

February 28, 2023

New York State Senate and Assembly

Re: Testimony for New York State Budget Hearing on Workforce Development & Labor

Dear Senators and Assemblymembers of the State of New York,

Since I started BioBus here in New York in 2008, **over 260,000 students in New York State** have jumped aboard BioBus mobile labs. Students use research-grade microscopes to explore science, fueled by their natural curiosity, alongside our community scientists. Young scientists follow our pathway from school to after school and summer programs and onto paid research internships. After BioBus, students are ready to join and diversify the rapidly growing STEM workforce in New York. Just this year, three Junior Scientist [intern alumni joined Volastra Therapeutics](#), a leader in Harlem's burgeoning biotech landscape. With your partnership, BioBus can bring opportunities like this to students across New York State.

Through high level, hands-on science education for K-12 and college students, BioBus brings our students into the scientific community that they have often been excluded from and prepares students for life-changing academic and career opportunities. This fall, BioBus Community Scientists joyously returned to the many students and teachers who missed our flagship mobile lab programs. Full classes of up to 30 students at a time are back on the bus!

With \$922,000 in FY22 and FY23 operating support from New York State, from a budget line and member items over the last two years, we are growing! BioBus reaches students in every corner of Harlem and the Lower East Side, where our proven pathway empowers young scientists from their initial excitement to paid internships. New York is ready for more, and we are ready to deliver. **With your help, BioBus will grow towards reaching every student in New York State.** Those students will become the next generation of great thinkers and leaders - they are already using science to fight climate change and food insecurity, identify disease before it spreads to humans, and study degenerative eye diseases and addiction. **I respectfully request that you include \$700,000 in operating support for BioBus in the Senate One-House Budget.** This funding will directly support 10,000 young scientists across New York State.

In addition to the students BioBus serves in your districts and our request for your support, we are also proud of our additional partnership and many volunteers. BioBus receives essential support from private investments and dozens of volunteers. Our partnerships with Regeneron Pharmaceuticals, Columbia University, NYU, and the New School, among others, brings students from public schools into the same room as the scientists doing research in their neighborhoods and shows students that they have a place in the exciting scientific world right



around them.

The need for proven science programs like BioBus is dramatic. NYC's biotech and life sciences industries continue to grow, offer high-paying jobs, and look towards our young people to fill those jobs. At the same time, incarceration has a disproportionate impact on the same communities who have often been excluded from science and educational opportunities and were most significantly impacted by the pandemic. Instead of falling into the school to prison pipeline or similar paths created by racism, **our students work to solve the problems that affect their friends, family, and neighbors.** Together, BioBus, our students, and our school partners foster engagement at school and excitement for science that has community-wide impact.

BioBus' research-grade laboratory experiences led by masters- and Ph.D.-level scientists give students of all races, ethnicities, and genders, including those underrepresented in STEM careers, the opportunity to start their scientific path and excel. BioBus community scientists empower students to investigate problems close to home, such as testing the toxicity levels in neighborhood community gardens and researching the impact of microplastics on the ecosystems of the Hudson River. Our students bring their family, their friends, and their neighbors along and create a constant, constructive dialogue with their community as it merges with the scientific community.

BioBus is an innovative program founded in NYC in 2008, starting with a 1970s public transit bus converted into a research-grade science lab on wheels. Now with two mobile labs, BioBus visits a different school every day and currently offers customized programs with microscopes in school courtyards, auditoriums, community gardens and other open spaces or online. Community scientists lead classes in ecology, anatomy, adaptation, evolution, and cell biology, all using science relevant to students and their immediate surroundings. Using microscopes, students gain an immediate sense of how science relates to their lives. BioBus offers curriculum for all ages and student levels, even offering a Living Environment Regents prep course.

At brick-and-mortar BioBase community labs, onsite at schools, and in community centers, BioBus offers in-depth after school, weekend, and summer programs for students in upper elementary school and above. BioBus scientists lead students in project-based scientific exploration. High school and college students can be paid Junior Scientist interns, mentoring younger students and gaining in-depth research science experience, an uncommon experience before Ph.D. programs.

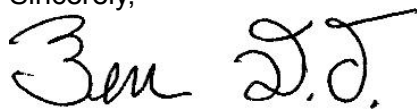
Previously, New York State generously provided capital funding for BioBase Harlem at Columbia and our newest mobile science laboratory, serving students across the city. This doubled the impact of BioBus programs and laid the foundation to continue growing to meet our students' needs. In the last two years, the \$922,000 in total funding from New York State Senators and Assemblymembers ensured that BioBus could engage tens of thousands of students in science throughout the pandemic and transition back to in-person programs.

Funds requested now will ensure BioBus can keep up with increasing costs across personnel and non-personnel expenses; provide the necessary increased staffing and resources for customized, safe, in-person programs; and expand so more New York State students have the chance to pursue a STEM career. Specifically, this funding will support personnel costs for BioBus's community scientists and program operations staff, lab supplies, lab maintenance, and travel to schools. The heart of BioBus is a team of highly committed, innovative, and experienced scientists who work tirelessly with NYS students as they prepare to lead a more diverse scientific community that will deliver for all New Yorkers.

BioBus aims to reach 45,000 students in the coming 2023-2024 school year. New York State support of \$700,000 operating expense funding will directly enable 10,000 NYS students to discover, explore, and pursue science. Support for BioBus will expand and continue science education programs and further education, equity, and opportunity.

Thank you for your continued support of BioBus and for your consideration of this request. I look forward to discussing how we can inspire the next generation of scientists from New York State.

Sincerely,



Ben Dubin-Thaler, Ph.D.
Founder and Executive Director
(347) 878-3210
ben@biobus.org

