

Presented by



CHILD MIND®
INSTITUTE

HUNTER
The City University of New York

2020 RISING SCIENTIST AWARDS

October 6, 2020

PROGRAM

Introduction

Harold S. Koplewicz, MD

President, Child Mind Institute

Special Remarks

W. Thomas Boyce, PhD, Professor Emeritus

Lisa and John Pritzker Distinguished Professor of Developmental Health at the University of California, San Francisco

Recipient 2020 Sarah Gund Prize for Research and Mentorship in Child Mental Health

Presentation of Awards & Rising Scientist Student Research Presentations

2020 Rising Scientist Award Winners



Huong Nguyen

Huong is a senior at Leesville Road High in Raleigh, North Carolina. Huong’s passion is at the intersection of art and engineering.

Her research focuses on innovative and creative ways to incorporate art and design with science. Her first initiative in science and research commenced with an article, “The Effects of Social Media on Altruism,” that was published by the peer reviewed Science Squad Symposium nationally. Through her discoveries, she co-founded “Consilio” an app for students and designers, where the psychological principle of altruism and constructive criticism are valued. This project was recognized as the Crown Education Challenge International STEM Semifinalist, an iResearch Foundation-sponsored, K-12 challenge launched by Stanford and Harvard. She is also a Design-a-thon First Place National Winner. Further, she pursued an electrical engineering research internship at Stanford Compression Forum, where she conducted research to reduce video latency with information theory.

For this reason, her paper is invited to publish at the Stanford Data Compression Conference alongside the *The Informaticists* journal. She continues to expand her discovery to develop an animation stream for digital puppetry artists affected during COVID-19. During her senior year, Huong is working on identifying breast cancer with novel Machine Learning and Statistics with University of California, Irvine databases. She is also an artist and a STEAM activist, volunteering time as a tutor for her school's art classes, as a past coordinator for Girl Genius (a STEM organization that empowers women), and a winning architectural designer for Scholastics Art and Writing. Outside of research, she is a part of Paper Bridges, where she sends letters to children in orphanages worldwide and is an active volunteer at her church.

2020 Rising Scientist Award Winners



Reed Lessing

Reed is a senior at the Chapin School in New York, New York. She is particularly interested in cellular and molecular neuroscience and their applications to treating illness.

As a research intern at the Columbia University Center for Anxiety and Related Disorders for the past two years, she has supported projects designed to improve novel behavioral therapies — such as immersive virtual reality simulations — for the treatment of adolescents with psychological disorders. Reed conducted a field study investigating clinicians’ perceptions of the effectiveness of mental health smartphone applications in adolescent treatment. She presented her findings at the 2020 Miami International Child and Adolescent Mental Health Conference.

In the summer of 2019, Reed discovered her love of scientific research and finding solutions to real-world problems at the Summer Science Program (SSP) in Biochemistry. At SSP, she characterized the Cdc14 enzyme from fungal pathogen *Thielaviopsis punctulata* and designed a novel small molecule inhibitor to prevent crop infection. This past summer, Reed pursued research in computational neurobiology through the Boston University Research in Science and Engineering Program. Adapting a CA1 pyramidal neuron model, Reed researched the effects of presynaptic ion concentration and channel conductance on action potential generation during ischemic stroke.

In school, she has served as President of the Debate Team, Co-Head of the Peer Tutoring Program, Captain of the Varsity Lacrosse Team, and a reporter for her school newspaper. An avid writer, Reed enjoys exploring the intersection of science and writing. She has received national and regional recognition by the Scholastic Writing Awards for poetry, public health journalism, and short stories examining issues in bioethics. During the COVID-19 pandemic, Reed launched a volunteer group that delivers groceries and medication to housebound seniors and immunocompromised community members.

2020 Rising Scientist Award Winners



Ethan Ocasio

Ethan Ocasio is a senior at the New School of Northern Virginia in Fairfax, Virginia. His interests include applications of Artificial Intelligence to medicine.

In particular, he has researched deep neural networks for processing and analysis of brain MRIs. He was selected for the Simons Summer Research program at Stony Brook University where he designed and tested a deep neural network for predicting the progression of mild cognitive impairment to Alzheimer’s disease based on longitudinal brain MRIs. As an intern in George Mason University’s Aspiring Scientist Summer Internship Program, he developed a neural network for segmentation of brain MRI lesions in multiple sclerosis. He presented his findings at Nvidia’s GTC 2020 virtual conference.

Ethan has worked with veterans to improve their awareness of and access to clinical research trials. He led the development team for the Clinical Trial Selector, a web application that allows patients to search for eligible clinical trials based on the data in their electronic health record, connecting interfaces from the U.S. Department of Veteran Affairs, National Cancer Institute, and the Centers for Medicare and Medicaid Services. The app was nationally recognized with an Honorable Mention at the U.S. Census Bureau’s Demo Day. It is currently running live and accessible to all veterans and Medicare patients.

He has a passion for acting, having performed in both school and professional plays. His recent performances include *Kennedy’s Children* and *Almost, Maine*, for which he was nominated as Best Comedic Actor for the national capital region Cappies award. Ethan also performed at the Washington Shakespeare Company Avant Bard’s productions of *King John* and *A Klingon Christmas Carol*.

2020 Rising Scientist Award Winners



Nikita Rohila

Nikita is a senior at Stuttgart High School in Stuttgart Arkansas. She has a deep interest in understanding cognitive development among children and adolescents.

She conducted a two-year cognitive psychology research project investigating risky behavior among adolescents. She identified significant factors that influence their risk-taking behaviors and poor decision-making skills. Furthermore, she found specific groups of vulnerable adolescents who were associated with a higher probability of engaging in risk-taking activities. Nikita’s research has been recognized at the international level as she was a 2019 International Science and Engineering Fair finalist. Additionally, she won one of the Addiction Science Awards from the National Institutes of Health and National Institute on Drug Abuse and was invited to their headquarters to present her study to their top researchers.

To disseminate her results and promote teen mental health awareness in her community, Nikita founded an initiative called “Lead Your Life.” Her program is partnering with a local nonprofit organization and community leaders. She is implementing the findings from her research to create a positive and lasting impact on teens’ lives.

At her high school, Nikita encourages students to engage with STEM-related activities and classes as the President of the Science Club. She has also competed the Junior Academy of Science and is a three-time national qualifier for the Future Business Leaders of America. In addition to her academics and research, Nikita is a state-winning pianist and enjoys volunteering at the children’s section of the public library.

2020 Rising Scientist Award Winners



Julia Savino

Julia is a senior at Smithtown West High School in Smithtown, New York. She has a keen interest in genomics and biochemistry and is passionate about using science as a way to improve the lives of others.

Julia participated in the Suffolk County Legislator’s Summer Research Institute at Brentwood High School during the summer of 2018 and 2019. She has also worked remotely on her Science Research during the summer of 2020. Julia was a Life Science Summer Scholar at Notre Dame during the summers of 2019 and 2020. Her course work at Notre Dame has deepened her understanding of genomics and biochemistry and this has enhanced the novel research that she has been doing on her Science Research projects. Julia was awarded Highest Honors at Long Island Science Congress in 2018 and was the only Sophomore to present at the NY State Science Congress that year. She was also named a Semi-finalist at the Long Island Science and Engineering Fair in 2018. As a Junior, Julia presented new work at the 2019 Long Island Science and Engineering Fair.

In addition to her Science Research work, she is deeply committed to community service, especially in helping individuals with special needs. Julia and her sister have raised over \$30,000 for Autism Speaks since 2014. In addition to fundraising for Autism, Julia has been a volunteer at countless events and has helped develop “Virtual Buddies,” a program to engage with and support special needs students during remote learning.

ABOUT THE RISING SCIENTIST AWARDS

Since 2012, the Rising Scientist Awards have been awarded annually to high school students who demonstrate exceptional early achievement in research in child and adolescent mental health and/or pediatric neuroscience. The Rising Scientist Award is a broadly recognized sign of student excellence, and recipients have gone on to study at the nation's most prestigious universities and have been awarded significant scientific prizes.

ABOUT THE CHILD MIND INSTITUTE

The Child Mind Institute is an independent, national nonprofit dedicated to transforming the lives of children and families struggling with mental health and learning disorders. Our teams work every day to deliver the highest standards of care, advance the science of the developing brain, and empower parents, professionals and policymakers to support children when and where they need it most. Together with our supporters, we're helping children reach their full potential in school and in life. We share all of our resources freely and do not accept any funding from the pharmaceutical industry. Learn more at childmind.org.

ABOUT HUNTER COLLEGE

Located in the heart of Manhattan, Hunter College is the largest senior college in the City University of New York (CUNY). Founded in 1870, Hunter is also one of the oldest public colleges in the country. More than 23,000 students currently attend Hunter, pursuing undergraduate and graduate degrees in more than 170 areas of study. Hunter's student body is as diverse as New York City itself. For nearly 150 years, Hunter has provided educational opportunities for women and minorities, and today, students, including men, from every walk of life and every corner of the world, attend Hunter. In addition to offering a multitude of academic programs in its prestigious School of Arts and Sciences, Hunter offers a wide breadth of programs in its preeminent Schools of Education, Nursing, Social Work, Health Professions, and Urban Public Health.



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