Davidson Institute
for Talent Development

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EVANS TEEN AWARDED \$25,000 FOR ALZHEIMER'S RESEARCH Alexander Kirov to be Named a 2017 Davidson Fellow

Reno, Nev. – The Davidson Institute of Talent Development has announced the 2017 Davidson Fellows. Among the honorees is 18-year-old Alexander Kirov of Evans, GA. Kirov won a \$25,000 Davidson Fellows Scholarship for his project, *Exosomes in Amyloid Aggregates Promote Neuronal Damage: A Mechanism of Alzheimer's Pathology*. He is one of only 20 students across the country to receive this honor.

"Being named a Davidson Fellow is the most rewarding culmination of a year's work for which anyone could ask," said Kirov. "Just finishing the project and having something significant to submit was gratifying, but progressing this far is really an incredible honor that I had not expected to achieve. I am humbled to be included in this close group of extraordinary young people, and I hope our paths will cross again in the near future."

Affecting more than 5.3 million people in the United States alone, Alzheimer's disease damages and eventually kills brain cells, specifically neurons that transmit signals essential for memory. Miniscule nanovesicles called exosomes are released by most cells and have been observed to help form clusters of amyloid, a protein that plays a major role in Alzheimer's disease. However, this process is still unknown. Kirov's research found a specific molecule in exosomes, ceramide, that binds to amyloid, contributing to its aggregation. His research has shown for the first time that this combination of exosomes and amyloid is extremely toxic to brain cells, and these findings suggest a treatment for Alzheimer's disease that includes using drugs that reduce ceramide levels, slowing the formation of deadly amyloid aggregates and the accompanying onset of the disease.

Kirov founded his school's chapter of the International Science Olympiads. He also loves sports, including tennis, skiing and sailing. He played on his school's varsity tennis team, and volunteers as a tennis instructor at both his school and tennis club.

Kirov will attend Yale University in the fall. He plans to study molecular biophysics and biochemistry.

"We are thrilled to recognize the 2017 Davidson Fellows not only for their incredible projects, but also for the journey they forged to reach this point," said Bob Davidson, founder of the Davidson Institute. "Every year I am amazed by the depth of the Fellows' accomplishments. Through encouragement and recognition, the Davidson Institute for Talent Development anticipates that gifted students like these will be among the pioneers who will solve the world's most vexing problems."

The 2017 Davidson Fellows will be honored at a reception in Washington, D.C., on September 27.

The Davidson Fellows Scholarship program offers \$50,000, \$25,000 and \$10,000 college scholarships to students 18 or younger, who have completed significant projects that have the potential to benefit society in the fields of science, technology, engineering, mathematics, literature and music. The Davidson Fellows Scholarship has provided more than \$7.1 million in scholarship funds to more than 300 students since its inception in 2001, and has been named one of the most prestigious undergraduate scholarships by <u>U.S. News & World Report</u>. It is a program of the Davidson Institute for Talent Development, a national nonprofit organization headquartered in Reno, Nev. that supports profoundly gifted youth.

About the Davidson Institute

Founded by Bob Davidson in 1999, the Davidson Institute for Talent Development recognizes, nurtures and supports profoundly intelligent young people, and provides opportunities for them to develop their talents to make a positive difference. The Institute offers support through a number of programs and services, including the Davidson Fellows Scholarship and the Davidson Academy of Nevada. For more information about the 2017 Davidson Fellows, please visit www.DavidsonGifted.org/Fellows-Scholarship.