

Gene Editing 360™

Dear Friends, Educators, and Students:

Every time one of our newsletters comes out, I'm always awestruck looking back at what we've accomplished in such a short time. The granularity of individual Learning Labs, experiments, and survey calculations sometimes leaves me lost in the weeds, but stepping back from it all, I can see the whole picture. And the whole picture blows me away.

With the implementation of a new booking platform, we were able to provide a way for teachers to book well in advance, giving more clarity on our available Learning Lab days to educators hoping to plan out their semesters early. Within the first few weeks of using the platform, we booked over 20 Learning Labs. Now, just after winter break, we're hitting our anticipated workshop goal of 50 workshops five months early. We're seeing students from all three counties of Delaware, a goal we didn't think would be possible without a satellite location. Our newly launched 'Intro to Gene Editing 360' course has already engaged 80 students, changing their outlook on STEM careers and sparking an interest in a new education pathway post-high school.

It's humbling to do this, to step back and look at all we've accomplished. It's even more humbling to remember the feeling in the classroom when a student picks up a skill they never thought they'd gain this early in their journey. I get to watch our volunteers become adept educators in their own right, making themselves more marketable for future career pathways and contributing to their community. And I see Sarah LaTorre, education program coordinator and wunderkind, forming new lesson plans and lighting a fire in every student she works with.

We've only just begun, and look how far we've come! Together, we can grow the next generation into a workforce that will advance this technology, demystifying it to their community and making it accessible for everyone.

We'll see you soon,

Amanda Flower
Education Program Manager

Intro to Gene Editing 360™: A Fruitful Endeavor!

We created our first introductory course designed for freshmen and sophomore high school students! After launching the pilot this past fall, we were blown away by the positive feedback from the students we saw. Students were given the chance to conduct a DNA extraction experiment using strawberries while learning proper lab techniques. They also had the opportunity to load a gel using food dye, water, and glycerol to understand how molecules separate based on size. The results showed a colorful spread of supercharged macromolecules! This course gives early high school students the chance to learn about concepts usually not seen until college, giving them a leg up on curriculum and easing the transition into higher education. We want students to build their skills prior to coming back to participate in the CRISPR in a Box™ experiment.

Gel electrophoresis is a laboratory technique that separates biomacromolecules according to molecular size. Two poles are created at either end of a mold filled with gel using an electric current that runs through two electrodes. The molecules move through the gel at different speeds and in different directions based on their size and charge. We challenge students to ask what this means for water molecules dyed with food coloring. Will green move faster than blue? Will purple move faster than red? Every question is a chance for further investigation, hypothesis, and discovery.

We're looking forward to refining what this course has to offer and strive to make it available for the entirety of next school year!



Check out our website!



FUN FACT!

The Gene Editing Institute turns 10 years old this year!

We originally started our work in the Helen F. Graham Cancer Center in 2015 under the guidance of scientific director Eric Kmiec, Ph.D., studying patient behavior and outcomes to inform our research. Though our institute has added new technologies, research objectives, and an education program, our central goal remains the same.

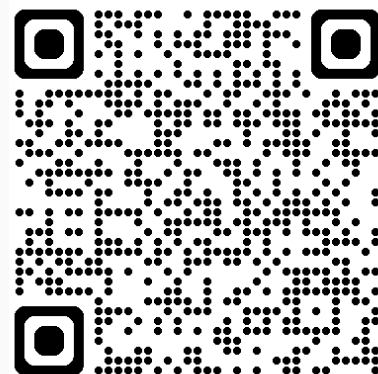


CRISPR in a BOX™ is a Top 10 Innovation!

The Scientist is a leading publication in the life sciences field that covers a wide range of topics central to the study of cell and molecular biology, genetics, and other life science fields. Since 2008, the publication has canvassed the life science community to find which newly released products are having the biggest impact on research. In an exciting exception to their usual research-based criteria, **the publication chose CRISPR in a Box™, our educational toolkit, as their #2 innovation this year!** We were incredibly proud to see the recognition of the hard work of our scientists, educators, and partners with this placement. To get this recognition not only uplifts the box itself, but also the work our team is doing to continue spreading gene editing education throughout the state and beyond the greater eastern seaboard.



Read more about this placement and the other excellent innovations chosen by The Scientist by scanning the QR code below.



Why should you support the education program?

Science takes collaboration. Sponsorships and partnerships are appreciated, as they help us accelerate our program! Every dollar counts, and individual donations keep our labs stocked, our experiments full of color, and our students curious! If you want to donate to our program, please scan the QR code below.

Thank You!



Fun fact: We have a new summer program!

This summer, we're pleased to announce a new opportunity for students to become science ambassadors, learn new techniques that expand on the Learning Lab's curriculum, and present findings in a capstone event celebration at the end of the program!

Stay tuned for our 'back to school' newsletter for the inside scoop on our pilot for this innovative new program!