



February 2, 2010

Hopkinton Firm Makes Time's Top Discoveries List

By Brandon Butler



Hopkinton-based Caliper Life Sciences worked with a British scientist to create Adam, a robot that Time Magazine named as one of the top 10 scientific discoveries of 2009.

The top 10 discoveries of 2009, according to Time Magazine, include identifying a possible cure for colorblindness, a comprehensive examination of the earliest human skeletal remains ever found and finding gallons of water on the moon.

Add to that list Hopkinton-based Caliper Life Science's contribution: a robot that could revolutionize the way scientists perform experiments.

“It beat out finding water on the moon,” said Caliper CEO Kevin Hrusovsky. “This is truly a game-changing discovery.”

Artificial Intelligence

Conceived by a British scientist and developed by Caliper, the robot can run an entire scientific experiment with virtually no human intervention. It can form a hypothesis, create a testing method, execute the procedure, analyze the results and revise the hypothesis.

That means more scientific tests can be done faster and with better accuracy.

“Having technology like this allows for a significant amount of additional experimentation and for even greater discoveries down the road,” Hrusovsky said.

Working with robots and some of the world's leading scientists is nothing new to Caliper. The company began in the early 1980s with a specialty focus in robots.

Today, Caliper offers a variety of products in lab automation, imaging technologies and development optimization techniques. The company works with scientists and engineers across the world to make tools that can accelerate the pace of study.

For the robot that Time Magazine cited, the company teamed with Dr. Ross King of Aberystwyth University in Wales, who was studying yeast genes.

“We work with people from Harvard, Stanford and MIT,” Hrusovsky said. “Many of these academics are trying to innovate the next great technology. We’re able to commercialize those great ideas.”

For example, the company has a series of products branded under the name LabChip that are used to study enzymes and test new drugs.

For another product, Caliper scientists isolated the cells that allow fireflies and jelly fish to light up and injected those cells into tumors in a mouse or rat. The tumors then light up, enabling scientists to see the efficacy of various treatments based on the luminescence given off by the tumor. If the tumor dims, chances are the treatment is working.

At any one time Caliper is working on about 10 of projects, but Hrusovsky said the company is always looking to partner with scientists to find a new breakthrough in technology.

Caliper’s revenues have grown from about \$25 million in 2002 to \$130 million in 2009. Preliminary figures released in mid-January show the company could end the year in a cash-positive position.