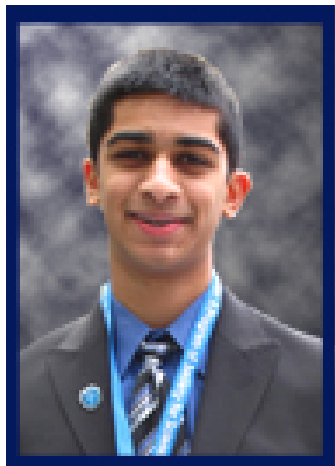


Davidson Fellow
Jayanth Krishnan
\$10,000 Scholarship Recipient



Personal Info

Age: 17
Mahopac, New York

School, College and Career Plans

A freshman in the accelerated physician scientist program at Rensselaer Polytechnic Institute and Albany Medical College, Jayanth plans to become a physician and bioinformatician. He also hopes to go into the field of hospital management.

Davidson Fellows Submission: Science

In his project, "Regulatory Signatures of Cancer Cell Lines Inferred from Gene Expression Data," Jayanth developed an approach to infer regulatory mechanisms governing changes in gene expression and identified possible proteins that induce cancer. By creating a web interface that could predict transcription factors for dysregulated genes, and mathematical models using MATLAB, he was able to predict proteins that are correlated with certain cancer families. Using this information, he calculated several combinations of drugs, for 60 different cancers, that have the potential to counteract the inducing agents and better guide therapeutics.

Biography

Though his school did not have a science research program, Jayanth was able to take many Advanced Placement (AP) classes including chemistry, biology, physics and statistics, that helped him become proficient in bioinformatics techniques and laid the foundation for his Fellows project. Jayanth studied biomedical sciences and genetics through the Johns Hopkins University Center for Talented Youth (CTY) program.

Jayanth's interest in science dates back to times he spent with his grandfather who always pushed him to be altruistic and improve the lives of others. When his grandfather died of prostate cancer, Jayanth felt an obligation to go into cancer research. Jayanth applied to many labs and was accepted to intern at the New York Medical College. He then went on to take courses through Columbia University's Science Honors Program and presented at the Columbia RECOMB Regulatory Genomics Conference. Jayanth became a Systems Biology Center of New York Fellow through the Mount Sinai School of Medicine, he also did another internship at the Putnam Hospital Center. He feels his experiences are varied but paint a mosaic of the scientist he is today.

Other than science, Jayanth enjoys playing the violin, guitar and piano as well as practicing martial arts, running track and playing tennis. He was the opinions and editorials editor of his school newspaper and played in the school's chamber orchestra.

Please see next page.



Davidson Fellow
Jayanth Krishnan
(cont.)

- 2011 Davidson Fellow
- 2011 Intel International Science and Engineering Fair (ISEF) Third Place Materials and Bio-Engineering Category, First Place National Antivivisection Society Award, European Organization for Nuclear Research All Expense Paid Trip to CERN Award
- 2011 Mahopac High School Advanced Regents Diploma with Distinction
- 2011 Advanced Placement National Scholar
- 2011 Rensselaer Polytechnic Institute Medal for Outstanding Accomplishment in Math and Science
- 2011 Tri-County Science Fair – STANYS First Place Overall Winner and Awarded Highest Honors
- 2011, 2010 Westchester Science and Engineering Fair First Place Engineering, All Expense Paid Trip to Intel ISEF 2011 and 2010
- 2011, 2010 Manhattanville College Annual Science Competition First Place Winner
- 2011 – 2006 Member of Westchester Putnam Senior Symphony
- 2010 Tri-County Science and Engineering Fair First Place Winner
- 2010 Presented Poster at Third Annual Joint Conference on Regulatory Genomics (RECOMB) at Columbia University
- 2010 Publication in Bionformatics Volume 26, Issue 19 – ChEA: Transcription Factor Regulation Inferred from Integrating Genome Wide CHIP-X Experiments
- 2009 Member of the National Honor Society and the National Junior Honor Society
- 2009 White Plains Invitational Regional Science Research Competition First Place Biology

Community Activities

Jayanth organized three blood drives with the American Red Cross and volunteered at nursing homes in his area. He served as a Mahopac High School Freshman Orientation Leader.