

# INTRODUCING

# The Aquarius Project

## Adler staff assembles team to hunt for sunken meteorite

AUBREY HENRETTY  
SENIOR WRITER

Despite what you may have heard, Sir Alexander Fleming didn't discover penicillin by accident. In popular retellings, his story goes something like this: Someone left a Petri dish uncovered and perhaps a window open in Fleming's bacteriology lab, a little patch of mold took up residence in the dish, and boom: Antibiotics were born.

It's true that Fleming's most important discovery *began* with a biological mishap, but what he did next was no accident. He didn't curse a careless lab tech for ruining a sample of *Staphylococcus aureus* or throw the contaminated agar into the trash. He noticed a bacteria-free ring around the mold and guessed (correctly) that if he could extract and concentrate whatever was stopping the bacteria, it might be the key to treating bacterial infections. He ran experiments and called on other scientists with different areas of expertise to join in. Together, they created a new kind of life-saving medicine.

An ability to recognize and harness serendipity is essential to the scientific process. Still, a bit of luck helps.

For the Aquarius Project, luck came in the form of a bright green flash that lit up the sky over the Midwest just before 1:30 am on February 6, 2017. A 600-pound meteor was about to crash into Lake Michigan.

Later that day, Adler astronomers Dr. Mark Hammergren and Dr. Shane Larson started an email chain to talk about the news. How big were the meteorite fragments? How many were there, where did they land, and how far had they spread? Shane asked Mark, "Do you think we could find fragments (big ones?) if we mounted a robotic dive to look for one?"

Shane's question quickly lodged itself in the mind of Adler teen programs coordinator Chris Bresky, who had been following the discussion on his laptop. Could they *really* find a piece of meteorite? Could the technology

developed to explore the surfaces of other planets work the same way at the bottom of a lake? The circumstances felt too perfect to pass up: Behind the museum, there was a lake with a meteorite in it. Inside the museum, there were scientists who studied meteorites.

As he tracked down Shane to ask the astronomer what it would take to fish a meteorite out of a 22,000-square-mile lake, Chris had no idea how many more happy coincidences would reveal themselves over the coming weeks and months—or just how many different kinds of people would join the project.

A New York Times story about the meteor quoted a scientist who worked down the street at the Field Museum. That scientist told Chris to check in with a sea-floor expert at the Shedd Aquarium. After posting about the project on OpenExplorer (a "digital field journal" for expeditions of all kinds), Chris would find out

that the National Oceanic and Atmospheric Administration was working on a detailed scan of a section of Lake Michigan that just happened to overlap with the meteorite crash site. At every turn, the Aquarius Project picked up momentum and new people with different skills.

By summer, the still-growing team included a sea-floor expert; a building engineer; a boat guy; a geologist; a NASA researcher; a diver; a graduate student; a robotics expert; a few astronomers; staff and volunteers from the Adler, the Shedd, and the Field; and a handful of extremely excited Adler teens.

The Aquarius Project is just getting started. Adler teens are designing and testing equipment they hope will catch some meteorite fragments. No one knows how the project will end. But in many ways, it has already succeeded. Scientists and teen programs from all three Museum Campus institutions are working together as they never have before, and the unusual combination of skills present on the team is a testament to one of the Adler's central tenets: It takes all sorts of people to make science work.

Great discoveries don't happen by accident. If the Aquarius Project ends with a meteorite fragment being pulled triumphantly from the lake, it will be tempting to remember their work as a lucky coincidence—that time a meteor fell into a lake behind a space museum. But the real story is so much better: that these scientists and other explorers seized an opportunity, worked hard, worked together, and made their own luck.

*Follow the Aquarius Project into the depths with us. Watch this space!*

