## **Challenges that inspire**



Many students who start out as STEM majors in college end up leaving STEM. They find the coursework too intense. But students who have presented their research at the DNA Learning Center's Urban Barcode Project and Barcode Long Island symposia gain an early appreciation of how challenging science can be.

High school students chose their own scientific question to explore biodiversity using a technique called DNA barcoding. Much like items in a store are labeled with a unique pattern of lines that make up a printed barcode, organisms have unique patterns in their DNA that can be a genetic "barcode." By comparing the DNA barcodes found in their samples with already-defined DNA barcodes available in online databases, students can identify organisms they study. Some students are challenged by the sophisticated molecular biology techniques. Others need to overcome their fear of handling the insects they study! But after 5 years and a thousand student barcoders, the DNA Learning Center finds that these challenges foster optimism in participants about a career in science!

One 10th grader offered this advice to future barcoders: "They should learn that even though something doesn't work out the first time they should not be so discouraged and keep trying. You should really be looking to learn from this, not just to succeed."

For more information visit urbanbarcodeproject.org and barcodeli.org

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