REGENERON

Teen Scientists Win $1.8 Million at Regeneron Science Talent Search 2018 with Top Awards for Novel Research on Crop Blight, Vaping and Rare Disease

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TARRYTOWN, N.Y. and WASHINGTON, March 13, 2018 /PRNewswire/ -- Regeneron Pharmaceuticals, Inc. (NASDAQ: **REGN**) and Society for Science & the Public today announced that **Benjamin "Benjy" Firester**, 18, of New York City, won the top award in the Regeneron Science Talent Search 2018, the nation's oldest and most prestigious science and math competition for high school seniors. Forty finalists, including Benjy, were honored tonight at the annual Regeneron Science Talent Search awards gala, which was keynoted by renowned author Malcolm Gladwell. Regeneron provided awards of more than $1.8 million for the finalists, who were evaluated for their research projects, as well as their exceptional scientific and mathematical knowledge and abilities.

Benjy Firester won first place and **$250,000** for his development of a mathematical model that uses disease data to predict how weather patterns could spread spores of the late blight fungus, which caused the Irish Potato Famine and still causes billions of dollars in crop damages annually. Benjy's program uses existing blight locations, date, time and detailed local weather data to model the likely routes by which late blight will spread and predict likely future infection sites. Farmers might someday use shared data to assess blight risk and reduce the preemptive use of fungicide.

Second place and **$175,000** went to **Natalia Orlovsky**, 18, of **Chadds Ford, Pennsylvania,** for her examination of the response of lung epithelial cells to fluids used in vaping, a practice promoted as a safer alternative to smoking cigarettes. While exposure to e-cigarette vapors did not change a lung cell's DNA, as does cigarette smoke, Natalia found that fluids of varying flavors and nicotine content did produce a potent stress response associated with decreased cell viability. Her results may demonstrate a need for greater scrutiny of the composition of vaping fluids.

Third place and **$150,000** went to **Isani Singh**, 18, of **Aurora, Colorado,** for her work towards determining that women with Turner Syndrome (TS), a genetic abnormality in which the second sex chromosome is missing, do have some cells with two X chromosomes. Knowing that most embryos lacking the second X do not survive, Isani adapted a laboratory protocol to search for and find these normal cells in TS embryos. She also identified genes that are under expressed in TS, a finding that may help physicians and patients better prepare for the variable medical complications of TS.

"Congratulations to this year's Regeneron Science Talent Search top winners," said Maya Ajmera, President and CEO of Society for Science & the Public and Publisher of *Science News*. "I am in awe of the finalists' passion, creativity and commitment to scientific ingenuity. The incredible history of accomplishments by past winners suggests this year's winners will become tomorrow's scientific leaders."

In 2017, [Regeneron](#) became only the third sponsor of the Science Talent Search following Westinghouse from 1942-1997 and Intel from 1998-2016, increasing the overall awards distribution to better reward the best and brightest young minds.

"The Regeneron Science Talent Search competitors are some of our country's very best young scientists," said George D. Yancopoulos, M.D., Ph.D., Founding Scientist, President and Chief Scientific Officer of Regeneron, and a Science Talent Search winner himself in 1976. "We're so excited to support the winners for their remarkable accomplishments, and are thrilled to see once again the amazing thinking that comes from a group of passionate, skilled young people bringing fresh perspectives to significant global problems. Being a winner in what was then the Westinghouse Science Talent Search changed my life, and inspired me to devote my life to science. We hope the same for this year's competitors, and that people of all ages will look to them as role models and be similarly inspired to change the world through science."

Other top honors from the competition include:

Fourth Place: Muhammad (Shahir) Rahman of Portland, Oregon, received a $100,000 award for engineering an internet-enabled microwave oven capable of simultaneously heating different foods on the same plate to optimal temperatures without requiring user input.

Fifth Place: David Wu of Potomac, Maryland, received a $90,000 award for his project studying the patterns of sequential prime numbers.

Sixth Place: Kyle Fridberg of Boulder, Colorado, received an $80,000 award for his discovery of a new compound that may be useful in improving rechargeable battery technology.

Seventh Place: Vinjai Vale of Exeter, New Hampshire, received a $70,000 award for creating a system that may improve the ability of convolutional neural networks (CNNs) to understand complex scenes.

Eighth Place: Skyler Jones of Ossining, New York, received a $60,000 award for her study of the crystal perovskite and identification of key properties of its atomic structure that make it a highly efficient semiconductor, despite its structural defects and low stability.

Ninth Place: Syamantak Payra of Friendswood, Texas, received a $50,000 award for his creation of a smart bionic leg brace that bends the knee automatically as the wearer walks.

Tenth Place: Raley Schweinfurth of Portland, Oregon, received a $40,000 award for her study of contamination levels following a 2013 incident of insecticide spraying in Oregon that killed more than 50,000 bees.

The remaining 30 finalists each received $25,000. These students join the ranks of other Science Talent Search alumni who have gone on to receive more than 100 of the world's most esteemed science and math honors, including the Nobel Prize and the National Medal of Science, to start successful biotechnology and technology companies, and to change the world through their myriad inventions.

About the Regeneron Science Talent Search

The Regeneron Science Talent Search, founded and produced by Society for Science & the Public since 1942, is the nation's oldest and most prestigious science and math competition for high school seniors. Each year, approximately 1,800 student entrants submit original research in critically important scientific fields of study and are judged by leading experts in their fields. Unique among high school competitions in the U.S. and globally, the Regeneron Science Talent Search focuses on identifying, inspiring and engaging the nation's most promising young scientists who are creating the ideas that could solve society's most urgent challenges.

Through its 10-year, $100 million commitment, Regeneron nearly doubled the overall award distribution to $3.1 million annually, increasing the top award to $250,000 and doubling the awards for the top 300 scholars and their schools to $2,000 each to inspire more young people to engage in science.

Program alumni include recipients of the world's most coveted science and math honors, including 11 National Medals of Science, five Breakthrough Prizes, 18 MacArthur Foundation Fellowships, two Fields Medals and 13 Nobel Prizes, as well as numerous notable entrepreneurs and inventors, including the co-founders of Regeneron.

Learn more at https://student.societyforscience.org/regeneron-sts and https://medium.com/regeneron-science-talent-search.

About Society for Science & the Public
Established in 1921, the Society is a nonprofit whose vision is to promote the understanding and appreciation of science and the vital role it plays in human advancement: to inform, educate and inspire. Through its world-class competitions, including the Regeneron Science Talent Search, the Intel International Science and Engineering Fair, and the Broadcom MASTERS, and its award-winning magazines, *Science News* and *Science News for Students*, the Society conveys the excitement of science and research directly to the public. Learn more at www.societyforscience.org and follow us on Medium, Facebook, Twitter, Instagram and Snapchat (Society4Science).

About Regeneron Pharmaceuticals, Inc.
Regeneron (NASDAQ: REGN) is a leading biotechnology company that invents life-transforming medicines for people with serious diseases. Founded and led for 30 years by physician-scientists, Regeneron's science-driven approach has resulted in six FDA-approved medicines and numerous product candidates, all of which are homegrown in their laboratories. Regeneron's medicines and pipeline are designed to help in a range of diseases, including eye disease, allergic and inflammatory diseases, cancer, pain, infectious diseases and rare diseases. We believe that scientists should be the world's heroes and are committed to fostering the next generation of scientific talent through STEM (Science, Technology, Engineering, Math) education efforts. For additional information about the company, please visit www.regeneron.com or follow Regeneron on Twitter and Facebook.

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