

BioBus Annual Report

2016





2015 - 2016 School Year By the Numbers



900 Students and 5K Hours at BioBase



87% of Students from High-Need Backgrounds



154 Days Teaching at **111** Schools



30KParticipants Total



758Volunteer Hours









11KParticipants at Public Events

Letter from "Dr. Ben"

Through the dim light of an early November morning, a bright blue and yellow bus pulls to a stop on East Broadway in front of Public School 134. As Mollie, a marine biologist, and Sascha, a geneticist, set up the high-tech BioBus lab, school kids walk by, many of whom live just blocks away in Manhattan's largest public housing complex. These children, primarily black and brown, 91% of whose families live in economic poverty, almost half of whom have special educational needs or are in temporary housing, see the bus and ask, "what is that?" Some of their friends have been on the BioBus and tell them, with proud authority, "That's the BioBus. It's a science bus."

The story inside PS 134 is amazing, yet, typical. Faced with the challenges of high-needs students, the principal and teachers aim high, and students in the school score well on state math and science assessments. This is the result of engaging students in topics that interest them, and that's why PS 134 brought the BioBus to their school 3 times last year: BioBus engages and inspires students. Mollie and Sascha work with all grades that day, teaching them to use \$30,000 microscopes and magnify ants and sea creatures from the nearby East River, helping them come up with questions like "What does it eat?" and answer those questions through experimentation: "Let's see what happens when we squirt some algae in there." The space inside the BioBus is more than a lab - it is a place where scientists and students meet and change the way science is done by changing who is doing science.

Our 150,000th student boarded the bus at PS 134, one of the 96 schools serving low-income communities and 15 other schools we visited last year. At all schools, we see that NYC's kids are excited about science, and most want to do more, both on the BioBus at their school and in our in-depth BioBase classes. Our highly trained research scientists (8 Masters and PhD level researchers) meet the students where they are, whether they're using a microscope for the first time or whether they're doing their own research project. At PS 134 and other schools in the neighborhood, 5% of students on the BioBus enrolled in in-depth BioBase programs, with the number limited not by interest but by our class capacity.

Thank you - you helped us get this far. Now, as we expand to double the number of NYC kids we reach every year, I continue to rely on you. You are a part of the amazing community of BioBus supporters who help create a scientific community in NYC that includes those students at PS 134, and students at schools across this great city.

Ben Dubin-Thaler, PhD Founder and Executive Director



BioBus

Research-Grade Microscopes

30,000 Students Served

30
Hours of Classes
Weekly



The BioBus is our flagship initiative to bring top-tier science education to the doorstep of students, with a focus on under-resourced and high-poverty communities. Equipped with ~\$100K in research-grade microscopes and a troop of PhD scientists, the BioBus has completed over 1,000 active teaching days, worked with over 150,000 students, and engaged over 500 schools and community organizations. Through this work, the BioBus has made a marked difference in the lives of students, parents, and educators -- bringing enthusiasm for discovery, heightened academic engagement, and increased interest in STEM career paths.

... Bringing
top-tier science
education to our
communities ...

BioBase

10
Research-Grade
Microscopes

900 Students Served Hours In-depth
Class Time per Student



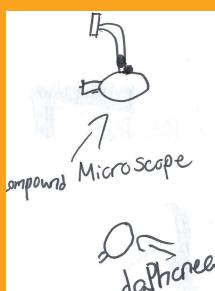
The BioBase is our answer to the most common question following time aboard BioBus: "When can I do more?" This brand new space is designed to be accessible, fun, and interdisciplinary and includes an 800 sq. ft. microscope laboratory, a 40 person multimedia amphitheater, and a 4,000 sq. ft. living green roof. The BioBase is located on the top floor of a state-of-the-art community center constructed by our partner, the Lower Eastside Girls Club, in the heart of one of Manhattan's most vibrant communities. Here, BioBase programs bring students from all socioeconomic backgrounds together for

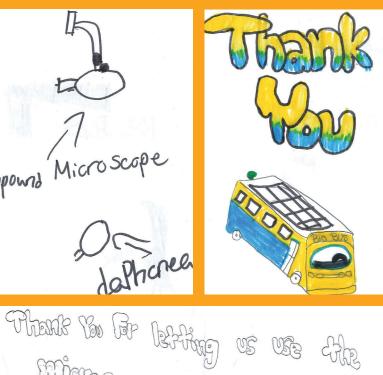
...Creating space for communities to seek out science...

high-quality field trips, after school programs, weekend events, and summer camps, taking BioBus programming to new heights.

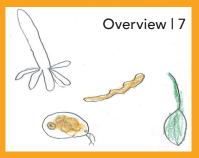












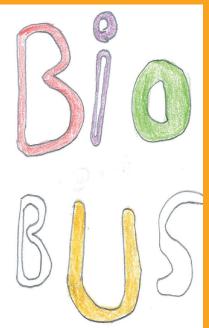








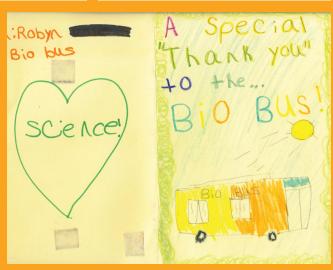












Board of Directors

John Butler | JD, Center for Court Innovation | President

John Butler, JD, is an attorney and a Fellow at the Center for Court Innovation, a criminal justice think tank based in NYC. He has extensive experience in nonprofit management and operations as well as public sector consulting, including: director of fundraising and operations for Big Brothers Big Sisters, co-founding a nonprofit consulting firm offering communications and public relations services to small nonprofits, and co-founding the Iraq Legal Education Initiative at the American University of Iraq. He was also a design fellow at the Stanford Institute for Innovation in Developing Economies, has represented clients through the Stanford Criminal Defense Clinic, and serves as a Trustee at Frost Valley, YMCA. He is a graduate of Brown University, has a masters in comparative politics from the London School of Economics and a JD from Stanford Law School.

Reva Gaur | MBA, Facebook | Vice President

Reva Gaur, MBA, works in News Partnerships at Facebook, where she leads the partner services team for the News vertical in the US, based out of Facebook's New York City offices. Prior to Facebook, she spent a decade in the fields of media, communications, marketing and digital strategy, including as Director of Communications for Educational Alliance, a 125 year old nonprofit organization serving over 50,000 New Yorkers per year through a range of education and social services programs. Reva holds a Masters in Business Administration from NYU's Stern School of Business and a Bachelors in Sociology from Brown University. Reva has been a BioBus volunteer since its inception, helping build the organization from a tiny startup to an internationally recognized model for science education. She has served on the board since 2010 and served as President from 2012 to 2014.

Sadia Halim | PhD, BNP Paribas | Treasurer

Sadia Halim, PhD, is a managing director at BNP Paribas in the Financial Institutions Coverage group based in New York. Upon completion of her doctorate in Virology in 2000 from SUNY Albany's School of Public Health, a collaboration between the NY Department of Health, SUNY Albany and Albany Medical College, she began a career on Wall Street. Sadia offers experience in research, banking, and asset management. She is a CFA Charterholder and a member of the New York Society of Security Analysts (NYSSA). She is also an avid supporter of the Harlem Academy, an independent school serving grades one through eight which the BioBus visits each year, as well as being on the board of AVRI (AIDS Vaccine Research Institute), a 501(c)(3) nonprofit research institute committed to the development of a vaccine to prevent HIV infection.

Jared Fox | PhD, NYC DOE WHEELS | Secretary

Jared Fox, PhD, is the science department chair at Washington Heights Expeditionary Learning School (WHEELS) in Manhattan and has been recognized as a Math for America (MfA) Master Teacher. Prior to teaching at WHEELS, Jared worked as a teacher in Edinburgh, Scotland and served as a Teach for America corps member in the Bronx. Jared holds a PhD in science education from Teachers College, Columbia University where he researched how mobile science labs influence student attitudes towards science.

Matthew Baldwin | Accenture

Matthew Baldwin is based in the tri-state area and works as a Financial Services Management Consultant focused on delivering business and technology strategy and solutions to Insurance customers. Matt holds a BA in Economics from The College of the Holy Cross. Matt has been involved with BioBus activities since 2014 and was recently elected to the board in 2016.

Nicolas Biais I PhD, Brooklyn College

Nicolas Biais, PhD, is an Assistant Professor in Biology at Brooklyn College. After earning his PhD in France, he completed his postdoc in microbiology at Columbia University. Alongside his acclaimed research, his main interest is teaching science, having taught chemistry, physics, and biology to French medical students and people in his home-country, Haiti. He has been a supporter and visiting scientist to BioBus since 2008, and on the board since 2011.

Deval Desai | MS, Barclays

Deval Desai, MS, is an experienced IT professional focused on reference data technology at Barclays. He has worked for Lehman Brothers, Standard & Poor's, Goldman Sachs and IBM earlier in similar capacities. Deval supports a variety of nonprofit organizations including New York Cares, StreetWise Partners, The Heckscher Foundation for Children, Cause Strategy Partners, Hudson County Court Appointed Special Advocates, Green City Force, and Added Value Farms. He holds a Bachelor of Engineering and a Master of Science and joined the board in April 2016.

Josh Dormont | MEd, NYC DOE

Josh Dormont, MEd, is the Director of Product Development for the NYC Department of Education and a photographer who specializes in portrait and social documentary projects. Josh has more than a decade of experience in education leading teams, managing operations and development, building products, and launching new entrepreneurial initiatives. Josh has a Masters in Education from PACE University and BA from Cornell. Josh has been on the board since 2011, and led the Development Committee from 2013-2016.

Stephen Jan | MS

Stephen Jan, MS, is a software engineer. His background includes communication applications at Google, e-commerce at Nook.com, digital advertising at Doubleclick.com, and several startups. Stephen has also founded a nonprofit that donates funding, medical equipment, and ambulances to hospitals in Africa, South America, and Asia. Stephen earned both his Masters and Bachelors degree in computer science and a Masters in bioengineering from Columbia University.

Quentin Van Doosselaere I PhD, Bregal Investments

Quentin Van Dooselaere, PhD, is the Co-CEO of Bregal Investments, a global private equity firm. Quentin began his career at Drexel Burnham Lambert before joining Bankers Trust where he ran various capital markets businesses. He then held executive positions in a number of nonprofits before moving to academia. He was affiliated with Columbia University and Oxford University when he returned to Bregal in 2008. He serves on the board of Laureate Education, IMG, Solar Reserve and Aurigen.



"I'm so amazed by everything in here!"

- BioBase Summer Camp Student

Summer camp students conduct experiments, learn about the environment, and make new friends. For example, students met with a local bee keeper to learn about bee behavior, honey production, and pollination.



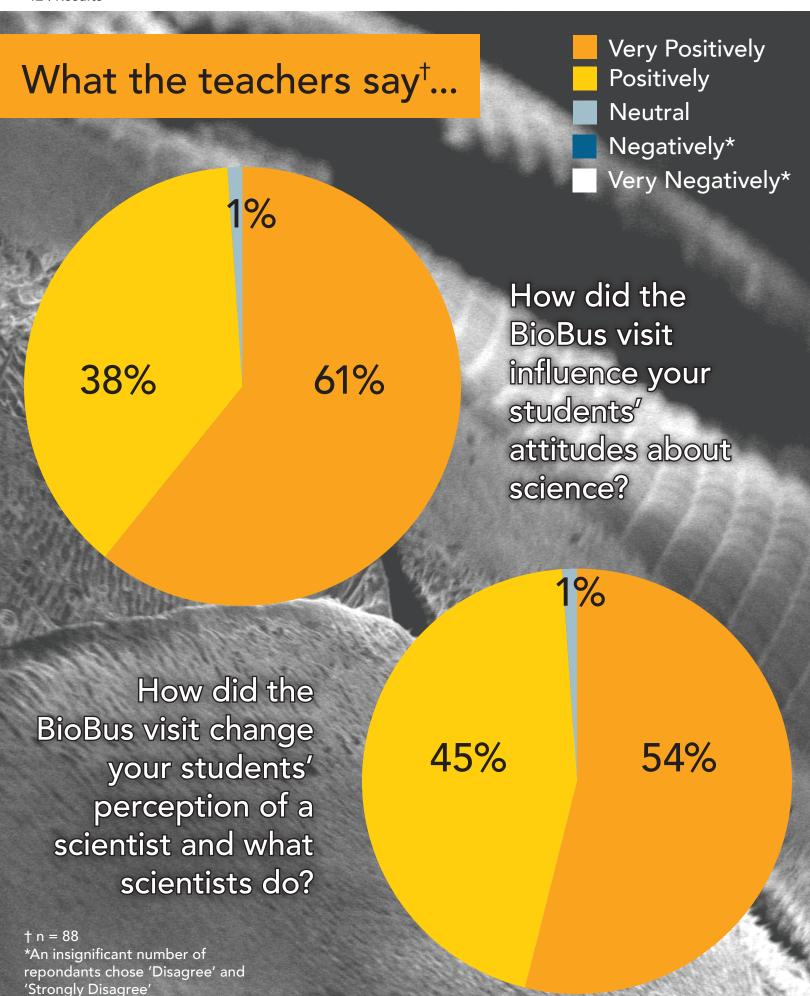




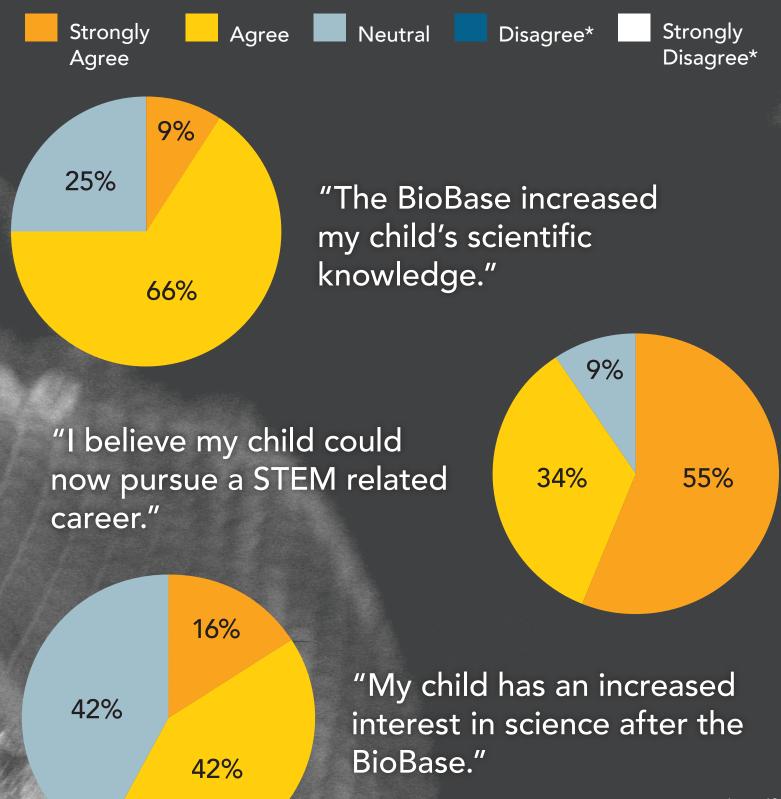


but now I know I want to be a microbiologist!"

- BioBase After School Student



What the parents say[‡]...



‡ n = 13 *An insignificant number of repondants chose 'Disagree' and 'Strongly Disagree'

What the students did...

4,500 students board BioBus on Lower East Side

> 5% sign up for in-depth BioBase programs

73% had never before done science outside of school

Students attend over 90% of the BioBase sessions they signed up for and 100% want to do more



"I didn't think scientists looked like you!"

- 7th Grader, Tompkins Square Middle School on
Manhattan's Lower East Side



BEN DUBIN-THALER, PhD, FOUNDER AND EXECUTIVE DIRECTOR, created the BioBus in 2008 after completing his PhD in Biology as well as his BA in Physics and Mathematics at Columbia University. "Dr. Ben," as he is known aboard the BioBus, started BioBus as an experiment to test his hypothesis that, given the opportunity to use research-microscopes to perform live experiments, anyone would be excited about science and want to do more. Dr. Dubin-Thaler and his team create a new kind of laboratory space that is empowering, accessible, un-intimidating, and that facilitates scientific engagement amongst populations historically underrepresented in science professions. Dr. Dubin-Thaler hopes to create a future in which people from all cultures and backgrounds have equal opportunities to practice and understand science.

DANNY VALDES, PROGRAM COORDINATOR, has been on the BioBus team since 2011. He is an experienced educator and is certified as a public school teacher in Florida and New York, and has also taught in the private sector. Danny graduated from Florida International University with a Bachelor's Degree in Political Science and Philosophy. Danny was wary of getting 'trapped' in the world of academia and so moved to New York City in 2009 hoping to make a difference in the field of education. Danny is dedicated to spreading the BioBus' mission of making education a fun and interactive experience accessible to all students. He handles logistics for the BioBus and is the main point of contact for schools and communities that are interested in having the bus visit.

DAVID YAP, PROGRAM MANAGER, joined the BioBus team in 2013. Born and raised in the Bay Area of California, he had a strong appreciation for the sciences instilled from his chemist father. After working part time as a lab assistant at the USDA in high school, he attended McGill University in Montreal, studying Anthropology and Biology. Next, David spent a year teaching English in Japan and returned the U.S., freelancing as an editor of college biology textbooks. Later, he dove into the world of education reform with Teach For America. In 2011, David left to take part in the Occupy Wall Street protests and with a collective of artists, formed a worker-run screenprinting shop dedicated to creating art in public space and printing in support of social justice. David enjoys introducing students to science outside of textbooks and the classroom.

FRANCESCA ANSELMI, PhD, STAFF SCIENTIST, completed her undergraduate education in Molecular Biology at the University of Padua in Italy and pursued graduate training at the Center for Interdisciplinary Research in Paris. There she learned how to build microscopes to investigate the mysteries of the brain. She received her PhD in Neuroscience and Optics at the University Paris Descartes, and then worked as a postdoctoral research fellow at Cold Spring Harbor Laboratory in Long Island. She hopes to help shape the next generation of scientists and citizens, aware and proud of the environment they live in, eager to observe reality first hand, challenge common knowledge and formulate their own original ideas to shape the world around them into a better place for everyone to share.

LATASHA WRIGHT, PhD, CHIEF SCIENTIST, received her PhD from NYU Langone Medical Center in cell and molecular biology. She continued her training at Johns Hopkins University and Weill Cornell Medical Center. She has co-authored numerous publications and presented her work at international and national conferences. She is an experienced grant writer and worked at the Park Avenue Armory under the direction of the Manager of Institutional Giving. BioBus enables her to share her love of science with a new generation of potential scientists. Students are encouraged to ask questions, formulate hypotheses, and design experiments. Everyday that Latasha spends teaching students about science in this transformative environment helps her remember that science is fun. She loves sharing the journey of discovery with students of all ages.

Our Staff

MOLLIE THURMAN, MA, LEAD SCIENTIST, joined the BioBus team in 2014 after studying urban ecology for many years. She attended Mount Holyoke College, joined a research group at the Harvard School of Public Health, and then earned an MA from Columbia University. Along the way, Mollie found that she loved to teach about the ecosystems that she studied. She spent a year as a marine science educator in Massachusetts and then returned to NYC to work with a team of researchers studying New York Harbor. Since joining the BioBus, she has worked to involve students in furthering our understanding of the ecology of NYC's shorelines.

RAYMOND WILKERSON, DRIVER AND PROGRAM ASSISTANT, joined the BioBus team in 2015 to drive the BioBus all over New York City. Ray also assists day to day in the BioBus office and labs. Previously, Ray was a bus driver for the MTA.

ROBERT FRAWLEY, PhD, STAFF SCIENTIST, received a BS in Biomedical Engineering at Columbia University and a PhD from Weill Cornell Medical College. He joined the BioBus team in 2016. As a graduate student he worked at the Hospital for Special Surgery as a research assistant studying chemical and cellular mechanisms governing mineralization in soft tissue. Rob is also an adjunct professor at Marymount Manhattan College, teaching microbiology and epidemics.

SASHA CHAIT, DIRECTOR OF DEVELOPMENT, joined the BioBus team in 2015 after working in the Office of Development at NYU Langone Medical Center, focusing on biomedical research, healthcare, and medical education. Sasha's nonprofit experience also includes a minority-based social and human service agency in Massachusetts and WomensTrust, a microfinance, healthcare, and education organization in Ghana, West Africa. Sasha earned a BA from Clark University in International Development and Social Change with a concentration in social entrepreneurship and nonprofit management.

SARAH WEISBERG, MSci, CHIEF SCIENTIST, climbed on board the BioBus in 2010 after completing a Master's of Science degree in Cell Biology at the Weizmann Institute of Science in Israel. There, she was trained as an independent research scientist. Sarah's work has been presented at a number of scientific conferences and published in several journals. Prior to moving to Israel, Sarah graduated Magna Cum Laude, Phi Beta Kappa from Harvard College with a degree in Biology and Linguistics. Sarah has been a teacher and social justice advocate since her youth, working at food pantries and tutoring programs from elementary school and running an inprison education program in college. Sarah believes wholly in the BioBus mission and works on all aspects of the program -- from teaching and writing curricula to strategic planning and fundraising to learning how to drive and maintain a 1974 diesel bus (with no power steering).

SASCHA RUSSEL, PhD, STAFF SCIENTIST, has been having great adventures exploring the microsopic world and New York City schools on board the BioBus since 2014. She loves how students discover how fun biology is when they get a chance to use real equipment and do authentic experiments on the Biobus, and how easy the Biobus is for teachers. After earning a BA in Biology from Brown University, she earned an MA in Science education from NYU-Steinhart while developing hands on curriculum and teaching high school biology in NYC public schools in the Bronx and Manhattan. She went on to earn a PhD in Genetics at Harvard University where she studied and published papers on molting in the roundworm C. elegans.

TIFFANY KING, PhD, STAFF SCIENTIST, joined the BioBus team in 2015 after earning her PhD in Cell and Developmental Biology from Rutgers University Graduate School of Biomedical Sciences. Her thesis focused on understanding embryonic cardiac tube formation using the Drosophila melanogaster model. Her work has been published in peer-reviewed journals and presented at numerous scientific meetings. Tiffany has long been interested in education and science outreach, and while volunteering with the organization Citizen Schools, she enjoyed communicating scientific concepts to students through hands-on learning. BioBus is the perfect place to continue presenting science in this manner. The experience at BioBus of igniting a passion for scientific exploration, and changing the idea of what a typical scientist is in the minds of young people is rewarding.



We host a community science lecture series bringing accomplished science professionals to speak to the general public in a casual setting with drinks and snacks. Jill Baronetti, PhD, gave an interactive talk on the science of cancer represented by dance.



Science Saturdays teach students that learning doesn't have to stop when school lets out. Some examples of Saturday activities include "Building a Neuron" and a marine biology unit that centers around the ecology of the East River.





Lower East Side...







BioBus' focus is in District 1, where BioBase is located. Our close collaboration with local groups and charities enables us to serve the community around us. We look forward to deepening these partnerships and building new connections in 2017.

Harlem...

BioBus' next horizon is the expansion of our programs to Harlem, New York. The BioBus attended the East Harlem Back to School Event, partnered with a Harlem RBI event, and brought the bus to the Harlem Week Children's Festival. In the coming years, we plan to broaden our reach into Harlem with the help of these amazing partners.









PLAY · LEARN · GROW

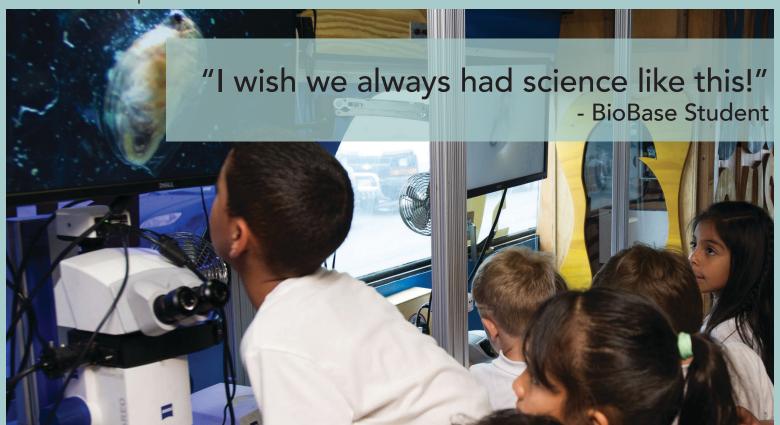
And Beyond...



Continued growth of BioBus is supported by our volunteers, the New York City Council, and the New York State Assembly, including Assembly Members Rodriguez and Crespo.











Audited Financial Statements

Statement of Financial Position as of June 30, 2015

ASSETS		
Cash and cash equivalents	\$959,817	
Accounts receivable	\$85,592	
Prepaid insurance	\$9,303	
Property and equiptment, net	\$130,048	
Other assets	\$6,600	
TOTAL ASSETS	\$1,191,360	
LIABILITIES		
Acounts payable and accrued expenses	\$43,715	
Deferred revenue	\$757,190	
TOTAL LIABILITIES	\$800,905	
NICT ACCETC		
NET ASSETS	¢200 4FF	
Unrestricted net assets	\$390,455	
TOTAL NET ASSETS	\$390,455	
TOTAL LIABILITIES AND NET ASSETS	\$1,191,360	
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Statement of Activities July 1 2014 - June 30, 2015

SUPPORT Unrestricted:	
Program service revenue	\$217,840
Contributions	\$640,218
Contributions in-kind	\$4,000
Investment Income	\$3,237
	•
Other income	\$1,693
TOTAL SUPPORT	\$866,988
EXPENSES	
Program services	\$587,609
Management & general	\$75,045
Fundraising	\$38,408
TOTAL EXPENSES	\$701,062
Increase/(Decrease) in Net Assets:	
Unrestricted	\$165,926
Temporarily restricted	\$0
Permanently restricted	\$0
Increase/(dec.) in net assets	\$165,926
Net assets, beginning of year	\$224,528
Net assets, end of year	\$390,454

Our Donors

PLATINUM:

Simons Foundation Alfred P. Sloan Foundation The Heckscher Foundation for Children Regeneron

GOLD:

Bregal Investments

SILVER:

Jon Thaler & Inga Karliner Lumenera Paul Walker NYU MRSEC INDEC Systems, Inc

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Thomas Campbell Jackson Richard Torres Carole Haas Gravagno Jennifer Thaler Alice Bonhomme-Biais & Nicolas Riais Edward E. Collins III George K. Chait & Hope E. Damon Meredith Moore Micro-Optics Precision Instruments, Inc Joel Oppenheim Rebecca Siekevitz Richard & Pascale Berner Fortress Investment Group, LLC GlaxoSmithKline Foundation **Reed Family Foundation** Connie Potter James & Barbara Korein JoAnna Noble Marissa Wesely Martin Chalfie & Tulle Hazelrig Peter Barry The Samuel & Lucille B. Ritvo Charitable Fund

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Wayne Embacher

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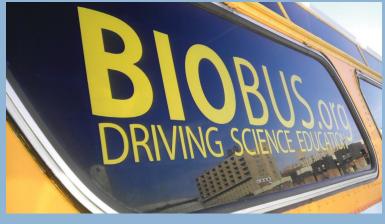
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Get Involved

This annual report was composed by Hunter York, a Harvard College junior who interned at BioBus during the summer of 2015 through Harvard's Center for Public Interest Careers, and Kim Goh, a volunteer consultant through Taproot+.

Sign Up for Programs, Volunteer, Donate, Learn More: www.biobus.org





