BRAIN TEASER

RESEARCHER GARY LANDRETH thought Patty Hunt was a little nuts when she called him four years ago with an idea: the director of research at Hathaway Brown wanted to put 14-year-old Adriana Zinn into a research laboratory.

"This just doesn't happen," recalls Landreth, director of the Alzheimer's research lab at Case Western Reserve University's School of Medicine. "I was seriously skeptical."

Now he says, much to his surprise, it's been "utterly fantastic."

As a result of her research in Landreth's lab, Zinn was a co-author on a paper submitted to medical research journals and a Siemens semifinalist in the 2010 Siemens Competition in Math, Science & Technology.

By knowing she would have almost four years and three complete summers in the lab, she started slowly, reading papers and learning the basics of slide and petri dish preparation. Now, she has her own bench in the lab, and it can be tough for the average person to understand much about her complex research.

"I have my own cell lines of astrocytes, which is a cellular body that have these prostheses that extend out to the brain," she explains. "We target these cell lines in a petri dish with the drug of interest... We can splice open the cells, and we can see what types of protein levels are there."

In other words, she is studying a drug's impact on cells to see if it will help clear the plaques from the brain that cause Alzheimer's.

Zinn's achievements extend beyond the lab. She is a policy debater, ranked 12th in the state. And she participates in Hathaway Brown's Global Scholars program, which will culminate in a project on "The Economics of Discrimination in Kurdistan." She also traveled to India to investigate the developing role of women there.

She hopes to work in international health. "Science has really helped me change the way I think," Zinn says. "I can take a more practical approach to things. I can reason my way through. I think I'm a little calmer under pressure. It also makes me more aware that I can challenge myself to understand things that are way outside my realm."

For his part, Landreth says Zinn has achieved far beyond what he ever expected from a high school student.

"Adriana is very smart. She's very ambitious, and she's very talented," Landreth says. "Over the period of years Adriana's skill set got larger and larger. Right now, she is better than many of my incoming graduate students."

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Q: How is Hathaway Brown building on its Education Innovation Summit?

A: "The summit allowed us to forge relationships with some of the brightest minds in education, science, business and the arts," says Bill Christ, head of school at Hathaway Brown. "We're collaborating with these and other experts and working to improve the educational landscape. In a special Innovation Derby, HB faculty proposed several new initiatives, many of which are being enacted. We also launched the Center for Educational Innovation and created an online innovation information storehouse."