

Davidson Fellow John Zhou

(\$25,000 Scholarship Recipient)



Personal Info John Zhou Age: 16 Northville, Michigan

School, College and Career Plans

John will be a senior at Detroit Country Day Upper School and hopes to attend Harvard, Stanford or Princeton University. He is considering majors in biomedicine, applied mathematics or economics and plans to earn a doctorate degree. He would like to be a pioneer in the biotech field.

Davidson Fellows Submission (Science: Biology)

In his project titled "A Study of Possible Interactions Among Rev1, Rev3 and Rev7 Proteins from Saccharomyces Cerevisiae," John used yeast cells to study the role of proteins in DNA. His results suggest a new molecular model for proliferating cell nuclear antigen (PCNA) of translesion DNA replication. The same molecules that have the ability to let the DNA replication process occur may also be a source of mutations. John's results will help scientists learn to enhance or suppress the function of these molecules, which is important in a wide variety of cancer treatments.

Biography

When John first came to the United States and started first grade in Virginia, he had not yet learned the alphabet. After two years in ESL classes, John passed a comprehensive exam to enroll in a talented and gifted program. He has taken many advanced classes in math and science, and also excels in languages and music. In addition to perfect SAT I scores and several perfect SAT II scores, John is an International Baccalaureate Diploma candidate.

His project's topic is a relatively new focus in biomedicine, which interests John because it juxtaposes scientific research and the desire to help others. John's grandfather, suffering from terminal lung cancer, further strengthened his resolve to pursue this area of research.

John is fluent in Mandarin Chinese, English and Spanish, and as the elected student council treasurer, he initiated and organized Culture Week and various activities. When he was Science Olympiad president, he revamped the school's team and led them to the state competition for the first time in eight years. John loves sports and was on the 2004 state championship men's track and field team.

Please see next page.



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(Cont.)

Honors/Awards

- 2005 Davidson Fellow
- 2005 Discover Card Tribute Gold Award, State Winner
- 2005 Rensselaer Medalist and Scholarship Winner, Best Junior Math Student
- 2005 Bausch and Lomb Medalist, Best Junior Science Student
- 2005 The Computer Science Student of the Year, Detroit Country Day Upper School
- 2005 The Harvard Book Award
- 2005 USA Mathematical Olympiad Semifinalist
- 2005 USA Physics Olympiad Semifinalist
- 2005 USA Biology Olympiad Semifinalist
- 2005 Intel International Science and Engineering Fair Finalist
- 2005 Michigan All-State Honor Band nominee
- 2005 Detroit Free Press Award, Honorable Mention
- 2005 National Spanish Exam, ranked 18th nationally
- 2004 Advanced Placement Scholar with Honors
- 2004 Michigan Math Prize Competition, First Place Gold Medalist
- 2003 Fryer Canadian Math Contest, Gold Medalist

Community Activities

Since 2002, John has visited inner city elementary schools and nursing homes to play music for the students and senior citizens.

John volunteered last summer by teaching English and American culture to high school students and senior citizens in two cities in China. This summer, John spent more than 40 volunteer hours successfully designing a Web site for his city's library, something he did previously in 2002 and 2003.

Currently John continues his philanthropy by tutoring students and organizing a Detroit Country Day team for an AIDS walk.

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