



**Davidson Fellow Laureate
Shuyu Wang**

(\$50,000 Scholarship Recipient)



Personal Info

Shuyu Wang
Age: 17
East Lansing, MI

School, College and Career Plans

Shuyu recently graduated from Okemos High School and will attend Harvard College in the fall to pursue a degree in biophysics. Ultimately, she hopes to earn a joint M.D./Ph.D. degree to satisfy her passion for both medicine and research. As a physician, Shuyu plans to apply her education directly to the service of people in need.

Davidson Fellows Submission (*Science*)

In her project titled “Statistical Mechanics of DNA Bending,” Shuyu Wang discovered how DNA “bends” under certain circumstances to form RNA, an intermediary nucleic acid that is formed during the transcription and translation of DNA to protein. Shuyu’s findings have led scientists to further understand one of the biggest questions in biophysics: how simple molecules work to create a larger being. Her work provides a foundation for future research in nanotechnology and biocomputation.

Biography

Born in China in 1986, Shuyu moved to Michigan in 1993 and entered Spartan Village Elementary School as a second grader. In just a year and a half, Shuyu moved to standard language classes and by sixth grade, she was placed in an accelerated math class. By participating in a math program sponsored by Michigan State University, Shuyu finished Geometry and Algebra 3 in the eighth grade. She took AP Calculus BC as a freshman and has since taken twelve other AP exams, five of which she accomplished through independent study.

Additionally, Shuyu participated in two summer programs — the High School Honors Science Program and the Research Science Institute—that kindled her interest in scientific research. Shuyu considers RSI to be the most formative and influential experience of her scientific career.

In 2003, Shuyu captained the school QuizBowl team to 7th place at the PACE National Scholastic Championships.

Already tri-lingual, Shuyu enjoys studying languages, playing the piano and violin, and playing tennis.

Please see next page.

The Davidson Institute for Talent Development

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(Cont.)

Honors/Awards

- 2004 Davidson Fellow Laureate
- 2004 USA Today All-USA High School Academic Second Team
- 2004 Detroit News Outstanding Graduate of the Year in the Sciences
- 2004 Michigan Science Fair, Second Place
- 2004 United States of America Biology Olympiad, Semi-Finalist
- 2004 Intel Science Talent Search, Semi-Finalist
- 2004 Michigan Quizbowl State Championships, First Place
- 2003 Michigan Mathematics Prize Competition Highest Score on Part I
- 2003 Siemens Westinghouse Competition in Math, Science & Technology, Regional Finalist
- 2003 National Merit Scholarship Program, Finalist
- 2003 AP Scholar with Distinction
- 2003 Rotary Student of the Month
- 2003 Bausch & Lomb Honorary Science Award
- 2003 Jeopardy! Teen Tournament Contestant, Semi-Finalist
- 2001 Hope College Albert E. Lampen Mathematics Competition, Individual and Team, First Place

Community Activities

As a National Honor Society officer this past year, Shuyu helped organize a community-wide food drive and a blood drive for the American Red Cross. For the past two years, Shuyu has tutored schoolmates through the National Honor Society and the Future Links program.

Shuyu is a regular volunteer at the public library in Okemos, Michigan.

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