platform that improved the readability and ease of navigation for all of its journals in 2016. Interest in the online journals continued to increase, as journal articles were viewed nearly 71 million times in 2016.





### SCIENTIFIC PUBLISHING

## EDITORS-IN-CHIEF

The AACR thanks its editors-in-chief for their hard work and stewardship of its scientific publishing program.





LEWIS C. CANTLEY, PHD, FAACR Sandra and Edward Meyer Cancer Center at Weill Cornell Medical College New York, New York

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KAREN E. KNUDSEN, PHD Kimmel Cancer Center Philadelphia, Pennsylvania





NAPOLEONE FERRARA, MD, FAACR UC San Diego Moores Cancer Center San Diego, California

#### **AACR INTERNATIONAL**

## COLLABORATING GLOBALLY TO ADVANCE CANCER SCIENCE

Two satellite offices. Twelve organizations. Five continents. The AACR continued to promote scientific excellence around the world in 2016 with an expanded slate of programs and partnerships.

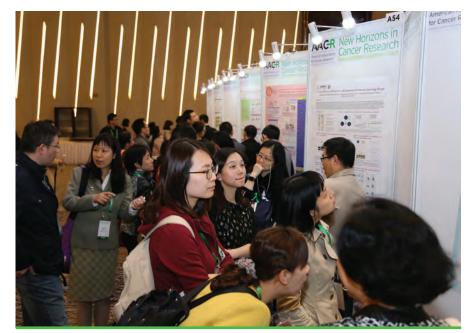
#### NEW HORIZONS CONFERENCE

At the third annual conference on New Horizons in Cancer Research in November 2016, the AACR brought the excitement of the Annual Meeting to the cancer research community in Asia. AACR President (2015-2016) José Baselga, MD, PhD, FAACR, and Annual Meeting Program Chair Scott A. Armstrong, MD, PhD, worked with local experts on the Regional Advisory Committee to showcase the breadth and depth of advances in cancer science.

The program included two early-career scientists whose outstanding work has been fostered by AACR grants. Nikhil Wagle, MD, a recipient of a 2016 AACR NextGen Grant for Transformative Cancer Research, and Christine M. Lovly, a recipient of the 2015 AACR-Genentech BioOncology Career Development Award, presented their results in a session on "Genomics, Targeted Therapies, and Clinical Applications."

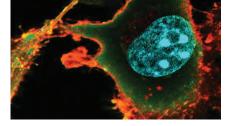
#### **EXPANDING PRESENCE** IN ASIA

The organization bolstered its presence in Asia in November 2016 with the launch of an AACR International website. Hosted on the aacr.asia domain, the site provides users with information on relevant AACR conferences and grants as well as cancer science news from AACR journals. In concert with the Shanghai office and the ongoing series of meetings in the region, the website supports the AACR's efforts to foster the highest quality science in Asia.



Scientists discuss their work with other attendees during the poster sessions at the New Horizons in Cancer Research conference.



















#### JOINT CONFERENCES FOSTERING JOINT PROGRESS AGAINST CANCER

Expanding its international collaborations in 2016, the AACR worked with nine different international scientific organizations to develop seven joint conferences and workshops:

TENTH AACR-JCA JOINT CONFERENCE ON BREAKTHROUGHS IN CANCER RESEARCH: FROM BIOLOGY TO THERAPEUTICS

Maui, Hawaii, February 2016

ECCO-AACR-EORTC-ESMO WORKSHOP ON METHODS IN CLINICAL CANCER RESEARCH

Zeist, The Netherlands, June 2016

FIFTH JCA-AACR SPECIAL JOINT CONFERENCE ON THE LATEST ADVANCES IN HEMATOLOGICAL CANCER RESEARCH: FROM BASIC SCIENCE TO THERAPEUTICS Urayasu, Japan, July 2016

EORTC-NCI-EMA-AACR INTERNATIONAL CONFERENCE ON INNOVATION AND BIOMARKERS IN CANCER DRUG DEVELOPMENT

Brussels, Belgium, September 2016

ACORD: AUSTRALIA & ASIA PACIFIC CLINICAL ONCOLOGY RESEARCH DEVELOPMENT WORKSHOP

Magenta Shores, Australia, September 2016

CRI-CIMT-EATI-AACR INTERNATIONAL
CANCER IMMUNOTHERAPY CONFERENCE:
TRANSLATING SCIENCE INTO SURVIVAL

New York, New York, September 2016

EORTC-NCI-AACR MOLECULAR TARGETS
AND CANCER THERAPEUTICS SYMPOSIUM

Munich, Germany, December 2016

### OTHER INTERNATIONAL COLLABORATIONS

The AACR worked with three additional organizations to sponsor sessions at or provide program support for the following conferences:

TATA CENTRE JUBILEE CONFERENCE: A CONFERENCE OF NEW IDEAS IN CANCER—CHALLENGING DOGMAS

Mumbai, India, February 2016

The AACR was a conference partner, and AACR member Varsha Gandhi, PhD, served on the Program Committee and delivered a symposium presentation on "Novel PI3 kinase inhibitors: Bench to bedside."

#### AACR ANNUAL MEETING

New Orleans, Louisiana, April 2016

The AACR and the Japanese Cancer Association (JCA) organized a joint symposium on "Molecular Pathogenesis, Diagnosis, and Treatment of ALK-induced Malignancies."

EIGHTH ANNUAL MEETING OF THE ISRAEL SOCIETY FOR CANCER RESEARCH:
BREAKTHROUGHS IN CANCER RESEARCH—
THE FUTURE IS NOW

Rehovot, Israel, May 2016

The AACR was the organizing partner, and AACR member Jedd D. Wolchok, MD, PhD, delivered a keynote presentation on "Immunologic checkpoint blockade: Exploring combinations and mechanisms."



#### Lyon, France, June 2016:

The AACR sponsored a lecture by Past President Elizabeth Blackburn, PhD, FAACR, recipient of the 2016 IARC Medal of Honour, on "Telomeres, biology, and cancer."

NINETEENTH ANNUAL MEETING OF THE CHINESE SOCIETY FOR CLINICAL ONCOLOGY (CSCO)

#### Xiamen, China, September 2016

The AACR and CSCO organized a joint symposium on "Study of Biomarkers in Cancer Immunotherapy."

SEVENTY-FIFTH ANNUAL MEETING OF THE JAPANESE CANCER ASSOCIATION

Yokohama, Japan, October 2016

The JCA and the AACR organized two joint symposia, on "Molecular Targeted Therapies for Breast Cancer" and "Personalized Treatments Based on Cancer Genome Profile."

## AFRICAN RESEARCHER TRAVEL AWARDS

The AACR invested in the education and training of African cancer investigators in 2016 through the inaugural African Cancer Researchers Travel Awards. The awards offset the travel expenses for five cancer scientists to attend the AACR Annual Meeting 2016.



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HONORING ACHIEVEMENT IN SCIENC

## AACR FELLOWS: LEADERSHIP FOR THE CANCER RESEARCH COMMUNITY

The AACR Academy amplifies the AACR's authoritative voice in the cancer research community by harnessing the innovative thinking of all of its Fellows to catalyze progress against cancer. Each new class of Fellows recognizes distinguished scientists for their groundbreaking achievements in cancer research and cancer-related biomedical science.



Fellows of the AACR Academy gathered during the AACR Annual Meeting in New Orleans to induct the 2016 class



## GUIDING THE CANCER MOONSHOT

The AACR Academy's leading role in the cancer community was evident in April 2016 when the National Cancer Institute formed a Blue Ribbon Panel to provide scientific direction to Vice President Joe Biden's National Cancer Moonshot Initiative. The 28-member panel, which served as a working group of the presidentially appointed National Cancer Advisory Board, included three AACR Fellows: James P. Allison, PhD; Charles L. Sawyers, MD; and Tyler Jacks, PhD (above), who was appointed cochair of the panel. Under Dr. Jacks's leadership, the panel delivered a report in September 2016 containing ten actionable recommendations to support the Moonshot's goal of stimulating a decade's worth of scientific advances in five years.



#### **CLASS OF 2016 INDUCTION**

At a ceremony on the evening before the Annual Meeting in New Orleans, the 2016 class of Fellows of the AACR Academy was formally inducted. The class included (above, left to right): Joan Massagué, PhD; Joe W. Gray, PhD; Sir David P. Lane, PhD; and John E. Dick, PhD, FRS.

## AACR FELLOWS CLASS OF 2016



BRUCE M. ALBERTS, PHD. FAACR University of California San Francisco, California

For contributions to characterizing the molecular and biochemical underpinnings of DNA replication



CLARA D. BLOOMFIELD, MD, FAACR The Ohio State University Comprehensive Cancer Center James Cancer Hospital and Solove Research Institute Columbus, Ohio

For research devoted to defining the chromosomal abnormalities that contribute to hematologic malignancies



University of Colorado Boulder, Colorado

For contributions to the discoveries of the catalytic properties of RNA and of the catalytic subunit of telomerase, telomerase reverse transcriptase



JOHN E. DICK, PHD, FRS, FAACR Princess Margaret Cancer Centre and McEwen Centre for Regenerative Medicine, University of Toronto Ontario Institute for Cancer Research Toronto, Ontario, Canada

For the discovery and characterization of normal hematopoietic stem cells isolated from both bone marrow and umbilical cord blood and leukemic stem cells from acute myeloid leukemia patients



JOE W. GRAY, PHD, FAACR Oregon Health & Science University Portland, Oregon

For developing technologies that have transformed the study and understanding of the genetic alterations that contribute to cancer



RUDOLF JAENISCH, MD. FAACR Whitehead Institute for Biomedical Research Massachusetts Institute of Technology Cambridge, Massachusetts

For contributions to the development of transgenic mouse models and efforts to generate inducible pluripotent stem cells in vitro



ERIC S. LANDER, PHD. FAACR Harvard Medical School The Broad Institute of MIT and Harvard Cambridge, Massachusetts

For efforts related to the sequencing of the human genome and to defining the basic drivers of cancer



SIR DAVID P. LANE, PHD. FAACR Agency for Science, Technology and Research (A\*STAR) Singapore Ludwig Institute for Cancer Research

New York, New York

For contributions to the discovery of the p53 tumor suppressor protein, implicated in over 50 percent of all



HENRY T. LYNCH, MD. FACP, FAACR Creighton University School of Medicine

For work related to the characterization of genetic susceptibility to cancer in at risk populations



JOAN MASSAGUÉ, PHD, FAACR Memorial Sloan Kettering Cancer Center New York, New York

For contributions to the understanding of the cell signaling pathways and resulting transcriptional mechanisms responsible for cancer metastasis



JOSEPH SCHLESSINGER. PHD. FAACR Yale School of Medicine New Haven, Connecticut

For work in the field of receptor tyrosine kinases and for elucidating their intracellular signaling pathways



## HONORING THE VANGUARD OF PROGRESS AGAINST CANCER

While groundbreaking investigation is critical to continued progress against cancer, dedication and collaboration make that progress possible. The 2016 AACR Scientific Achievement Awards and Lectureships recognized exceptional scientists both for their scientific innovation and for their commitment to the cancer community.

For example, the 2016 AACR Margaret Foti Award—which honors members of the cancer community for their leadership and extraordinary achievements—was presented to Waun Ki Hong, MD, FAACR. A Past President and Fellow of the AACR Academy, Dr. Hong was recognized for his seminal contributions to translational, clinical, and preventive cancer research; for his dedicated mentorship of several generations of young investigators; and for his visionary leadership in the area of science policy.

In addition, the 2016 AACR Team Science Award—which recognizes collaborative scientists who build interdisciplinary teams to accelerate progress for cancer patients—honored the Women's Health Initiative Team for its 20-year collaboration dedicated to the prevention of breast cancer, colorectal cancer, and other common causes of death and disability for postmenopausal women. Bringing together hundreds of investigators from more than 45 institutions, the team has conducted studies involving more than 161,000 women that have made significant contributions to public health.



Waun Ki Hong, MD, FAACR (center), recipient of the Margaret Foti Award, is recognized by AACR President (2015-2016) José Baselga, MD, PhD (left), and CEO Margaret Foti, PhD, MD (hc) (right) during the Awards Ceremony at the AACR Annual Meeting 2016.

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## 2016 AWARD RECIPIENTS AND LECTURERS



AACR G.H.A. Clowes Memorial Award VISHVA M. DIXIT. MD Genentech, Inc. South San Francisco, California



AACR-American Cancer Society Award for Research Excellence in Cancer Epidemiology and Prevention SIR RICHARD S. PETO, FRS, FAACR University of Oxford Oxford, England



Cambridge, Massachusetts

AACR-Women in Cancer Research Charlotte Friend Memorial Lectureship ANGELIKA AMON, PHD Massachusetts Institute of Technology



AACR-Minorities in Cancer Research Jane Cooke Wright Memorial Lectureship WORTA MCCASKILL-STEVENS, MD, MS National Cancer Institute Rockville, Maryland



AACR Team Science Award: Women's Health Initiative Team

ROSS L. PRENTICE, PHD

Seattle, WA

Seattle, WA

Bethesda, MD

Kaiser Permanente

Harvard University

University of Arizona

Harbor-UCLA Medical Center

Oakland, CA

Boston, MA

Tucson, AZ

Torrance, CA

Fred Hutchinson Cancer Research Center

Fred Hutchinson Cancer Research Center

GARNET L. ANDERSON, PHD

JACQUES E. ROSSOUW, MD

JOANN E. MANSON, MD. DRPH

CYNTHIA A. THOMSON, PHD, RD

ROWAN T. CHLEBOWSKI, MD. PHD

National Institutes of Health

BETTE CAAN, DRPH

Members of the Women's Health Initiative Team are presented with the 2016 AACR Team Science Award

L. Prentice, PhD; Electra D. Paskett, PhD; Rowan T. Chlebowski, MD, PhD; and Garnet L. Anderson, PhD.

AACR Outstanding Investigator Award for Breast Cancer Research, funded by Susan G. Komen<sup>TM</sup> FERGUS J. COUCH, PHD Mayo Clinic Rochester, Minnesota

ELECTRA D. PASKETT, PHD. MPH

JEAN WACTAWSKI-WENDE, PHD

MARCIA L. STEFANICK, PHD

SALLY A. SHUMAKER, PHD

REBECCA D. JACKSON, MD

Wake Forest University School of Medicine

CHARLES L. KOOPERBERG, PHD

Fred Hutchinson Cancer Research Center

The Ohio State University

Columbus, OH

Buffalo, NY

University at Buffalo

Stanford University

Winston Salem, NC

The Ohio State University

Stanford, CA

Columbus, OH

Seattle, WA



AACR Richard and Hinda Rosenthal Memorial Award ANTONI RIBAS, MD, PHD University of California Los Angeles Medical Center Los Angeles, California



AACR Joseph H. Burchenal Memorial Award for Outstanding Achievement in Clinical Cancer Research JOHN C. BYRD. MD The Ohio State University Comprehensive Cancer Center The James Cancer Hospital and Solove Research Institute



AACR-Irving Weinstein Foundation Distinguished Lecture ROBERT S. LANGER, SCD Massachusetts Institute of Technology Cambridge, Massachusetts Houston, Texas



AACR Margaret Foti Award for Leadership and Extraordinary Achievements in Cancer Research WAUN KI HONG, MD, FACP, DMSC, FAACR The University of Texas MD Anderson Cancer Center



AACR Award for Outstanding Achievement in Chemistry in Cancer Research JAMES BRADNER, MD Novartis Institutes for BioMedical Research Cambridge, Massachusetts



AACR Award for Outstanding Achievement in Cancer Research FRANZISKA MICHOR, PHD Dana-Farber Cancer Institute Boston, Massachusetts



New York, New York

Pezcoller Foundation-AACR International Award for Cancer Research JOAN MASSAGUÉ, PHD. FAACR Memorial Sloan Kettering Cancer Center



AACR Award for Lifetime Achievement in Cancer Research ROBERT A. WEINBERG, PHD, FAACR Massachusetts Institute of Technology Institute for Biomedical Research Cambridge, Massachusetts





Distinguished Lecture on the Science of Cancer Health Disparities, funded by Susan G. Komen<sup>TM</sup> AMELIE G. RAMIREZ, DRPH

The University of Texas Health Science Center San Antonio, Texas



AACR-CRI Lloyd J. Old Award in Cancer Immunology RONALD LEVY, MD, FAACR Stanford University Stanford, California

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Dana Farber Cancer Institute

Boston, Massachusetts

## AACR PROJECT GENIE: DELIVERING ON THE PROMISE OF PRECISION ONCOLOGY

The AACR entered 2016 with a promise to catalyze clinical and translational cancer research through data sharing. As the leader of AACR Project Genomics Evidence Neoplasia Information Exchange (GENIE), the AACR forged a consortium of eight international institutions around an agreement to aggregate their genomic data and link it to clinical outcomes to advance cancer treatment. The year came to a close with the GENIE team delivering on that promise, sharing one of the largest fully public, real-world cancer genomic data sets ever released.





In November 2015, the AACR announced the launch of AACR Project GENIE, a multiphase, multiyear, international project formed to realize the promise of precision medicine to benefit cancer patients. As the founding organization and leader of GENIE, the AACR houses the Coordinating Center, which organizes and executes on all aspects of the project. The AACR also provided the seed funding to launch the project.

On January 5, 2017, a little more than a year after the launch of the project, the AACR made the first data release from the project public, as promised. These data consist of nearly 19,000 de-identified genomic records and the associated limited clinical



Steering Committee Chair Charles L. Sawyers, MD, FAACR, announces the launch of AACR Project GENIE in November 2015. Thirteen months later, the first data release from the project was made publicly available.

data collected from patients who were treated at the eight participating institutions. The dataset covers 59 major cancer types, including data on more than 3,000 patients with lung cancer, 2,000 patients with breast cancer, and 2,000 patients with colorectal cancer. By making the data available to the global research community, AACR Project GENIE catalyzes new clinical cancer research in myriad ways, including but not limited to:

- Validating gene signatures of drug response or prognosis;
- Identifying new patient populations for previously approved drugs;
- Expanding patient populations that will benefit from existing drugs; and
- Discovering new drug targets and biomarkers.

The release of this initial dataset is only a starting point. The dataset will be continuously expanded with regular data additions and public releases, and the project is now accepting applications for new participating centers—a year ahead of schedule. The project is also open to sponsored research requests to use the data to gather deeper clinical outcomes information on specific subsets of patients to make the connection between genotype and clinical phenotype. Moving forward, the AACR Project GENIE registry will provide a valuable tool to the cancer community, solving a multitude of clinical and research challenges and improving the lives of cancer patients.

Members of the AACR Project GENIE team meet at the AACR office in October 2016 to prepare for the first public data release.



Members of the AACR Childhood Cancer Predisposition Workshop, which met in October 2016 to develop clinical surveillance guidelines and recommendations for childhood cancer predisposition syndromes.



## SCIENTIFIC LEADERSHIP: HARNESSING KNOWLEDGE, FORGING SOLUTIONS

Solving the complexities of the cancer problem requires the concerted effort of a variety of groups. As the authoritative source and voice in the cancer community, the AACR brings these groups together—focusing their collective knowledge to accelerate the development of innovative cancer research.



Members of the AACR Think Tank on Genomics in Clinical Medicine, which met in July 2016 to address the challenges and accelerate the application of precision medicine to the clinic.

AACR CANCER PREVENTION
SUMMIT: SHAPING THE
FUTURE OF CANCER
PREVENTION—A ROAD MAP
FOR INTEGRATIVE CANCER
SCIENCE AND PUBLIC HEALTH

Throughout its history, the AACR has advanced the frontiers of cancer prevention science in support of improved public health and the reduction of cancer incidence,

morbidity, and mortality. In February 2016, to evaluate that history and set a course for future efforts, the AACR organized a Cancer Prevention Summit on "Shaping the Future of Cancer Prevention: A Road Map for Integrative Cancer Science and Public Health." Chaired by Ernest T. Hawk, MD, MPH, and Scott M. Lippman, MD, the summit brought together nearly 70 scientists, clinicians, patient advocates,

and funders. Over three days, the participants reviewed the current state of cancer prevention science; identified future research priorities in screening, early detection, and cancer intervention; developed a plan to optimize the AACR's support of the prevention community; and defined the AACR's role in advancing public policy and education in cancer prevention.

## AACR THINK TANK: GENOMICS IN CLINICAL MEDICINE

While the sweeping insights yielded by genomic data have moved the promise of cancer precision medicine into the realm of possibility, logistical challenges hinder the translation of that promise into everyday oncology practice. To address these challenges and accelerate the application of precision medicine to the clinic, Past President José Baselga, MD, PhD, FAACR, convened an AACR Think Tank on Genomics in Clinical Medicine in July 2016.

As a trusted scientific partner, the AACR provided common ground for the discussion of coordinated and competing interests from key stakeholders including academic and industry scientists, clinicians, regulators, payers, and patient advocates. At the July meeting—the first stage of a multiyear project—the think tank identified the primary obstacles in cancer genomics in clinical medicine and recommended

actionable first steps that the key players could take to overcome them. A report from this think tank is currently in preparation.

AACR CHILDHOOD CANCER PREDISPOSITION WORKSHOP: OPTIMIZING PEDIATRIC SURVEILLANCE AND CARE THROUGH PRECISION GENETICS

Through a number of programs—i.e., conferences, grants, task forces, and a pediatric cancer working group—the AACR has worked to establish childhood cancer research as a global priority. Those efforts included fostering the early detection and treatment of pediatric cancers in 2016, as the AACR gathered more than 50 pediatric cancer experts from around the world for a three-day workshop in October. Under the leadership of Chairs Garrett M. Brodeur, MD, and David Malkin, MD, the workshop participants developed clinical surveillance recommendations for childhood cancer predisposition syndromes.

Like all AACR initiatives, this workshop established a foundation for future action. After the publication of their pediatric cancer surveillance recommendations in the AACR journal *Clinical Cancer Research*, workshop participants will pursue the formation of a working group subcommittee to develop collaboration opportunities that will further advance research on pediatric cancer predisposition and risk.

## SCIENCE AND EDUCATION CAREER DEVELOPMENT

The AACR sustains the pipeline of cancer researchers through the efforts of its Career Development Committee. Chaired by Kathleen W. Scotto, PhD, the committee provides science education for students at the high school and undergraduate levels and career development for scientists from graduate school through the junior faculty level.

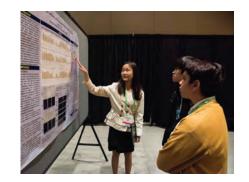


Recipients of the 2016-2017 AACR Thomas J. Bardos Science Education Awards for Undergraduate Students. Available to full-time, third-year undergraduate students majoring in science, the purpose of the awards is to inspire promising science students to enter the field of cancer research.

### HIGH SCHOOL STUDENT PROGRAM

The AACR Special Program for High School Students enables high school students and their teachers to participate in an immersive day of learning about cancer and careers in science. Their experience includes presentations by senior researchers and cancer survivors, a networking lunch, and ar opportunity to present their own research at an AACR meeting. The AACR hosted high school students at two meetings in 2016. During the AACR Annual Meeting in New Orleans, Louisiana, students were greeted by New Orleans Saints punter Thomas Morestead and Miss Arkansas USA, Abby Floyd. An additional high school program took place during the Ninth Annual AACR Conference on the Science of Cancer Health Disparities in Racial/Ethnic Minorities and the Medically Underserved in Fort Lauderdale, Florida. During the program, 100 students participated in engaging talks and competed for prizes during a Cancer Bowl hosted by session chair Beverly Lyn-Cook, PhD.

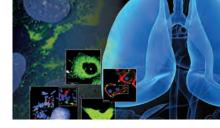
In 2016, the AACR Science Education Committee continued an innovative program initiated last year to sponsor prizes at high school regional science fairs. These prizes were awarded to bright students who showed an aptitude for science to encourage them to consider a career in cancer research.

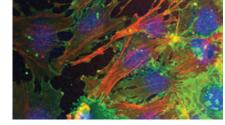


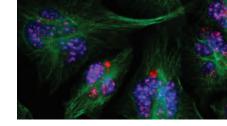
### UNDERGRADUATE STUDENT PROGRAM

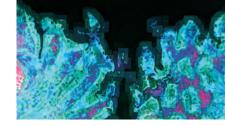
The Science Education Committee hosted its Eleventh Annual Undergraduate Student Caucus and Poster Competition at the AACR Annual Meeting 2016. More than 200 students participated in the program, and more than 100 students presented their work and competed for prizes in a poster session judged by leading AACR members. These senior scientists provided invaluable feedback and mentorship to all participants, inspiring them to consider careers in cancer science.

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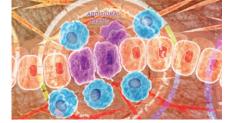












# MEETINGS AND EDUCATION EDUCATIONAL WORKSHOPS

AACR meetings and educational workshops are models of global scientific outreach. The 22 meetings and six workshops convened in 2016 harnessed the collaborative efforts of ten scientific organizations to bring the most innovative cancer science to the United States and seven other countries. These meetings reached across disciplines as well as national borders, exploring the interface between oncology and related scientific areas.

For example, the AACR conference on Engineering and Physical Sciences in Oncology, held in June 2016, explored the physical forces exerted by tumors on their microenvironment as well as ways to exploit those forces to suppress tumor progression. During the inaugural four-day conference on this high-priority subject, the AACR forged a unique collaboration between engineers, physical scientists, and cancer scientists to translate their increasing knowledge of mechanopathology into novel therapeutic approaches.

#### 2016 WORKSHOPS

- Meeting Held outside U.S.

June 18-24; Zeist, The Netherlands Codirectors: Corneel Coens, MSc, Christian Dittrich, MD, Lee M. Ellis, MD, and Stefan Sleijfer, MD, PhD

#### AACR/ASCO METHODS IN CLINICAL CANCER RESEARCH

July 23-29; Vail, Colorado
Codirectors: Patricia M. LoRusso, DO, Jyoti
D. Patel, MD, and Yu Shyr, PhD

MOLECULAR BIOLOGY IN CLINICAL ONCOLOGY

July 24-31; Snowmass, Colorado
Director: Levi A. Garraway, MD, PhD
Codirectors: Mark W. Geraci, MD, Charles
L. Sawyers, MD, FAACR, and Jean Y. Tang,
MD, PhD

#### INTEGRATIVE MOLECULAR EPIDEMIOLOGY

August 5-9; Boston, Massachusetts Director: Thomas A. Sellers, PhD, MPH Codirectors: Peter Kraft, PhD, and Lorelei A. Mucci, ScD, MPH

ACORD: AUSTRALIA & ASIA PACIFIC CLINICAL ONCOLOGY RESEARCH DEVELOPMENT

September 11-17; Magenta Shores, Australia

Steering Committee Chair: Martin R. Stockler, MBBS

TRANSLATIONAL CANCER RESEARCH FOR BASIC SCIENTISTS

September 18-23; Boston, Massachusetts Course Directors: Tom Curran, PhD, FAACR, George D. Demetri, MD, and Pasi A. Jänne, MD, PhD

#### 2016 MEETINGS

AACR-IASLC INTERNATIONAL JOINT CONFERENCE: LUNG CANCER TRANSLATIONAL SCIENCE FROM THE BENCH TO THE CLINIC

January 4-7; San Diego, California Chairs: Karen L. Kelly, MD, and Alice T. Shaw, MD, PhD Cochairs: Stephen B. Baylin, MD, FAACR, Jeffrey A. Engelman, MD, PhD, Roy S. Herbst, MD, PhD, and Pierre P. Massion, MD

THE FUNCTION OF TUMOR
MICROENVIRONMENT IN CANCER
PROGRESSION

January 7-10; San Diego, California Cochairs: Douglas Hanahan, PhD, FAACR, Raghu Kalluri, MD, PhD, Morag Park, PhD, and Robert A. Weinberg, PhD, FAACR

PATIENT-DERIVED CANCER MODELS: PRESENT AND FUTURE APPLICATIONS FROM BASIC SCIENCE TO THE CLINIC

February 11-14; New Orleans, Louisiana Cochairs: Hans Clevers, MD, PhD, FAACR, S. Gail Eckhardt, MD, Manuel Hidalgo, MD, PhD, and Joan Seoane, PhD AACR-JCA JOINT CONFERENCE: BREAKTHROUGHS IN CANCER RESEARCH— FROM BIOLOGY TO THERAPEUTICS

February 16-20; Maui, Hawaii Cochairs: Frank McCormick, PhD, FAACR, and Tetsuo Noda, MD, PhD

PRECISION MEDICINE SERIES: THE CANCER CELL CYCLE—TUMOR PROGRESSION AND THERAPEUTIC RESPONSE

**February 28-March 2; Orlando, Florida** Cochairs: J. Alan Diehl, PhD, Karen E. Knudsen, PhD, and Julien Sage, PhD

ACCELERATING ANTICANCER AGENT DEVELOPMENT AND VALIDATION WORKSHOP

**May 4-6; Bethesda, Maryland** Chair: H. Kim Lyerly, MD

PANCREATIC CANCER: ADVANCES IN SCIENCE AND CLINICAL CARE

May 12-15; Orlando, Florida Cochairs: Manuel Hidalgo, MD, PhD, Christine A. Iacobuzio-Donahue, MD, and Robert H. Vonderheide, DPhil, MD

PRECISION MEDICINE SERIES: TARGETING THE VULNERABILITIES OF CANCER

May 16-19; Miami, Florida Cochairs: Stephen W. Fesik, PhD, Jeffrey Settleman, PhD, and Paul Workman, PhD

ENGINEERING AND PHYSICAL SCIENCES IN ONCOLOGY

June 25-28; Boston, Massachusetts Cochairs: Joan S. Brugge, PhD, FAACR, Rakesh K. Jain, PhD, and Robert S. Langer, ScD

July 13-15; Urayasu, Japan
AACR Chairs: Catriona H. M. Jamieson,
MD, PhD, Ross L. Levine, MD, and
Jonathan D. Licht, MD
JCA Chairs: Shigeru Chiba, MD, PhD, Issay
Kitabayashi, PhD, and Takuro Nakamura,
MD, PhD

EORTC-NCI-EMA-AACR INTERNATIONAL CONFERENCE: INNOVATION AND BIOMARKERS IN CANCER DRUG DEVELOPMENT

September 8-9; Brussels, Belgium Cochairs: Denis A. Lacombe, MD, and John W. Martens, PhD

OVARIAN CANCER RESEARCH SYMPOSIUM

September 12-13; Seattle, Washington Cochairs: Deborah K. Armstrong, MD, Martin M. Matzuk, MD, PhD, Gordon B. Mills, MD, PhD, and Saul E. Rivkin, MD

COLORECTAL CANCER: FROM INITIATION TO OUTCOMES
September 17-20; Tampa, Florida

Cochairs: Ernest T. Hawk, MD, Steven H. Itzkowitz, MD, Kenneth W. Kinzler, PhD, FAACR, and Johanna W. Lampe, PhD, RD

THE SCIENCE OF CANCER HEALTH DISPARITIES IN RACIAL/ETHNIC MINORITIES AND THE MEDICALLY UNDERSERVED

September 25-28; Fort Lauderdale, Florida

Cochairs: Rick A. Kittles, PhD, Folakemi T. Odedina, PhD, Jeffrey N. Weitzel, MD, and Jun J. Yang, PhD

CRI-CIMT-EATI-AACR INTERNATIONAL
CANCER IMMUNOTHERAPY CONFERENCE:
TRANSLATING SCIENCE INTO SURVIVAL
September 25-28; New York, New York

Cochairs: James P. Allison, PhD, FAACR, Philip D. Greenberg, MD, Christoph Huber, MD, and Guido Kroemer, MD, PhD

TUMOR IMMUNOLOGY AND IMMUNOTHERAPY

October 20-23; Boston, Massachusetts Cochairs: James P. Allison, PhD, FAACR, Pamela S. Ohashi, PhD, Antoni Ribas, MD, PhD, and Ton Schumacher, PhD

TRANSLATIONAL CONTROL OF CANCER: A
NEW FRONTIER IN CANCER BIOLOGY AND
THERAPY

October 27-30; San Francisco, California Cochairs: Jennifer A. Doudna, PhD, Frank McCormick, PhD, FAACR, Davide Ruggero, PhD, and Nahum Sonenberg, PhD

ONA REPAIR: TUMOR DEVELOPMENT AND THERAPEUTIC RESPONSE

November 2-5; Montreal, Quebec, Canada Cochairs: Robert G. Bristow, MD, PhD, Maria Jasin, PhD, and Theodore S. Lawrence, MD, PhD

NEW HORIZONS IN CANCER RESEARCH: DELIVERING CURES THROUGH CANCER SCIENCE

November 2-5; Shanghai, China Cochairs: José Baselga, MD, PhD, FAACR, and Scott A. Armstrong, MD, PhD

IMPROVING CANCER RISK PREDICTION FOR PREVENTION AND EARLY DETECTION

November 16-19; Orlando, Florida Cochairs: Graham A. Colditz, MD, DrPH, Susan M. Gapstur, PhD, Kenneth R. Muir, PhD, and Mark E. Sherman, MD

November 29-December 2; Munich, Germany

Scientific Committee Cochairs: Jean-Charles Soria, MD, PhD, Lee J. Helman, MD, and Levi A. Garraway, MD, PhD

CTRC-AACR-BCM SAN ANTONIO BREAST CANCER SYMPOSIUM

December 6-10; San Antonio, Texas Codirectors: Carlos L. Arteaga, MD, FAACR, Virginia G. Kaklamani, MD, and C. Kent Osborne, MD

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SCIENTIFIC REVIEW AND GRANTS ADMINISTRATION

## ESSENTIAL FUNDING FOR PROMISING CANCER RESEARCH

The AACR grants program is a critical driver of exciting and innovative cancer research. Over the past two decades, more than \$300 million in grants has been awarded and administered through a rigorous peer-reviewed grants program. Continued growth of the grants program in 2016 was fueled through new and enhanced partnerships with nonprofit organizations and pharmaceutical companies. This vital support enabled the AACR to extend its reach even further, providing resources to support basic, translational, and clinical research in the United States as well as Canada, Germany, Spain, and Italy.



Recipients of the 2016 AACR NextGen Grants for Transformative Cancer Research are honored at the opening ceremony of the AACR Annual Meeting (left to right): Nikhil Wagle, MD; Sophia Y. Lunt, PhD; Andrew C. Hsieh, MD; and Paul A. Northcott, PhD.

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Scientists were funded in 2016; these investigators—including Holly Martinson, **PhD** (*far right*)—received more than \$8.2 million to support work that spans the spectrum of cancer research.

## \$3.6 million

In funding was awarded to mentored scientists, providing critical resources to support the career development of the next generation of researchers.

## \$1.8 million

Was awarded to the inaugural recipients of the AACR NextGen Grants for Transformative Cancer Research, supported by the AACR, Bayer, Incyte, and Takeda Oncology.

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Grant applications were evaluated in 2016.

### \$2.9 million

Was awarded through partnerships with the pharmaceutical industry, including the new AACR-Bayer Innovation and Discovery

AACR members served on 16 scientific review committees to select the 2016 grant recipients. The AACR is grateful to these committee members for their expert assistance.pharmaceutical industry, including the new AACR-Bayer Innovation and Discovery Grants.

The AACR is grateful to all of its research grant funders for their generous support (see p. 62).



HOLLY MARTINSON, PHD AACR Grantee

Holly Martinson, PhD is a postdoctoral fellow studying health disparities in the Alaska Native population at the University of Alaska, Anchorage (UAA). She is a recipient of a Debbie's Dream Foundation-AACR Gastric Cancer Research Fellowship, which supports the efforts postdoctoral or clinical research fellows to conduct gastric cancer research and to establish a successful career path in this field. Born and raised in Anchorage, Dr. Martinson is the first Alaskan to receive an AACR grant:

**f** I am one of the only cancer researchers in the state of Alaska, so the connections I've made with other leaders in the gastric cancer field as a result of receiving this grant have been instrumental to my career development and success in establishing my own cancer research lab at UAA.

> One of the largest health disparities in the Alaska Native population relates to gastric cancer. Members of the Alaska Native population are three times more likely to be diagnosed with gastric cancer and four times more likely to die from it than Caucasians in the United States. My research goal is to better distinguish patients that are at high risk of developing gastric cancer and to identify alternative treatments for patients that don't respond to current therapies.

#### SCIENTIFIC REVIEW AND GRANTS ADMINISTRATION

## THE AACR AND STAND UP TO CANCER: PARTNERS TO ACCELERATE PROGRESS

The AACR is proud to serve as the Scientific Partner of Stand Up To Cancer (SU2C), an organization that harnesses the collective power of the entertainment industry to support collaborative, translational cancer research. With ongoing oversight of scientific peer review and grants administration from the AACR, SU2C developed new funding partnerships to enable the launch of transformative new programs in 2016.

#### SU2C FUNDING PARTNERS

In 2016, SU2C along with the AACR launched SU2C Catalyst™, a new program that utilizes funds and products from the pharmaceutical, biotechnology, diagnostic, and medical device industries to accelerate research on cancer prevention detection, and treatment. Merck is the Founding Collaborator. Bristol-Myers Squibb Company and Genentech, a member of the Roche Group, are Charter Supporters. Under the SU2C Catalyst program, these companies donate funds to support collaborative research studies using their products, such as diagnostic tests, new pharmaceutical compounds under development, approved agents, and immuno-oncology products that can be investigated for other uses.

Working with an expert Executive Committee, the AACR managed the selection process for projects funded by Merck and Bristol-Myers Squibb in 2016.

#### **NEW SU2C DREAM TEAMS**

The fundamental principles of the Stand Up To Cancer funding model are collaboration, innovation, acceleration, targeted therapy, and translational research. These principles are exemplified by the SU2C Dream Team, a scientific task force comprising leading researchers from different institutions who collaborate to develop new and

improved approaches to cancer treatment. By removing barriers to creativity and collaboration, the Dream Team model accelerates the progress of therapies from the laboratory to the clinic.

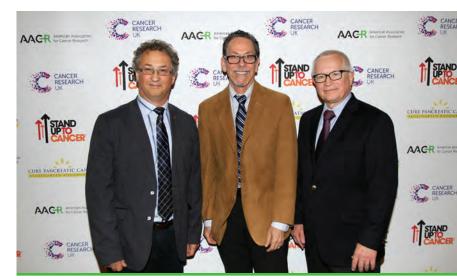
Since SU2C was founded in 2008, a total of 19 Dream Teams have been established and more than \$213 million has been committed to fund their efforts. As the Scientific Partner of SU2C, the AACR has provided scientific leadership, expert peer review, scientific oversight, and grants administration to the Dream Team program. The Scientific

Advisory Committee (SAC), led by Nobel Laureate Phillip A. Sharp, PhD, FAACR, identifies the most promising Dream Team projects. Two of these innovative projects were launched in 2016:

• SU2C-Cancer Research UK-Lustgarten Foundation Pancreatic Cancer Dream Team: Reprogramming of Transcriptional Circuitry to Control Pancreatic Cancer

Leader: Daniel D. Von Hoff, MD, FACP, FAACR

Co-leaders: Ronald M. Evans, PhD, FAACR, and Gerard I. Evan, PhD



SU2C-Cancer Research UK-Lustgarten Foundation Pancreatic Cancer Dream Team leaders (left to right): Gerard I. Evan, PhD, Ronald M. Evans, PhD, FAACR, and Daniel D. Von Hoff, MD, FACP, FAACR

This Dream Team aims to reset malfunctioning machinery in pancreatic tumors, increasing their sensitivity to chemotherapy and to anticancer immune cells and pushing the tumors into lasting remission.

• SU2C Canada-Canadian Breast Cancer Foundation Breast Cancer Dream Team Leader: Tak W. Mak, PhD, FAACR Co-leader: Samuel Aparicio, BM, BCh, PhD This Dream Team's approach is to identify differences in the cancer cells that distinguish them from normal body cells, find out how those differences make the cancer cells vulnerable, and then target drugs to those points of vulnerability in order to kill the cancer cells.

## SU2C PHILLIP A. SHARP INNOVATION IN COLLABORATION AWARDS

The AACR continued to manage the selection process for the SU2C Phillip A. Sharp Innovation in Collaboration Awards, named for the Nobel laureate and chair of the SU2C Scientific Advisory Committee. The 2016 awards—totaling \$1 million—went to five research teams, each of which paired a senior investigator with a more junior investigator from a different institution. These unique collaborations will accelerate the development of new therapies to benefit cancer patients.

#### FIFTH SU2C TELECAST RAISES AWARENESS AND FUNDS FOR CANCER RESEARCH

On September 9, SU2C produced its fifth biennial telethon to raise funds to support its groundbreaking collaborative



Actors Rob Riggle (left) and Ken Jeong (right) discuss the AACR's role as Scientific Partner to Stand Up To Cancer during the 2016 SU2C Telecast.

research programs. With Bradley Cooper as executive producer, the telethon was broadcast on over 40 networks in English and Spanish, and featured appearances by Ben Affleck, Matthew McConaughey, Emma Stone, Anna Kendrick, Josh Gad, Niecy Nash, Eric Stonestreet, Alison Sweeney, Marcia Cross, Greg Grunberg, Danielle Campbell, Charlie Wilson, Brittany Daniel, and SU2C cofounder Katie Couric.

During the broadcast Ken Jeong, the comedic actor, who is also a physician, discussed the AACR's central role as Scientific Partner to SU2C. "The AACR works with scientific advisors to make sure funding goes to the right places, the right labs, [and] the right scientists, and that there is rigorous oversight of research

progress," Jeong said. "Their dedication makes all this happen."

#### ANNUAL SU2C SCIENTIFIC SUMMIT

The 2016 SU2C Scientific Summit, organized by the AACR, gathered the entire SU2C community for updates on the scientific achievements of the various SU2C-funded projects. The summit explored cross-cutting themes and possibilities for collaboration across research teams.

Dream Team members, Translational Team members, and Innovative Research Grant recipients discussed the potential of their novel research projects with members of the Scientific Advisory Committee and the Joint Scientific Advisory Committees. These

discussions were inspired by presentations from guest speakers Andrew Conrad, PhD, of Verily (formerly Google Life Sciences) and Douglas R. Lowy, MD, FAACR, acting director of the National Cancer Institute. Also in attendance were the SU2C Council of Founders and Advisors and members of the patient advocate community, who reminded the scientists of the urgency of their challenge.



Patricia M. LoRusso, DO, speaking at the 2016 SU2C Scientific Summit.

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LEE D. GIBBS Associate Member of the AACR

Lee D. Gibbs is an Associate Member of the As a graduate student, I have witnessed many AACR and a doctoral candidate in molecular and medical genetics at the University of North Texas Health Science Center in Fort Worth, Texas. With 14 of his fellow Associate Members, he participated in the AACR's first Early Career Investigator Hill Day:

of my colleagues' aspirations detour from the path of independent research because of a lack of sustainable and predictable NIH funding... This event was a tremendous occasion as it trained me and my fellow early-career bench scientists in how to take

our story and message to Capitol Hill. As a biomedical scientist. I have been trained in the responsibilities in the laboratory. But I also see the great value in being a 'civic' scientist.

AACR has lit the flame; now, it is our turn to carry the torch from the bench to the Hill.

#### POLICY AND ADVOCACY

## SCIENCE POLICY AND GOVERNMENT AFFAIRS

In 2016, the AACR Office of Science Policy and Government Affairs continued to motivate lawmakers to invest in cancer science that will benefit cancer patients. At the same time, the AACR worked to optimize that investment by fostering more efficient and effective communication among legislators, regulators, scientists, and the public.



Clockwise from left: AACR member Roy A. Jensen, MD; AACR President (2016-2017) Nancy E. Davidson, MD; AACI President Stanton L. Gerson, MD; ASCO President (2016-2017) Dan Hayes, MD; Mary Lee Watts, AACR Director of Government Relations and Advocacy; and ASCO President (2015-2016) Julie Vose, MD, MBA, meet with Rep. Tom Cole (R-OK) (right) to stress the importance of funding cancer research during the AACI-AACR-ASCO Joint Hill Day, May 11-12.

#### LEADING THE CALL FOR RESEARCH FUNDING

While the cancer research enterprise is built upon the passion and talents of researchers, physician-scientists, survivors, and advocates, it is sustained through robust annual federal funding increases for the National Institutes of Health (NIH) and the National Cancer Institute (NCI). As the authoritative voice of cancer research, the AACR called upon all of those stakeholders throughout 2016 to request that members of Congress and Administration officials make cancer research a national priority.

• February 23-24: Early Career **Investigator Hill Day.** The funding crisis that affected the NIH and NCI from 2004 through 2015 disproportionately affected young scientists, many of whom left the field in search of better opportunities. To educate Congress on the vital importance of sustaining the nation's pipeline of cancer scientists through robust, sustainable, and predictable funding increases for the NIH, the AACR brought 15 associate members—including doctoral candidate Lee D. Gibbs (far *left*)—to Capitol Hill in February for its first-ever advocacy initiative for young investigators. Through meetings

- on Capitol Hill, the AACR informed lawmakers of the benefits of sustained research funding—and demonstrated the power of informed advocacy to a new generation of civic scientists.
- March 8: Cancer Research Policy Forum. The AACR partnered with Moffitt Cancer Center—with support from the American Association of Cancer Institutes (AACI)—to host a forum titled "Progress, Promise, and Challenges in the Era of Precision Medicine." Using Moffitt as an example, the forum highlighted how federally funded research contributes to progress against cancer at institutions across the United States. NCI Acting Director Douglas R. Lowy, MD, FAACR, and U.S. Representatives Gus Bilirakis and Kathy Castor of the House Energy and Commerce Committee joined expert scientists and a patient advocate to call for robust, sustained, and predictable increases in funding for the NIH.
- May 11-12: AACR-AACI-ASCO Joint Hill Day. The AACR worked with the AACI and the American Society of Clinical Oncology (ASCO) to bring stakeholders from across the cancer community to Capitol Hill—including more than 80 researchers, physicianscientists, cancer center directors, survivors, and patient advocates. The participants shared their diverse perspectives on the impact of sustained cancer research funding during more than 120 meetings with congressional offices, including those of leading members in the House and Senate.

 September 22: Rally for Medical **Research Hill Day.** As the founding organizer in 2013 of the Rally for Medical Research, the AACR's leadership role in advocating for federal research funding extends beyond cancer to benefit all fields of biomedical science. As the lead supporter for the fourth annual Hill Day, the AACR facilitated meetings with 238 congressional offices from 38 states for its 346 participants.



These advocacy efforts came to fruition in early December when the Senate passed the 21st Century Cures Act by an overwhelming majority. The bill establishes an NIH Innovation Account that provides \$4.8 billion in supplemental funding for vital medical research programs—including \$1.8 billion over seven years to support the recommendations of Vice President Biden's National Cancer Moonshot Initiative.

#### CONNECTING THE CANCER **COMMUNITY WITH POLICY** MAKERS

Lawmakers and regulators rely on the AACR for guidance in developing cancer science policy. The AACR provided that guidance in 2016 by sharing critical perspectives from various stakeholders.

- January 8: Meeting with Vice President Biden's Staff. Prior to President Obama's announcement of the National Cancer Moonshot Initiative during his State of the Union Address on January 12, 15 distinguished AACR members representing 10 medical institutions and nine states met with senior leaders on Vice President Biden's staff to discuss areas of considerable promise in cancer research—including precision medicine, immunotherapy, and potential collaborations around big data (such as AACR's Project GENIE).
- January 8: Meeting with FDA Leaders. Fifteen prominent members of the AACR met with senior officials from the Food and Drug Administration (FDA) including FDA Commissioner Robert Califf, MD—to discuss the agency's current thinking on laboratory developed tests, companion diagnostics for cancer therapies, and the regulation of nextgeneration sequencing-based tests.
- June 28: Congressional Briefing on the National Cancer Moonshot Initiative. Five associate members joined AACR President Nancy Davidson, MD, CEO Margaret Foti, PhD, MD (hc), and NCI Acting Director Douglas R. Lowy, MD, FAACR, at a standing-room-only briefing on the Cancer Moonshot Initiative.



AACR members visit Washington to meet with senior leaders on Vice President Biden's staff on January 8, 2016, four days before the State of the Union Address.



AACR President Nancy Davidson, MD (left), moderates the Congressional Briefing on the National Cancer Moonshot Initiative.

Titled "Seizing Today's Opportunities to Accelerate Cancer Research," the briefing educated congressional representatives and staffers about the research opportunities presented by the Cancer Moonshot project and the need for dedicated funding to realize those opportunities. The associate members on the panel discussed the challenges facing young investigators in the current funding paradigm and called on Congress to invest in the next generation of cancer scientists.

• September 16: Cancer Progress Report Congressional Briefing. The AACR released its Cancer Progress Report 2016 at a briefing on Capitol Hill that outlined the progress against cancer driven by federally funded research and called for sustained, robust, and predictable annual funding increases to accelerate that progress. The briefing featured cancer survivors and

advocates whose stories were included in the report, including Congressman Donald Payne, Jr. (D-NJ). Following the briefing, the survivors accompanied AACR President Nancy Davidson, MD, and CEO Margaret Foti, PhD, MD (hc), to the White House to deliver a copy of the report to Vice President Biden personally and to thank him for his leadership of the Cancer Moonshot Initiative.

#### **FOSTERING DIALOGUE BETWEEN REGULATORS AND** THE CANCER COMMUNITY

At the interface between cancer science and cancer patients, the FDA plays a critical role in accelerating the delivery of innovative cancer treatments to meet the needs of patients and their families. The AACR continued its support of the FDA's mission in 2016, partnering with the agency to engage researchers, physician-scientists, policy makers, and the public in discussions of important regulatory issues.

- June 13: Dose-Finding Workshop. The emergence of combination therapies to overcome drug resistance and the toxicity of current dosing regimens are challenges for cancer patients and clinicians. Chaired by Pasi Jänne, MD, PhD, Geoffrey Kim, MD, Amy McKee, MD, and Eric Rubin, MD, this workshop addressed these challenges by discussing more efficient processes of dose selection in the early stages of study design.
- July 19: Workshop on Liquid Biopsies in Oncology Drug and Device **Development.** The analysis of tumorderived cell-free DNA in plasma, a noninvasive method for detecting genetic alterations in tumors, holds considerable promise for the areas of diagnosis and drug development and is likely to be rapidly integrated into the clinic. This workshop, chaired by Gideon Blumenthal, MD, Pasi Jänne, MD, PhD, and Reena Philip, PhD, examined the scientific and regulatory steps needed to translate this emerging technology into improved patient care.



- September 27: Webinar on E-cigarettes and Public Health. On August 8, the FDA extended the scope of its ban on the sale of tobacco products to youth to include e-cigarettes, cigars, pipe tobacco, and water pipe tobacco. To assist the agency in informing the public about the risks of e-cigarettes, the AACR released a webinar discussing current research in this area.
- October 13-14: Immuno-Oncology Drug **Development Workshop.** Chaired by Maitrevee Hazarika, MD, Marc Theoret, MD, Suzanne L. Topalian, MD, and Jedd D. Wolchok, MD, PhD, this workshop gathered experts to redefine biological outcome measures and clinical endpoints to inspire innovative clinical trial designs and statistical methods and foster the development of effective immunooncology clinical trials.



Eric Rubin, MD, presents at the Immuno-Oncology Drug Development Workshop.

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## SURVIVOR AND PATIENT ADVOCACY

While the AACR's meetings, journals, and research initiatives support the efforts of scientists and clinicians, its Survivor and Patient Advocacy Program reaches beyond the bench and the bedside to engage the patients, caregivers, and advocates who are the focus of its mission. Patient advocates are a vitally important part of the cancer field. Through programs and publications, the AACR works to ensure that patients feel at home in the cancer community and that, through education, they are empowered to understand their health and treatment options.



Participants in the AACR Scientist<->Survivor Program at the AACR Annual Meeting 2016 wear t-shirts in support of patient advocate (and SSP program alumnus) Jack Whelan, who was undergoing treatment and was unable to attend the meeting. Mr. Whelan is scheduled to chair a minisymposium on "Cancer Survivorship and Quality of Life" at the AACR Annual Meeting 2017.

#### SCIENTIST⇔SURVIVOR PROGRAM

More than 50 advocates participated in the program in 2016—including the first mother-son, caregiver-survivor duo; the first male breast cancer survivor; and the first advocate from the Caribbean island of Anguilla. These participants partnered with both scientist and advocate mentors at the Annual Meeting and the Cancer Health Disparities meeting to learn more about the innovative cancer science that impacts their lives.

A highlight of the Annual Meeting program was "Cancer Mini-Med School," a unique lecture by Carolyn Compton, MD, PhD, that provided the participants with an education in the basics of cancer biology. The advocates built upon that foundation while attending scientific sessions and discussing the latest developments in the field with their mentors.



#### CANCER TODAY MAGAZINE

cancer patients, survivors, and caregivers, challenges of cancer diagnosis, treatment, and survival. In 2016, the magazine hope. Of the dozens of articles published over 20 issues of the magazine, the following rank among the most popular:

- "Easing the Pain" (Spring 2016). Noting
- "The Cost of Cancer" (Summer 2015). Expensive cancer treatments can leave patients with a pile of debt; this article help them handle the financial burden.
- "Telling Cancer's Story" (Winter 2014/2015). Published just before the



Cancer Today, the AACR's magazine for is a vital resource for anyone navigating the celebrated its fifth year of providing cancer patients with practical knowledge and real

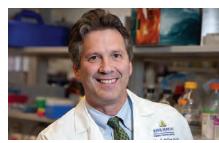
- that "pain and cancer frequently go hand in hand," contributing editor Sue Rochman looks at cancer pain and ways to relieve it.
- highlights programs that are available to



release of the documentary "Cancer: The Emperor of All Maladies," this article offers a behind-the-scenes look at the making of the film—featuring interviews with award-winning filmmaker Ken Burns and oncologist and Pulitzer Prize-winning author of the book, Siddhartha Mukherjee, MD, PhD.

- "Prostate Cancer, Redefined" (Winter 2013/2014). Addressing the risks and benefits of prostate cancer screening, this article describes the challenges in deciding whether to treat prostate cancer aggressively or watch it closely.
- "The Family Cancer Tree" (Summer **2012).** While noting that "genetics are not destiny," this article spotlights the role of family history in determining cancer risk.

In February 2016, a reconstituted Cancer Today Editorial Advisory Board held its first quarterly meeting, under the guidance of editor-in-chief William G. Nelson, MD, PhD (below), director of the Johns Hopkins Kimmel Cancer Center in Baltimore. The 37-member board includes luminaries from cancer research, clinical practice, and patient advocacy.



PUBLIC SERVICE AWARD

Mary Jackson Scroggins (left) receives the 2016 AACR Distinguished Public Service Award from AACR CEO Margaret Foti, PhD, MD (hc) during the opening ceremony at the AACR Annual Meeting 2016.

cancer survivor and health activist, Mary is a cofounder of In My Sister's Care, an organization focused on improving cancer care for medically underserved women and on eliminating cancer health disparities. Her national advocacy activities include serving on the President's Cancer Moonshot Blue Ribbon Panel Working Group on Precision Prevention and Early Detection and the National Cancer Institute's Cancer Prevention and Control Central Institutional Review Board.

An accomplished writer and editor, Mary serves on the Editorial Advisory Board of Cancer Today and has written numerous articles for the magazine. She has also been a key participant in AACR initiatives such as the Scientist<->Survivor Program, the High School Student Education Program, the AACR-Minorities in Cancer Research career roundtable, and the AACR/ASCO Educational Workshop on Methods in Clinical Cancer Research.

#### AACR DISTINGUISHED PUBLIC SERVICE AWARD

Many advances against cancer are made because of the dedicated efforts of remarkable men and women in all sectors of the cancer community. The American Association for Cancer Research (AACR) Distinguished Public Service Award honors the extraordinary contributions of an individual or group whose groundbreaking, innovative work exemplifies the AACR's mission to accelerate the prevention and cure of all cancers through research,

POLICY AND ADVOCACY

education, communication, and collaboration. Distinguished public service takes many forms, and past winners have included generous philanthropists, government officials, advocates, and the members of the media.

During the opening ceremony at the 2016 Annual Meeting, the AACR recognized the sustained contributions of Mary Jackson Scroggins. A 20-year ovarian



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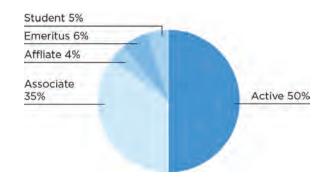


## **AACR MEMBERSHIP**

## BY THE NUMBERS

With a focus on innovative cancer science and a staunch commitment to improving the lives of cancer patients worldwide, the 37,000 members of the AACR work together to pursue their common mission of preventing and curing all cancers. AACR programs and initiatives foster collaborations across the cancer research community, building productive relationships among scientists, clinicians, and patient advocates to catalyze discoveries and translate those advances to cancer patients.

#### MEMBERS BY CATEGORY



#### **ACTIVE MEMBERS**

Established laboratory researchers, physician-scientists, clinicians, and population scientists

#### ASSOCIATE MEMBERS

Young laboratory scientists and physicians-in-training (graduate students, medical students and residents, and clinical and postdoctoral fellows)

#### STUDENT MEMBERS

Undergraduate and high school students

#### **EMERITUS MEMBERS**

Active members who have reached the age of 70 years

#### AFFILIATE MEMBERS

Other health care professionals (practicing oncologists, nurses, laboratory technicians, non-scientific corporate professionals, and patient advocates)

5,433

New members joined the AACR in 2016.

58

Nobel Laureates have been members of the

198

Patient advocates are members of the AACR. An additional 800 patient advocates have been actively involved in AACR Survivor and Patient Advocacy activities.

Individuals have been AACR members for more than 25 years.

130

Individuals have been AACR members for more than 50 years.

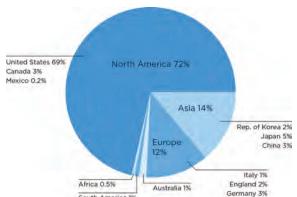
108

Countries are represented by AACR members.

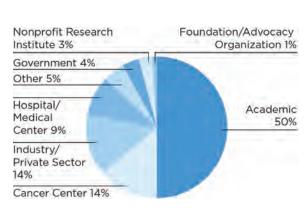
Note: Totals may not equal 100% due to rounding.



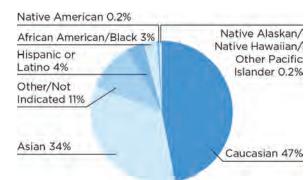




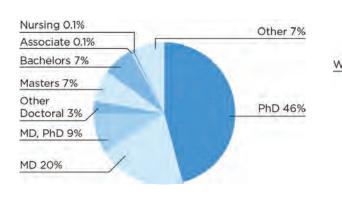
#### MEMBERS BY WORK SETTING



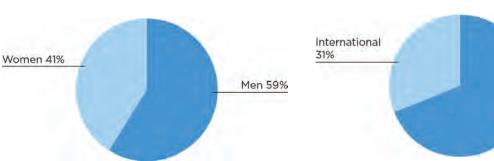
#### MEMBERS BY RACE/ETHNICITY



#### MEMBERS BY DEGREE



#### MEMBERS BY GENDER



MEMBERS BY LOCATION

**United States** 

Note: Totals may not equal 100% due to rounding.

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## HARNESSING THE POWER OF DIVERSITY



The AACR takes a deliberate approach to diversifying the cancer research community through programs designed to highlight and empower those who have been historically underrepresented in the scientific community. Through Minorities in Cancer Research (MICR), Women in Cancer Research (WICR), and the Associate Member Council (AMC), the AACR provides brilliant scientists with the support they need to flourish, maintaining a robust cancer workforce that is diverse in its makeup but uniform in its dedication to patients.



#### AACR-MINORITIES IN CANCER RESEARCH (2016 COUNCIL CHAIR: RICK A. KITTLES, PHD)

• MICR is a membership group within the AACR committed to preventing and curing cancer while meeting the professional needs and advancing the careers of minority scientists. In 2016, the MICR Council provided another example of the AACR's leadership with regard to the National Cancer Moonshot Initiative. Upon review of the initial report from the Blue Ribbon Panel, the council sent a letter to NCI Acting Director Douglas R. Lowy, MD, FAACR, on behalf of the cancer health disparities research community. The letter recommended that the panel's report be modified to directly address the issue of cancer disparities. As a result of



the council's efforts, the final Blue Ribbon Panel report highlighted the inclusion of diverse patient populations in several of its recommendations.

• The AACR-MICR Jane Cooke Wright
Lectureship, which celebrates an
outstanding scientist who has specifically
furthered the advancement of minority
investigators, marked its tenth anniversary
in 2016. This year's lecturer was Worta
McCaskill-Stevens, MD, MS, of the
National Cancer Institute (above, center).
Dr. McCaskill-Stevens presented her
lecture, "Community Clinical Trials: A
Path to Leveling the Cancer Research
Playing Field," at the AACR Annual
Meeting in New Orleans to an inspired
audience ranging from early-career to
senior scientists.



#### WOMEN IN CANCER RESEARCH (2016 COUNCIL CHAIR: PATRICIA M. LORUSSO, DO)

- WICR is a membership group within the AACR committed to recognizing women's scientific achievements and fostering their career development and advancement in cancer research. In 2016, WICR presented two Professional Advancement Sessions to support the career development of women investigators. "Thriving in an Extroverted World," which was held at the AACR Annual Meeting, focused on the roles of introverts and extroverts in career advancement. "Navigating the Role of Gender in Professional Development" took place during the AACR conference on Tumor Immunology and Immunotherapy, October 20-23, in Boston, Massachusetts.
- For nineteen years, the prestigious AACR-WICR Charlotte Friend Memorial Lectureship has highlighted an outstanding investigator who has



furthered the advancement of women in science through her work. In 2016, the AACR honored Angelika Amon, PhD (above, left), of the Massachusetts Institute of Technology. Dr. Amon presented her lecture, "Effects of Aneuploidy on Cell Physiology and Its Role in Tumorigenesis," at the AACR Annual Meeting in New Orleans.

#### ASSOCIATE MEMBER COUNCIL (2016 CHAIR: DIANA M. MERINO, MSC, PHD)

• In 1996, AACR Past President Lee W. Wattenberg, MD, FAACR, proposed that the growing cohort of early-career scientists that comprised the AACR's associate membership have their own leadership body within the organization. That year the Associate Member Council (AMC) was established to advocate for the needs of young investigators (above).



• In 2016, the council marked its twentieth anniversary (*above*), celebrating its milestone with reflections from former members in the form of a tribute video (available on the AACR YouTube channel). Throughout its 20-year history—during which the number of associate members increased from 2,700 to 13,000—the AMC has provided a strong platform for early-career scientists by engaging in peer-to-peer mentoring, offering career development programs, organizing workshops on grantsmanship, and fostering interactions with scientific leaders in the cancer community.



• On February 23-24, the AMC held its firstever Early-Career Hill Day in collaboration with the AACR Office of Science Policy and Government Affairs (*above*). Fifteen associate members (including four council members) and one member of the Science Policy and Government Affairs Committee conducted a total of 36 meetings with congressional offices in a single day. The meetings focused on members who served on the House and Senate Appropriations Committees, as well as the authorizing committees for the NIH.

The participants shared their personal stories as early-career investigators, thanked Congress for providing \$2 billion for the NIH in the FY2016 omnibus bill, expressed support for the president's budget request for the vital Cancer Moonshot Initiative, and asked the representatives to provide robust, sustained, and predictable funding increases for the NIH in FY2017 and beyond.

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## AACR OFFICERS AND DIRECTORS

The AACR thanks its officers and members of the board of directors for their vision, their wisdom, and their tireless efforts on behalf of the cancer research community.





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Eighty-eight cents of every dollar raised by the AACR Foundation goes to support lifesaving cancer science. The AACR thanks the officers and trustees of the Foundation for their efforts to maximize the impact of donations on the lives of cancer patients.

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## SUPPORTING INNOVATIVE CANCER SCIENCE

Only the AACR has the breadth and depth of scientific expertise and the authoritative voice in the community to fully achieve its ambitious goal of preventing and curing all cancers. The AACR Foundation works to provide the resources that the AACR needs to reach that goal. It supports investment in conferences, grants, and other programs that accelerate progress and impact the lives of cancer patients.





#### PARTY WITH A PURPOSE

The AACR Foundation built new relationships with the philanthropic community in 2016, enhancing the AACR's reputation as a beneficiary of choice for discerning donors. After an extensive search, the Philadelphia-based "Party with a Purpose" group selected the Foundation as the beneficiary of its exclusive fund-raising gala. Under the leadership of President Beverly Goldberg and event chairs Meredith Goldstein, Carol Lissack, John Parker, and Yvonne Winig, the 2016 edition of Party with a Purpose attracted 410 guests and raised more than \$400,00 in support of lifesaving cancer research.

During the gala, philanthropist John J. (Jack) Donnelly was recognized with the Party with a Purpose Humanitarian Award for his dedication to the community. Another highlight of the event was the presentation of the newly established AACR Foundation/ Party with a Purpose Scientific Achievement Award to Jeffrey A. Drebin, MD, PhD, chair of the Department of Surgery at the Perelman School of Medicine at the University of Pennsylvania. As part of this award, which fosters the work of early-career cancer researchers, Dr. Drebin selected Major Kenneth Lee IV, MD, PhD, Penn Medicine assistant professor of surgery, to receive a \$50,000 grant for his surgical and laboratory work in pancreatic cancer research.



#### LOCAL EVENTS: **FUND-RAISING AND** FRIEND-RAISING

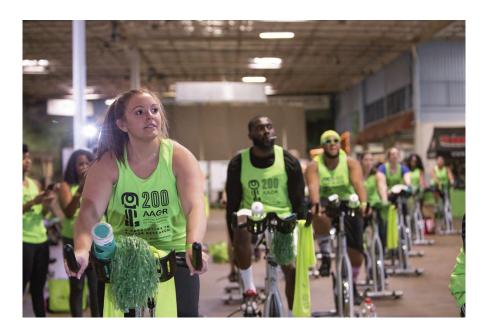
Recognizing the potential of local philanthropy to have a global impact on cancer patients, the AACR Foundation built upon its existing fund-raising events and launched new events with the potential to expand beyond the AACR's Philadelphia hometown.

- AACR Runners for Research. This AACR Foundation program enables individuals, groups, and companies to channel their passion for running toward a common goal of supporting cancer research by participating in fund-raising races around the country. For the second straight year, the AACR was the charity title partner to the Rock 'n' Roll race series in Philadelphia. In addition to the signature Half Marathon, the event was expanded to include a 5K race. More than 19,000 runners participated in the two-day event, including more than 250 AACR Runners for Research members.
- Taking advantage of the AACR's presence in the host city for the Annual Meeting, the Foundation also launched the inaugural AACR Runners for Research 5K race at the 2016 Annual Meeting in New Orleans. More than 350 runners and walkers—including Annual Meeting attendees and members of the local community—participated in the race that provided support for cancer research.
- Overall, the AACR Runners for Research program contributed significantly to the Foundation's fund-raising efforts in 2016, bringing in \$268,000 to support the AACR's mission.



**AACR Spintensity 200.** At this new indoor cycling event, teams of participants rode for 200 minutes during three sessions to raise awareness of and research funds for the more than 200 types of cancer. While the inaugural event—which raised \$200,000 to fund cancer science was held in the AACR's hometown of Philadelphia, the Foundation established a model that can be replicated in other locations to expand the AACR's base of support.









#### PUBLIC OUTREACH CAMPAIGN

In 2016, the Foundation continued its efforts to educate the public about the mission of the AACR and how funding that mission can have a vital impact on the lives of cancer patients. Several of those cancer patients were featured in a marketing campaign in the Philadelphia region, telling their stories about how advances in cancer treatment enabled them to go beyond simply enduring their disease. The campaign inspired the public to support cancer research so that patients can live with and beyond cancer.

#### FORGING PARTNERSHIPS TO ADVANCE CANCER SCIENCE

- AACR Industry Roundtable. Corporate partners that comprise the AACR's Sustaining Members gathered with AACR leaders in November to discuss ways to advance progress in cancer research. More than 20 organizations participated in the forum, which addressed critical issues in regulatory science and policy, innovative ways to improve clinical trial participation, challenges in drug development, and opportunities in precision medicine.
- Engaging with Silicon Valley. Through the visionary efforts of Trustee Laurence J. Marton, MD, the Foundation facilitated a unique meeting between the AACR and leaders in Silicon Valley. The meeting brought executives from more than 50 technology companies together with life sciences professionals and members of the cancer community to discuss and develop innovative approaches to solving the cancer problem. Participants in this collaborative forum included representatives of Microsoft Genomics,

Facebook, Yahoo, Amazon Web Services, Google Genomics, Genentech, Oracle Health Sciences, Intel Corporation, SAP Precision Medicine, Stanford, UC San Francisco, UC Santa Cruz, and the Food and Drug Administration.

#### AACR-WAUN KI HONG AWARD FOR OUTSTANDING ACHIEVEMENT IN CANCER RESEARCH

While progress against cancer depends on the generous support of the public, foundations, and corporate partners, members of the cancer research community also came together in 2016 to support the AACR's mission—and to honor a distinguished colleague, mentor, and friend.

At the 2016 Annual Meeting, the AACR announced the establishment of the AACR-Waun Ki Hong Award for Outstanding Achievement in Cancer Research. The award—which will recognize a cancer researcher under the age of 46 who has conducted highly meritorious laboratory, translational, or clinical cancer research anywhere in the world—was named in honor of Waun Ki Hong, MD, AACR past president, Fellow of the AACR Academy, and mentor to hundreds of cancer scientists.

AACR members and other members of the cancer community responded to the Foundation's call to ensure that the legacy of the AACR-Waun Ki Hong Award would endure, raising \$1,000,000 in only 15 months to support the award in perpetuity.





SUSAN AXLER

Susan Axler, 69, is a patient advocate who participated in the AACR Scientis<->Survivor Program in 2013. She has been a breast cancer survivor for more than a third of her life. Upon living with metastatic breast cancer, Susan (above left, with *Scientist*<->*Survivor Program* Chair Anna Barker, PhD) celebrated her "sweet sixteen" by requesting that friends send donations to the AACR instead of birthday gifts:

This is my sixteenth year living with metastatic breast cancer, and my gratitude to your research I have benefitted so much from the advances, the therapies developing daily, and the new understanding of pathways and

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John E. and Elizabeth S. Leonard (left) and AACR President (2015-2016) José Baselga, MD, PhD, FAACR (right), present the 2016 AACR John and Elizabeth Leonard Family Foundation Basic Cancer Research Fellowship to Fides D. Lay, PhD (center). Through its partnership with the AACR, the Leonard Family Foundation has provided \$150,000 since 2014 to support basic cancer research.

#### **AACR FOUNDATION**

## ACKNOWLEDGMENT OF SUPPORTERS



Joseph Cordaro, PharmD, MBA (left), Vice President of U.S. Medical Affairs for Incyte Corporation, and AACR President (2015-2016) José Baselga, MD, PhD, FAACR (right), present the 2016 AACR-Incyte Corporation NextGen Grant for Transformative Cancer Research to Sophia Y. Lunt, PhD (center). In the first year of this partnership, Incyte provided more than \$650,000 in funding to support cancer research.

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- 6 AACR Staff
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Uchechi Tarver<sup>6</sup> David J. Blum Marc-Andre Dorel Robyn Greenberg Travelers Insurance **BNSF** Railway Foundation Eileen Dove Katherine Gregory Sean Trujillo Amanda Boggs Lynne Drebin Samuel M. Grinspar Paul Driscoll<sup>6,10</sup> Nance Guilmartin<sup>3</sup> Laura Tyson Sandy Bomze UCLA David Geffen School of Medicine Lauren DuFour Briarcliff Congregational Tammie Gullory Church Women's Society Jennifer Dunlap Kerry Guthrie United Way of the Bay Area United Way of Central New Mexico Jamilla D. Brooks Richard Dunlap Rebecca Hammac University of Kansas Cancer Center Suzanne Brown Palady Tom Elliott Gina Hammond University of New Mexico Cancer Center BSC Men's Basketball Gregg T. Ellis Gregory Harding Valley of the Sun United Way Richard G. Buck<sup>6</sup> EPiC Elementary School Joseph Harris Peter VanPelt<sup>6</sup> Melissa Burgett First Grade Students Laurel K. Harrison Victor E. Velculescu, MD, PhD1 Hats with Heart Kelly L. Burkert Estate of Betty Jean Warner<sup>9</sup> Barbara Parker-Wahl, MD, and Jill and Webster Cavenee, PhD, FAACR<sup>1,4,8</sup> Estate of Charles Herman Armstrong<sup>9</sup> Heather Hasdemir Geoffrey Wahl, PhD, FAACR<sup>1,3,4,8</sup> Ben Hatfield Cenova Katherine Evans Washington Street School Caitlin Cesarini Suzanne Evans Bill Hatfield Janna S. Weinerman Heather Challenger Jennifer Eve Kate Hatfield Marci B. Williams Ana Chan Katherine R. Familetti Jerome Heller Lee J. Helman, MD1 Yvonne Winig **Bob Chreste** Melissa Favaloro Helena Yates Patricia Favaloro Alina Hernandez Sung Chung Caroline Hill Robert C. Young, MD1,8 Camille Ciesliga Nanette Feeney Stuart H. Yuspa, MD<sup>1,8</sup> Genevieve Fisanich Annie Hodges City Line Pediatrics Clark Capital Management Group Hanna Flick Paul Zaritsky Holman Automotive Group, Inc. Ewing Cole Alexus Flores Elle Holtzman \$500 - \$999 Nancy K. Colman Deanna Foerman Ryan Horst Jane Aba William Foos Louis L. Horton Shannon N. Conry Abbot Downing Malaika Contaste For Momentum LLC Cathy Hossack AeroBrigham Ruth Fortson<sup>6</sup> Jimmy Cook Phuong Huang Scott Agran Megan Cook Jennifer Fosco Yu chin Huang Amy Allaire Zelva Frazier Brian Costello Catherine Hubbard AmazonSmile Foundation Julie Cruse Beverly Freeman **Interstate Plastics** Kenneth C. Anderson, Kim Cullen Matthew Freiermuth Dana Ivanco MD, PhD (hc), FAACR<sup>1,4</sup> Karen Czuprynski Amy Garrison Stephanie Jeitner Susan Angelo Rhonda Daugherty Heather Garza Bonnie L. Johnson Anonymous Deanna DeBrosse Elethia Gay Bryan R. Johnson ArcelorMittal Matching Gifts Program Paul Decker Kristin Jones Robyn Gerry Mary Baraiolo Daniel T. Dempsey Alden Gibbs Sophia Jones Angela Barnes Desert Cross Lutheran Church Kim Judkins Susan Girouard Jane Barnes Ivv Devitt Susan H. Goldberg Beth Karchner Rachel Barsness Alison Diaz Josh Goldstein<sup>6</sup> Michael Kastan, MD, PhD1,8 Jennifer Beal Joseph N. DiBello Jennifer Goss Mayuri Kealy Philippe L. Bedard, MD<sup>1</sup> Gerardo Di Dio Grace Grandville

Grace Kim Cyndi Kirkpatrick Chrissy Kissinger Holly Kisskalt Karen Kleczka William Klein Debbie Kleinberg Nancy E. Kohl, PhD1 Hannah Kraemer Robert Krouse Jack Kutney Jamie Labonosky Rebecca Larson Jason Latchaw Rochelle Laudenbach Richard Law Wendy and Theodore S. Lawrence, MD,  $PhD^{1,8}$ Karen Lecky-Springer Krista Ledden Carla Lee Frank Lee James Lee Janice Lee Toniann Lentine Elizabeth and John E. Leonard, PhD<sup>1,3</sup> Keith Le Pard Kristie L. Lesniak Nancy Levin Alex Lieberman Eileen Loftus<sup>6</sup> Jodi Lokoff John MacDonald Macquarie Group Foundation Dawn Maloney Shannon Mann Nina Marchetto Lisa Martin Shannon Martin Iraida Mathews Lauren Mathews

Melanie Mel Mercer **Janet Mestre** Roseanne Miller Vern Mitchell<sup>6,10</sup> Amelia Moissinac Alyssa Monas Emily Moore Kimberly Moore Harriet Morgan Maurice Moriarty Kelly Morrone Michael Mountain Jennifer Muarip Iennifer Muckley Patty Muenzenmeyer Shannon Muenzenmever Belinda Mulpeter Matthew Mulpeter Caterina L. Musetti, PhD1 Kerry Musgrave Andrea Myers David Naide Jacob Nankin Brandon Neudecker Kevin Noonan Dana Palmeri Vicki H. Parks Tayreen Partch Taine Pechet Stacev Peltier-Ginther Jillyan Perrine Nancy and Robert Perry Joy Pochatila Joe Pontoski6 Laurie Powers Stanley Prager Armand Prestidge Carolina Prudente Nancy Pundyk Patty Quinn McAuley Denelle Radka

Monica Reich Southern Finishing Co. Michael Rench Kenneth Sparling Patricia Reno David Stauffer Linda Revno Laura L. Stenger Tom Reynolds Jeanette Stephens-El Cathy and Mike Stewart<sup>6</sup> Timothy Rhoades Michael Rickey Mark D. Stewart, PhD1 Linda Ridolfi Strata Company Stephanie Rife Chris Straw Mark Risi Lisanna Stotts Edward Roberts Lynn A. Sullivan **Jillian Roberts** William Sun Rockland Immunochemicals, Inc Reggie Swanigan<sup>6</sup> Melody A. Swartz, PhD1 Rob Rogers Robin Rose-Dale Craig Tangeman Gail Rosen B.E. Tate Carolyn Ross April H. Teitelbaum, MD Joy K. Rouse Jamie Thompson Mark Rubino Wayne Thompson Wanda Ruiz Marilyn Toub Dawn Trask Daniel J. Ryterband Debbie Turczan Anthony Sagnelli Michelle Santos Dee Ann and Ashley Turner Mark Saraficio Tustin Mechanical Services Scarlett Alley United Way of the Greater Lehigh Valley Manali Vaishnay Robert Schamis John Schmidt Karen Vallecillo-Pereira Meghan Schoenborn Deborah Van Dam Scrub Daddy, Inc. Pulin Visaria City of Seattle Stacie Wallace Eboni Ward Mary Semple Lynn Seuberling Tracy Weber Stefanie Shimansky Brian West Silicon Valley Community Foundation Karen Whitman Iamie Skelton, III Katie Whitman Katie Smith Lacey Wilson

Tyrone Wilson

DeeAnn Yabusaki1

Linda Wulff

Owen N. Witte, MD, FAACR<sup>1,4,8</sup>

Taffin Smith

Reginald Smith

Vernon Smith

Linda Snider

## REVENUES AND EXPENSES



AACR members, patient advocates, and local cancer experts from New Orleans participated in an educational event titled "Progress and Promise against Cancer," held during the AACR Annual Meeting 2016. The educational event was one of several new initiatives launched in 2016.

In 2016, the AACR reported another year of positive financial growth. This financial stability enables the AACR to comprehensively meet the challenges of the cancer problem and respond to today's exciting research opportunities. Operating revenues increased 10 percent to \$87 million and total expenditures

closely matched revenues. The net impact of revenues and expenses resulted in an operating surplus of \$1.6 million. As outlined in this report, several major projects were launched in 2016, and the AACR was able to outperform the budget through successful programs, revenue growth, evaluation of expenses, and prudent financial management.

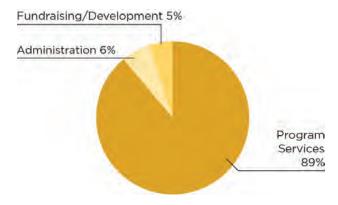
Non-operating activities are primarily related to long-term investments. The AACR's investments provided strong

returns in the amount of \$3.5 million in a year of stock market volatility and economic uncertainty.

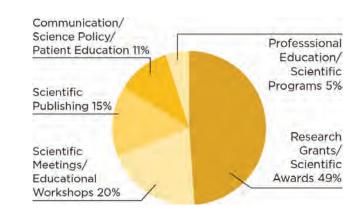
The results of the combined operating and non-operating activities resulted in a net surplus of \$5.1 million, which enabled the AACR's unrestricted net assets to grow to \$60.5 million. This important source of income ensures continued investment in the programs that will accelerate progress toward the prevention and cure of cancer in accordance with AACR's strategic plan.

## REVENUES AND EXPENSES 2016

#### **2015 TOTAL EXPENSES**



#### **2015 PROGRAM EXPENSES**



## American Association for Cancer Research, Inc. and AACR Foundation UNRESTRICTED REVENUES AND EXPENSES (UNAUDITED) AS OF DECEMBER 31, 2016

|  | 2015   | 2016   | 2016<br>PERCENT<br>OF TOTAL   |
|--|--|--|-------------------------------|
| REVENUE  |  |  |                               |
| Membership Dues  | \$3,196,515  | \$4,028,240  | 5%                            |
| Scientific Publishing  | \$16,663,107   | \$18,233,267   | 21%                           |
| Scientific Meetings / Educational Workshops  | \$19,822,200   | \$18,950,958   | 22%                           |
| Other Revenue  | \$687,561  | \$861,593  | 1%                            |
| Subtotal: Program Revenue  | \$40,369,383   | \$42,074,058   | 48%                           |
| Support  |  |  |                               |
| NIH Grants   | \$872,051  | \$849,259  | 1%                            |
| Contributions  | \$38,318,845   | \$44,549,942   | 51%                           |
| Subtotal: Support Revenue  | \$39,190,896   | \$45,399,201   | 52%                           |
| TOTAL REVENUE  | \$79,560,279   | \$87,473,259   | 100%                          |
|  |  | . , ,  | 100%                          |
| EXPENSES   |  |  | 100%                          |
| EXPENSES Research Grants / Scientific Awards   | \$31,746,082   | \$37,022,199   |                               |
|  | \$31,746,082<br>\$17,545,741                               |  | 43%                           |
| Research Grants / Scientific Awards  |  | \$37,022,199   | 43%<br>18%                    |
| Research Grants / Scientific Awards<br>Scientific Meetings / Educational Workshops   | \$17,545,741   | \$37,022,199<br>\$15,542,214   | 43%<br>18%<br>13%<br>9%       |
| Research Grants / Scientific Awards<br>Scientific Meetings / Educational Workshops<br>Scientific Publishing  | \$17,545,741<br>\$10,736,411                               | \$37,022,199<br>\$15,542,214<br>\$11,359,827                               | 43%<br>18%<br>13%<br>9%       |
| Research Grants / Scientific Awards Scientific Meetings / Educational Workshops Scientific Publishing Communications / Science Policy / Patient Education  | \$17,545,741<br>\$10,736,411<br>\$7,195,985                | \$37,022,199<br>\$15,542,214<br>\$11,359,827<br>\$8,040,487                | 43%<br>18%<br>13%<br>9%<br>5% |
| Research Grants / Scientific Awards Scientific Meetings / Educational Workshops Scientific Publishing Communications / Science Policy / Patient Education Professional Education / Scientific Programs | \$17,545,741<br>\$10,736,411<br>\$7,195,985<br>\$2,648,648 | \$37,022,199<br>\$15,542,214<br>\$11,359,827<br>\$8,040,487<br>\$4,083,423 | 43%<br>18%<br>13%             |

| TOTAL EXPENSES                       | \$78,838,571  | \$85,831,885 | 100% |
|--------------------------------------|---------------|--------------|------|
| Operating Surplus before Investments | \$721,708     | \$1,641,374  |      |
| Investment Income                    | (\$2,202,893) | \$3,513,691  |      |
| Change in Unrestricted Net Assets    | (\$1,481,185) | \$5,155,065  |      |
| NET ASSETS BEGINNING OF YEAR         | \$56,898,057  | \$55,416,872 |      |
| NET ASSETS END OF YEAR               | \$55,416,872  | \$60,571,937 |      |

\$8,965,704

\$9,783,735

11%

**Subtotal: Support Expenses** 

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THE AACR IN 2017: A VISION OF THE FUTURE

## ACKNOWLEDGING THE PAST, LEADING THE FUTURE

During the past year, AACR programs and initiatives have catalyzed groundbreaking cancer science for the benefit of patients. The AACR will expand its reach even further in 2017—marking milestones, moving into new geographic regions, and working to expedite the development of effective cancer treatments.

#### RECOGNIZING THE AACR'S 110TH ANNIVERSARY

On May 7, 1907, eleven prominent scientists met at the Willard Hotel in Washington, DC, to found the American Association for Cancer Research, the first organization in the world to focus on cancer. In 2017, the AACR will return to Washington to host its Annual Meeting and to celebrate 110 years of accomplishments and progress against cancer. History shows there is much to be proud of, but there is much work to be done to save more lives from cancer.

The AACR will commemorate this milestone at the Annual Meeting by updating the Landmarks in Cancer Research display that was produced during its Centennial celebration in 2007. The display will recognize the cumulative progress in the understanding and eradication of cancer by the global community of scientists, researchers, clinicians, and patient advocates. The anniversary celebration will continue throughout the year, as the AACR looks back on its past and looks forward to a future of continued advances against cancer.



#### **EXPANDING INTERNATIONAL COLLABORATIONS: AFRICA** AND SOUTH AMERICA

The AACR continues to foster excellence in cancer science around the world in 2017, bringing cutting-edge conferences to two new continents:

• Africa: The AACR International Conference on New Frontiers in Cancer Research. This conference, held in

Cape Town, South Africa, was the first AACR meeting on the African continent. Under the leadership of cochairs Peter A. Jones, PhD, DSc, FAACR, and Frank McCormick, PhD, FAACR, the conference brought the latest basic, translational, and clinical cancer research to researchers working primarily in Africa—with a special focus on cancers that have a high rate of incidence in the region.



Cape Town, South Africa



#### THE AACR IN 2017: A VISION OF THE FUTURE



São Paulo, Brazil

• South America: AACR International **Conference on Translational Cancer Medicine.** In cooperation with the Latin American Cooperative Oncology Group (LACOG), the AACR will host its first-ever conference in South America. Cochairs Carlos L. Arteaga, MD, FAACR, and Carlos Gil M. Ferreira, MD, PhD, will convene leading researchers from North, Central, and South America in São Paulo, Brazil, to address the challenges of bridging the gap between basic research and clinical care.

#### **DEVELOPMENT FOR** PEDIATRIC CANCER

Since its establishment in 2011, the AACR Pediatric Cancer Working Group has promoted the prevention and cure of childhood cancers by promoting communication and collaboration among researchers in all sectors. In 2017, the working group will focus on accelerating the development of pediatric cancer drugs and expanding access to existing

drugs with potential applications to childhood cancers. Under the leadership of chair Lee J. Helman, MD, the working group will convene a Pediatric Cancer Drug Development Subcommittee. In collaboration with the AACR Science Policy and Government Affairs Committee, this new subcommittee will address the scientific, policy, and legislative challenges facing the development of pediatric cancer treatments.

#### VISION 2020 STRATEGIC PLAN

Throughout the past year, the AACR Board of Directors and staff worked together to develop the AACR's Vision 2020 Strategic Plan. Approved by the Board in November 2016, the plan set a course for the AACR's growth and impact on cancer research, and it identified the following seven strategic priorities for the AACR through 2020:

- 1. To identify and foster innovative science that is of the highest priority and potential for impact in reducing cancer incidence, morbidity, and mortality
- 2. To become the primary educational resource for cancer scientists, the broader cancer community, and the public
- 3. To publish and disseminate high-quality cancer science worldwide
- 4. To meet the professional needs of members and increase international outreach and participation

- 5. To increase awareness of the AACR among the public
- 6. To serve as the authoritative voice for cancer research and thereby inform and influence science and public policy
- 7. To develop and implement a comprehensive financial plan that supports the strategic plan and achieves dynamic growth and increased impact

These priorities will inform the AACR's actions for the next several years and will keep the AACR focused on the destination —the prevention and cure of all cancers that is at the heart of its mission. AACR members from across the spectrum of cancer science worked with patients, advocates, legislators, regulators, and the public to move toward that destination in 2016. As the focus turns to 2017 and beyond, the AACR will continue leading discoveries, targeting cures, and saving lives. On the cover (clockwise from center):

Retired Army colonel and prostate cancer survivor Jim Williams and his wife, Lois. Featured in the Summer 2016 issue of *Cancer Today*, the AACR's consumer magazine, Jim counsels recently-diagnosed prostate cancer patients and works with nonprofits to increase cancer screening and improve cancer care for racial and ethnic minorities.

Acute lymphoblastic leukemia survivor Luke Theodosiades (*center*) with his brothers. A featured survivor in the *AACR Cancer Progress Report 2016*, Luke received CAR T-cell therapy in May 2016 and a bone marrow transplant in August 2017, and he currently has no evidence of disease.

**AACR President (2016-2017) Nancy E. Davidson, MD.** Dr. Davidson is Executive Director of Oncology at the Fred Hutch/University of Washington Cancer Consortium, Seattle, Washington.

**AACR President (2015-2016) José Baselga, MD, PhD, FAACR.** Dr. Baselga is Physician-in-Chief at Memorial Sloan Kettering Cancer Center, New York, New York.

Papillary thyroid cancer survivor Cherry Sloan-Medrano. Diagnosed with stage III papillary thyroid cancer in 2008, Cherry was treated successfully and now works to educate her community about cancer risk and prevention. Her story is featured in the Fall 2015 issue of *Cancer Today*.

Former Vice President Joe Biden addressing the AACR Annual Meeting 2016. In late 2015, Vice President Biden called for a "cancer moonshot... a national commitment to end cancer as we know it." After President Obama appointed the vice president to lead the National Cancer Moonshot Initiative, AACR members and leaders worked in 2016 to shape and realize the vice president's vision.

**Leiomyosarcoma survivor Nancy McGuire.** Diagnosed in 2009, Nancy has received a number of treatments over the past seven years, including one drug (trabectedin; Yondelis) that had just received FDA approval. Nancy is a featured survivor in the *AACR Cancer Progress Report 2016*.

