



## Davidson Fellow

### Janet Song

(\$25,000 Scholarship Recipient)



#### Personal Info

Janet Song

Age: 15

Norristown, Pennsylvania

#### School, College and Career Plans

Janet is a rising junior at the Methacton High School. She is considering her college options and plans to major in molecular biology or a biomedical field. Janet hopes to work in the area of molecular biology or biomedical research.

#### Davidson Fellows Submission (*Science*)

In her project, "Development of a Urine Test for the Early Detection of Cancer," Janet used carboxylated magnetic beads to develop a urine test for the early detection of cancer. Urine has been shown to contain short-length, circulatory DNA from possible tumor sites. Janet developed a method to isolate the short-length DNA from urine and demonstrated that the use of the isolated DNA greatly increased the sensitivity in detecting a cancer-associated mutation. The use of a urine test for cancer screening would be less invasive, less unpleasant, and less expensive than current cancer screening methods, increasing compliance rates and allowing for the early detection of cancer.

#### Biography

Janet was motivated to pursue her project after watching a friend's parents both die of cancer within a six-month period. When Janet was offered the opportunity to conduct cancer research at Drexel University she jumped at the chance.

Janet mastered several laboratory techniques and procedures, and with the help of her mentor, she designed experiments geared towards creating a cancer test that would be very patient-friendly. Janet's test is patent pending.

Janet has always sought to make the most of educational opportunities and is currently her class valedictorian and has been in the gifted program since third grade. She has been participating in science fairs since the sixth grade.

Janet is also an accomplished piano player. She won the World Piano Competition in 2004 and was a Finalist in the American Fine Arts Festival, and has performed at Carnegie Hall. Janet enjoys reading, playing video games, surfing the Internet and watching football.

*Please see next page.*

**The Davidson Institute for Talent Development**

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## **Davidson Fellow**

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*(Cont.)*

#### **Honors/Awards**

- 2007 Davidson Fellow
- 2007 Special Award from the National Collegiate Inventors & Innovators Alliance
- 2007 Best Project for Human Health and Veterinary Sciences provided by the Pennsylvania Society for Biomedical Research
- 2007 Special Award from the United States Metric Association
- 2003-2007 First Place at the Pennsylvania Junior Academy of Science
- 2007 Winner of the American Fine Arts Festival
- 2007 First Place for Fiction in the Methacton Writing Contest
- 2006 First Place at Nanoday at the University of Pennsylvania
- 2006 First Place at Discovery Day Research Poster Competition at Drexel University in the High School Division

#### **Community Activities**

Janet is a member of her school's Peer Connections which raises awareness about self-injurious behavior and HIV/AIDS. She also is a student ambassador and a participant in Mock Trials. For the past two years, Janet has played the piano at a local nursing home.

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