

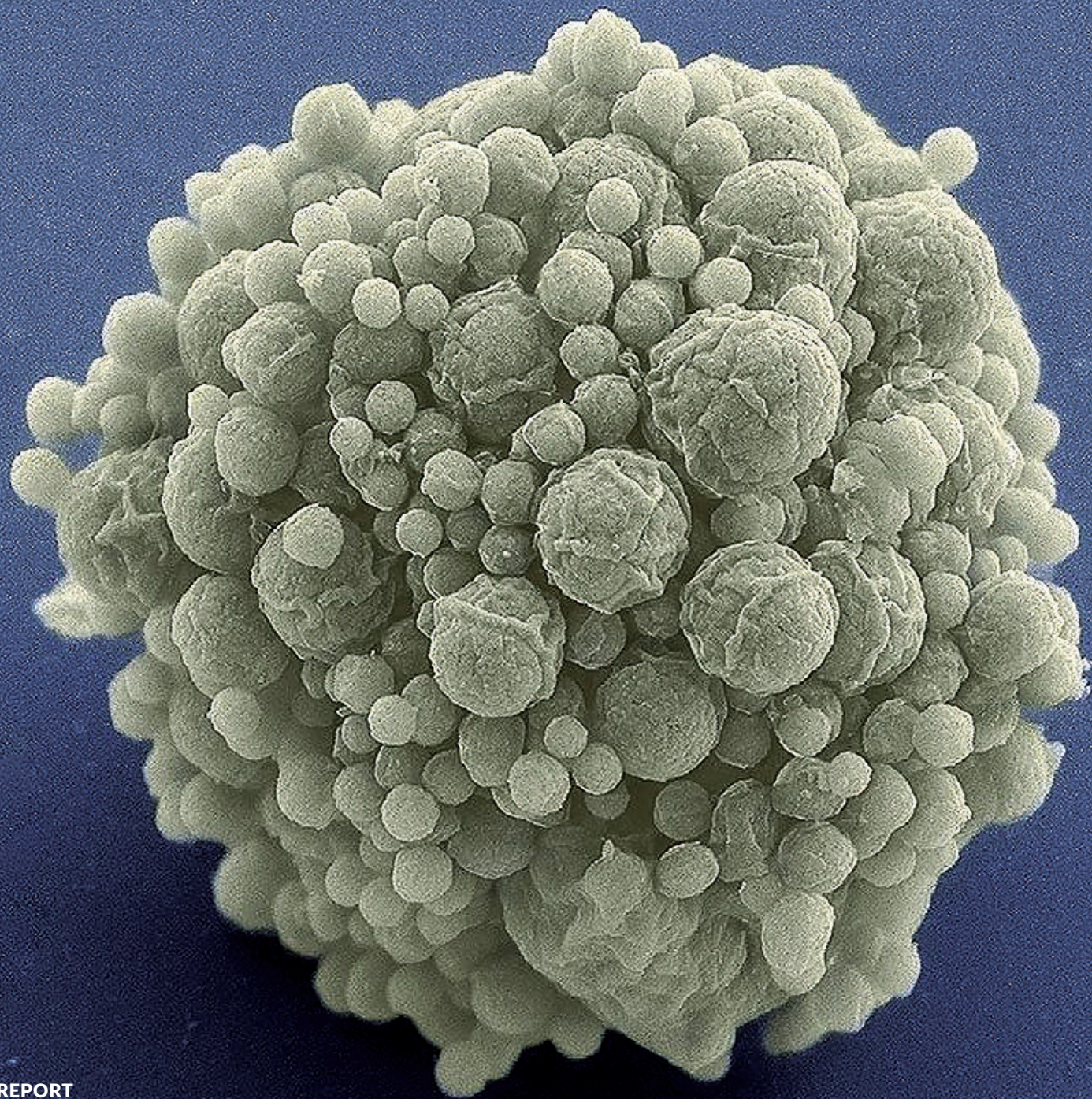


# TRANSFORMING OUR DNA



2016 ANNUAL REPORT







# Table of Contents

<b>2016 Year in Review</b>	<b>2</b>
Letter from H. Robert Horvitz, Chair	4
Letter from Maya Ajmera, President & CEO	6
Overview and Top Ten	8
Regeneron Sponsorship Announcement	10
<b>2016 Society Competitions</b>	<b>14</b>
Intel Science Talent Search	16
STS 75 <sup>th</sup> Anniversary Gala	18
Intel International Science and Engineering Fair	20
Broadcom MASTERS	22
Alumni	24
STS 75 <sup>th</sup> Anniversary Alumni Conference	26
<b>Science News Media Group</b>	<b>28</b>
<i>Science News</i>	30
<i>Science News for Students</i>	34
<b>Outreach &amp; Equity</b>	<b>36</b>
<i>Science News</i> in High Schools	38
Advocate Grant Program	40
Research Teachers Conference	42
STEM Action & Research Grants	44
<b>Society for Science &amp; the Public</b>	<b>46</b>
Financials	48
Donors	50
Board of Trustees	56
Executive Team and Staff	57

*Science News* | DECEMBER 24, 2016

## ONLY THE ESSENTIALS

One of biology's biggest achievements in 2016 was intentionally as small as possible: building a bacterium with only 473 genes. That pint-size genetic blueprint is a milestone in a decades-long effort to create an organism containing just the bare essentials of life. Ultimately, such cell templates could transform the field of medicine, as well as agricultural and chemical industries.





Science News | MARCH 5, 2016

## VIRAL DELIVERY

In a multivirus competition, a new-comer came out on top for its ability to transport genetic cargo to a mouse's brain cells. The engineered virus AAV-PHP.B was best at delivering a gene that instructed Purkinje cells, the dots in the micrograph shown, to take on a whitish glow. Such cargo could one day replace faulty genes in people's brains, potentially transforming how we treat brain disease and injury.



# 2016 YEAR IN REVIEW





As the Chair of the Society's Board of Trustees, I have the honor of introducing the Society for Science & the Public's 2016 Annual Report, *Transforming Our DNA*, which shares a comprehensive portrait of the organization with you, our dedicated supporters.

Our vision of promoting the understanding and appreciation of science and the vital role played by science in human advancement continues. Under the visionary leadership of Maya Ajmera, we are excelling at our core programs while also transforming our work as a long-respected voice in the scientific community with the goal of reaching more people, from students and teachers to professional scientists and science enthusiasts.

In 2016, we celebrated the 75<sup>th</sup> anniversary of our Science Talent Search (STS), the nation's oldest and most prestigious science competition for high school seniors. 2016 also included the announcement of our third ever Science Talent Search sponsor, Regeneron. Their incredible \$100 million, 10-year sponsorship ensures the continued success of this national treasure, which has served as a catalyst for the careers of many of our nation's most well-respected scientists and entrepreneurs. It is fitting, but not surprising, that Regeneron was founded by two STS alumni, George D. Yancopoulos (1976 STS) and Leonard Schleifer (1970 STS). With their support, the Society is able to double the value of the awards given to the Science Talent Search winners to more than \$3 million annually. We cannot thank those at Regeneron enough.

*Science News* and *Science News for Students* remain at the forefront of breaking scientific news. For example, we described the landmark development and innovative applications of the CRISPR system, a topic that inspired our Annual Report theme. *Science News* and *Science News for Students* continue to win prestigious journalism awards for their exceptional coverage. We are working to ensure that more people, especially young people, have access to our trusted science reporting. More than 4,000 schools now participate in our *Science News* in High

Schools program, an impressive increase over 2015, when we reached fewer than 300 schools. We hope one day to expand this program to include all public high schools.

I personally thank our Board of Trustees for working diligently to ensure the continued success of the Society in achieving our important goals. I extend a special thank-you to Vivian Schiller, who retired as a Trustee after serving with distinction since 2012.

The Society welcomed three new members to our Board of Trustees in 2016: Hayley Bay Barna, Tessa M. Hill and Scott A. McGregor. Hayley is a Venture Partner at First Round Capital and Co-Founder and former Co-CEO of Birchbox. She is also an alumna of the 2001 Science Talent Search. Tessa is Associate Professor and Chancellor's Fellow in the Department of Earth & Planetary Sciences at the University of California, Davis. Scott is the retired President and Chief Executive Officer of Broadcom Corporation and a retired Chairman of the Broadcom Foundation. He is an alumnus of the 1974 Science Talent Search. These three new members add exceptional depth and breadth to the Board and will increase the Board's ability to advise the Society to grow.

Our work is made possible by the generous support of you, the Society's subscribing members, donors, alumni and readers. Thank you for helping the Society promote science.

We look forward through this next year to building upon our recent exciting progress.

Sincerely yours,

H. Robert Horvitz, Ph.D.

Chair, Board of Trustees

Nobel Prize in Medicine or Physiology, 2002

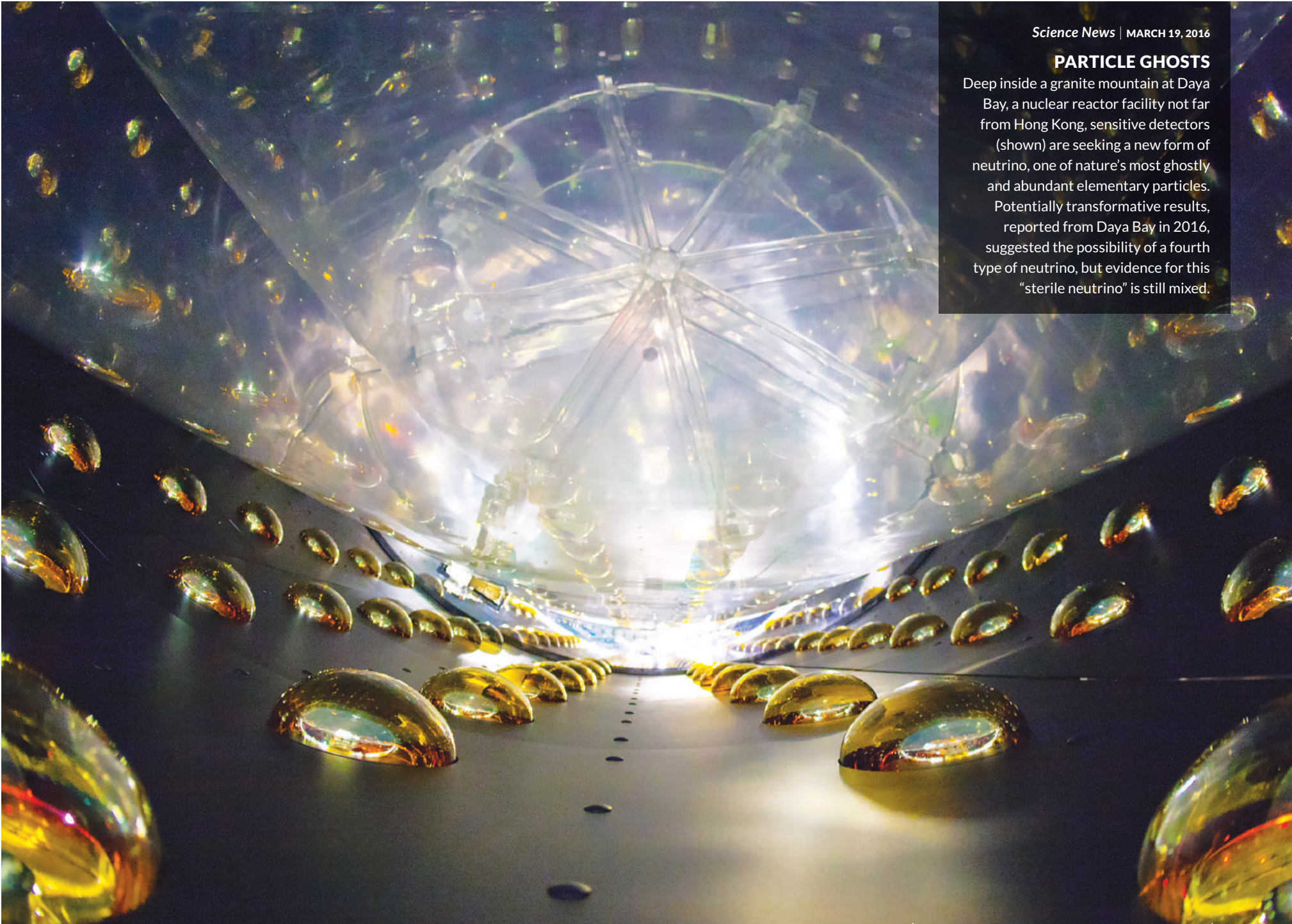
Professor of Biology, Massachusetts Institute of Technology

Investigator, Howard Hughes Medical Institute

Member, MIT McGovern Institute for Brain Research

Member, MIT Koch Institute for Integrative Cancer Research





Science News | MARCH 19, 2016

## PARTICLE GHOSTS

Deep inside a granite mountain at Daya Bay, a nuclear reactor facility not far from Hong Kong, sensitive detectors (shown) are seeking a new form of neutrino, one of nature's most ghostly and abundant elementary particles. Potentially transformative results, reported from Daya Bay in 2016, suggested the possibility of a fourth type of neutrino, but evidence for this "sterile neutrino" is still mixed.





This was a year of celebration and growth for the Society for Science & the Public. I am thrilled to present our 2016 Annual Report — *Transforming Our DNA*.

In its 75-year history, the Science Talent Search (STS) has had only two sponsors — Westinghouse and Intel. In 2016, we announced the third sponsor of the Science Talent Search — Regeneron, a biotech company. This 10-year, \$100 million partnership secures the future of STS, doubling our annual STS awards to more than \$3 million to better reward the nation's brightest young scientists and encourage their continued pursuit of scientific innovation, as well as investing \$30 million in our outreach and equity initiatives. This partnership is thanks to the powerful leadership of STS alumni Leonard Schleifer (1970 STS), President and CEO, and George D. Yancopoulos (1976 STS), President and Chief Scientific Officer, of Regeneron. The passion and commitment of the entire Regeneron team show that they are an extraordinary force for STEM education in the 21<sup>st</sup> century.

In March, we celebrated the 75<sup>th</sup> anniversary of STS with a beautiful gala and awards ceremony with close to 1,000 finalists, parents, mentors, Society supporters and alumni in attendance. This was followed the next day by the Society's first alumni conference, where distinguished alumni spoke, including Nobel Laureates, entrepreneurs and scientific leaders.

I want to personally thank Intel for its visionary leadership supporting STS from 1998 through 2016. Our exemplary partnership enabled us to reach thousands of the nation's brightest students, putting them on the paths of their remarkable careers in STEM.

The Society's outreach and equity initiative continues to scale its reach to serve more students and teachers. More than 4,000 public high schools, close to 30 percent of all public high school students in the United States, now have access to our *Science News* in High Schools program. We also doubled the size of our annual Research Teachers Conference to 200 teachers.

In addition, we were pleased to begin making STEM Action & Research Grants to innovative projects and to research teachers working on critical STEM issues.

The pages of our Annual Report highlight incredible images from our 2016 coverage in *Science News* and *Science News for Students*. These images illustrate our transforming understanding of the world around us. They show the importance of the Society's timely, credible and independent science journalism.

In 2016, *Science News* was among the first to report what was widely considered the biggest physics discovery in a decade — the direct detection of gravitational waves. In August, the Society launched a stunning new website for *Science News for Students* that better showcases our award-winning journalism.

The Society's high-caliber programming can only take place thanks to the Society's exceptional team. In particular, I would like to thank our executive team for securing the Regeneron sponsorship. I am also grateful for the expansive network of thousands of judges and volunteers who ensure the success of our world-class science competitions. Additionally, I appreciate the steadfast stewardship of the Society by our Board of Trustees. I am particularly excited to welcome new Trustees Hayley Bay Barna (2001 STS), Tessa M. Hill and Scott A. McGregor (1974 STS).

Just as science transforms, we will remain on the forefront of both scientific news and finding the next generation of science and engineering leaders. None of this would be possible without your generous commitment to our work. Thank you for all that you do to ensure the Society's success and impact.

With best wishes,

A handwritten signature in black ink that reads "Maya Ajmera".

Maya Ajmera

President & CEO

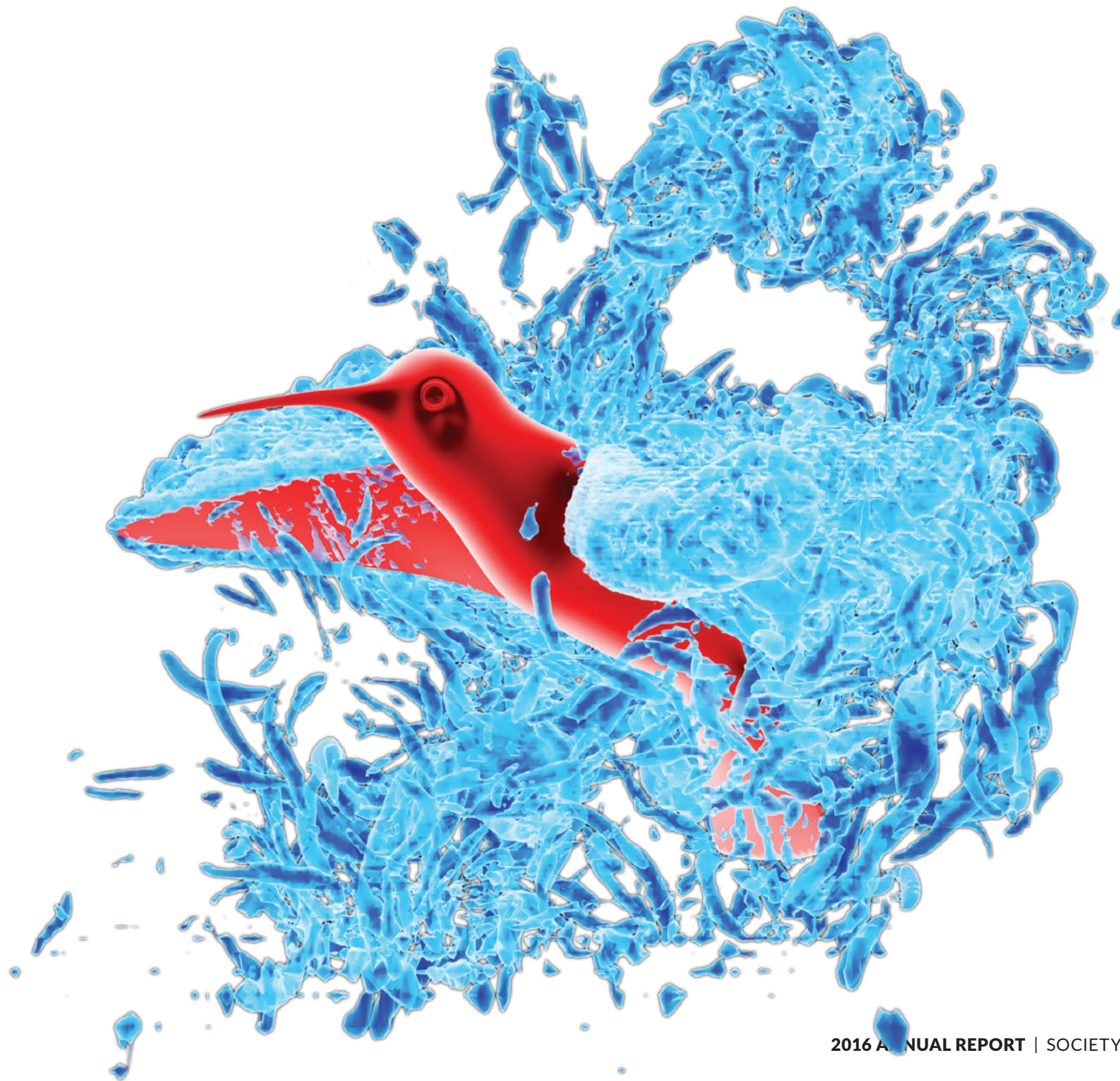
Publisher, *Science News*

1985 Science Talent Search Alumna

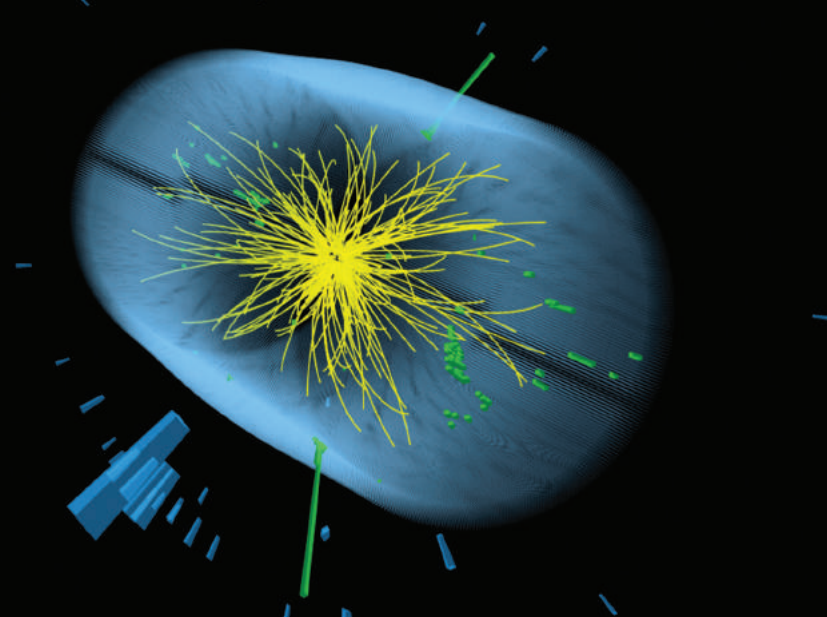


## WONDERS OF FLIGHT

Hummingbirds are extreme athletes, deftly darting between flowers. A combination of high-speed filming and computer simulations has now revealed how the birds' wings manipulate the surrounding air. Researchers have known that the wings induce lift by generating what are called leading-edge vortices (shown as thick blue layers), but the simulations highlight the true complexity of air movement.







Science News | MAY 28, 2016

### BIG OR BLIP?

A possible new particle spotted at the Large Hadron Collider had physicists searching for explanations in 2016. The potential particle showed up in proton collisions that produce two photons (illustrated here). If real, the data could transform our understanding of particle physics — or they might turn out to be merely a blip.

# TRANSFORMING OUR DNA

The Society for Science & the Public is a champion for science, dedicated to expanding scientific literacy, effective STEM education and scientific research. Founded in 1921 by Edward W. Scripps, a renowned journalist, and William Emerson Ritter, a California zoologist, we are a nonprofit 501(c)(3) membership organization focused on promoting the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate and inspire.

Since 1922, the Society has published *Science News (SN)*, a vibrant and trusted source of science journalism that is concise and comprehensive. The Science

News Media Group offers readers bold, contemporary, award-winning editorial content, informative imagery, a blog network, educational products and access to archives going back to 1924. This includes *Science News for Students (SNS)*, launched in 2003 as a youth edition and companion to *SN*. *SNS* is an award-winning, free digital resource serving students, parents and teachers. *SN* has more than 120,000 subscribers, more than 12 million unique website visitors during the past year, 2.7 million Facebook fans and 2.2 million Twitter followers.

In 1942, the Society launched the first of its science competitions, the Science Talent Search (STS). In 2016, we cele-

brated the 75<sup>th</sup> anniversary of STS and named Regeneron as the competition's third sponsor, following Intel and Westinghouse. The Society also founded and produces the Intel International Science and Engineering Fair (Intel ISEF) and Broadcom MASTERS (Math, Applied Science, Technology and Engineering for Rising Stars). The Society's Affiliated Fair Network, encompassing 450 U.S. and international fairs, is a gateway to higher education and STEM careers for millions of students worldwide each year. The community of 60,000 alumni of our competitions are thought leaders and innovators of all ages and from all industries.

The Society recently expanded its work to ensure that more young people have access to its award-winning science journalism and can experience the benefits of science research competitions. These programs include our *Science News* in High Schools, Advocate Grant Program, Research Teachers Conference and STEM Action & Research Grants.

The Society is thrilled to present its 2016 Annual Report. We are looking back on a year of important announcements and exciting changes that have transformed our organization.



## 2016 Society Top Ten



In an unprecedented special report, *SN* was among the first to report what was widely considered the biggest physics discovery in a decade — the direct detection of gravitational waves.



Twenty-three Society alumni participated in the sixth White House Science Fair, bringing the number of our students who have participated in this exciting event to nearly 70. Society alumni have attended every White House Science Fair.



With the support of Intel, the Society celebrated the 75<sup>th</sup> anniversary of the Science Talent Search during a formal gala keynote by Neil deGrasse Tyson. This was followed the next day by the Society's first STS Alumni Conference, with MIT's Feng Zhang (2000 STS) and former California first lady Gayle Edlund Wilson (1960 STS) as speakers.



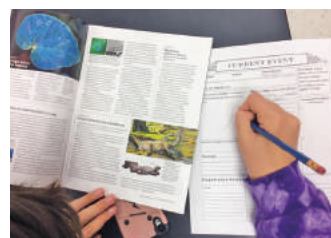
*Science News* was immortalized in "Merriam-Webster Unabridged," which used several *SN* writers' sentences in its newly expanded online dictionary to demonstrate the usage of technical terms.



Regeneron was selected by the Society as the new sponsor for the Science Talent Search. Regeneron committed \$100 million to support the competition and expand the Society's outreach and equity programs through 2026.



More than 1,700 students from over 75 countries, regions and territories competed for more than \$4 million in awards at the 2016 Intel International Science and Engineering Fair. Canadian Han Jie (Austin) Wang won the top award of \$75,000 for developing microbial fuel cells that more efficiently convert organic waste into electricity.



The *Science News* in High Schools program expanded from 270 to more than 4,000 schools for the 2016–2017 school year, providing programmatic access to close to 30 percent of public U.S. high school students, reaching all 50 states.



The Society launched an improved platform for *Science News for Students*, enabling this award-winning middle school resource to make an even larger impact by placing *SNS* on its own mobile website and advancing its design and navigation.



For the first time, Broadcom MASTERS included four top awards: Nathan Deng won the new \$7,500 Lemelson Award for Invention, Eleanor Sigrest won the \$25,000 Samueli Foundation Prize, Aria Eppinger won the new \$20,000 Robert Wood Johnson Foundation Award for Health Advancement and Kaien Yang won the \$10,000 Marconi/Samueli Award for Innovation.



The Society doubled the impact of the Research Teachers Conference, providing an all-expenses-paid three-day training to 200 teachers.

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEP

OCT

NOV

DEC



**REGENERON**

**SCIENCE  
TALENT SEARCH**

A program of  
**SOCIETY FOR SCIENCE  
& THE PUBLIC**



Since 1942

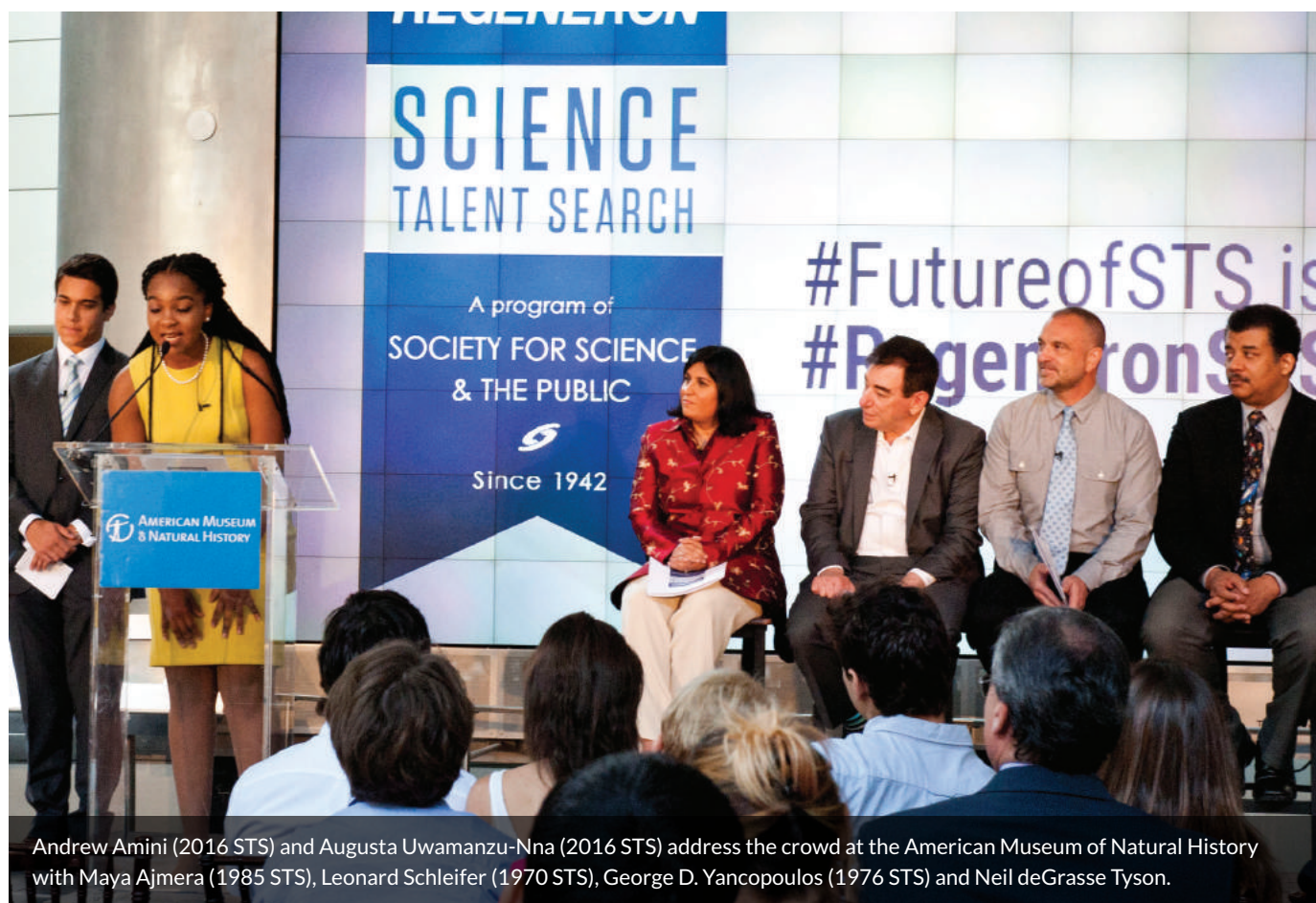
“We are honored to be the new sponsor of the Science Talent Search, a national treasure that showcases the critical role science plays in advancing society.”

GEORGE D. YANCOPOULOS (1976 STS)  
PRESIDENT AND CHIEF SCIENTIFIC OFFICER,  
REGENERON



# REGENERON PARTNERSHIP TRANSFORMS THE SOCIETY

In 2016, Regeneron became only the third sponsor of the Science Talent Search, following previous sponsors Westinghouse and Intel. Founded and led by physician-scientists who are STS alumni themselves, Regeneron is an innovative biotechnology company that works to help patients with serious diseases. As part of its 10-year, \$100 million commitment, Regeneron significantly increased the awards distributed during the Science Talent Search to better reward the nation's brightest young scientists and encourage their continued pursuit of scientific innovation. Regeneron nearly doubled the overall award distribution to \$3.1 million annually and increased the top award to \$250,000. Regeneron and the Society share a deep commitment to expanding and diversifying the STEM talent pool and have earmarked \$30 million for Society programs aiming to increase access to STEM education and resources for underrepresented populations. Regeneron's transformative sponsorship is the largest commitment the Society has ever received from a single organization.



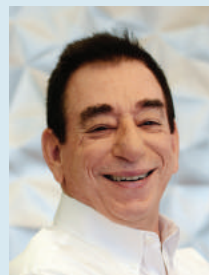
Andrew Amini (2016 STS) and Augusta Uwamanzu-Nna (2016 STS) address the crowd at the American Museum of Natural History with Maya Ajmera (1985 STS), Leonard Schleifer (1970 STS), George D. Yancopoulos (1976 STS) and Neil deGrasse Tyson.





## HOMECOMING CELEBRATION

Top left: George D. Yancopoulos (1976 STS) announces the \$100 million partnership at the Bronx High School of Science; Bottom left: The crowd listens to the announcement; Opposite: George and Neil deGrasse Tyson are celebrated by students at their alma mater.



### Leonard Schleifer

President and Chief Executive Officer

Len (1970 STS) grew up in Queens, New York, with parents and teachers who inspired his passion

for science and entrepreneurship. Len's high school math teacher encouraged him to submit a project to the Westinghouse Science Talent Search in 1970, helping to launch him on the path to his current position.

He earned his M.D. and Ph.D. in pharmacology from the University of Virginia and became a licensed physician certified in neurology. While working as a practicing neurologist and professor at Cornell Medical School, Len became frustrated with the lack of effective treatments for his patients with serious neurodegenerative diseases. He wondered if new "biotechnology" could be harnessed to potentially make an impact for these patients, and many others. Len founded Regeneron in 1988, with the vision of creating a company built entirely on science, where scientists are the heroes and everyone works towards the common goal of helping patients. Thirty years later, Len's dream is a reality, and the Regeneron team is using their scientific prowess to consistently and repeatedly bring new medicines to people in need.



### George D. Yancopoulos

President and Chief Scientific Officer

George (1976 STS) has led Regeneron alongside Len for nearly 30 years and serves as the

company's President and Chief Scientific Officer. The son of Greek immigrants in New York City, George attended the Bronx High School of Science, where he wanted to be like the heroes at school and compete in the Westinghouse Science Talent Search.

With the help of his teacher-mentor, Mrs. Strom, George would arrive to school at 5:30 each morning to work on his project, a top winner in the 1976 Science Talent Search. This was a life-changing experience that confirmed he would commit to a career in science.

After graduating as valedictorian at Bronx Science and at Columbia University, George received M.D. and Ph.D. degrees from Columbia University's College of Physicians & Surgeons.

George, together with key members of his team, is a principal inventor and developer of Regeneron's six FDA-approved drugs, as well as its foundational drug development technologies.



# REGENERON SUPPORT

## BY THE NUMBERS



\$100  
million  
over 10 years

\$70 million  
for STS

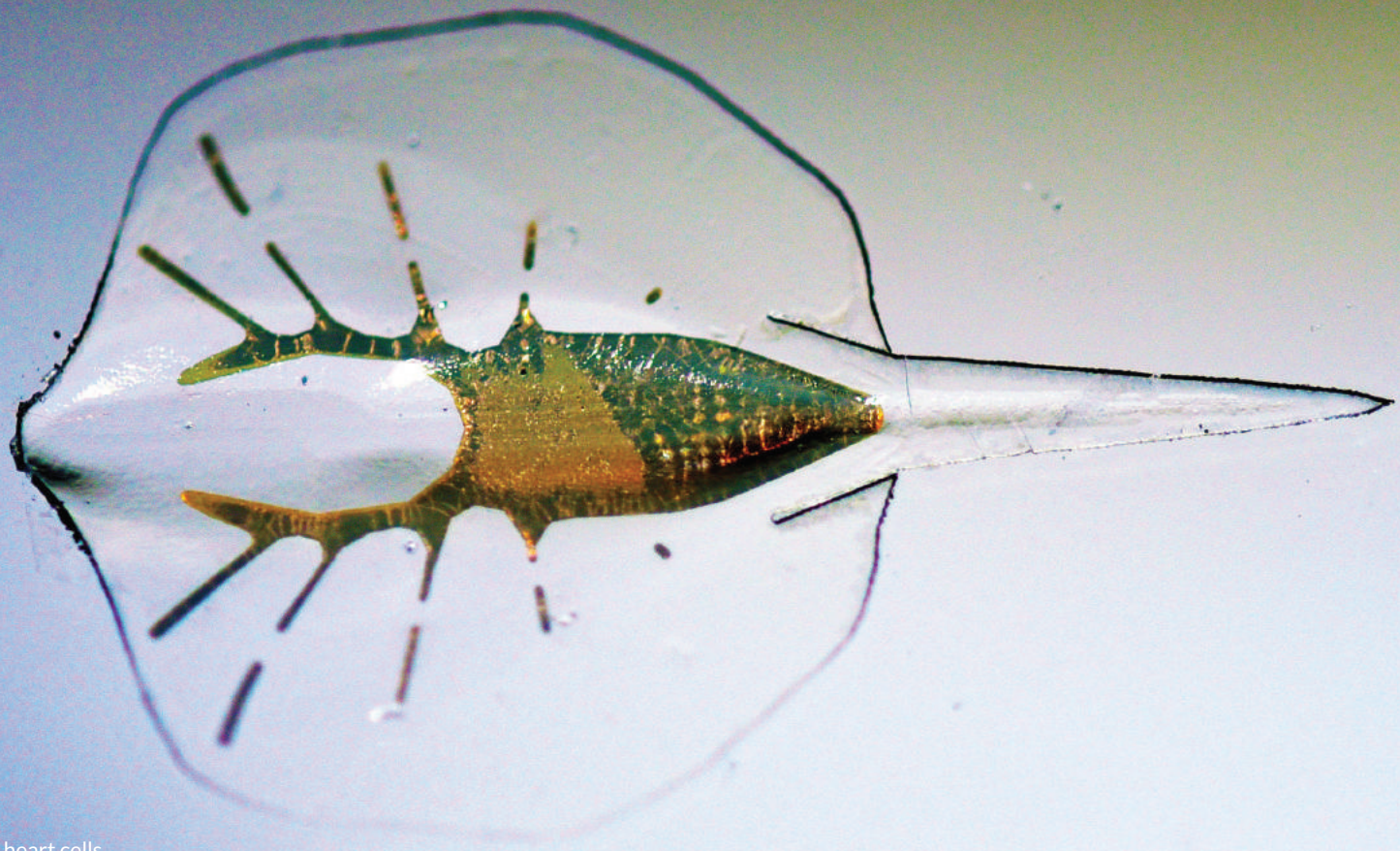
\$30 million  
for outreach and equity

\$10  
million  
per year

\$3  
million  
per year in STS Awards

\$250,000  
top prize amount





*Science News* | AUGUST 6, 2016

## HAVE A HEART

Even robots can use a heart. Or heart cells, at least. A new stingray bot about the size of a penny relies on light-sensitive heart cells to swim. Zaps with light force the bot's fins to flutter, letting researchers drive it through a watery obstacle course. Similar bots may one day be used in biomedicine or for environmental cleanup.



# 2016 SOCIETY COMPETITIONS



## TRANSFORMING OUR WORLD

All 40 Intel STS 2016 finalists gather on the steps of the U.S. Capitol during Science Talent Institute week in Washington, D.C.

INTEL SCIENCE TALENT SEARCH





# BRIGHTEST YOUNG MINDS COMPETE IN PRESTIGIOUS COMPETITION

The Intel Science Talent Search (STS), a program of the Society for Science & the Public, is the nation's oldest and most highly regarded science competition for high school seniors. From nearly 1,800 applicants in 2016, 300 semifinalists were selected; they and their schools were each awarded \$1,000. Forty Intel STS finalists were selected to each receive \$7,500 and a trip to Washington, D.C., to compete for top awards.

During the Intel Science Talent Institute in Washington, D.C., Steven Eastaugh (1970 STS), former health policy advisor to President Obama, served as alumni speaker, and alumnus Grant Stokes (1977 STS; 1976 ISEF) of MIT Lincoln Laboratory honored all of the finalists with minor planets named in their honor and in honor of their teachers. Students also participated in an engineering challenge at a TechShop makerspace with sixth grade students from E.L. Haynes Public Charter School in Washington, D.C. The Public Exhibition of Projects took place at the National Geographic Society, where the finalists

shared their research and enthusiasm with more than 500 visitors. Finalists also visited the National Institutes of Health and met with their members of Congress on Capitol Hill.

For the first time in its history, more than half of the 2016 Intel Science Talent Search finalists were female. Additionally Intel STS honored two female top winners.

Top prizes of \$150,000 each were awarded in Basic Research, Global Good and Innovation. Amol Punjabi, 17, of Marlborough, Massachusetts, won for his software that seeks to help drug makers develop new therapies for cancer and heart disease. Paige Brown, 17, of Bangor, Maine, studied water quality and built a cost-effective filter largely made of calcium alginate strands to remove the phosphate from stormwater systems. Maya Varma, 17, of Cupertino, California, created a low-cost, smartphone-based lung function analyzer that diagnoses lung disease as accurately as expensive devices currently used in medical laboratories. Prizes for all winners totaled more than \$1.6 million.

**"STS was the best week of my life. The other finalists, along with the judges and Society staff, made me really believe in my potential as a scientist."**

PAIGE BROWN, FIRST PLACE FOR GLOBAL GOOD



Intel STS finalist George Hou with 6<sup>th</sup> grade students from E.L. Haynes Public Charter School in Washington, D.C.

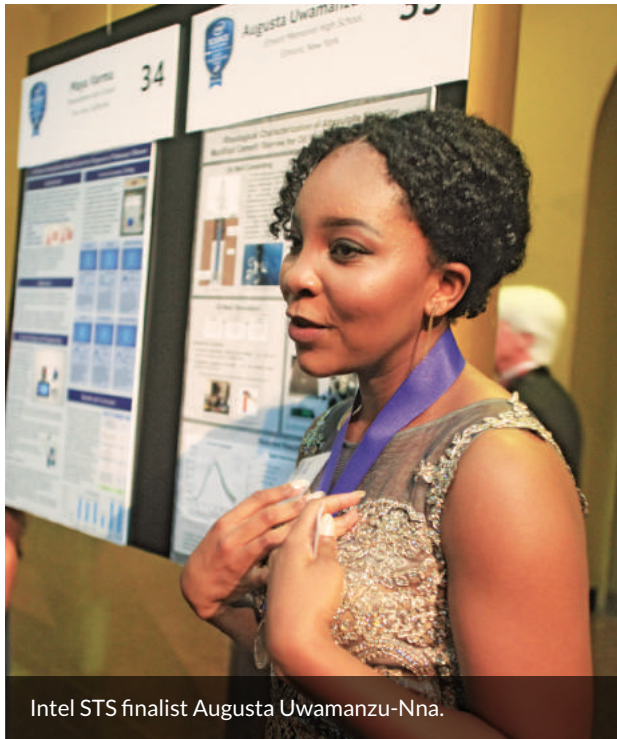


**A GALA CELEBRATION**

Forty finalists celebrate on stage at the 2016 Intel Science Talent Search Awards Gala. Pictured center stage: First Place for Basic Research recipient Amol Punjabi, First Place for Global Good recipient Paige Brown and First Place for Innovation recipient Maya Varma.







**CELEBRATING**  
**75**  
**YEARS**  
**INTEL**  
 1998 - 2017  
**WESTINGHOUSE**  
 1942 - 1998



**GLOBAL SCIENCE LEADERS**

From left, 2016 Intel Foundation Young Scientist Award winner Kathy Liu, First Place Gordon E. Moore Award recipient Han Jie (Austin) Wang and Intel Foundation Young Scientist Award winner Syamantak Payra.



**"Intel ISEF is the catalyst for bringing together students to celebrate knowledge and make powerful, life-long connections that will positively impact our world."**

TINA WEBB-BROWNING, SOUTH CAROLINA  
FAIR DIRECTOR AND DISPLAY & SAFETY  
COMMITTEE MEMBER



# WORLD'S BRIGHTEST YOUNG SCIENTISTS TRANSFORM THE WORLD

The Intel International Science and Engineering Fair (Intel ISEF), a program of the Society for Science & the Public, is the world's largest international pre-college science competition. The 2016 Intel ISEF, held in Phoenix, Arizona, proved to be a showcase of the best scientific minds by featuring more than 1,700 young scientists selected from 417 affiliated fairs in more than 75 countries, regions and territories. Two new categories, Biomedical Engineering and Translational Medical Sciences, were added at the 2016 Intel ISEF to better define and distribute projects, bringing the range of scientific and engineering disciplines to 22. And for the first time, judges entered their scores via a digital application. This improved the timing and tracking of score collection and was well-received by the judges. Han Jie (Austin) Wang, of Canada, was awarded first place, receiving the Gordon E. Moore Award

of \$75,000 for developing microbial fuel cells that more efficiently convert organic waste into electricity. Syamantak Payra, of Friendswood, Texas, received one of two Intel Foundation Young Scientist Awards of \$50,000 for developing a low-cost, electronically aided knee brace that allows an individual with a weakened leg to walk more naturally. Kathy Liu, of Salt Lake City, Utah, received the other Intel Foundation Young Scientist Award of \$50,000 for developing an alternative battery component that could significantly improve battery performance and safety.

The Society's Education Outreach Day brought students from 45 schools throughout the state of Arizona to participate in hands-on science, visit an engaging Expo Hall and meet finalists. A total of 2,545 volunteer hours were contributed by core volunteers, judges and local community members.

30+  
million

Number of students who compete in science fairs every year around the globe at local, state, regional and national levels

175,000

Number of high schools students who rise to the level of competing in the Society's Affiliated Fair Network around the globe at local, state, regional and national levels

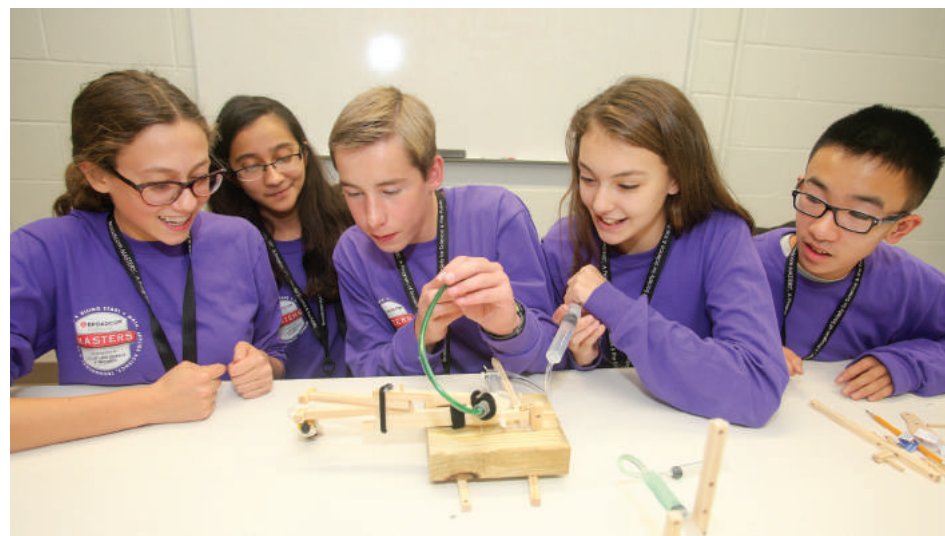
1,800

average number of ISEF finalists





BROADCOM MASTERS







# FUTURE STEM LEADERS

## COLLABORATE AND COMPETE

Broadcom MASTERS is the premier science and engineering competition for middle school students. Broadcom MASTERS continues to grow the number of entrants each year, with more than 2,400 applying from the top ten percent of middle school participants in Society-affiliated science fairs around the country. Three hundred semifinalists were honored, representing 250 middle schools from 37 states. The 30 finalists came to Washington, D.C., in late October to present their research and compete in hands-on team challenges to demonstrate their skills in critical thinking, collaboration, communication and creativity.

The finalists competed in hands-on challenges at the Smithsonian Environmental Research Center, at Georgetown University School of Medicine and with partners from the Computer History

Museum. They presented their research to the public at the National Geographic Society, met with the White House Office of Science and Technology Policy and learned about spacesuit design for Mars missions from NASA engineer Lindsay Aitchison. Two top-level awards were introduced in 2016, sponsored by the Lemelson Foundation and the Robert Wood Johnson Foundation. Eleanor Sigrest was named the winner of the Samueli Foundation Prize (\$25,000) for her project analyzing the best angles for cold fusion rockets. Aria Eppinger received the Robert Wood Johnson Foundation Award for Health Advancement (\$20,000), Kaien Yang was named the winner of the Marconi/Samueli Award for Innovation (\$10,000) and Nathan Deng received the Lemelson Award for Invention (\$7,500).

**“A kid can dream big — especially for the benefits of those in poor and developing countries. The award also inspired me to continue engineering and coming up with new ideas, so yes, it encourages me to continue researching.”**

**NATHAN DENG, 2016 BROADCOM MASTERS FINALIST,  
WINNER OF THE LEMELSON AWARD FOR INVENTION**

### MIDDLE SCHOOL STEM CHAMPIONS

Opposite page, clockwise from left: 2016 Broadcom MASTERS Samueli Foundation Prize winner Eleanor Sigrest; red team members Aalok Patwa, Olivia Lazarik, Sienna Fink, Daven Yadav and Shreya Ramachandran; Davia Allen shares her project at the Science and Engineering Project Showcase; purple team members Aria Eppinger, Anushka Naikaware, Lucas Ritzdorf, Rachel Pizzolato and Nathan Deng.



## 2016 MACARTHUR FELLOW

Dianne Newman is an alumna of the 1987 and 1988 International Science and Engineering Fairs. She received a 2016 MacArthur Fellowship for her work merging methods and approaches from disparate fields to investigate the co-evolution of bacteria and their environments. She received a B.A. (1993) from Stanford University and a Ph.D. (1997) from the Massachusetts Institute of Technology. Dianne is the Gordon M. Binder/Amgen Professor of Biology and Geobiology in the Divisions of Biology and Biological Sciences as well as Geological and Planetary Sciences at the California Institute of Technology.





# ENGAGING ALUMNI THROUGH COMPELLING PROGRAMMING

The Society's alumni community is composed of more than 60,000 alumni of its science education competitions who are thought leaders and innovators of all ages and from all industries. Through events, professional development activities and volunteer opportunities, the Society engages alumni with each other and with the wider world, empowering them to become leaders in their chosen fields.

2016 was an exciting year for the Society's alumni community. In addition to commemorating the 75<sup>th</sup> anniversary of the Science Talent Search competition with an inaugural alumni conference, the Society's alumni community hosted nine events nationwide and welcomed 3,500 students who participated in its various science programs. The Society was also thrilled to celebrate the achievements of several Society alumni for their work and contributions to their fields and to the global community.

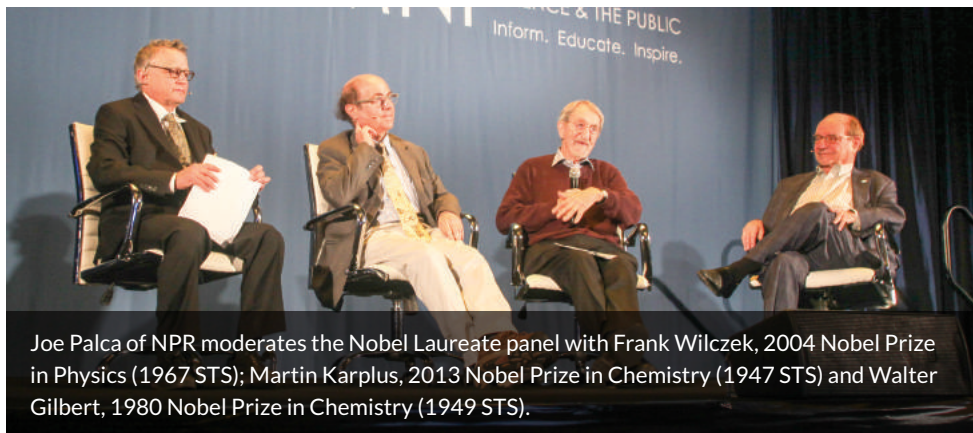
## Stanford Signature Alumni Event

In 2016, the Society hosted its first West Coast Signature Alumni event at Stanford University. The evening began with a welcome reception and opening remarks by Stanford University President Marc Tessier-Lavigne and Society President & CEO Maya Ajmera (1985 STS). The highlight of the evening featured a distinguished panel of alumni entrepreneurs and innovators, followed by a book signing with panelist Nina Vasan (2002 STS, 2002 ISEF), author of *Do Good Well*.

Clockwise from top right: Maya Ajmera moderates a panel with Nina Vasan, Rajen Sheth (1994 STS and 1992–1994 ISEF), Meredith Lee (2000 ISEF), Benjamin Jun (1992 STS) and William Bencze (1985 STS and 1984 ISEF); alumni attend event; Nina Vasan signs her book.







Joe Palca of NPR moderates the Nobel Laureate panel with Frank Wilczek, 2004 Nobel Prize in Physics (1967 STS); Martin Karplus, 2013 Nobel Prize in Chemistry (1947 STS) and Walter Gilbert, 1980 Nobel Prize in Chemistry (1949 STS).



Feng Zhang (2000 STS)



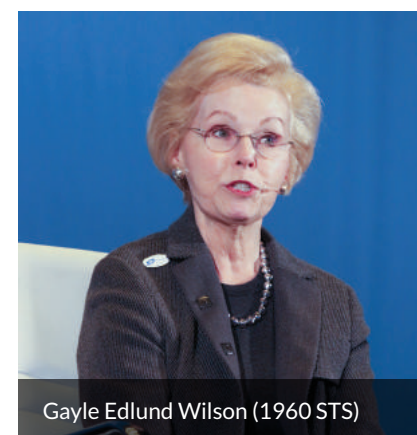
Lisa Randall (1980 STS)



Eva Emerson moderates the Basic Research panel with Lisa Steiner (1950 STS), Ted Hoff (1954 STS), Leroy Hood (1956 STS), Debra Elmegreen (1971 STS) and Soojin Ryu (1990 STS).



Frank Wilczek (1967 STS)



Gayle Edlund Wilson (1960 STS)



Richard Harris of NPR moderates the Entrepreneurship panel with Paul Maddon (1977 STS), Daniel Skovronsky (1991 STS), Bob Sproull (1964 STS), George Yancopoulos (1976 STS) and Hayley Bay Barna (2001 STS).



Maya Ajmera (1985 STS) moderates the Scientific Leadership panel with Erika Ebbel Angle (1999 STS), Gayle Edlund Wilson (1960 STS) and Mary Sue Coleman (1961 STS).



# SOCIETY ALUMNI SHARE THEIR STORIES

The Society continued its celebration of the 75<sup>th</sup> anniversary of the Science Talent Search with its first STS Alumni Conference on March 16, 2016, at the Marriott Marquis in Washington, D.C. More than 200 alumni and friends gathered to hear panel discussions on scientific leadership, entrepreneurship

and basic research by alumni who have been recognized for their contributions to science as top researchers and Nobel Laureates. (Please see the pictures to the left to learn more about the panelists.) Featured speakers included Feng Zhang (2000 STS; 1998 and 1999 ISEF), The James and Patri-

cia Poitras Professor in Neuroscience at the McGovern Institute for Brain Research at the Massachusetts Institute of Technology, and Lisa Randall (1980 STS), Frank B. Baird, Jr. Professor of Science on the physics faculty of Harvard University.



Robert Lynch, an alumnus from the 1<sup>st</sup> STS in 1942, joins the festivities.



New 2016 STS alumni Amol Punjabi, Demetri Maxim and Rachel Mashal attend the Alumni Conference.

“Being an STS finalist at the age of 17 was a defining moment in my life — that realization was renewed at the STS 75<sup>th</sup> Anniversary celebration.”

GAYLE EDLUND WILSON (1960 STS)



## RADIANT RUMP

Male peacock spiders know how to work their angles and find their light. The arachnids, native to Australia, raise their derriere — or, more accurately, a flap on their hind end — and shake it to attract females. Recent research reveals how the hairlike scales covering the spiders' bodies produce their vibrant colors.





# SCIENCE NEWS MEDIA GROUP





"I love *Science News*...  
The coverage is credible  
and accessible — I share the links  
with the community college  
classes I teach... I think you guys  
are doing a great job."

DENISE SIGNORELLI, MICROBIOLOGY TEACHER  
AND SOCIETY MEMBER

SCIENCE NEWS

*Science News* | DECEMBER 24, 2016

### MAKING WAVES

Scientists have been searching for gravitational waves for decades. Discussions of these subtle signals from dramatic and distant phenomena appear dozens of times in the *Science News* archives, starting as early as the 1950s. Their long-awaited discovery, the top story of 2016, touched off the celebration of a new era in astronomy.



# MAKING WAVES WITH COMPELLING STORIES

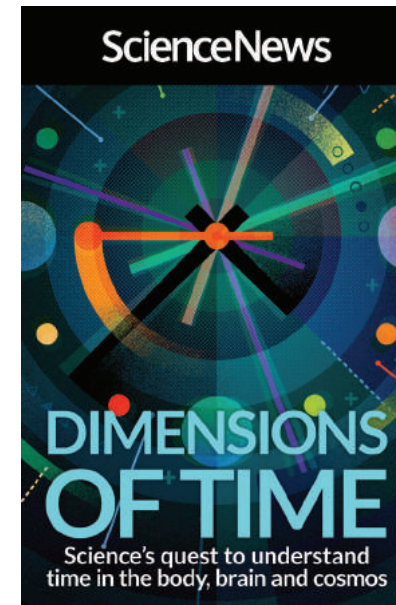
For more than 90 years, *Science News* has been the go-to source for surprising and important reporting on the latest research and scientific developments. In 2016, our stories reached 120,000 subscribers and more than 12 million visitors online, with a growing social media audience that includes nearly 2.2 million followers on Twitter and 2.7 million on Facebook. In partnership with a leading publisher in China, we also released five collections of *Science News* stories in Chinese in 2016.

“I appreciate the simplicity you are trying to put into science,” longtime reader Jim Cook wrote to us in 2016. “I have read, I am reading and I will be reading *SN*.”

Our commitment to covering scientific advances is now more important than ever. From the horrifying havoc brought by the Zika virus, to the ethical challenge of three-parent babies, to the transformative potential of gene editing, *Science News* tracked the intimate link between scientific and societal advancement in 2016. A special issue titled “Aging’s Future”

explored whether aging can be delayed, how the brain ages and why some organisms might not age at all. An accompanying video answered the question “What is aging?,” while three writers participated in a Reddit Ask Me Anything that led to detailed conversations about telomeres and real-world aging treatments. In a special report on the Zika virus, *Science News* broke ground by presenting the evidence linking Zika to microcephaly and investigating the leading strategies for mosquito control.

Also in 2016, *Science News* was among the first to report what was widely considered the biggest physics discovery in a decade — the direct detection of gravitational waves. With a scoop from a trusted contributor, *SN* put together an unprecedented special report that won the Imagination Award for innovative content from the Association of Magazine Media. *SN* brought the finding to a wider audience with a video introduction to gravitational waves and an e-book. Together, the components highlighted the wonders of the natural world and the thrill of discovery.



## FROM THE ARCHIVES

In 2016, *Science News* published four e-books with publishing partner Diversion Books. Each book collected the best articles — both breaking news and features — from the magazine’s nearly 90-year archive. The titles provide a deep history of compelling topics, from the nature of time to studies of consciousness. *Dimensions of Time* explores the mystery of time’s one-way flow and the biology of circadian clocks.





# ONLINE FAVORITES OF 2016

*Science News* published more than a thousand stories online in 2016, attracting the attention of more than 12 million visitors. The list below includes some of the most popular news and blog posts.

## Popular stories from the magazine

- 1 **E-cigarettes linked to new health risks**  
New studies reveal legions of health risks from vaping, including damages to sperm, heart and mental health (SN: 3/5/16, p. 16).
- 2 **He Stress, She Stress**  
Men and women react to stress differently, and the root may be messaging within the brain (SN: 1/23/16, p. 18).
- 3 **Microbes and the Mind**  
Our bodies are having a conversation with our microbiome that may be affecting our mental health — for better or worse (SN: 4/2/16, p. 22).
- 4 **Constant Connections**  
New units based on fundamental properties of the universe will make measurements more precise (SN: 3/5/16, p. 24).
- 5 **Down in the Mouth**  
Scientists suspect microbes on the gums can cause a range of diseases from arthritis to cancer (SN: 4/16/16, p. 18).

## Popular blog posts

**CONTEXT** | TOM SIEGFRIED

**A new 'Einstein' equation suggests wormholes hold key to quantum gravity**

ER=EPR summarizes new clues to understanding entanglement and spacetime (SN Online: 8/17/16).

**SCIENCE TICKER** | EMILY CONOVER

**Four newest elements on periodic table get names**

Discoverers of elements 113, 115, 117 and 118 chose names of people and places (SN Online: 6/8/16).

**GROWTH CURVE** | LAURA SANDERS

**Should C-section babies get wiped down with vagina microbes?**

Babies who bypass the birth canal may be missing out on health-protecting bacteria (SN Online: 3/30/16).

**SCICURIUS** | BETHANY BROOKSHIRE

**Sometimes busting myths can backfire**

Scientists could be doing more harm than good when they address outlandish theories, research says (SN Online: 2/14/16).

**WILD THINGS** | SARAH ZIELINSKI

**Nature has a dog problem**

Free-roaming domestic and feral dogs are among the worst offenders for extinguishing wild species, among other ecological impacts (SN Online: 9/30/16).

**CULTURE BEAKER** | RACHEL EHRENBURG

**GMO isn't a four-letter word, but it is hard to define**

Labeling genetically modified foods is harder than it sounds, given the variety of and discord over modification practices (SN Online: 2/5/16).



# HONORS AND OUTREACH FOR 2016

Major societies and organizations recognize the quality of *Science News*. *SN* stories received high honors and awards and *SN* staff were invited to participate in important outreach.

## Science News won two awards from Folio in 2016 for two of its most outstanding efforts: “Gene drives unleashed” and “Cosmic vibrations: Special report.”

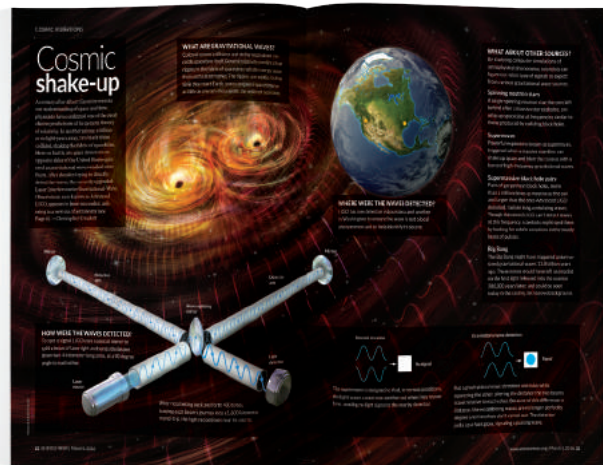
### 2016 Eddie and Ozzie Awards

#### Best Consumer Single Article, Science

- “Gene drives unleashed” by Tina Hesman Saey, Dec. 12, 2015

#### Best Series of Articles, Consumer, Science

- “Physicists detect gravitational waves” by Andrew Grant, March 5, 2016
- “Listening for gravity waves” by Marcia Bartusiak, March 5, 2016
- “Cosmic shake-up” by Christopher Crockett, March 5, 2016
- Online extra: “What are gravitational waves?” produced by Helen Thompson



### Science News immortalized in dictionary

“Merriam-Webster Unabridged” uses several *SN* writers’ sentences in its newly expanded online dictionary to demonstrate the usage of technical terms.

“Brain images of healthy people reveal that **A-beta** plaques are common, even in people who don’t have dementia.”

— Tina Hesman Saey, August 16, 2008

“**Heuristics** are generally those rules-of-thumb or pieces of empirical knowledge that help to narrow a focus or search.” — Janet Raloff, May 26, 1984

“Skipping most of the tadpole business, a **coqui** frog hops out of the egg as a miniature adult, smaller than a pea. ... The apricot-size **coqui** frogs set the Puerto Rican dusk vibrating with the “co-key, co-key” call of males.” — Susan Milius, March 11, 2000

## Science News in the news

### Popular Science Radio

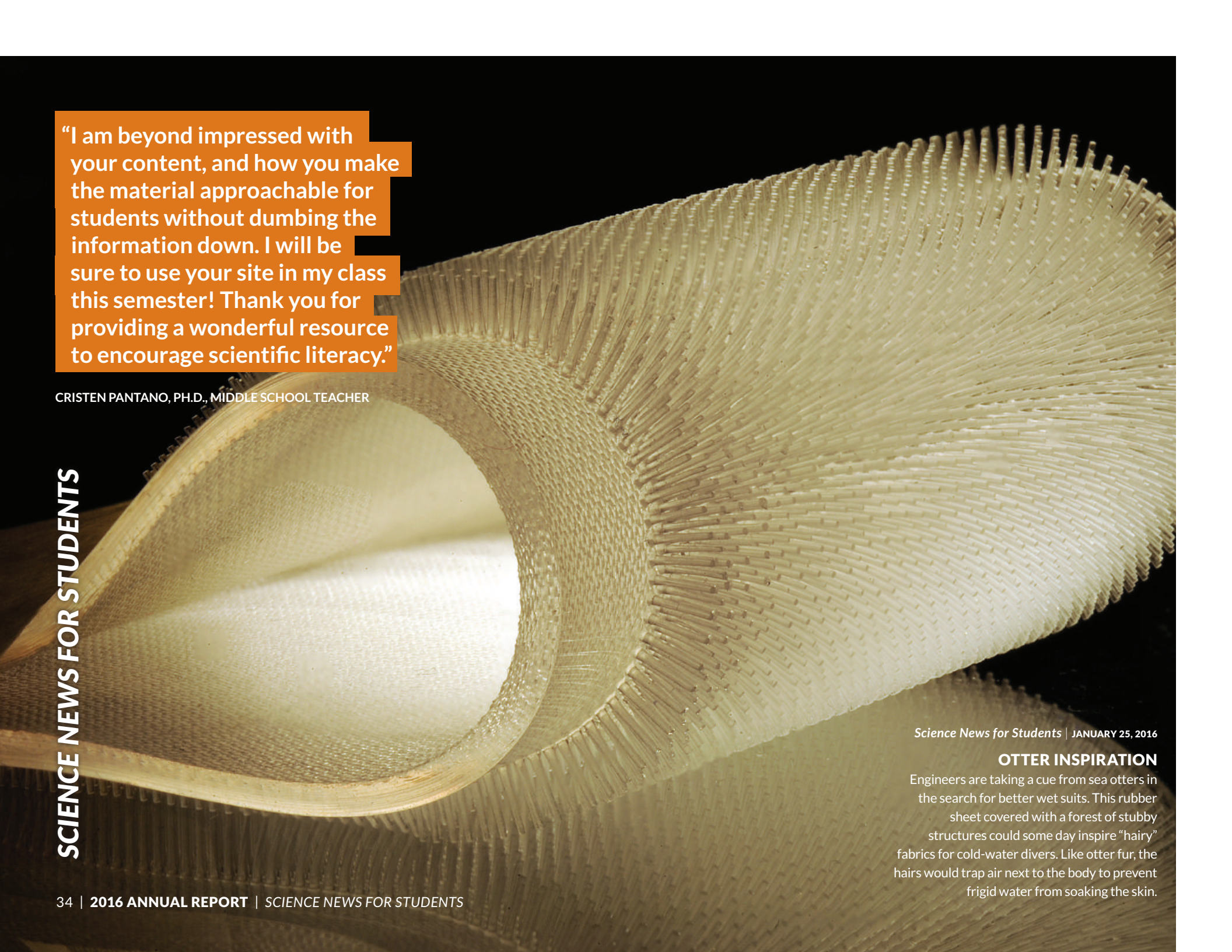
In May, writer Laura Sanders explained the link between gut microbes and mental health, and Meghan Rosen (pictured below) filled listeners in on health threats from the Zika virus and from heartburn medication.

### Science for the People podcast

On the July 29 episode, Bethany Brookshire and Tina Hesman Saey mapped out the genetics of wizardry in the Harry Potter universe and explained the phenomenon of genetic superheroes — people who carry mutations that should give them diseases but stay perfectly healthy.







"I am beyond impressed with your content, and how you make the material approachable for students without dumbing the information down. I will be sure to use your site in my class this semester! Thank you for providing a wonderful resource to encourage scientific literacy."

CRISTEN PANTANO, PH.D., MIDDLE SCHOOL TEACHER

*Science News for Students* | JANUARY 25, 2016

### **OTTER INSPIRATION**

Engineers are taking a cue from sea otters in the search for better wet suits. This rubber sheet covered with a forest of stubby structures could some day inspire "hairy" fabrics for cold-water divers. Like otter fur, the hairs would trap air next to the body to prevent frigid water from soaking the skin.



# TRANSFORMED SITE BRINGS NEWS TO STUDENTS

*Science News for Students* (SNS) brings the latest developments in science, technology, engineering and math (STEM) to anyone in middle school or older. In late July 2016, the online magazine unveiled a new mobile-friendly website that also enabled educators to search for stories based on which Next Generation Science Standard each story supports.

The site's more engaging stories and imagery helped increase the year's traffic to more than six million visitors, representing readers in more than 120 nations.

A generous Lemelson Foundation grant in 2016 enabled SNS to boost its news coverage to include stories that showcase how science and engineering drive clever and important developments in invention and innovation.

Many other SNS stories were especially

timely. For instance, just minutes after the February 11 announcement that gravitational waves had been confirmed, SNS posted three stories describing the unusual phenomenon, how gravitational waves were identified and the long hunt for these signals that had been racing across space and time. Similarly, a few weeks after the contentious U.S. presidential election, SNS posted "Racism hurts." This story reported on the post-election spread of racism, especially in schools.

Other major SNS stories in 2016 included "A woman's place is in science," which highlighted the growing participation of women in research. It was accompanied by related stories as well as 19 blog posts showcasing 150 women across all STEM fields — working on all seven continents.



Launched in August 2016, this new website for *Science News for Students* better showcases our award-winning journalism. The new site features enhanced design elements with improved navigation, new media capability and an internal blog network.



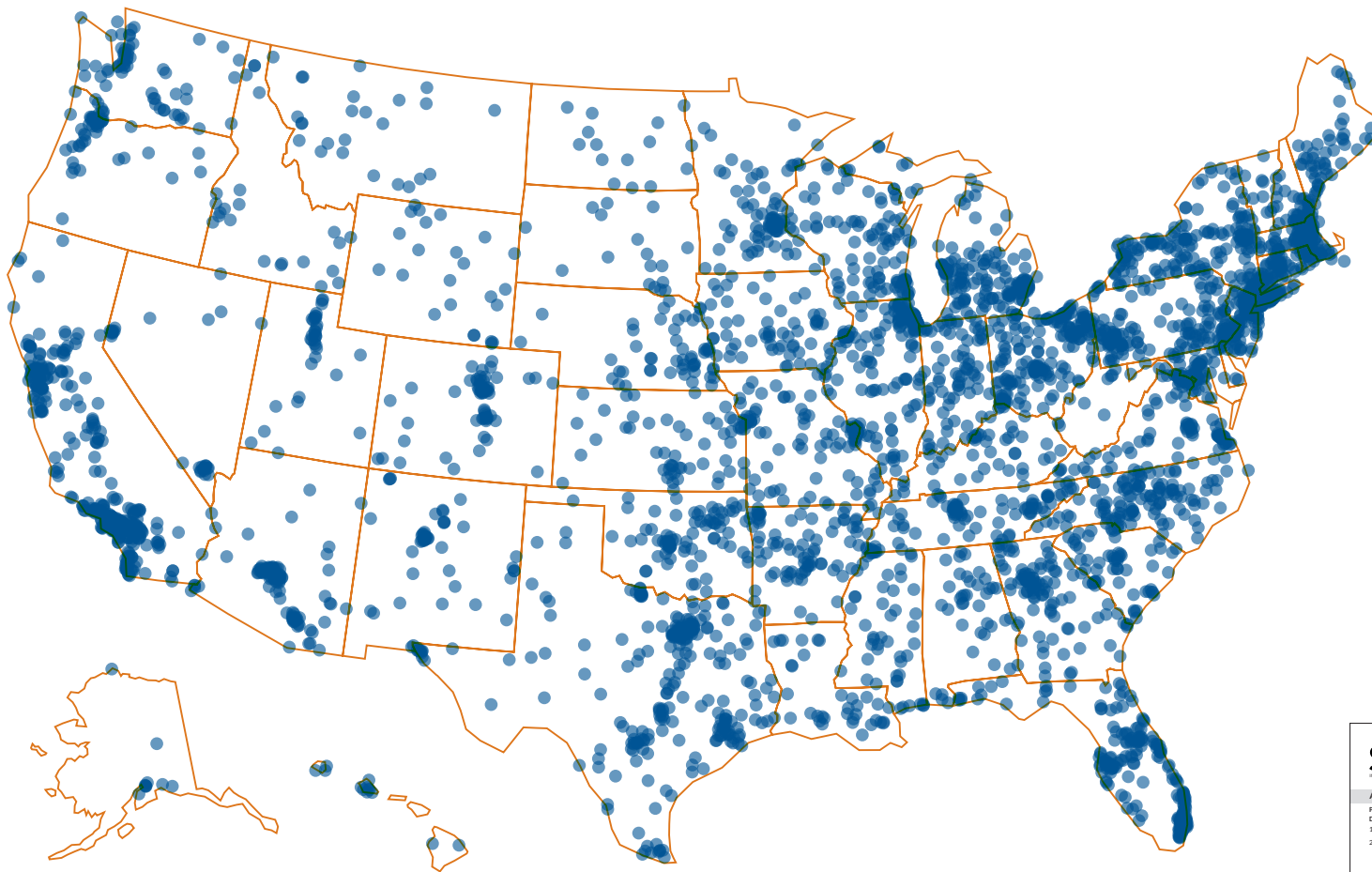
## FISH FACE

This forlorn-looking face of a four-day-old zebrafish embryo represents “a whole new avenue of research” for geneticist Oscar Ruiz, who studies how faces develop at the cellular level. A new technique, developed by Ruiz and colleagues at the University of Texas MD Anderson Cancer Center, mounts embryos in a gel to allow for clear, head-on pictures.



# OUTREACH & EQUITY





"This program has had a significant influence on my students' learning and love of science! I teach in a rural area, and SN has been a very important link to the real science that is occurring in the world."

AMY KOCHENSPPARGER, HIGH SCHOOL OF SCIENCE & TECHNOLOGY, OHIO

**SN** November 26, 2016  
The Artistry of Animal Coloration

Analyzing Plant Pigments Using Paper Chromatography

**PART 1: INTRODUCTION TO SPINACH CHROMATOGRAPHY**  
Directions: Practice the paper chromatography process.

1. Prepare a data table similar to the one shown in Step 8 below.
2. Put on your gloves so you don't transfer the oils from your skin to the chromatography paper. (This is known as contaminating the sample and will affect your results.) Cut your chromatography paper so it is the right length for the beaker or cup you will be using.
3. Place about 5 leaves of chopped, fresh spinach in a mortar and add 5 mL acetone. Use the pestle to release the pigment from the leaf. You want a very intense color solution.
4. Using a pencil, draw a reference line about 1 to 2 cm from the bottom of the chromatography paper.

**FIGURE 1: BEAKER AND PAPER SETUP**

**FIGURE 2: LABEL YOUR PAPER**

# TRANSFORMING SCIENCE WITH A NEW HIGH SCHOOL CURRICULUM

The *Science News* in High Schools program ensures that teachers can help their students link what they are learning in their textbooks and labs to the latest discoveries, making topics more current, relevant and understandable to inspire more young people to pursue science careers. More than four million high school students have access to the 2016–2017 *Science News* in High Schools program. In just its second year, the *Science News* in High Schools program includes more than 4,200 schools in all 50 states, the District of Columbia, Australia and the United Kingdom.

Participating high schools receive ten copies of the biweekly *Science News* magazine and digital access to online content and archives going back to 1924. In addition to award-winning scientific journalism, participating high schools receive an interdisciplinary educator guide with each issue, aligned with Common Core and Next Generation Science Standards. This offers teachers ways to incorporate the science content into their classrooms. Teachers also gain access to an

online educator community, where they are able to share ideas and best practices.

The program is positively impacting participating schools, many of which are reaching underserved rural and Title I students. Science textbooks are almost immediately out-of-date, whereas *Science News* in High Schools provides award-winning real-time scientific information. A survey of 1,180 subscribing teachers in 2016 found that 90 percent of educators used the program to supplement topics covered in their curricula, and 87 percent discussed current science research using the materials provided.

The Society appreciates the support of Regeneron, Arconic Foundation and Burton Family Foundation, along with the generosity of individuals, school booster clubs and even the Society's staff Annual Giving Fund, which have all sponsored schools.

4,230  
schools

in 50 states as well as Washington, D.C., Australia and the United Kingdom, participated in *Science News* in High Schools during the 2016–2017 school year

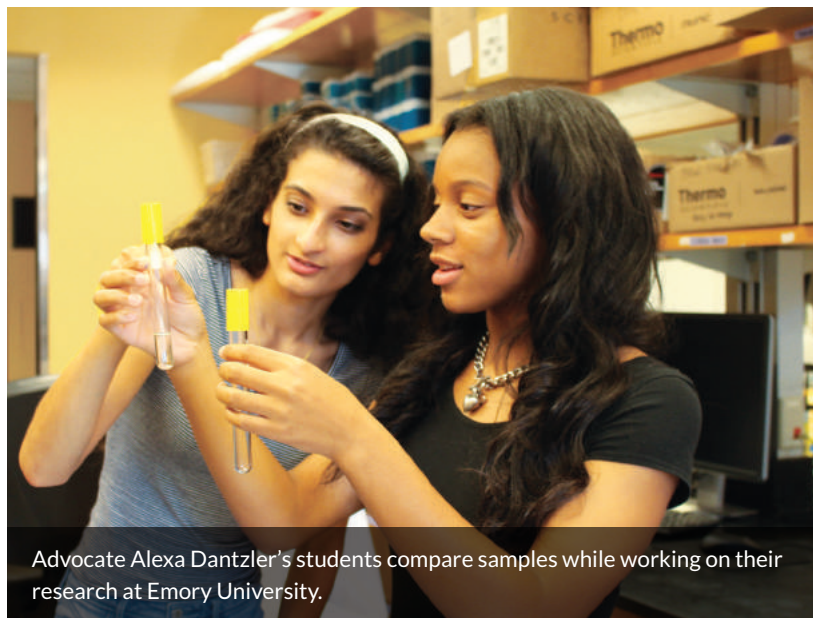
4.1  
million

students gained access to *Science News* in High Schools program content during the 2016–2017 school year

5,390  
high school teachers

directly received the program's content during the 2016–2017 school year





Advocate Alexa Dantzler's students compare samples while working on their research at Emory University.



Society Advocates Tom Schmedake and Sakinah Ellickson listen as a veteran research teacher shares ideas on how to keep students engaged in research.



Society Advocate Lynne Muhammed who works with underserved students in Chicago Public Schools, attends the convening event.



Teacher Priscilla Lumbreras participates in a lab activity where she tries to identify the odor of air bottled at common businesses.



Advocate Elizabeth Proctor helps her students set up an experiment for their research projects.

# MENTORS EXPANDING STEM PIPELINE TO UNDERSERVED STUDENTS

In 2016, the Society continued its commitment to expanding opportunities for underserved students to compete and succeed in science research competitions through the Advocate Grant Program. Advocates serve as mentors for a group of students, helping them navigate the processes involved in entering science research competitions.

In 2015, the Society piloted the program by selecting nine individuals to serve in an initial class of Advocates. With the generous support of Regeneron, Arconic Foundation and Jack Kent Cooke Foundation, the Advocate Grant Program was able to increase the number of Advocates to 31 in 2016.

In addition to a \$3,000 stipend, Advocates received an all-expenses-paid trip to Washington, D.C., for a convening event where they received additional training and support from Society staff. Throughout their term, the Advocates continued to connect with one another and with Society staff through regular conference calls as well as through an online community.

In the pilot year, Advocates recruited more than 85 students to participate in the program. Of those students, 40 completed applications for competitions. In 2016, that number grew to 400 students, with many students already competitions, including the Regeneron Science Talent Search.

With renewed support in 2017 from Regeneron, Jack Kent Cooke Foundation and Arconic Foundation, the number of Advocates will grow, enabling the Society to reach and engage even more underserved students and help them enter science research competitions.

**“Many of my students were never encouraged to participate in science fair and they were very surprised when some of them placed first in their category. One of my girls kept on saying that she had never been first in anything in her life. She carried her trophy in her backpack for a whole week and she would show it to anyone that agreed to listen to her story!”**

ADVOCATE PRISCILLA LUMBRERAS, MCALLEN, TEXAS



“The conference itself was a spectacular experience... I brought back a ton of things for my students, which I utilized immediately.”

MITCH CHARKIEWICZ, SUFFIELD, CONNECTICUT



Michele Zielinski takes notes.



Horace Walcott and Lisa Ranney discuss the benefits of the new SNS website.



Peggy Veatch listens during a conference workshop.



Research Teacher Conference participants Paul Strode, Cheryl Kirby-Stokes, Lisa Fridman and Julio Rodríguez review the program.

# COMMUNITY BUILDING AT THE RESEARCH TEACHERS CONFERENCE



Rebecca Grella, Barbi Frank and Jennifer Gordinier share insights.



Shaniece Mosley enjoys the conference.

The Society's annual Research Teachers Conference, sponsored by Regeneron, doubled in size in 2016, bringing together 200 STEM research teachers from 45 states across the U.S. The Society brings these teachers to Washington, D.C., with all expenses paid, for a weekend of sharing best practices, troubleshooting challenges and connecting with other teachers for future collaboration. It has become clear that this conference is building a support system for research teachers that benefits them year-round.

Rebecca Nyquist, a member of Dr. Angela

Duckworth's research lab at the University of Pennsylvania, spoke to attendees about the power of grit — passion and perseverance — and how it is both needed for, and learned from, the scientific research projects that students complete. Veteran research teachers presented on topics, such as Sustaining Research Programs on Limited Resources, Ethics in Student Science Research as well as Finding Mentors and Partnering with Universities.

Of those surveyed, 95 percent of attendees indicated that they would recommend this conference to their colleagues.

**"I cannot even begin to express my full appreciation for what you do. Without Society for Science, we simply couldn't have the positions that we have as dedicated research teachers."**

STEVE GORDON, GARDEN CITY, NEW JERSEY



“The Society’s funding of the pilot episode of *Ozone Park*, much like the theme of the show itself, helps transform our frame of reference — specifically by expanding our nonprofit’s work to include motivating the public to engage candidates for public office on key science and technology policy issues.”

NANCY HOLT, MANAGING DIRECTOR, SCIENCEDEBATE

*Science News* | AUGUST 6, 2016

## DIRECT COLLAPSE

A remote galaxy called CR7 (illustrated) might harbor a type of black hole that arises directly from a massive cloud of gas rather than forming after the death of a star. This rare specimen could explain how some galaxies built gargantuan black holes in the first billion years or so after the Big Bang.

# NEW PROGRAM SUPPORTS

## STEM INNOVATORS AND TEACHERS

In 2016, the Society for Science & the Public was proud to launch a STEM Action & Research Grants program, awarding more than \$30,000 in STEM Action Grants in the first year. Through grants of up to \$5,000, the program seeks to fund community and school-based initiatives that support the Society's mission to expand scientific literacy.

The STEM Action Grants program seeks to fund innovative, mission-driven organizations that support community-based STEM projects. Grantees should advocate for the public's increased understanding of STEM fields; aim to spark life-long interest in STEM fields through unique programming, increased accessibility and exposure to science; and aim to increase participation of under-represented populations in STEM fields. The Society was proud to support eight innovative projects and organizations in 2016: BioBus; Georgetown Day School STEM Conference for students from D.C. public and independent schools; LITAS for Girls; ProjectCSGirls;

Sci-Inspire; ScienceDebate; Science from Scientists and a new Community Innovation Award given by the Society to students who are making a difference in their communities.

The STEM Research Grants, which will start being distributed in 2017, will support school-based science research programs by providing one-time grants to teachers who are leading students in authentic research projects. Grants may be used for equipment and travel that support students doing research. Preference is given to schools or teachers supporting multiple students in research, schools or teachers supporting low-income students or students of under-represented ethnicity, and/or programs proving sustainability beyond the current school year.

### 2016 STEM Action Grant Recipients:


 BIOBUS


LITAS For Girls


 ProjectCSGIRLS


 sciinspire


 Science Debate






*Science News* | DECEMBER 24, 2016

## **BLAST OFF**

On August 14, 2016, a SpaceX Falcon 9 rocket launched from Cape Canaveral Air Force Station in Florida and safely shepherded a commercial communications satellite into Earth's orbit. By the end of 2016, the aerospace company had reported six successful landings — two on land and four at sea — of its reusable Falcon 9 rocket. Such rockets could transform spaceflight by making it cheaper and more efficient.

# SOCIETY FOR SCIENCE & THE PUBLIC





Science News | SEPTEMBER 17, 2016

## WORLD NEXT DOOR

A world at least 1.3 times as massive as Earth appears to orbit the closest star to the sun: Proxima Centauri, a dim red orb about 4.2 light-years away. Dubbed Proxima b, the planet (illustrated) is cozied up to its star, needing just 11.2 days to complete one orbit, and has temperatures just right for liquid water, researchers report.

# FINANCIALS

The Society for Science & the Public operates within two broad areas of program work: science journalism and world-class science competitions for high school and middle school students. Ninety-one cents of every dollar spent by the Society goes to support program work. General and Administrative costs are six cents of every expense dollar, and fundraising costs are three cents of every expense dollar.

Science competitions remain a vibrant and important segment of program work, accounting for 64 percent of all program spending. The audience for the Society's science journalism continued to expand in 2016 as the digital audience grew by 14 percent. The *Science News*

website averaged 2.4 million page views per month, and social media readers have increased to more than 2.2 million Twitter followers and more than 2.7 million Facebook fans.

The print component of *Science News* magazine increased by 33 percent in 2016 due to the Society's new *Science News* in High Schools program. The program is funded through individual and corporate grants that sponsor more than 4,200 high schools with 42,000 print magazines and unlimited digital access for each sponsored school. The program serves more than 4.1 million students.

The Society's balance sheet is very healthy,

with unrestricted current assets exceeding current liabilities by \$23.2 million, yielding a current ratio of 4.6 (ratio of current assets to current liabilities). The Society carries no long-term debt and owns its primary office real estate.

The Society's investment portfolio makes up 90 percent of current assets. The investment portfolio is conservatively invested to preserve capital and minimize any downside risk.

Restricted assets (grants receivable) make up the largest asset class, which represent future funding commitments from Regeneron, Intel, Broadcom and other funders for science competitions and other program work.

## Current Year Operating Revenue and Expense

	2016	2015
<b>Revenue</b>		
Science News magazine	\$ 5,648,941	\$ 4,897,950
Science education programs	17,762,816	15,970,314
In-kind and other revenue	1,181,930	770,732
<b>Total operating revenue</b>	<b>24,593,687</b>	<b>21,638,996</b>
<b>Expense</b>		
Program services	\$ 22,558,091	\$ 20,495,020
General and management	1,471,265	1,419,375
Fundraising	814,721	645,108
<b>Total operating expense</b>	<b>24,844,077</b>	<b>22,559,503</b>

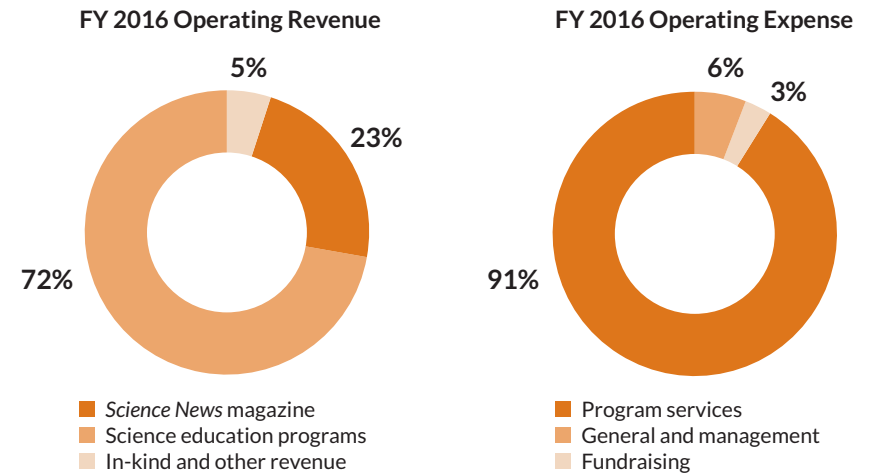
## Non Operating Activities and Pledges

	2016	2015
<b>Non Operating Activity</b>		
Investment income	1,627,399	(216,677)
Change in post retirement benefit liability	(104,149)	386,000
<b>Pledges and Contributions Designated for Future Years</b>		
Pledges and contributions received in 2016	52,742,378	12,954,080
Prior years' pledges used in current year	(18,923,015)	(15,964,261)
Change in permanently restricted net assets	25,480	(9,167)
<b>Non Operating Activity</b>	<b>35,368,093</b>	<b>(2,850,025)</b>
<b>Change in Net Assets</b>	<b>35,117,703</b>	<b>(3,770,532)</b>
Net assets at the beginning of the year	65,004,368	68,774,900
Net assets at the end of the year	\$ 100,122,071	\$ 65,004,368

## Balance Sheet

	2016	2015
<b>Assets</b>		
Cash and short term receivables	\$ 3,016,104	\$ 2,822,011
Investments	26,543,262	24,785,480
Grants receivable	78,442,518	45,532,129
Property and equipment	286,247	249,053
<b>Total Assets</b>	<b>108,288,131</b>	<b>73,388,673</b>
<b>Liabilities</b>		
Accounts payable	515,015	673,828
Awards payable	2,594,490	2,221,864
Deferred subscription revenue	3,267,555	3,880,613
Post retirement benefit liability	1,789,000	1,608,000
<b>Total Liabilities</b>	<b>8,166,060</b>	<b>8,384,305</b>

**Net Assets** **\$100,122,071** **\$ 65,004,368**







Science News | JANUARY 9, 2016

### GLASSY ANSWER

Proteins that are floppy and unformed when water bears are hydrated fold into a glass-like solid as the microscopic creatures dry. This solid encases and protects other proteins and molecules that would normally fall apart when dried, enabling water bears, also known as tardigrades, to withstand extreme desiccation.



# DONORS

Thank you to our generous supporters. You are champions for strong science.

## Institutional donors

### Title Sponsors

Broadcom Foundation  
Intel Foundation and  
Intel Corporation  
Regeneron

### Inventor

**(\$250,000 – \$999,999)**  
Arconic Foundation (successor  
to Legacy Alcoa Foundation)

### Developer

**(\$100,000 – \$249,999)**  
Jack Kent Cooke Foundation  
The Lemelson Foundation

### Explorer

**(\$50,000 – \$99,999)**  
Burton Family Foundation  
John S. and James L. Knight  
Foundation  
Robert Wood Johnson  
Foundation

### Maker

**(\$20,000 – \$49,999)**  
Arizona Community Foundation  
Burroughs Wellcome Fund  
GoDaddy  
Howard Hughes Medical Institute  
Samueli Foundation  
Anonymous

### Collaborator

**(\$10,000 – \$19,999)**  
Allergan Foundation  
Ashtavadhani Vidwan Ambati  
Subbaraya Chetty Foundation  
Experience Matters  
Consortium, Inc.

### Ambassador

**(\$5,000 – \$9,999)**  
Helios Education Foundation  
KPMG  
Regeneron Matching Gift  
Program  
Southern California Edison  
The Riordan Foundation

### Associate

**(Up to \$4,999)**  
AmazonSmile  
Areté Associates  
Audrey and David Egger  
Charitable Fund at the Jewish  
Community Foundation of  
Greater Mercer  
Avnet

Basha Science is Fun  
Beta Squared Lithography, Inc.  
Bluestone Productions  
Breathe Utah  
California University of  
Pennsylvania Global Online  
City University of New York  
Conceptual Analytics, LLC  
CopperPoint  
Davidson Institute for  
Talent Development  
Deloitte  
Department of Natural Resources  
and Environmental Sciences -  
University of Nevada  
DigiPen Institute of Technology  
Dryden Instrumentation  
First Giving  
Freeport-McMoRan  
Glendale Unified Schools  
Grace Jones Richardson Trust  
Grand Canyon University  
Great Neck North High School  
Science Boosters  
Harvey & Leslie Wagner  
Foundation  
Healdsburg Education  
Foundation  
Hickrell Foundation  
Howat Family Foundation  
Imperial College London  
Jacksonville Science Festival  
James P. Mitchell, P.E., LLC  
Jeffries Technology Solutions  
Local Independent Charities  
Louisville Regional Science &  
Engineering Fair  
miniPCR  
Missouri University of Science  
and Technology  
New Mexico Tech  
Philomath High School  
Right Stuff Marketplace  
Rockwell Collins  
Rockwell Collins Matching  
Gifts Program  
Sacred Heart School  
Smith Family Fund  
Smith Richardson Foundation  
SRP  
Sumner High School  
Suring High School  
Technical Innovation Center  
Tellabs Foundation  
The Boeing Company Gift  
Match/BPAC Program  
The Chicago Community  
Foundation  
The Moody's Foundation  
The Richard H. Yearick  
Foundation  
The Stern Investor Relations  
Foundation

TIAA Charitable, Inc.  
Tonto Creek Camp  
U.S. Intelligence Community  
United States Patent and  
Trademark Office  
University of Toronto  
Utah Charter Academies  
Vanguard Charitable  
Verizon Foundation  
West Forsyth High School PTSA  
Yetadel Foundation  
YourCause, LLC Trustee for  
AOL, Inc.

### Intel ISEF Special Awards Organizations

Acoustical Society of America  
ADA Foundation  
American Association of  
Pharmaceutical Scientists  
American Chemical Society  
American Committee for the  
Weizmann Institute of  
Science  
American Geosciences Institute  
American Intellectual Property  
Law Association  
American Mathematical Society  
American Meteorological  
Society  
American Physiological Society  
American Psychological  
Association  
American Society for  
Horticultural Science  
American Statistical Association  
Arconic Foundation (successor  
to Legacy Alcoa Foundation)  
Arizona State University  
Association for Computing  
Machinery  
Association for the Advancement  
of Artificial Intelligence  
Astronomical Society of the  
Pacific and the American  
Astronomical Society  
ASU Rob and Melani Walton  
Sustainability Solutions  
Initiatives  
China Association for Science  
and Technology (CAST)  
Coalition for Plasma Science (CPS)  
Drexel University  
European Organization for  
Nuclear Research – CERN  
Florida Institute of Technology  
Fondazione Bruno Kessler  
GoDaddy  
Google  
IEEE Foundation  
International Council on Systems  
Engineering – INCOSE

K. Soumyanath Memorial Award  
K. T. Li Foundation Special Award  
King Abdul-Aziz and His  
Companions Foundation for  
Giftedness and Creativity  
Monsanto Company  
Mu Alpha Theta, National High  
School and Two-Year College  
Mathematics Honor Society  
National Aeronautics and Space  
Administration  
National Anti-Vivisection Society  
National Institute on Drug  
Abuse, National Institutes of  
Health & the Friends of NIDA  
NSA Research Directorate  
Office of Naval Research on  
behalf of the United States  
Navy and Marine Corps  
Oracle Academy  
Patent and Trademark Office  
Society  
Psi Chi, The International Honor  
Society in Psychology  
Qatar Foundation Research &  
Development  
Ricoh USA, Inc.  
Sigma Xi, The Scientific Research  
Society  
Society for Experimental  
Mechanics  
Society of Experimental  
Test Pilots  
SPIE, the international society  
for optics and photonics  
Synaptics, Inc.  
U.S. Agency for International  
Development  
U.S. Environmental Protection  
Agency  
United Technologies Corporation  
University of Arizona  
University of the Sciences in  
Philadelphia  
West Virginia University  
Wolfram Research, Inc.



**Carol Dahl**  
Executive Director  
The Lemelson Foundation

## Why we give...

“Our mission is to inspire and empower today’s students to become the inventors and problem solvers of tomorrow. The Society provides a wealth of programs that enable middle and high schoolers to explore ideas that address the challenges they see in the world and their communities.”





## Individual donors

### Champion Circle

#### Visionary (\$100,000+)

Tom Leighton

#### Innovator

#### (\$50,000 – \$99,999)

Craig Barrett

#### Medalist

#### (\$10,000 – \$24,999)

Scott McGregor and

Laurie Girard

Feng Zhang

### Scholar Circle

#### Chair (\$5,000 – \$9,999)

Marcian Hoff

#### Professor (\$2,500 – \$4,999)

Maya Ajmera and

David Hollander

William Bencze

Rob Chang

Jim and Laurie Clark

Mary Sue Coleman

Leroy Hood

Alan and Agnes Leshner

Stephanie Pace Marshall

Nancy J. Peltzer

Hal Schmitorst

Robert W. Shaw, Jr.

Thomas Washburn

Frank Wilczek

Anonymous

#### Candidate (\$1,000 – \$2,499)

Nick Adelmeyer

Travis Bartholomew

Hayley Bay Barna

Reinier Beeuwkes

Sue Blough

George Patrick Brady, Jr.

William Calvin

John F. Cassidy

William Clendenen

Ernest Condon

James Cooper

Robert Cowen

Thatta Dayte

Sara Driver

Gordon Freeman

Bruce Gould

John Grabbe

Robert Hagge

E. A. Higgins

H. Robert Horvitz

Erica Ide

Samuel P. Kafoury

Frank R. Kerr, Jr.

James T. Kirk

Thomas Knight

David J. Krupp

George Landau

Gordon Large

Judith Lee

Thomas Luken

Bruce Makous

George P. Markin

Chris McDonald

Mary Meagher

Dianne Newman

Adele Richardson Ray

Dave Rigsby

Beth and Russ Siegelman

Marian and Abraham Sofaer

Christopher Sonnack

Priscilla Spears

Lisa Steiner

Matthew A. Stewart

Lawrence Stifler

Mary Stroh-Twischell

John Turtle

William Wallace

William and Sandra Warburton

Linden H. Welch

Gayle Wilson

Nelson Ying

Anonymous (3)

#### Fellow (\$500 – \$999)

Laura and Paul Atwood

Allan and Merry Avery

Andrew and Linda Banta

Richard Barnes

Mona Baumgartel and

John Debeer

Michael Beursken

James Biggs

C. John Blankley

Ernest Brooner

Linda Brown

Ron and Michelle Burch

Bryan Cashion

Park Chamberlain

Martha Clatterbaugh

David Cox

Dorothy K. Dean

Erik and Beverly DeBenedictis

Michael DeRosa

Thomas Detman

Penelope Drawbridge

Reginald Dufour

James and Anita Dulak

Gene Eldridge

Marlin Eller

Michela English

Julia Espel and Ken Chang

David Finrock

Cynthia French

Peter Furia

Bill Galcher

Phil George

Dean Gerber

Michele Glidden

Robin Halford

Harlan Halma

Jon and Belya Hauxwell

Lenwood Heath

Brian Hennessey

Tessa Hill

Charles Hoffman

Donald Holly and

Lorraine Gardner

Margaret Hudson

Judith and Brian Hunderfund

Robert J. Janes

Thomas Jemison

Richard Jenkins

Barry E. Jones

Brian Joseph

Jerry Kickenson

Dean Kopesky

Terrence Kramer

David Leckey

Dennis Lehman

Patricia Litton

George and Roseann Lorefice

Robin Lorenz

Michael and Mary Lubin

Linda Mar

David March

Christopher and

Catherine Mathews

Robert McFarland

Robert Messerschmidt

Slavko Milovancevic

Cynthia Minar

Paul Misener

Robert Mong

Nikolai Ortiz

Terrence Pegula

John Petersen III

Robert Potthoff

Professor Linda S. Powers

Lon Radin

John Roach

George Rodormer

Leonard Rosi

Susan Scott

Joel and Janine Shaw

Ross Simons

Pete Skeggs

Alfred Spector

Susan Staugaitis

Daniel Sullivan

Dan Sulzbach

Carol Swarts

Bernard Tagholm

Anthony R. and Young Tepedino

Trudie Thompson

Jane Turner

Roy Underhill

William Underwood

Jearl Walker

David Wdowiak

Jean Weigert and Dan Millstein

Virginia Wight

Bennet Yee

Jonathan Zinsmeyer

Marian Zlotkiewicz

Anonymous (6)

#### Discoverer (\$250 – \$499)

Allan Abrahamse

H. M. Addikson

Nancy Aiello

Rachel and Elijah Alper

Erika Angle

Janet Asimov

Maya Bailoor

Patricia Baird

Alex Bantz

Alan Barak

Tom Baruch

Paul Bayless

Brad Berg and

Ramona Rolle-Berg

Jeff Berwick

Erik Bilello

Andras and Elena Bodoni

Donald Boos

Fred Borcharding

Katherine Borgen

Amy Bouska

Arlene Brandwein

David Brookshire

Ray A. Bucklin

Charles Burger

Nicholas Bush

Thomas Casten

John Chatham

Andrew Chong

Gilbert and Swainia Cochran

James Cockrum

Kathlene Collins and

David Lowenstein

Janice Conavay

Tom and Stephanie Conroy

Crawford Cooley

C. K. Crawford

Carlina Crevecoeur

Starrett Dalton

Andrew Daubenspeck

Judy DeLoache

John Delodder

Sonce Devries

George Diamantis

Lori Dostal

George F. Drake

Leonard Duda

Adriana Elefante

Richard Elrick

Jeffrey Eppinger and

Francesmary Modungo

Erick Erickson

Matthew Evans

Arthur Falk

Donna Farley

Charles Feeney

Russell Fernald

Roger Fitzharris

Harold Folley and Jennie Negin

Sandra Fonville

Charles Forest

Ernest Fountain

Richard Fox

Lawrence Fritz

Paul A. Gade, Ph.D.

Linda Goldsworthy

Steven Golowich

David Good

Hallie Goodall

Karen J. Goodman

Herbert Gowen

Kenneth Graham

Jack Graver

John Green

David Griesinger

David Hagie

Keith Hall

Steve and Debbie Hankison

Rebecca Harvey

Antoine Hatoun and

Andrea Levitt

Megan and Jeremy Healey

Paul Heermans

Michael Hess

William E. Himwich

Donna and Peter Hollinger

Wanda Horwege

Diane Huffman

Elizabeth Hugel and

Manfred Egerer

Frankie Jackson

R. Bradley Jensen

Howard Jensen

Julia Kalmus

Nolan Kamitaki

Esther Keplingler

Robert Klein

Michael Klobucar

Peter Klose

Steven Knapp

Jeff Kodosky

Daniel Kovarik

Martin and Susan Kozak

Julie and Marc Kummel

Milton Lackey

Alexander Lane

Marke Lane

Richard Larson

E. P. Lee

Kevin Li

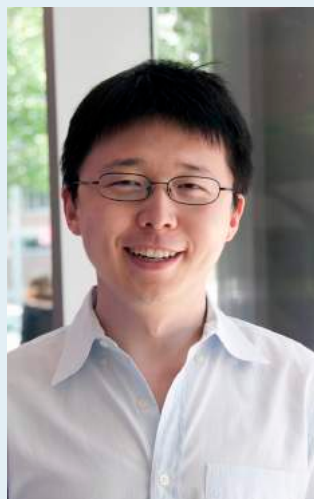
Peter R. Limburg

Peter Lin

Rudolf Loeser

Thomas L. Logan

Robert Lynch



**Feng Zhang**  
Poitras Professor  
in Neuroscience, MIT  
(1998 and 1999 ISEF; 2000 STS)

## Why I give...

“By looking into and harnessing life’s diversity, we can develop technologies that have the potential to profoundly improve our lives. The scientific curiosity nurtured by my participation in the Society’s Science Talent Search and International Science and Engineering Fair have been instrumental for my work.”

William Unertl  
Pete and Gina Van Opens  
Lydia Villa-Komaroff  
Robert Walker  
Bradford Walters  
Robert Watson  
Karen and Richard Watts  
Larry Wehr  
Charles Weiss  
John Wetzel  
Robert Williams  
John J. Wilt  
Kenneth Witherly  
George J. Young  
Chia Yun Yang  
Patricia Zalo  
Glenn Zwanzig  
Anonymous (11)

## Researcher Circle Investigator (\$100 – \$249)

Martyn Abbott  
Helen Acland  
John Adams  
Margaret Adams  
Sam H. Adams  
Jerry Addington  
William Ailor  
Albert Allen  
Carolyn S. Allen  
John Allen  
Larry W. Allen  
William C. Allen  
Elizabeth Allison  
Susan Almy  
Marie Aloia  
Alex and Emily Althausen

Robert Altizer  
Robert Anderson  
Cynthia Anthony  
Susan Appel  
David Arneson  
William Arnold  
John Arnsperger  
Chris Arrowood  
Alec Arshavsky  
Jack D. Arters, Ed.D.  
Parker Ashurst  
Hawkin Au  
Daniel Babitch  
Diana and Charles Bain  
Charles D. Baker  
John Baker  
William Baker  
Marian Baldy  
Matthew Ballard  
Bibhuti Banerjee  
John Barbis  
Jack D. Barchas, M.D., and  
Rosemary A. Stevens, Ph.D.  
William Barker  
Elwood Barnes  
William Barns  
John Barstow  
Stephen E. Bartlett  
Howard Barton  
Paul and Lavonne Batalden  
Marion Bauman  
James R. Beacham  
Timothy Beamer  
Kevin Beardsley  
Rachel Beech  
Alvin Beilby  
Ellis K. Bennett

W. Bennett  
M. A. Benning  
Jolene and Ron Berg  
John Bergin  
Geoffrey Berresford  
Donald K. Berry  
Richard Berry  
Reid Bicknell  
Andrew Bicos  
Ted Biggerstaff  
Bruce Bilodeau  
Richard Birkebak  
Kenneth Blair  
Robert Bloomer  
Stephen Blumenkranz  
Charles Boardman  
Brian Bock  
James Boddy  
Benett Bolek  
William Bolhofer  
Robert D. Bond  
Joan K. Bonner  
David J. Borchert  
Teodoro Bordador  
Sidney “Buddy” Bounds  
Marian Boutet  
Cindy Bowers  
Barbara Bowman  
Sandra Bowman  
Thomas and Catherine Boxleiter  
Donald Boyd  
Norman Boyd  
K. Z. Bradford  
L. B. Brainerd  
David A. Brashear  
Greg Breen  
John Bretney  
Orlie Brewer  
Bill Brideson  
Joel Brind  
Billy Britton  
J. Broadhead  
Robert Brobst  
Martin Broeske  
Shari Brooks  
Carl Brown  
David Brown  
James Brown  
Keith C. Brown  
Nancy Brown  
Norman Brown  
Robert D. Brown  
Roberta Brown  
Peter Brownscombe  
Donald Brundirks  
Philip Bryan  
Leslie Bullock  
Marco Burenko  
Douglas Burgess  
Dale Burningham  
Paul and Lois Burns  
Anna Burton  
Samuel Butcher  
Laurentiu Buzdugan  
Joseph Byers  
Robert R. Caddel  
Howard Barton  
Harry E. Cade  
Thomas Cahill  
William Caldwell  
W. Callahan  
John Calvert  
Mark Caprio  
Dennis Carey  
Andrew Carleton  
Ross B. Carlson

Marilyn Carpenter  
Quentin Carpenter  
Douglas L. Carroll  
Michael Carstensen  
John Case  
Bill and Ian Cash  
Peter Castro  
Dr. F. M. Caudie  
Wayne Cedidla  
Santanu Chakraborty  
Jason Chamberlain  
Barbara Charette  
Mark Chatinsky  
Scott Cheney  
Jin Cheng  
T. N. Chin  
Richard Churchill  
Alan Citron  
David Clair  
Boyd Clampitt  
Kathryn Clancy  
John E. Clarke  
Malcolm Cleaveland  
Jack Clemons  
Peter Cline  
Christopher Clouse  
L. S. Cobb  
Charles Cockerell  
Rebecca Cole  
David and Margaret Conover  
Jana L. Cook  
Kilian Cooley  
Leon Cooper  
Roger Cooper  
Leisa Corbett  
Craig Corbitt  
John Correia  
Gary Cortright  
John Costopoulos  
Pamela L. Coville  
T. S. Cowles  
Peter H. Coy  
Matt Craig  
R. Criswell  
James and Audrey Crockett  
Richard Croley  
David Crooks  
William Cruce  
Mike Cuchna  
Fred Cunningham  
Madeleine Cunningham  
Everett Dade  
Carina Dalton-Sorrell  
Jerome Danburg  
Nolan Danchik and  
Hynda Kleinman  
Jerry A. Darsey  
Marco Burenko  
Philip De Barros  
Jack DeBaun  
John DeBorde  
Martin DeGeorge  
Beth Delaney  
P. M. Delaubenfels  
Joseph Demer  
Barbu Demian  
Steve Deng  
Rolf and Judy Dercum  
Florence Derosé  
Don Derthick  
Susan Derus  
Robert Desiderato  
Tamar di Franco  
John Dickerson  
David Dinger

John Dishion  
Matthew M. Dismar  
Dana Dittmore  
Melinda Dixon  
Philip L. Dixon  
John McGregor Dodds  
V. Alton Dohner  
R. E. Dole  
Roland Dolle  
James Doty  
Marc Doty  
Harold Douglass  
Robert Dow  
Steve Dow  
Michael Doyen  
Brian Doyle  
Denis Drapeau  
Herman Dress  
C. J. Drury  
Robert Druzinsky  
Leigh Dudash  
Casey Dunn  
Jon Michael Dunn  
William Durch  
Loraine Durmann  
Michael Durr  
Gay Dybwad  
James Dyer  
J. R. Eagan  
Richard Easterly  
Douglas Easton  
Dana Eckart  
Ruth L. Eckert  
Ranya Edupuganti  
Arthur Ehlmann  
A. Ehringer  
L. Eiland  
Randy Elliott  
Robert Ellis  
J. and D. Ellison  
Jerry Emanuelson  
Eva Emerson  
Jeanette Eng  
John Engel  
Darell Engelhaupt  
Emilio Englade  
Kenneth Epstein  
Ellen Erdelsky  
Josiah Erickson, Jr.  
David Evans  
Monte R. Evans  
Anita Everson  
Phyllis M. Faber  
C. M. Fair  
Pail Fairbrother  
Robert H. Fairclough  
Margaret Faris  
Peter B. Farquhar  
Jay Farr  
Stephen Farr  
John Fay  
Thomas Fenwick  
Jane Ferguson  
Richard Ferguson  
Robert W. Fiefarek  
C. T. Field  
Marty Field  
Robert Field  
Jeremy H. Fields  
Sam Fields  
Alfred Filskov  
David Fischer  
George Fisler  
Terry Fitzmorris  
J. Flaherty

Theresa Fleming  
Maribeth Fletcher  
Casiano Fontanez  
Russell Forbess  
Gianmarc Formichella  
James Forrest  
Ned and J. R. Forrester  
Jeff Fortwengler  
Wayne Foster  
Dale A. Fournier  
Bob Fox  
Charles H. Fox  
Robert Fox  
Anthony Frank  
C. E. Frasch  
John C. Fraser  
Leif Fredin  
Carl Freeman  
John Edward Freeman  
Quida Freeman  
Danny Freitas  
Alan French  
Cary Frumess  
Delmer H. Fuchs  
Nicolast Furjanick  
Glen Gaddy  
Linda Gallagher  
M. Gaman  
Tony Gambacurta  
Steven Gardell  
Allan Garfield  
Srinivas Garimella  
Larry Garmezy  
Mary Garnett  
David Garrett  
Donald L. Gasho  
Gregory Gbur  
Judy Geer and  
Richard A. Dreissigacker  
David Gentry  
Samuel George  
William Gerber  
Robert Gerzoff  
Steven Gestrich  
Lawrence Gettleman  
A. J. and Jessica Gharrett  
David Giandomenico  
Charles Gibbs  
Jeffrey Gibbs  
Tom and Judith Gielow  
Sue Gier  
Antonia Gilligan  
Jean Gillmer  
Gerald Ginsburg  
Allen Ginzburg  
William and Lorna Glaunsinger  
Fred Glover  
Ruth L. Gokel  
Arthur Goldberger  
Mary Helen Goldsmith  
Paul K. Goldsmith  
Mark Goldstein  
Mari Golub  
Chris Gondeck  
Jan Gong  
Frederick Goodfellow  
Tom Goodwin  
Michelle Gooze-Miller  
Felice Gordis  
Leonard H. and Judith M. Gordy  
Karen Gottmann  
David Grade  
Thomas Gray  
Michael A. Grayson  
George Green



Jerry Green  
Moulton Green  
Paul Greeney  
John Grefenstette  
Joyce E. Griffith  
Eric Gritzmacher  
Susan Grobman  
David Gross  
Stephen Gross  
Robert T. Grossman  
James P. Grover  
James R. Guerino  
Anvita Gupta  
Jim Haber  
Michael G. Hadfield  
F. D. Haldane  
Ellis H. Hall  
Tanya Hall  
Bertrand Halperin  
Kimball Halsey  
Stan Halvorson  
Robert Hamilton  
Dale Hammerschmidt  
H. G. Hammon III  
Glenn Hammons  
Barbara Hampton  
James Hanko  
Beverly Hansberry  
Gordon Hanson  
Jon Harbaugh  
Danille Harder  
Lawrence Hardy  
Yasser Hareb  
Agnes Harp  
Jeremy Harris  
B. Hart

Daniel K. Hartine  
A. Hartkopf  
R. A. Harvey  
Mack Hassler  
Elizabeth R. Hatcher, M.D., Ph.D.  
Daniel A. Hauptman  
Gary Heaney  
Daniel Heintz  
Cary Hellman  
Ed Helmer  
Charles Helmick  
Rich Hencke  
Leon Hendee  
Brian Henkel  
Vincent Hennessy  
Richard Hennings  
James Herman  
Band S. Herrick  
Dudley Herschbach  
Brad Hershey  
A. C. Heston  
Art Hicks  
Nancy Higbee  
Thomas Higgins  
Douglas Hill  
Norris D. Hill  
Robert A. Hill  
Richard Hillman  
Linda and Steven Hipsman  
Bryan Hodgson  
Ted Hoff  
Walter Hoge  
Jeff Holden  
Edson P. and Mary E. Holland  
J. Hollstein  
Pat Holman

Charles Holst  
Diane Honeysett  
Ellen Honsa  
Brian Hooker  
Douglas Hoon  
Laura Hope  
M. Hopkins  
Paul Horn  
William Hoskinson  
Paul Hossler  
Philip Houck  
Jim Houghton  
F. W. Houston  
Peter and Charlotte Howell  
George Hrycelak  
John Huehnergard  
Patrick Hui  
R. W. Hungate  
Rosalyn R. Hurley  
Kathleen Hurtle  
John Hussey  
David Inverso  
Gordon Irving  
Eriko Isaac  
Geoff Iverson  
Marguerite Iverson  
John G. Iwachiw  
B. Scott Jackson  
Paul Jackson  
Tom Jackson  
Arnold Jacobson, M.D.  
Jessica Jacobson  
E. Jakary  
Donald Jakes  
Kenneth Janes  
Ann Jaspersen  
Linda S. Jeffries  
K. C. Jenner  
John C. Jensen  
Kim T. Jew  
Andrew and Shu Jin  
Jeanyoung Jo  
David A. Johnson  
H. M. Johnson  
J. T. Johnson  
Lynne Johnson  
Scott D. Johnson  
Richard Johnston  
Chris Jones  
Frank Jones  
Mark Jones  
Nikhil Joshi  
Tika Juneja  
Tom Jurewitz  
Randy Jurgensen  
Ann Kah  
Brewster Kahle  
Tom Kaminski  
Joan Kammerer  
Mary Kamprath  
Van Kane  
Gayle Kansagor  
James K. Katen  
Paul and Cheryl Katen  
Marc Katz  
Bonnie Kaufman  
Francis Keeler  
John Kelley  
Debra Kelsh  
Jim Kendall  
Kevin Kenlan  
Elizabeth Kennedy  
Margaret Kennedy  
Tom Kent  
R. Kern

Thomas Kerwin  
Larry Kessler  
Mark Ketterer  
Robert Kieckhefer  
Isaac Kikawada  
Tim Killen  
Yoon Soo Kim  
Michael Kimps  
Charles King  
Kenneth King  
Louis Kirby  
Andrew Kitchen  
Mary J. Klay  
Mr. Klumb  
Ronald Knecht  
Frank Knight  
Robert Knoll  
Ralph Koldinger  
Gregory Konesky  
Kenneth G. Konz  
Stanley Korenman  
R. Kosinski  
Matt Kowitt  
Ludwig Krcma  
Robin Krivanek  
John Kronholm  
Eric Krupka  
Thomas C. Kuchenberg  
Francis Kuhlen  
Karl Kuhn  
M. Kuppusami  
T. W. Kurczynski  
Andrew Kurtz  
Carl Kurz  
Marc Kusinitz  
Sally Kutzer  
William Kwinn  
Christina Lacey  
Mae-Dell Lacy  
Alvin Lamarre  
Joan D. Lambert  
Ralph Lambert  
Barbara Lambird  
Esther Landhuis  
Larry Langenberg  
Nancy Lanning  
Earl E. Lanter  
Caryla J. Larsen  
William Lascurettes  
Kim Laselle  
Dr. Jose R. Latimer  
Charles L. Lawless  
Richard Leblanc  
Michael Leboffe  
Paul Lee  
Rachel and Ferrol J. Lee  
Scott A. Lee  
Bob Leet  
Roger Lefco  
Evan Leland  
Will Leland  
Carl Lemp  
John Leone  
Andrew Lerner  
Chris Leslie  
David Lesnini  
Alan Levine  
Lisa Lewis  
Martin Lewis  
Fengrong Li and Weiwen Yang  
Noble and Carolyn Lieu  
Paulett Liewer  
Dawei Lin  
John Lindley  
Thomas A. Linkhart

David Lipnick  
Arni Litt  
James Little  
Ron Little  
John Livingood  
Martha Lockhart  
James Loddengaard  
D. E. Lofstrom  
Ernie and Santana Lopez  
Alfonso López  
Robert Losada  
Lynn Lozier  
Danielle Lucey  
Ravi Lumpkin  
Mo Luo  
Shirley Lutz  
David Lux  
Patrick Lyons  
Aileen Ma  
William Macanka  
Michael MacNeil  
Michael Maddex  
Edith Maffeo  
John V. Magee  
Julie Magilen  
Vera V. Mainz  
Jeannine A. Majde-Cottrell  
Mark Majesky  
Sigrid Maldonado  
Roger L. Mansfield  
A. S. Marchant  
James Mardis  
Harry Markert  
T. J. Marlowe  
Leonard A. Marowitz  
Brent Marsh  
Alan H. Marshall  
Jack Marshall  
Betsy Martin  
Kreg Martin  
Michael Martino  
Matt Marty  
Peter Mascwitz  
James Mason  
Sarah Masterman  
Jane Mathews  
William Matousek  
Mary Jo Maydew  
Robert McCabe  
Jay McCandless  
Margaret T. McCann  
Ryan Mccue  
Chad McDaniel  
Walt McEnerney  
Alice Mcfarland  
Ann McGinley  
Ann McIver McHoes  
Janice McIntosh  
Brookes Mckenzie  
Mark McKinnon  
Alfred McLaren  
Bernard T. McNamara  
William H. McNeil  
Pearson McWane  
Michael Meadows  
William Meadows  
Gerrit Meddeler  
Richard Meetz  
Murray Meisels  
Carol Meligan  
Marli Melton  
E. A. Meng  
Ram Menon  
Jon C. Merkle  
E. Merrick

Janice and George Merrill  
Omez Mesina  
James Meyers  
Claire Meyners  
Peter J. Meza  
John Miaullis  
Michael Milbouer  
Jeffrey Miller  
Jerry Miller  
Louis Miller  
Frederick Mills  
Stephanie Mills  
Bradley B. Milner  
Carroll Missimer  
Gordon Mitchard  
Robert Moates  
R. and G. Moehrke  
James Mohr  
Wenda Monger  
Patricia Monteith  
James Moore  
R. A. Moore  
Tom M. Moran  
Patricia W. Moriarty  
Kjirste and John Morrell  
Alfred D. Morris  
Drew Morris  
J. Morris  
Daniel Morrison  
Duane Morse  
Robert K. Moses  
Richard Moss  
Scot Moss  
Jim Mossor  
Teri Motley  
Dan Moulding  
Nancy Moulding  
Ernest Moy  
George Mueller  
Susan Mulroney  
Carolyn Murphy  
Denise Murphy  
Karyn Murphy  
Michael Murphy  
Philip Myers  
Daniel Mytelka  
Derick Naef  
T. R. Neet  
David Nelson  
Nanette M. Nelson  
Robert M. Nelson  
William Nelson  
Robert Nevin  
Jack Newman  
Robert Newton  
James N. Neyman  
Ray J. Nichols  
Heidi Nicholson  
John M. Nicholson  
Elena Nightingale  
Richard H. Nimtz  
Vanita Norgard  
Mike Normandin  
Phyllis S. Norris  
Victor Norton  
Thomas Nowak  
Steve O'Connor  
Bryan and Sarah O'Donnell  
Mark Oldenburg  
John Oliver  
Jean L. Olson  
Yoshiaki Omura  
Jesse Oppenheimer  
Jennie Orr  
Louise M. Osborn



**Robert Haines**  
President, Insaco, Inc.

## Why I give...

"The International Science and Engineering Fair (ISEF) provides a great opportunity for our young people to learn how to explore the world through scientific research and inquiry. It builds a love of science and engineering in them and prepares them to take their place in the world and change it for the better. I have

been pleased to play my part for the past 20 years by serving as a leader in an affiliated science fair and as a volunteer at ISEF. It's a terrific experience."



Jon Korchak

## Why I give...

"I sponsor a school for the *Science News* in High Schools program in memory of my father, Jon Korchak. He was an avid *Science News* reader and used this magazine as a tool to inspire his special education classes to work through their reading disabilities. Because the content of this magazine is current and interesting, the students eagerly read them."

— Judi Hunderfund

Lawrence Y. Ota  
Steven Overmyer  
Mary Ann Padovani  
Howard Page  
Allison R. Palmer  
Alan Palmiter  
Paul Palmquist  
Craig S. Palonen  
Lu Pan  
Himanshu Pandey  
Hatsumi Park  
Bruce Parker  
Jill Parker  
Kevin Parker  
Robert Parson  
Dave Parsons  
Will Pastron  
Ajay Pathania  
Gretchen Paupore  
Steven Pearl  
John E. Pearson  
Heather Peirce  
Gregory Pepin  
Carlos Perdue  
Anthony Perry  
R. G. Peterson  
Richard Peterson  
Michael Phillips  
Shelley Phipps  
Gordon Pickett  
Dawn Piechocki  
Andrew Pierce  
Alburt Pifer  
Ralph Pifer

Noreen Pillitteri  
Richard E. Pillmore  
James Pintar  
Walter Pirie  
Kate and Ira Pohl  
Christopher Poje  
John Porter  
William Porter  
Larry Potthoff  
Stephen Prata  
Franklin Prosser  
Kay Purcell  
John Purdon  
Rita M. Pyrdol  
Dean Quick  
Moursheda Rahman  
Joshua Rai  
P. S. Rao  
Diane Rashid  
Janeen Rastall  
Gerald W. Rattley  
Dewey Ravenscroft  
Gregg Raymond  
Lee Read  
Cecil Reaves  
John H. Rediske  
Aaron Reed  
Dan Reed  
Douglas Rees  
David and Krystin Reider  
Frank Reilly  
Tony Rein  
Kurt Reisler  
Howard Resnikoff

Robert Rew  
Karen Reynolds  
Robert Rhein  
E. Rhoads  
Mary Rich  
P. T. Richardson  
Gregory Richterich  
Charles Riedesel  
Linda Riles  
Philip Ritchie  
Jason Ritenour  
Nuria Rivera  
Ted Rivers  
Charles Rivette  
David Roach  
Doug and Wendy Robbins  
Roland Roberts  
Daniel Robey  
Phillip H. Robidoux  
Michael P. Roca  
Donna Rodel  
Chuck Rodert  
Barbara Saylor Rodgers  
Gerald Roeder  
Joseph Rogers  
Robert K. Rohwer  
Lynn Roosevelt  
Daniel Rose  
Michelle Rose-Fuller  
Mark Rosenberg  
Margaret Rosenberg  
David Rosenfeld  
Arthur D. Ross  
David Ross  
Terry Rossow  
Michael Rowan  
William Rowan  
Arnold Roy  
Jim Roy  
Norah Rudin  
Dennis Ruppert  
Marvin Russell  
Diana Ryan  
Richard Ryan  
Barry Sachs  
David Sachs  
Carmen Salgueiro  
Gerhard L. Salinger  
Ronald Saltz  
James Samis  
Sandra D. Sandell  
Sholom Sanders  
Paul Santos  
Jean T. Sarg  
Paul Sarvasy  
Gerald Sauer  
John B. Sauter  
Patricia Sawvel  
Martin Schachter  
Edward Schaefer  
Steven Schaefer  
Thomas C. Schelling  
David Schey  
Steven Schlosser  
Carl Schluter  
Brian Schmidt  
Christopher Schmidt  
Weston Schmidt  
Michael L. Schmitz  
Lawrence Schmutz  
Stephen Schneider  
Martha Schumacher  
Leanne Scott  
John R. Sechena  
Gerry Seck

Salvador Sedita  
C. and H. Seibert  
Terrence J. Sejnowski  
Mary Severinghaus  
Tommie Shade  
Tony Shallin  
Caroline Shamu  
Narendra Shankar  
Sadasivan Shankar  
John Shannon  
Michael Shaw  
Jian Shen  
Chuck Sherman  
Claire Sherwood  
Rajen Sheth  
Glen Shipley  
H. Shookhoff  
Harry Short  
Scott Shumack  
Edward Sichterman  
Joan Silver  
Carl Silvants  
Katrina Wynkoop Simmons  
Diana Simoni  
Kimberly Simpson  
Om Singla  
Michael Sitko  
Linda Skory  
Arthur Slater  
Barrett Slenning  
David Small  
Sari Small  
Bill Smith  
Jennifer Smith  
Julie Smith  
K. A. Smith  
Michael Rowan  
Karl Smith  
M. W. Smith  
Patrick Smith  
Sherri Smith  
Stephen L. Smith  
Kristi Snell  
Allen G. Snyder  
Sharon Snyder  
Rachael Solem  
Linda Sowray  
Lynn Sparling  
Robert Spencer  
Russ Spickelmier  
Nick Spitzer  
Steven Squires  
Michael Stambaugh  
A. W. Stanson  
Michael Stebel  
Jack A. Stecher  
Eric Steel  
Darrell Stein  
William Stein  
Alan Steinberg  
Susan Stephenson  
Peirce Stern  
Saul Sternberg  
Gil Stevens  
John Stevenson  
Rodney Stock  
Michael Stoddard  
Beth Stoockly  
Edward C. Stone  
R. L. Stone  
Tim Storey  
Susan Streufert  
Stephen Strommen  
Paul Strull  
Thomas Struzik  
Thomas Sturges

Barb Stutting-Sattler  
Lewis Suber  
Frances M. Sullican  
Nevin Summers  
G. V. Swan  
Roy Sykes  
Cuiyan Tan  
Wade Tarzia  
Barbara Taylor  
Paul A. Taylor  
Tony Taylor  
Bruce Thayer  
David M. Thomas  
John Thomas  
Keith E. Thomas  
Mathew Thomas  
Tom Thomas  
James Thompson  
Mac and Elsie Thompson  
Edward Thorp  
Gary Tickel  
Peter Todd  
Michael Tomayko  
Lisa Toombs  
Anne Townsend  
Margaret Tracy  
Steven Tracy  
Kate Travis  
Charles Treinen  
John Troan  
David Trulock  
Robert J. Twiss  
J. A. Tyson and P. C. Boeshaar  
Emil Unanve  
Ron Unger  
Lois Urban  
Neal Van Fossan  
Eve Van Rennes  
Phillip Vango  
Jerrold Vannocker  
Nina Vasan  
David Vaughn  
Melissa Vaught  
Alicia Vande Ven  
Jim Versteeg  
Marysue Vidro  
Carol Vines  
Samuel Visner  
Jane Voichick  
Joseph A. Vrba  
Tynan Wait  
Leslie I. Wake  
William and Marjorie Waldrop  
Chalma Walker  
Christopher L. and  
Beth Poppe Walker  
Gene Walker  
Ron Wallace  
Mark Wallach  
Claire Walsh  
Marion Walsh  
Douglas Walty  
Donna Wanless  
Michael Warring  
Greg Waters  
Larry Watters  
Josef Watts  
Karen Wcislo  
David F. Webb  
Chris Wegener  
William Weigand  
N. Weil  
Jeff Weiner  
Brian Weiss  
Lawrence Weiss

Julie Welch  
Daniel Wellner  
Kay Werk  
Glenn Westin  
David Wheatley  
John Wheeler  
Franklin White  
Wesley White  
George M. Whitesides  
Zerman Whitley  
George Wiggers  
Marla Wigton  
Susan Wiley  
David Williams  
Forrest Williams  
John Williams  
Mary Ann Williams  
K. Willig  
Alan Willner  
Thomas Wills  
William Wilner  
Thomas Wilson  
Victor Wilson  
James Wink  
Douglas Winsand  
Rodney Winters  
Robert E. Winton  
Allen Wise  
Donald V. Wise  
Tracy G. Witt  
Sylvia Wittels  
Christine Wolak  
S. Wolen  
James L. Wolfe  
Marion Wollmeringer  
Richard H. Womack  
Barbara Wood  
Janice Wood  
Scott Wood-Prince  
John Woods  
T. K. Worde  
C. R. B. Wright  
Shannon Wright  
Elizabeth Wylde  
Scott Wynn  
John and Lavinia Ycas  
Fancy Younglove  
Robert Youngs  
Jennifer Yruegas  
Grace Ze Wang  
Leticia G. Zertuche  
Wei-Jing Zhu  
Uta Ziegler  
David Zuccaro  
Robert Zucker  
Anonymous (47)

This list includes \$100 and above individual donors. For a complete list, please visit [www.societyforscience.org/2016annualreport](http://www.societyforscience.org/2016annualreport).



# SOCIETY BOARD OF TRUSTEES

**H. Robert Horvitz, Chair**

Nobel Prize in Medicine or Physiology, 2002  
Professor of Biology, Massachusetts Institute of Technology  
Investigator, Howard Hughes Medical Institute  
Member, MIT McGovern Institute for Brain Research  
Member, MIT Koch Institute for Integrative Cancer Research

**Alan Leshner, Vice Chair**

Chief Executive Officer Emeritus,  
American Association for the Advancement of Science

**Robert W. Shaw, Jr., Treasurer**

Retired President and Founder, Areté Corporation

**Paul J. Maddon, Secretary**

Founder and Vice Chairman, Progenics Pharmaceuticals, Inc.  
1977 Science Talent Search  
1977 International Science and Engineering Fair

**Mary Sue Coleman, Executive Committee, At-Large**

President, Association of American Universities  
President Emerita, University of Michigan  
1961 Science Talent Search  
1959 and 1960 International Science and Engineering Fair

**Maya Ajmera, ex officio**

President and CEO, Society for Science & the Public  
Publisher, *Science News*  
1985 Science Talent Search

**Hayley Bay Barna\*\***

Venture Partner, First Round Capital  
Co-Founder and former Co-CEO, Birchbox  
2001 Science Talent Search

**Craig R. Barrett**

Retired Chief Executive Officer/Chairman of the Board, Intel Corporation

**Sean B. Carroll**

Vice President for Science Education, Howard Hughes Medical Institute  
Allan Wilson Professor of Molecular Biology, Genetics and Medical Genetics,  
University of Wisconsin–Madison

**Tessa M. Hill\*\***

Associate Professor and Chancellor's Fellow,  
Department of Earth & Planetary Sciences, University of California, Davis

**Tom Leighton**

Chief Executive Officer and Co-Founder, Akamai Technologies  
1974 Science Talent Search

**Stephanie Pace Marshall**

Founding President/President Emerita, Illinois Mathematics and Science Academy

**Scott A. McGregor\***

Retired President and Chief Executive Officer, Broadcom Corporation  
Retired Chairman, Broadcom Foundation  
1974 Science Talent Search

**Joe Palca**

Science Correspondent, NPR

**Vivian Schiller\*\*\***

Executive Editor-in-Residence, Weber Shandwick  
Journalism, Media and Technology Advisor  
Former Global Chair of News, Twitter

**Frank Wilczek**

Herman Feshbach Professor of Physics, Center for Theoretical Physics,  
Massachusetts Institute of Technology  
2004 Nobel Prize in Physics  
1967 Science Talent Search

\*Term started in March 2016

\*\*Term started in October 2016

\*\*\*Term ended in May 2016

# SOCIETY EXECUTIVE TEAM

**Maya Ajmera**

President & CEO  
Publisher, *Science News*  
1985 Science Talent Search

**Rachel Goldman Alper**

Chief of Staff

**Rick Bates**

Senior Advisor

**Kathlene Collins**

Chief Marketing Officer

**Stephen Egts**

Chief Design Officer

**Charles Feeney**

Chief Financial Officer

**Kumar Garg**

Senior Fellow

**Michele Glidden**

Chief Program Officer

**Cait Goldberg**

Chief of Event Planning and Operations

**Gayle Kansagor**

Chief Communications Officer

**Bruce Makous**

Chief Advancement Officer

**James C. Moore**

Chief Technology Officer

**Elizabeth Quill**

Acting Editor in Chief

# SOCIETY STAFF

Zain Abidin

Muaz Ahmed

Daryl Anderson

Parshva Bavishi

Bruce Bower

Nancy Boyd

Michele Brenner

Bethany Brookshire

Alison Buki

Federico Castaneda

Marlena Chertock

Sarah Conner

Emily Conover

Erin Cummins

Aimee Cunningham

Ellen Cutler

Maxine David

Emily DeMarco

Mike Denison

Lauren E. Duffy

Maurice Dunn

Jinny Farrell

Janelle Germanos

Ricardo Gortaire

Lisa Grossman

Victor Hall

Laurel Hamers

Justine Hirshfeld

Bridgette Hudson

Lillian Steenblik Hwang

Lisa Icenroad

Ashley Johnson

Tika Juneja

June Kee

Tracy Lee

Philip Lewis

Kristen Looney

Cassie Martin

Ed Maxwell

Susan Milius

Macon Morehouse

Nancy Moulding

Eric Nguyen

Eric Olson

Erin Otwell

Pratham Patkar

John Pierce

Lisa Proctor

Janet Raloff

Raevathi Ramadorai

Diane Rashid

Elizabeth Remy

Anna Rhymes

Krystal Robinson

Paul Roger

Carole Russo

Tina Hesman Saey

Jordan Schwartzbach

Sabrina Scull

Sharon Snyder

Allison Hewlett Stifel

Caitlin Sullivan

Evora Swoopes

Molly Telfer

Helen Thompson

Tracee Tibbitts

Kate Travis

Cori Vanchieri

Erin Wayman

Randy Williams

Kerwin Wilson

Sarah Zielinski

Society Executive Team and Staff as of June 12, 2017



## EDITOR OF LIFE

All eyes are on the hot new genome-editing tool called CRISPR/Cas9. Scientists have reported using CRISPR to repaint the wings on butterflies and re-engineer immune cells, for example. Some labs are editing viable human embryos. Feng Zhang, an alumnus of the 2000 Science Talent Search and the 1998 and 1999 International Science and Engineering Fairs, and one of the first scientists to wield the molecular scissors, is seeking ways to further improve the system. "Our search is not done yet," Zhang told *Science News* in 2016.

"The field is advancing so rapidly."

COVER IMAGE: MCGOVERN INSTITUTE FOR BRAIN RESEARCH AT MIT



★★★★  
**CHARITY NAVIGATOR**  
Four Star Charity

For more information, please contact:

**Bruce Makous** Chief Advancement Officer  
202-872-5138 | [bmakous@societyforscience.org](mailto:bmakous@societyforscience.org)  
[www.societyforscience.org](http://www.societyforscience.org) | [www.sciencenews.org](http://www.sciencenews.org)



**SOCIETY FOR SCIENCE & THE PUBLIC**