America’s Top Young Scientist of 2020: 14-Year-Old Researches Spike Protein of SARS-CoV-2 Virus to Develop Novel Antiviral Drug to Combat Spread of COVID-19

Anika Chebrolu Takes Home Top Prize and Improving Lives Award at This Year’s 3M Young Scientist Challenge

ST. PAUL, Minn. & SILVER SPRING, Md.--(BUSINESS WIRE)-- 3M (@3M) and Discovery Education (@DiscoveryEd) have named 14-year-old Anika Chebrolu from Frisco, Tex. the winner of the 2020 *3M Young Scientist Challenge (#YoungScientist)*, the nation’s premier middle school science competition. Anika used in-silico methodology for drug discovery to find a molecule that can selectively bind to the spike protein of the SARS-CoV-2 virus to find a cure for COVID-19.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20201014005340/en/

The SARS-CoV-2 virus is the cause of hundreds of thousands of deaths worldwide and was declared a worldwide pandemic and public health emergency earlier this year. With the virus continuing to spread far and wide, there is an urgent need to find an effective anti-coronavirus drug. In her study, Anika discovered a molecule that can selectively bind to the spike protein of the SARS-CoV-2. Binding and inhibiting this viral protein would potentially stop the virus entry into the cell, creating a viable drug target. In her research, Anika screened millions of small molecules for drug-likeness properties, ADMET properties, and binding affinities against the spike protein using numerous software tools. The one molecule with the best pharmacological and biological activity towards the spike protein of the SARS-CoV-2 virus was chosen as the lead molecule that can be a potential drug for the effective treatment of COVID-19.

For the first time in the history of the competition, the *3MYoung Scientist Challenge* showcased the top ten finalist projects and announced this year’s winner in a virtual event, held October 12-13, 2020. Anika, an eighth-grader at Nelson Middle School in Frisco Tex., at the time of entry, competed against nine other finalists in an interactive virtual competition. Each finalist was evaluated on a series of challenges and the presentation of their completed innovation. These young inventors – aged 12-14 – won the top ten spots in this year’s challenge through their innovative thinking, scientific acumen, and display of exceptional communication skills.

"Amidst the challenges of a global pandemic, quality STEM education for all has become an even more urgent need, and 3M’s commitment to fostering the next generation of science leaders has never been more determined,” said Denise Rutherford, senior vice president of Corporate Affairs at 3M. “In spite of challenges, like adjusting to new norms of distance learning and participating in virtual events, this year’s *3M Young Scientist Challenge* finalists have smashed through barriers with grit, creativity, innovative thinking, and excitement – all in the name of applying science to improve lives. 3M is inspired by these young innovators and we celebrate each one of them. Our heartfelt congratulations go to this year’s winner, Anika Chebrolu, and our many thanks to all our *3M Young Scientist Challenge* finalists.”

Over the past few months, each *3M Young Scientist Challenge* finalist worked with a 3M scientist who played the role of mentor and worked one-on-one with each finalist to transform their idea from concept to physical prototype. Anika was paired with Dr. Mahfuza Ali, a 3M corporate scientist in the materials resource division and a recent Carlton Society inductee.

As part of the program, challenge finalists received a variety of prizes from 3M and Discovery Education. The

grand prize winner received a $25,000 cash prize, the prestigious title of “America’s Top Young Scientist,” and a special destination trip. The second and third place winners each received a $1,000 prize and a special destination trip. This year’s *3M Young Scientist Challenge* winner, two runners up, and their mentors will also have the exciting opportunity to ring the New York Stock Exchange Closing Bell in a virtual event on October 15 at 4:00 p.m. EST. These exceptional middle-school-aged students at the time of entry are:

In second place, Kyle Tianshi, an eighth-grader at The Cambridge School from San Diego, Calif. Kyle designed a portable Total Suspended Solids (TSS) device that detects invisible particles in water to monitor water quality and contamination levels.
In third place, Laasya Acharya, a seventh-grader at Mason Middle School in Mason City School District from Mason, Ohio. Laasya utilized a neural network to detect crop diseases through image analysis.

The fourth through tenth place winners each receive a $1,000 prize and a $500 excitations gift card. These middle-school aged finalists at the time of entry, in alphabetical order by last name, are:

Xavier Baquero-Iglesias from Naples, Fla., a fifth-grader at Community School-Naples in the Collier County School District.
Rithvik Ijju from Englewood, Colo., an eighth-grader at Challenge School in the Cherry Creek School District 5.
Ekansh Mittal from Beaverton, Ore., an eighth-grader at Meadow Park Middle School in the Beaverton School District.
Harsha Pillarisetti from San Ramon, Calif., an eighth-grader at Windemere Ranch Middle School in the San Ramon Valley Unified School District.
Samhita Pokkunuri from Old Bridge, N.J., a seventh-grader at Carl Sandburg Middle School in the Old Bridge Township Public School District.
Samvrit Rao from Ashburn, Va., a seventh-grader at Stone Hill Middle School in the Loudoun County Public School District.
Sophia Weiner from Rockledge, Fla., an eighth-grader at Holy Trinity Episcopal Academy.

For the second time in competition history, the *3M Young Scientist Challenge* has named a recipient of the *Improving Lives Award*; the competition's public voting process recognizes one project from the top ten that has the potential to change the most lives. Anika Chebrolu, this year’s 2020 *3M Young Scientist Challenge*winner, was also selected as the recipient of the competition’s *Improving Lives*Award. Anika was selected through an online public vote from September 28 – October 9, 2020.

“For over a decade, Discovery Education and 3M have shared a commitment to empowering young people to bring the power of STEM learning to life,” said Lori McFarling, president of Corporate & Community Partnerships at Discovery Education. “All of this year’s participants demonstrated their deep engagement in these critical disciplines, and we are so pleased to have supported the 2020 participants in their endeavors.”

In its 13th year, the *3MYoung Scientist Challenge* continues to inspire and challenge middle school students to think creatively and apply the power of STEM to discovering real-world solutions. Winners have gone on to give TED Talks, file patents, found nonprofits, make the Forbes 30 Under 30 list, ring the bell at the New York Stock Exchange, and exhibit at the White House Science Fair. These young innovators have also been featured in *The New York Times Magazine*, *Forbes*, *Business Insider*, and on national television programs such as *Good Morning America* and *The Ellen DeGeneres Show*.

The award-winning *3MYoung Scientist Challenge* supplements the 3M and Discovery Education program – Young Scientist Lab – which provides no-cost dynamic digital resources for students, teachers, and families to explore, transform, and innovate the world around them. All resources are also available through the 3M Channel and Corporate Education Partnerships Channel on Discovery Education *Experience*, the digital service whose high-quality resources and instructional supports for educators are enriching student learning and extending it to the real world.

To download images of the 2020 science competition, click here. To learn more about the *3M Young Scientist*

Challenge and meet this year's finalists, visit youngscientistlab.com.

About 3M
At 3M, we apply science in collaborative ways to improve lives daily. With $32 billion in sales, our 96,000 employees connect with customers all around the world. Learn more about 3M's creative solutions to the world's problems at www.3M.com or on Twitter @3M or @3MNews.

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Multimedia Files:

nika Chebrolu named America's Top Young Scientist at this year's 3M Young Scientist Challenge (Photo: 3M).
ownload:
ownload original 790 KB 1200 x 800
ownload thumbnail 78 KB 200 x 133
ownload lowres 425 KB 480 x 320
ownload square 179 KB 250 x 250

Additional assets available online: Photos (1)

https://news.3m.com/2020-10-14-Americas-Top-Young-Scientist-of-2020-14-Year-Old-Researches-Spike-Protein-of-SARS-CoV-2-Virus-to-Develop-Novel-Antiviral-Drug-to-Combat-Spread-of-COVID-19