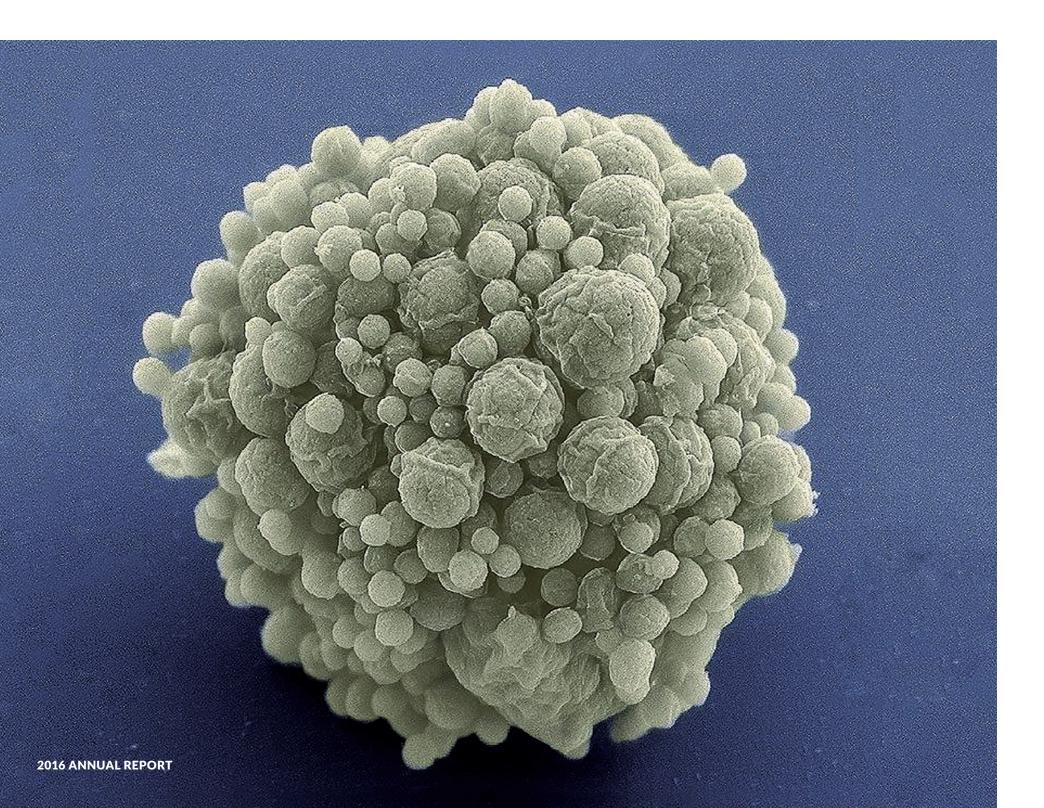
# TRANSFORMING





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.

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#### Science News | MARCH 5, 2016

#### **VIRAL DELIVERY**

In a multivirus competition, a newcomer 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

2016 ANNUAL REPORT | SOCIETY FOR SCIENCE & THE PUBLIC | 3



s 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 a 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,

A. Robert Huly

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.

Actor of the last



his 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 21st century.

In March, we celebrated the 75th 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).

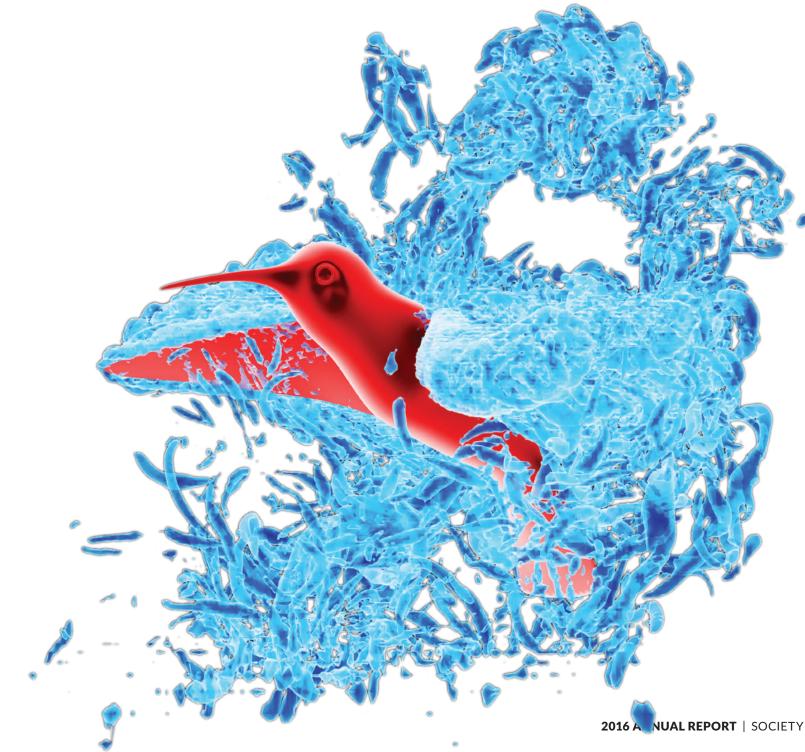
Just as science transforms, we will remain on the forefront of both scientific news and finding the next generation of science and engineering leaders. None of this would be possible without your generous commitment to our work. Thank you for all that you do to ensure the Society's success and impact.

With best wishes,

Maya Amen

Maya Ajmera President & CEO Publisher, Science News 1985 Science Talent Search





Science News | JANUARY 23, 2016

#### 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.

#### 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.



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#### 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 75th 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.



With the support of Intel, the Society celebrated the 75<sup>th</sup> anniversary of the Science Talent Search during a formal gala keynoted 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.

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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.



Science News was immortal ized 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.

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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.

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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.

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## REGENERON **SCIENCE** TALENT SEARCH

A program of SOCIETY FOR SCIENCE & THE PUBLIC

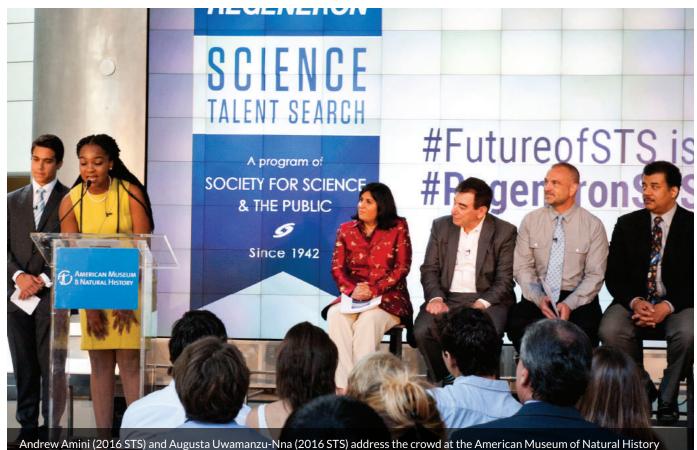
> Ø Since 1942

"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

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

## **REGENERON PARTNERSHIP** TRANSFORMS THE SOCIETY



with Maya Ajmera (1985 STS), Leonard Schleifer (1970 STS), George D. Yancopoulos (1976 STS) and Neil deGrasse Tyson.





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#### 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









for outreach and equity

million per year



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.

14 | 2016 ANNUAL REPORT | SOCIETY COMPETITIONS



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## 2016 SOCETY CONPETIONS

**2016 ANNUAL REPORT** | SOCIETY FOR SCIENCE & THE PUBLIC | 15



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

## BRIGHTEST YOUNG MINDS COMPETE IN PRESTIGIOUS COMPETITION

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. **CIENCE** 

PAIGE BROWN, FIRST PLACE FOR GLOBAL GOOD



Havnes Public Charter School in Washington, D.C.

## 6 $(\mathbf{O})$ **CIENCE TAL** S 75<sup>TH</sup> ANNIVERSARY

#### Competitions



#### 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.

2016 Intel STS Awards Gala keynote speaker

Intel STS finalist Augusta Uwamanzu-Nna.

2016 Seaborg Award winner Sanath Devalapurkar.



Board of Trustees, welcomes the crowd.





**2016 ANNUAL REPORT** | SOCIETY FOR SCIENCE & THE PUBLIC | 19

#### **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.

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"Intel ISEF is the catalyst for bringing together students to celebrate knowledge and make powerful, lifelong 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 receiving the Gordon E. Moore Award

20 | 2016 ANNUAL REPORT | INTEL INTERNATIONAL SCIENCE AND ENGINEERING FAIR



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,

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 lowcost, 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.

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

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

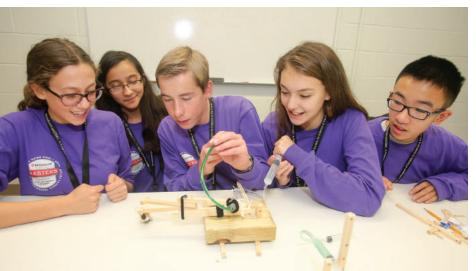


average number of ISEF finalists









Competitions

## 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 Lazorik, 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 Naiknaware, 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.

and to the global community.

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## **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

#### **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).







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).







Richard Harris of NPR moderates the Entrepreneurship panel with Paul Maddon (1977 STS). Daniel Skovronsky (1991 STS), Bob Sproull (1964 STS), George D. 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



26 | **2016 ANNUAL REPORT** | STS 75<sup>TH</sup> ANNIVERSARY ALUMNI CONFERENCE



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.



"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)** 

#### Science News | SEPTEMBER 17, 2016

#### **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.

## SCENCE NEWS GROUP

**2016 ANNUAL REPORT** | SOCIETY FOR SCIENCE & THE PUBLIC | 29

"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 | 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

Chinese in 2016.

and I will be reading SN."

NEWS

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### **ScienceNews**

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

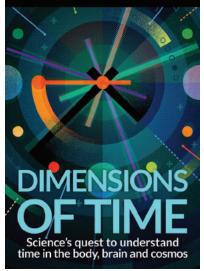
"I appreciate the simplicity you are trying to put into science," longtime reader Jim Cook wrote to us in 2016. "I have read. I am reading

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.

#### **ScienceNews**



#### 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.



#### TURE HEALTH, MICROBIOLOGY, CANCER Gum disease opens up the body to a host of infections

AURA BEIL 9:00AM APRIL 6 2016



## **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

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).

#### 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).

#### 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).

#### Constant connections

New units based on fundamental properties of the universe will make measurements more precise (SN: 3/5/16, p. 24).

#### 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 SIEGERIED

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)

#### **SCICURIOUS** 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 EHRENBERG

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

- March 5. 2016

- by Helen Thompson



#### Journalism

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,

"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



#### 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.

#### 2016 ANNUAL REPORT

#### Science News immortalized in dictionary

"Merriam-Webster Unabridged" uses several SN writers' sentences in it's 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



"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

The site's more engaging stories and imagin more than 120 nations.

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## ScienceNews for Students

## **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 August 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.

ery helped increase the year's traffic to more than six million visitors, representing readers

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.

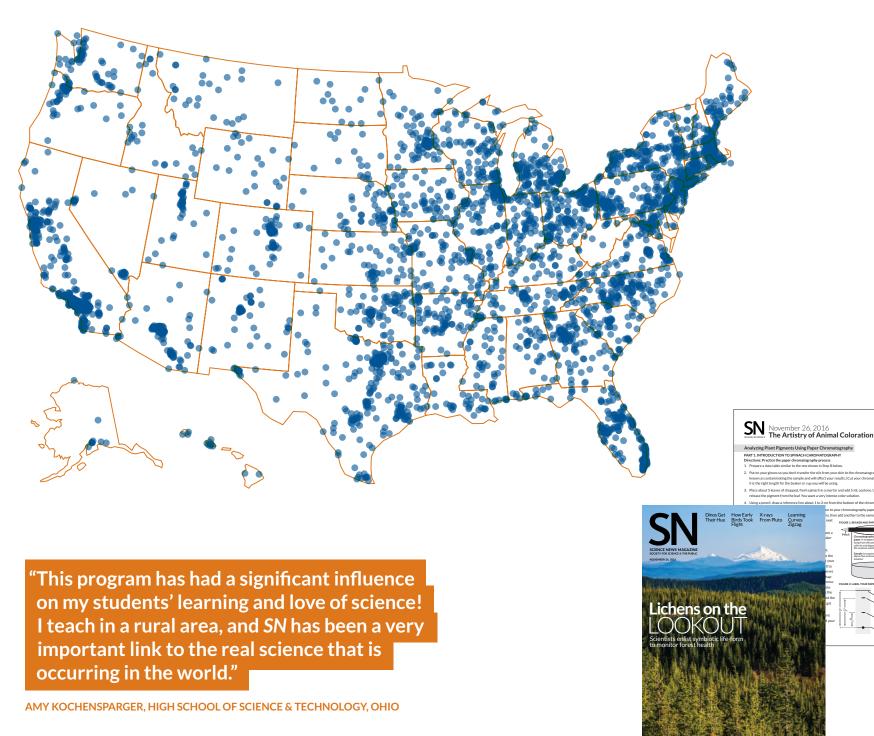
Science News | NOVEMBER 12, 2016

#### 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

**2016 ANNUAL REPORT** | SOCIETY FOR SCIENCE & THE PUBLIC | 37



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

38 2016 ANNUAL REPORT SCIENCE NEWS IN HIGH SCHOOLS

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**Outreach & Equity** 

#### **ScienceNews** IN HIGH SCHOOLS

## **TRANSFORMING SCIENCE** WITH A NEW HIGH SCHOOL CURRICULUM

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 1 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.



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



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



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.





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



## **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

Advocates to 31 in 2016.

community.

**Outreach & Equity** 



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

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

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 500 students, with most students entering 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









## **COMMUNITY BUILDING** AT THE RESEARCH TEACHERS CONFERENCE





**Outreach & Equity** 





Rebecca Grella, Barbi Frank and Jennifer Gordinier share insights



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

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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

**Outreach & Equity** 



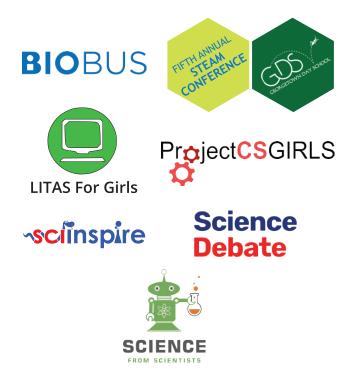
## **NEW PROGRAM SUPPORTS** STEM INNOVATORS AND TEACHERS

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 schoolbased 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 underrepresented 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 underrepresented ethnicity, and/or programs proving sustainability beyond the current school year.

2016 STEM Action Grant Recipients:



#### 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.

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## SOCIETY FOR SCIENCE & THE PUBLIC



## **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 longterm 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**

#### 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. Revenue Science News m Science educat In-kind and oth Total operating

#### Expense

Program servic General and ma Fundraising Total operating

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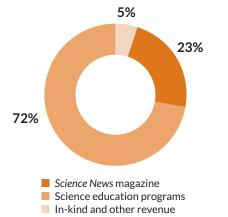
	2016	2015	
nagazine	\$ 5,648,941	\$ 4,897,950	
tion programs	17,762,816	15,970,314	
her revenue	1,181,930	770,732	
revenue	24,593,687	21,638,996	
ices	22,558,091	20,495,020	
nanagement	1,471,265	1,419,375	
	814,721	645,108	
expense	24,844,077	22,559,503	

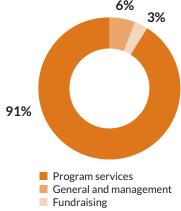
#### Non Operating Activities and Pledges

		2016	2015
Activity			
come		1,627,399	(216,677)
t retirement benefit liability		(104,149)	386,000
ntributions Designated for Futu	re Y	ears	
ontributions received in 2016		52,742,378	12,954,080
edges used in current year		(18,923,015)	(15,964,261)
manently restricted net assets		25,480	(9,167)
Activity		35,368,093	(2,850,025)
ssets		35,117,703	(3,770,532)
the beginning of the year		65,004,368	68,774,900
the end of the year	\$	100,122,071	\$ 65,004,368

#### **Balance Sheet**

	2016	2015	
Assets			
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	
Total Assets	108,288,131	73,388,673	
Liabilities			
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	
Total Liabilities	8,166,060	8,384,305	
Net Assets	\$100,122,071	\$ 65,004,368	
FY 2016 Operating Revenue	FY 2016 Operating Expense		
5%	6%		







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### Institutional donors

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Rockwell Collins Matching

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Rockwell Collins

Gifts Program

Sacred Heart School

Sumner High School

Suring High School

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Foundation

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K. Soumyanath Memorial Award

K. T. Li Foundation Special Award



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

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Mava Aimera and David Hollander William Bencze Rob Chang Jim and Laurie Clark Mary Sue Coleman Lerov Hood Alan and Agnes Leshne Stephanie Pace Marshal Nancy J. Peltzer



Tom Leighton (1974 STS) Co-Founder and CEO, Akamai

and provided an environment of innovation and invention which ultimately inspired the creation of Akamai.

Hal Schmitorst Robert W. Shaw, Jr Thomas Washburn Frank Wilczek Anonymous

#### Candidate (\$1.000 - \$2.499) Nick Adelmever

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#### Why I give...

Gordon Large

'Solving the world's biggest problems starts with inspiring the next generation through the appreciation of science and the vital role it plays n human advancement. The Society provides the ideal environment for students to tackle these challenges. The Science Talent Search was a big part of my growth as a student,

Dave Rigsby Beth and Russ Siegelman Marian and Abraham Sofaei Christopher Sonnack Priscilla Spears Lisa Steiner Matthew A. Stewart Lawrence Stifler Mary Stroh-Twichell 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 Brvan 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 Fller Michela English Julia Espel and Ken Chang David Finfrock Cvnthia French Peter Furia Bill Galcher Phil George Dean Gerber Michele Glidden Robin Halford Harlan Halma Jon and Belva Hauxwell Lenwood Heath **Brian Hennessey** Tessa Hill Charles Hoffman Donald Holly and Lorraine Gardner Margaret Hudson

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#### **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."



All

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