



Davidson Fellow Jennifer Alyono

(\$10,000 Scholarship Recipient)



Personal Info

Jennifer Alyono

Age: 17

Silver Spring, Maryland

School, College and Career Plans

A recent graduate of Montgomery Blair High School, Jennifer will attend Stanford University this fall. Jennifer is still undecided about her major of study but is considering biochemistry, engineering and government as possibilities.

Davidson Fellows Submission (*Science*)

In her project, Development of an *Electrochemical Biosensor for Phospholipase C Based on Supported Hybrid Lipid*, Jennifer used self-assembly methods to develop a novel hybrid lipid bilayer membrane (HBM) coating on a gold electrode that can be used to electrochemically detect any type of molecule changing membrane permeability. Her interdisciplinary project involved nanotechnology in which a biosensory coating detects changing membrane permeability for any type of molecule. Jennifer's discovery has practical applications in medicine, national security and life science research.

Biography

Jennifer worked as a student intern at the Biotechnology Division of the National Institute of Standards and Technology in Gaithersburg, Maryland to develop the electrochemical biosensor.

Jennifer has always been interested in science. She attended science magnet middle and high schools. For the past 11 years, Jennifer has also attended the Washington School of Chinese Language and Culture.

Team captain of the varsity volleyball team, Jennifer also played varsity tennis. She received the award for Female Scholar Athlete of the School in 2002 and was also the recipient of the Maryland Athletics Association Athletic Scholar Award from 1998 through 2001.

During high school, Jennifer also served as vice president of the Montgomery Blair High School National Honor Society; editor of the school newspaper; representative to the National Summit for Young Technology Leaders; and, was a member of the school's Show Choir, Chinese Club, Envirothon Team and Physics Team.

Jennifer also plays the piano and violin.

Please see next page.

The Davidson Institute for Talent Development

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(Cont.)

Honors/Awards

- 2002 Davidson Fellow (September)
- 2002 Chinese American Medical Society Mid-Atlantic Chapter, Scholarship
- 2002 Electrochemical Society National Capitol Chapter Award
- 2002 Intel Science Talent Search, Finalist
- 2002 National Merit Scholarship, Finalist
- 2002 Scientific American Outstanding Achievement Award
- 2002 U.S. Army Medallion for Science and Engineering
- 2002 U.S. Air Force Regional Fair, Winner
- 2001 American Citizens of Taiwan Origin, Outstanding Student Award
- 2001 College Board AP Scholar
- 2001 Maryland Distinguished Scholar, Finalist
- 2001, 2000 National Honors Society

Community Activities

Jennifer was a volunteer tutor from 2000 to 2001 through the Math and English Tutoring Assistance program.

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