

Davidson Fellow Xin (Cindy) Wang

(\$10,000 Scholarship Recipient)



Personal Info Xin (Cindy) Wang Age: 17 Geneva, Illinois

School, College and Career Plans

Cindy recently graduated from the Illinois Math and Science Academy and will be attending Harvard in the fall, where she plans to major in a biology-related field and become a college professor.

Davidson Fellows Submission (Science)

In her project, "nm2608A, A New Naturally Arising Mouse Model for Human Autosomal Recessive Achromatopsia 2," Cindy identified a gene responsible for complete colorblindness in mice. By measuring the electrical activity on the surface of the mouse eye, called electroretinography, and mapping the mouse DNA, Cindy isolated the mutation on the gene *Cnga3* responsible for colorblindness and the protein acting as the biochemical component. Spanning genetics and ophthalmology, her results may one day be used to help people with achromatopsia 2, the most severe form of colorblindness, in which people can only see in shades of gray.

Biography

Cindy is always looking for an educational challenge or opportunity – whether it is to learn how to think differently, to meet a diverse array of people or to learn more advanced leadership skills. By enrolling in enriched classes, attending Chinese School since elementary school, and serving in various leadership roles in her high school clubs and societies, Cindy is a dedicated, well-rounded and energetic individual who constantly seeks out educational opportunities.

Cindy started working in a laboratory the summer before her junior year in high school and continued her research throughout her senior year. She finds the atmosphere refreshingly exciting and enjoys the various aspects of discovery. Cindy gained valuable experience conducting two original research projects before being accepted to the Summer Student Program at The Jackson Laboratory in Bar Harbor, Maine where she completed her Davidson Fellows project.

Cindy is the co-concertmistress of her local youth symphony and plays the violin in the string quartet. She also teaches violin and viola to local elementary school students. Cindy helped organize a group of students for "For the Love of Science," an international collaborative effort to develop textbooks for free distribution to students in developing nations.

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(Cont.)

Honors/Awards

- 2006 Davidson Fellow
- 2006 USA Today All-USA High School Academic Team First Team
- 2006 Chicago Tribune All-Illinois High School Academic Team
- 2006 Illinois Science Teachers' Association Science Achievement Award
- 2006 Intel Science Talent Search Finalist
- 2006 American Academy of Neurology Neuroscience Research Prize Winner
- 2006 National Merit Scholar
- 2006 Illinois State Scholar
- 2005 Top Paper Award, Illinois Junior Academy of Science Paper Session

Community Activities

Cindy was the captain of her high school's Science Olympiad team, president of Mu Alpha Theta Math Honor Society as well as the Tri-M Music Honor Society. Cindy is the founder and first violinist of the Serendipity String Quartet, co-concertmistress of the Elgin Youth Symphony Orchestra, and a sectional coach for the Aurora Youth Symphony Orchestra. As a candy striper at Delnor-Community Hospital, Cindy often performed for patients, encouraging other musicians in her youth symphony to follow suit.

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