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GREENWICH TEEN AWARDED $10,000 SCHOLARSHIP FOR MACHINE LEARNING SYSTEM TO IDENTIFY TREATMENTS FOR NEUROLOGICAL DISORDERS
Ashley Malkin Named A 2024 Davidson Fellows Scholarship Winner

Greenwich, Conn. – The Davidson Fellows Scholarship Program has announced the 2024 scholarship winners. Among the honorees is 17-year-old Ashley Malkin of Greenwich. Malkin won a $10,000 scholarship for her project, *"Identification of Therapeutics for Neurological Disorders through Development of a Novel Machine Learning System for Predicting Drug-Gene Interactions in the Glymphatic System*. She is one of only 20 scholarship winners in the 2024 Fellows class.

"I feel incredibly honored to have been selected as a Davidson Fellow, and I hope to inspire other young people to explore STEM," said Ashley Malkin. "I am looking forward to sharing my research with the other Fellows and learning about their work. Together, I hope we will serve as role models to encourage others to deeply engage in a project, pursue research, and make an impact in the world."

For her project, Malkin developed GlymDS, a glymphatic-specific database, and GlymRx, a novel machine learning system utilizing three customized models to identify potential drug candidates for treating neurological disorders, including strokes, Alzheimer's disease, and epilepsy, by predicting drug-gene interactions within the brain's waste clearance system, the glymphatic system. These tools successfully narrowed down a pool of 11,575 FDA-approved drugs to 273 promising candidates. Comparable to the first stage of the FDA drug development process, which can take up to six years, Malkin's research has the potential to save crucial time in developing treatments for neurological disorders.

Malkin is a rising high school senior in Greenwich. In addition to her research, she founded a free STEM mentoring program for elementary school girls. She also enjoys creative writing and is active in her school as co-captain of the debate team, president of the economics club, and a member of the squash team.

"This year's class of Davidson Fellows Scholarship recipients exemplifies the power of innovation and perseverance," said Bob Davidson, founder of the Davidson Institute. "Our

Fellows continue to push the boundaries of their educational and research pursuits, striving to solve some of the world's most challenging problems by leveraging creative, outside-the-box thinking and cutting-edge technology to expand their networks, access new sources of information, and deliver an impressive array of diverse projects."

The 2024 Davidson Fellows will be honored during a reception at the Smithsonian National Museum of the American Indian in Washington, D.C. and with a virtual project presentation ceremony in September 2024.

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 $9.9 million in scholarship funds to 448 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, 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 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 2024 Davidson Fellows, please visit: DavidsonFellows.org.

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