



**Davidson Fellow
Julian Gingold**

(\$10,000 Scholarship Recipient)



Personal Info

Julian Gingold
Age: 17
Scarsdale, N.Y.

School, College and Career Plans

Julian graduated from New Rochelle High School as salutatorian of the Class of 2003 and will be attending Harvard University this fall where he will major in biochemistry or computational chemistry. Julian hopes to conduct research in academia or for a pharmaceutical company to improve the drug development process.

Davidson Fellows Submission (Science)

In his project titled “Analyzing/Displaying Protein Motion: Variations in Interatomic Distances and Crystallographic B-Factor,” Julian performed advanced research in computational chemistry to develop a new and detailed method for understanding protein function, structure and motion. Julian’s study of protein motion has broad implications for public health, future pharmaceutical development and biochemistry education.

Biography

While conducting computational experiments on the effectiveness of blood-clotting drugs with his mentor at Lehman College, Julian noticed a source of error in assuming that the protein is fixed in position. After numerous attempts at trying to understand protein motion, Julian finally came upon a method which quantified the protein flexibility and accurately displayed the results. He hopes that his results will help streamline the drug development process and lead to a better understanding of protein function.

Julian majored in the Performing and Visual Arts Educational Program (PAVE) at his high school and performed as the principal cellist of his high school orchestra and gave a 2-hour piano recital in May 2003. He also plays the piano and drums, and has served as interim conductor, keyboardist and pit band drummer for various congregational musical performances.

Julian also served as captain of the high school Math Team and participated in the Academic Bowl in addition to studying Latin, Spanish and Hebrew.

Julian enjoys table tennis, cycling and swimming. He was recently honored as Youth of the Year at Beth El Synagogue.

Please see next page.



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(Cont.)

Honors/Awards

- 2003 Davidson Fellow
- 2003 National Merit Finalist and Scholarship Recipient
- 2003 Presidential Scholar, Semi-Finalist
- 2003 Intel Science Talent Search, Finalist
- 2002 National Honor Society
- 2002, 2001 National Junior Classical League Latin Honor Society
- 2002, 2000 National Latin Exam Gold Medalist
- 2002–1999 New York State Math League, Inter League Competition
- 2002 American Invitational Math Exam (AIME), Qualifier (147 index)

Community Activities

Julian volunteers at the New Rochelle Youth Court, an organization providing first-offender children with a trial by their peers. At the Youth Court, he has served as judge, prosecutor and defense attorney and through this work Julian has been recognized by the City of New Rochelle, the Westchester County Board of Legislators and the County District Attorney's office.

Julian also assists with several community activities at the Beth El Synagogue including preparation of food for the homeless, delivering holiday gift packages to the needy and visiting the elderly.

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