



THE FUTURE IS NOW 2007 ANNUAL REPORT



"... I could not have imagined then how greatly the Ingenuity Project® would impact my life. It has opened so many doors and has given me so many opportunities. I would probably not be where I am today without the program... I graduated Magna Cum Laude, and am now attending Johns Hopkins School of Medicine." – TRANG VU (CLASS OF 2003)

**Ms. Vu is a graduate of University of Maryland College Park.
She is in her first year at The Johns Hopkins University School of Medicine.**



DEAR FRIENDS,

THE INGENUITY PROJECT® HAS PROVED TO BE AN UNQUALIFIED SUCCESS. HIGH ACHIEVEMENT IN ELITE NATIONAL COMPETITIONS, ACCEPTANCE AT THE NATION'S MOST COMPETITIVE COLLEGES AND UNIVERSITIES, AND GENEROUS DONOR SUPPORT ARE JUST A FEW INDICATIONS OF THIS. BUT THE TRUEST MEASURE OF THE PROGRAM'S SUCCESS IS THE GRADUATES THEMSELVES AND THEIR ABILITY TO FLOURISH BEYOND THE SUPPORTIVE ENVIRONMENT OF INGENUITY.

AS A SCIENTIST, I KNOW THE LONG YEARS OF TRAINING THAT ARE REQUIRED. IT IS THEREFORE INSPIRING TO SEE THAT THE EARLIEST INGENUITY GRADUATES ARE ALREADY IN ADVANCED DEGREE PROGRAMS, ONLY A FEW YEARS FROM WHAT WILL SURELY BE IMPRESSIVE CAREERS. IT IS EQUALLY SATISFYING TO SEE THAT THESE YOUNG PEOPLE, WHO BENEFITED SO GREATLY FROM MENTORING AS INGENUITY STUDENTS, ARE THEMSELVES BECOMING LEADERS AND MENTORS.

IN THESE PAGES WE INVITE YOU TO MEET JUST A FEW OF THESE ALUMNI. THEIR STORIES ILLUSTRATE THE POSITIVE FORCE THAT INGENUITY HAS PLAYED IN THE LIVES OF ALL OUR GRADUATES. THEY ARE THE FINAL PROOF THAT INGENUITY TRULY HAS WARRANTED THE PASSION AND RESOURCES THAT HAVE NURTURED AND SUPPORTED IT FROM THE START.

SUCCESS ON THIS LEVEL IS BROUGHT ABOUT ONLY THROUGH THE EFFORTS OF MANY DEDICATED PEOPLE, IN PARTICULAR THE OFFICIALS OF THE BALTIMORE CITY PUBLIC SCHOOL SYSTEM, THE ABELL FOUNDATION, AND INGENUITY'S STELLAR, PROFESSIONAL STAFF.

THE INGENUITY PROJECT IS PRODUCING NOT ONLY GOOD STUDENTS, BUT COMMUNITY LEADERS, IN BALTIMORE AND BEYOND. WE INVITE YOU TO ADD YOUR SUPPORT TO THIS MODEL OF SUCCESS.

Gary R. Pasternack, M.D., Ph.D.
President, Board of Directors



THE FUTURE IS NOW

THE INGENUITY PROJECT® HAS MADE AN INDELIBLE MARK ON PUBLIC EDUCATION IN BALTIMORE CITY. NOW ITS GRADUATES ARE MAKING THEIR OWN MARK. THESE GIFTED MEN AND WOMEN ARE RISING STARS AT TOP UNIVERSITIES, IN MARYLAND AND ACROSS THE COUNTRY.

From Harvard to Stanford, Johns Hopkins to MIT, they are future leaders not only in mathematics and science, but in disciplines as far ranging as philosophy, law and the arts.

In 1992, foresighted educators under the leadership of the Abell Foundation proposed a new kind of education in Baltimore. They recognized the need for accelerated mathematics and science education in the City schools – superior training that would prepare Baltimore City students for success in elite national competitions in mathematics, science, engineering, technology and related fields. They correctly predicted that success in national competitions would translate to acceptance at top colleges and universities, and finally to professional careers in these fields.

Fifteen years later we are seeing the fruition of this vision. The initial 150 graduates have gone on to America's top schools. The class of 2007 alone boasts acceptance to Cornell, Johns Hopkins, Duke, Carnegie Mellon, UNC Chapel Hill, University of Virginia, University of Maryland and other prestigious institutions.

The story of Ingenuity becomes more impressive as graduates go further. This fall we asked our alumni where their Ingenuity training has taken them. Their answers are inspiring. They are award winners, graduate students, and campus leaders. Here are just a few highlights.



N'Dama Bamba (Class of 2001) graduated with honors from Morgan State University and earned a Masters of Health Science in Molecular Microbiology and Immunology from The Johns Hopkins Bloomberg School of Public Health. She is currently attending The Johns Hopkins School of Medicine.





“Ingenuity helped solidify my love of science, which is the career path I am still pursuing. The more I mentor high school students here in New York, the more I appreciate how little exposure most American high school students get to laboratory science.”

– DENNIS J. SPENCER (CLASS OF 2001)

Mr. Spencer, a graduate of Morehouse College, is an MD/PhD candidate at the Weill Medical College of Cornell University in New York City.

Sami Tannouri (Class of 2003) attended University of MD College Park majoring in Neurobiology and Physiology and is now pursuing a master’s degree in Physiology and Biophysics at Georgetown University and applying to medical schools.

Ela-Sita Carpenter (Class of 2001) is completing her graduate studies in Ecology at Christopher Newport University. In 2007 she presented her original research to the Virginia Academy of Science and to the American Society of Mammalogists.

David Ehrenberger (Class of 2002) graduated from UMBC where he majored in computer science. He is a software engineer with Raytheon Solipsys working on Sensor Networking and Integration. He is planning to return to the University of Maryland, Baltimore County for graduate studies.

The success of these young scholars is the result of native talent and outstanding preparation. Ingenuity students are among

the best and brightest in the country. The Ingenuity Project® trains them to excel as scientists and mathematicians, as well as thinkers, leaders, and mentors.

In 2006-2007, five hundred students were enrolled in The Ingenuity Project, powerful young minds that will make important contributions in the fields they pursue, including medicine, education, engineering, environmental sciences, and law.



Robert Watkins (Class of 2001) graduated from Yale University in 2005 with a degree in Electrical Engineering. Currently a student at Columbia Law School, he plans to specialize in patent law.

We invite you to visit our website – www.ingenuityproject.org for more stories.



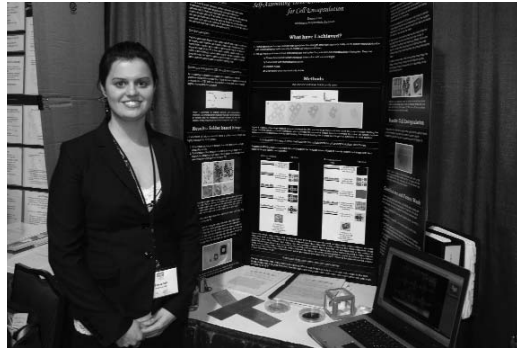
IT STARTS WITH RECOGNIZING TALENT

According to research, as many as twenty percent of high school dropouts in this country are intellectually gifted, but lack the education and support they need to stay in school. The Ingenuity Project® recognizes talent early and provides a nurturing environment for highly gifted students, students who might otherwise not get an education equal to their ability.

Ingenuity students come from across the City, from diverse ethnic and economic backgrounds, each selected for his or her potential to excel in mathematics and science. Success in The Ingenuity Project is the ticket to a better and more secure future. Ingenuity gives its students the opportunity to maintain their grades and the self-confidence to follow their dreams.

THE LEARNING CLUB

Ingenuity students come from a variety of circumstances. The program therefore goes beyond formal academic training to help “at risk” students develop life and study skills. The Learning Club is at the cornerstone of



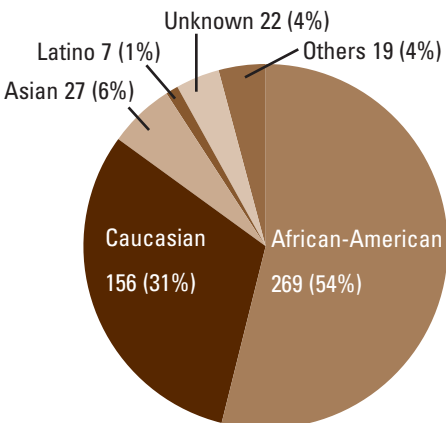
In 2007, Emma Call became the first female and third Ingenuity student in as many years to be selected as a national winner for the Intel Science Talent Search.

Ingenuity’s commitment to achieve and maintain student diversity. This enrichment program helps these vulnerable children succeed in the middle school program and advance to the more rigorous high school program.

PROMOTING PASSION AND INDEPENDENCE

At Ingenuity, students enjoy individual attention, skilled teachers who have a passion for their subject, and opportunities for intellectual independence. The students’ ability to perform so well is directly attributed to the quality of our twenty Ingenuity teachers. Four of them are Eastern European mathematicians. In addition, each of the Ingenuity school sites has specifically designated classrooms for Ingenuity students. They are equipped with computers, laboratory equipment and a resource science and mathematics library selected by Ingenuity teachers. Cutting edge resources and master educators give students the tools and encouragement to delve deeply into their studies.

Student Demographics by Ethnicity



Total students: 500
Eligibility for free and reduced lunch: 30%

The Ingenuity Project® at Baltimore Polytechnic Institute 2006-2007

Enrollment: 132 students in grades 9-12

Average class size for mathematics and science classes: 21

	Class of 2001	Class of 2002	Class of 2003	Class of 2004	Class of 2005	Class of 2006	Class of 2007
SAT Scores:							
Mathematics	679	674	681	676	694	718	681
Verbal	615	638	638	641	644	685	625
Combined	1294	1312	1319	1317	1338	1403	1306
Total College Scholarships	> \$3 million	> \$1.3 million	> \$1.9 million	> \$2.5 million	> \$2.9 million	> \$2.2 million	\$3.1 million

14 Ingenuity students have scored a perfect 800 on the mathematics SAT; one student scored a perfect 1600 on combined SAT (Math and Verbal).

Class of 2003

National Merit Scholarship, Finalist 1
National Achievement Scholarship, Semifinalist 2

Class of 2004

National Merit Scholarship, Finalist 1
National Achievement Scholarship, Finalist 2

Class of 2005

National Achievement Scholar 1

Class of 2006

National Merit Scholarship, Finalist 1
National Achievement Scholarship, Finalist 1

Class of 2007

National Achievement Scholarship, Finalist 1

MIDDLE SCHOOL PROGRAM

The Ingenuity Project middle school program is offered at two sites, Roland Park and Mount Royal Middle Schools. Ingenuity's gifted students come together to participate in an accelerated curricula in mathematics and science written for the students by Ingenuity's own master teachers. In the sixth grade, students study Earth and Space; seventh graders study Biology, and in eighth grade, they advance to Physics and Chemistry. In mathematics, sixth-graders study Singapore Math; seventh and eighth-graders focus on completing Algebra 1, to prepare for Algebra II in high school.

HIGH SCHOOL PROGRAM

Baltimore Polytechnic Institute (Poly) hosts Ingenuity's high school program. High school mathematics begins with Geometry in the ninth grade. Tenth grade mathematics includes Algebra 2, Trigonometry, Probability and Statistics. Students write the AP Calculus exam (AB) at the end of their junior year and go on to take the BC Advanced Placement examination as seniors. Beloved

teacher and Mathematics Department Head, Dr. Mikhail Goldenberg oversees the program.

High school students study the traditional branches of science: Biology, Physics, Chemistry, and Advanced Placement electives. At the end of ninth and tenth grades, students take SAT II examinations in biology and physics. In eleventh grade, students may choose to take the AP Chemistry exam. Students may also choose to take AP and SAT II exams outside the areas of mathematics and science.

INSPIRING LOFTY GOALS

According to the U.S. Department of Education, the highest achieving students in other countries, including Japan and Singapore, significantly outscore their U.S. counterparts in mathematics. The Ingenuity Project prepares students to close the gap, giving them access to resources and mentoring usually reserved for scientists working at university and professional levels, and inspiring them to develop their potential to the fullest.



In 2007, Emma Call became the third Ingenuity student in as many years to be selected as a national winner for the Intel Science Talent Search, placing 10th in a competition considered to be the “Junior Nobel Prize.” Ingenuity students also took honors in other prestigious competitions, including the American Mathematics Competition, the University of Maryland Mathematics Competition, the Maryland Science Olympiad, and the USA Biology Olympiad.

POLY RESEARCH PRACTICUM

The Ingenuity Project® provides students the opportunity to stretch as far as their interests and talents will take them. A key component of Ingenuity’s program at Poly is the three-year Research Practicum, an incubator for young scientists. Students work to develop their understanding of scientific methodology and examine existing research to hone their skills in scientific writing and presentations. Most importantly, students are given the chance to pursue their own interests under the mentorship of local experts in science, mathematics, and engineering. Students leave campus to go to their mentors’ labs and engage directly in cutting-edge research, profiting from the selection of world class institutions located in Baltimore.

The Research Practicum, led by David Nelson, M.S., presents a unique opportunity for students who are willing to take on the challenge. Students develop exceptional written and spoken communication skills, and gain self-confidence and poise. Students are encouraged to ask questions and develop their own ideas, not simply follow directions. They earn the respect of their lab colleagues as they assume ownership for their research. The depth of understanding achieved through their lab experiences makes them competitive for scholarships to the nation’s top colleges. It also allows them to qualify for lab positions earlier in their college studies than they would otherwise.

Research Practicum Student Publications

2001

Albert W. Brzezcko, Randal P. Goldberg, Russell H. Taylor, Peter Evans, “Smart Alignment Tool for Knee MosaicPlasty Surgery.” *MICCAI*

2002

Roya Saffary, Renu Nandakumar, **Dennis Spencer**, Frank T Robb, Joseph M Davila, Marvin Swartz, Leon Ofman, Roger J Thomas, Jocelyne DiRuggiero. “Microbial survival of space vacuum and extreme ultraviolet irradiation: strain isolation and analysis during a rocket flight.” *Federation of European Microbiological Societies (FEMS) Microbiology Letters*

2006

T. Leong, H. Ye, **E. Call**, B. Gimi, Z. Bhujwalla and D. H. Gracias, “Microfabrication and Self-Assembly of 3D Microboxes for Biomedical Applications.” 18th IEEE International Conference on Microelectromechanical Systems (MEMS)

2007

Milutinovich M, Ünal E, **Ward C**, Skibbens RV, Koshland D (2007) “A Multi-Step Pathway for the Establishment of Sister Chromatid Cohesion.” *PLoS Genet*

Burke, K.A., **Miller, D.N.**, and Schoenbaum, G. (in press) “Conditioned reinforcement and the specialized role of corticolimbic circuits in the pursuit of happiness and other more specific rewards.” *Pleasures of the Brain: The Neural Basis of Sensory Rewards*. Edited by M.L. Kringelbach and K.C. Berridge

Michael Buszczak, Shelley Paterno, Daniel Light-house, Julia Bachman, Jamie Planck, Stephenie Owen, Andrew D. Skora, Todd G. Nystul, Benjamin Ohlstein, Anna Allen, James E. Wilhelm, Terence D. Murphy, Robert W. Levis, Erika Matunis, **Nahathai Srivali**, Roger A. Hoskins, and Allan C. Spradling. “The Carnegie Protein Trap Library: A Versatile Tool for Drosophila Developmental Studies.” *Genetics*

OUTSTANDING COMMUNITY SUPPORT



THEY SAY IT TAKES A VILLAGE TO RAISE A CHILD. WITHOUT QUESTION, IT TAKES STRONG COMMUNITY INVOLVEMENT TO CREATE AND SUSTAIN A PROGRAM AS DYNAMIC AND FAR REACHING AS THE INGENUITY PROJECT®.

COMMUNITY MENTORSHIPS

In Ingenuity's Research Practicum, students work with scientist mentors in the community to develop independent research projects, which are acknowledged in professional scientific papers. Mentoring institutions include The Johns Hopkins Medical Institutions, The Johns Hopkins University at Homewood, University of Maryland Center of Marine Biotechnology, and Carnegie Institution of Washington. Mentors agree to provide a work environment that fosters the growth of the student as a scientist.

FOUNDATION SUPPORT

The story of Ingenuity begins with the Abell Foundation, which has supported and encouraged the project from its inception in 1992. Since that time, many

other foundations and philanthropic corporations have recognized the impact of Ingenuity both on individual students and on a school's academic climate.

GIVING BACK TO THE COMMUNITY

Just as The Ingenuity Project relies on a larger community for support, it gives a great deal in return. Ingenuity trains students to think beyond their own personal success. These young people are already making a difference as leaders and mentors in their colleges and universities. Ingenuity has a positive impact on Baltimore's economy, encouraging families to remain in the City and taking advantage of a first class public school education. And, The Ingenuity Project gives the Baltimore City Public School System a great deal to be proud of.



"One of the most valuable things Ingenuity has taught me was how to find great opportunities and how not to be afraid to go for them."

— NAHATHAI (PLOY) SRIVALI (CLASS OF 2006)

Ms. Srivali is a Chemical Biological Engineering major at MIT.

**THE INGENUITY PROJECT® GRATEFULLY ACKNOWLEDGES THE FOLLOWING
CONTRIBUTIONS RECEIVED IN THE 2006/2007 SCHOOL YEAR**

**Baltimore City Public School
System
The Abell Foundation**

**Alba Therapeutics
William G. Baker, Jr. Memorial
Fund**

**Baltimore Community Foundation
Baltimore Office of Promotion &
The Arts**

**The Black & Decker Corporation
Jacob & Hilda Blaustein
Foundation**

**Eddie C. and Sylvia C. Brown
Foundation**

**Jim and Anne Cantler Memorial
Fund**

**Commonweal Foundation
Zanvyl & Isabelle Krieger Fund
Lockhart Vaughan Foundation
T. Rowe Price & Associates
Foundation
Wright Family Foundation**

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Orly Korat
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John Lee & Amanda Kell
Teresa Lee
Lisa & Stuart Levine
Edward Makowski



NANCY FORGIONE MEMORIAL FUND

Tom & Cindy Bands
Sandra Banisky
Brenda Bodian
Beth Brown
Nancy & Louis Cedrone
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Henry Whitter



STATEMENTS OF FINANCIAL POSITION, JUNE 30, 2007 AND 2006*

	2007	2006
ASSETS		
Current Assets		
Cash	\$180,769	\$122,013
Grants receivable	30,000	60,000
Accounts receivable	13,306	0
Net property and equipment	90,469	72,314
Total Assets	<u>\$314,571</u>	<u>\$254,327</u>
 LIABILITIES		
Current Liabilities		
Deferred Revenue	\$ 0	\$ 0
Accounts payable and accrued expenses	—	—
Total Current Liabilities	<u>\$ 0</u>	<u>\$ 0</u>
 NET ASSETS		
Unrestricted	\$314,571	\$254,327
Temporarily Restricted	—	—
Total Net Assets	<u>\$314,571</u>	<u>\$254,327</u>

STATEMENTS OF ACTIVITIES, JUNE 30, 2007 AND 2006

	2007	2006
Revenues and Other Support		
Baltimore City Public School System	\$420,000	\$400,000
The Abell Foundation	400,000	400,000
Foundation and Corporate Grants	110,400	133,750
Other revenue	40,895	36,801
Total revenues and other support	<u>\$971,295</u>	<u>\$970,551</u>
 Expenses		
Program services	735,788	\$729,940
Management and general	148,936	155,195
Fundraising	26,327	25,331
Total expenses	<u>\$911,051</u>	<u>\$910,466</u>
Change in Net Assets	60,244	60,085
Net Assets at Beginning of Year	254,327	194,242
Net Assets at End of Year	<u>\$314,571</u>	<u>\$254,327</u>

*Above are selected components from the 2007 audited financial report.

Total student enrollment: 500

Cost per student: \$1,821



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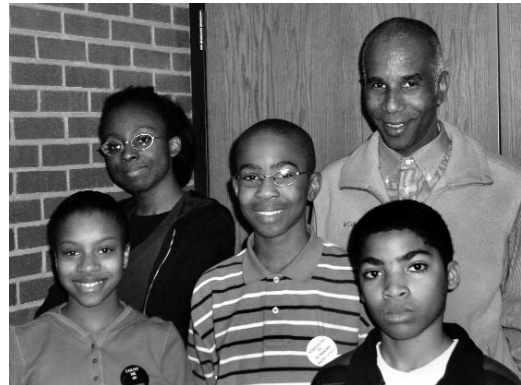
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Shani Lee-Ortiz, M.A., Admission Coordinator

Dolores Morales, Administrative Assistant



Karol Costa, Founding Director



**Mount Royal Middle School Math Counts Team,
2006-2007.**



Roland Park Middle School, Class of 2007.

"I truly believe it was Ingenuity's in-depth yet varied scholastic experience that attracted me to Brown University, where I am now enrolled." — DAVID PAESANI (CLASS OF 2006)

Mr. Paesani is majoring in Philosophy and Modern Culture and Media at Brown University.

"To this day, my Ingenuity classes were some of the hardest that I have taken. They challenged me to look at the world differently and understand why I need to work hard to make a contribution. From Dr. Goldenberg, I learned that the power of education is seeing the beauty in knowledge." — JAROD HIGHTOWER-MILLS (CLASS OF 2004)

**Mr. Hightower-Mills is majoring in French at Claremont Mckenna College.
He is interested in globalization, modernization, economic and political freedom,
and development in the third world countries.**



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