

News Release

Dobbs Ferry High School Senior Named Semifinalist in 2014 Siemens Competition in Math, Science & Technology

First “Team” Project Connects Two High School Science Research Programs

Dobbs Ferry, N.Y. , October 23, 2014-- Dobbs Ferry High School senior Yiorgos Argyros has been named a Semifinalist in the 2014 Siemens Competition in Math, Science & Technology, one of the nation’s premiere science research competitions for high school students. Argyros, a student in Dobbs Ferry High School’s science research program, teamed up with Mamaroneck High School senior Emily McCarthy to study the effect that a specific gene has on a person’s susceptibility to epilepsy and seizures. This collaboration is a first for the two Westchester schools, which each have their own award-winning science research programs.

Both students were conducting independent research over the summer at a laboratory at New York Medical College when their mentors suggested that they combine their overlapping data into one significant research project. The resulting joint project, entitled “Brd2 Gene Deficiency Alters Numbers of GABAergic Cells,” studied the relationship between an important developmental gene (Brd2) and the number of brain cells producing the neurotransmitter GABA in mice predisposed to seizures. Their findings have the potential to help clarify the genetic underpinnings of Juvenile Myoclonic Epilepsy in humans and could ultimately help to develop more effective treatments for seizures.

According to Dobbs Ferry Science Research teacher Tom Callahan, McCarthy and Argyros worked together in person and “virtually” to complete the project. Callahan and Mamaroneck Original Science Research program teacher Guido Garbarino, helped the students review and edit their final paper submission working with both students simultaneously via Google Docs. McCarthy and Argyros are among 300 Semifinalists chosen this year from approximately 1500 entries. They will be entering their project in other upcoming science competitions in the spring including the Westchester Rockland Junior Science and Humanities Symposium and the Westchester Science and Engineering Fair.

Argyros, who is an International Baccalaureate (IB) Diploma candidate and a member of the National Honor Society, is interested in studying biological sciences or pre-med in college. He has been in the Dobbs Ferry High School Science Research Program since sophomore year. The DFHS program started in the 2006-2007 school year with 4 students, but did not formally enter science competitions until 2008.

“In the first two or three years, our science research program didn’t have a budget for presentation boards and Mamaroneck High School generously lent them to us,” said Mr. Callahan. “This collaboration has been a great opportunity for both schools to come together in the name of science. I want to commend Emily and Yiorgos who did such a great job collating and analyzing the

statistical data and translating their research into a professional document. Siemens is one of the few competitions that lets students compete as a member of a two or three-person team. This has been a great learning experience for our science students and I hope that we will be able to showcase many more cooperative projects with Mamaroneck.”

In the last six years, Dobbs Ferry High School’s science research program has had three National Intel Science and Talent Search semifinalists, an International Science and Engineering Fair finalist, two NY upstate Junior Science and Humanities Symposium participants and last year four out of five Westchester Science and Engineering Fair (WESEF) entries placed in the top three of their categories. The program also boasts a Milton Fisher Scholarship winner and runner-up, both cash scholarship prizes.

The Siemens Foundation established the Siemens Competition in Math, Science & Technology in 1999. The Competition is the nation’s premier science research competition for high school students and seeks to promote excellence by encouraging students to undertake individual or team research projects. It fosters intensive research that improves students’ understanding of the value of scientific study and informs their consideration of future careers in these disciplines.

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