

## Local student among the top 300 in prestigious national science and math competition

A student from Buchholz High School has been named a 2023 Scholar in the Regeneron Science Talent Search, the nation's oldest and most prestigious science and math competition for high school seniors.

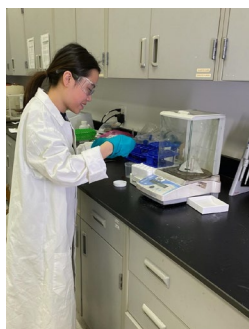
Senior Angela Gao is one of just 300 students named Scholars in this year's competition, which is organized by the Society for Science and the Public. As a Scholar, she will receive a \$2000 award, with an additional \$2000 going to Buchholz to use for STEM (science, technology, engineering and math)-related activities.



According to the Society, the Search Scholars were selected from among nearly 2000 applications submitted by students across the U.S. and four other nations. A news release from the Society says they are chosen "based on their outstanding research, leadership skills, community involvement, commitment to academics, creativity in asking scientific questions and exceptional promise as STEM leaders."

To be named Scholars, students must submit original research projects, essays and recommendations. Gao's submission is an environmental science project called 'Iron Modified Biochar Recovers Phosphorus from Wastewater as Fertilizer through Column Filters and Flow Reactors.' Essentially Gao is researching how to remove phosphorus from wastewater before it can harm aquatic ecosystems and then reuse it as fertilizer. Excessive phosphorus in Florida's water systems has led to severe algae blooms, fish kills and other problems.

"I want to do my best to help reduce the negative consequences of phosphorus and turn those consequences into something positive," she said. "I don't want to just address one side of the issue, but look at it overall."



Gao focuses on the use of biochar, the residue left over when organic material is burned. Biochar's potential to support water sustainability has interested Gao for years. Last summer she represented Florida at the national Stockholm Junior Water Prize competition, which drew outstanding students from across the U.S. who have developed projects to solve water challenges.

"I grew up in Florida, where we're surrounded by aquatic ecosystems," she said. "Water is so critical, and I've always been fascinated by water and water sustainability."

Gao has a wide range of other interests and activities. She's on the national championship Buchholz High math team, she's president of the school's Future Business Leaders of America club, she's on the debate team, she's a Girl Scout, a synchronized swimmer and plays the violin.

Gao will be attending the University of Pennsylvania after graduation, and plans to pursue research in STEM during and after college.

On January 24, 40 of the Scholars will be announced as finalists in this year's program. Finalists will receive a minimum award of \$25,000 and will travel to Washington D.C. in March for the final competition. The top ten awards in that competition range from \$40,000 to \$250,000.

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