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## **Gifted Teens Win \$480,000 in Scholarships for Remarkable Academic Developments 20 Students Named 2020 Davidson Fellows Will Receive \$50,000, \$25,000 and \$10,000 Scholarships**

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Reno, Nev. – The Davidson Fellows Scholarship Program has announced the 2020 scholarship winners. The recipients received \$50,000, \$25,000 and \$10,000 awards for projects in science, technology, engineering, mathematics, and music. Only 20 students across the country are recognized as scholarship winners each year.

**“Davidson Fellows represent those with a visceral passion towards the pursuit of knowledge and a dedication to improving society as a whole,” said Ethan Levy, 2020 Davidson Fellow Laureate. “Being recognized as a Davidson Fellow is a great honor, and it invigorates me to keep exploring through my professional journey.”**

For his project Levy built upon the newly approved rotational atherectomy procedure that is able to remove plaque from arteries. He developed and tested an improved system which implements suction holes and is thus able to remove a greater volume of plaque while reducing heat buildup compared to a simulation of the current technique. Results showed that the new system has the potential, when combined with stent placement, to replace a debilitating surgery by removing occlusion from the coronary artery and restoring blood flow to the heart muscle.

The Davidson Fellows Scholarship has provided more than \$8.2 million in scholarship funds to 366 students since its inception in 2001, and has been named one of the most prestigious undergraduate scholarships by [U.S. News & World Report](#). It is a program of the Davidson Institute for Talent Development, a national nonprofit organization headquartered in Reno, Nev. that supports profoundly gifted youth.

**“We are proud to announce the 2020 Davidson Fellows Scholarship recipients and applaud them for their hard work and achievement in their fields of study,” said Bob Davidson, founder of the Davidson Institute. “By being awarded this recognition, these students have shown immense skill and work ethic, and they should be commended as they continue their educational and research journeys while continuing to work to solve some of the world’s most vexing problems.”**

Davidson Fellows not only represent some of the brightest young minds in the country, but they also demonstrate a strong desire to improve the world around them. Many of the Fellows’ projects are inspired by personal experiences that drive them to find a solution to a problem, and each Fellow is driven to use their passion and intelligence to make the world a better place.

Eighteen-year-old Audrey Anderson of Omaha, Neb. won a \$25,000 scholarship for her research, the first to demonstrate a relationship between the abundance of resilin and honeybee age class, thus, identifying resilin as a potential age-dependent marker of honeybee health. Her research is an important step to understanding and establishing markers of honeybee health, which are valuable to assessing the health of the colony and will potentially allow scientists and beekeepers to develop preventative measures against environmental stressors leading to Colony Collapse Disorder.

**“Identifying markers of health in honeybees is the first step in mitigating the effects of Colony Collapse Disorder,” said Anderson. “If we want the world to be healthy, we need healthy bees!”**

(MORE)

The Davidson Fellows program seeks to recognize young people who have developed significant projects that have great potential to benefit society. This year's Davidson Fellows exemplify the extraordinary work that can be accomplished by gifted young students who are given opportunities to excel.

The 2020 Davidson Fellows will be honored during a virtual reception on September 30, 2020.

Following are this year's Davidson Fellows and their projects:

### 2020 Davidson Fellow Laureates

#### **\$50,000 Scholarships**

- **Mr. Ethan Levy**, 17, Miami, Fla.; *Efficiency of a Novel Nano-Cardiac Device for Atherectomy of Coronary Artery Occlusion*
- **Miss Annie Ostojic**, 18, Munster, Ind.; *Targeting Cancer via Signaling Pathways: A Novel Approach to the Discovery of Gene *CCDC191*'s Double-Agent Function using Differential Gene Expression, Heat Map Analyses through AI Deep Learning, and Mathematical Modeling*
- **Mr. Jacob Yasonik**, 18, Mequon, Wis.; *Multiobjective De Novo Drug Design with Recurrent Neural Networks and Nondominated Sorting*
- **Mr. Maximilian Zhang**, 18, Emerson, N.J.; *PIF1 Gene Integration: A Novel Chemosensitizing Approach in Non-Small Cell Lung Cancer*

### 2020 Davidson Fellows

#### **\$25,000 Scholarships**

- **Miss Audrey Anderson**, 18, Omaha, Neb.; *Resilin Distribution and Abundance in *Apis mellifera* Wing Joints across Biological Age Classes*
- **Mr. Kevin Chen**, 17, Saint James, N.Y.; *A Toxic Lunar Environment: Adverse Effects of a Lunar Soil Simulant (*JSC-1A*) on Alveolar Cellular Health and Genomic Integrity*
- **Miss Jessie Gan**, 16, San Diego, Calif.; *Use of a Novel Force Measurement Method to Quantify the Metastatic Potential of *RasV12* Cells*
- **Miss Alyssa Keirn**, 18, Fort Collins, Colo.; *Solar-Powered Ozone and UVC-Based Decontaminator*
- **Mr. Lev Kruglyak**, 17, Irvine, Calif.; *The Rational Cherednik Algebra of Type *A<sub>1</sub>* with Divided Powers*
- **Mr. Wiley Skaret**, 18, Bogota, Colombia; *Recording and Outdoor Video Production of Modern Stylistic Use and Arrangement of Liszt's Transcendental Etudes*
- **Miss Emily Tianshi**, 16, San Diego, Calif.; *Biomimicking Torrey Pine Needles: Atmospheric Moisture Harvesting Device Through Alternating Hydrophilic and Hydrophobic Micro-Patterns*
- **Miss Katherine Vandermel**, 17, Closter, N.J.; *The Language of Memory: Combating the Erasure of Self-Identity*

#### **\$10,000 Scholarships**

- **Mr. Jack Albright**, 16, Los Altos, Calif.; *Forecasting the progression of Alzheimer's disease using neural networks and a novel preprocessing algorithm*
- **Miss Hailey Edelman**, 17, Syosset, N.Y.; *Exploring the Role of Cannabidiol in a *Caenorhabditis elegans* Epilepsy Model*
- **Mr. Jason Liu**, 17, Reno, Nev.; *Quantum Integer-Valued Polynomials*
- **Miss Nadine Meister**, 18, Ellicott City, Md.; *Cooperative Relaxation in Supercooled Liquids: Kadanoff's Block Construction and Wilson's Renormalization Group Transformation*
- **Mr. Jason Ping**, 18, Fort Lee, N.J.; *Enabling Personalized Medicine: A Novel Deep Learning Tool for Classifying Genetic Mutations Using Text from Clinical Evidence*
- **Miss Anushka Sanyal**, 16, Los Altos, Calif.; *Rethinking Therapeutic Targets in Alzheimer's Disease: A multipronged study linking the *nAChR*  $\alpha 7$  and its role in the G-protein Signaling Pathway for AD*
- **Miss Kasey Shao**, 16, Cincinnati, Ohio; *Music through stories: A new kind of fairytale*
- **Mr. Kevin Yao**, 18, Katy, Texas; *A Novel and Feasible Method to Detect and Prevent the Ambient Degradation of Two-Dimensional *MoS<sub>2</sub>* Structures*

*High-resolution photos are available at [www.DavidsonGifted.org/Fellows-Scholarship](http://www.DavidsonGifted.org/Fellows-Scholarship).*