

UB professor to receive innovation award from Obama

By Jerry Zremski

NEWS WASHINGTON BUREAU CHIEF

Updated: September 18, 2009, 11:39 AM

WASHINGTON -- President Obama on Thursday announced that he will present the nation's top innovation award to a professor at the University at Buffalo who, while working at Greatbatch Inc., invented the tiny batteries that power pacemakers and implantable defibrillators.

Esther S. Takeuchi, a professor in UB's chemical and biological engineering department and in its electrical engineering department, will receive the National Medal of Technology and Innovation at a White House ceremony Oct. 7.

Three other inventors and one company also won the award, and nine others won National Medals of Science. All are renowned in their fields, and some -- like J. Craig Venter, founder of the Institute for Genomic Research, and Francis Collins, head of the Human Genome Project -- are widely known nationwide.

"These scientists, engineers and inventors are national icons, embodying the very best of American ingenuity and inspiring a new generation of thinkers and innovators," Obama said in announcing the list of award winners.

In honoring Takeuchi, Obama is singling out a scientist who holds more than 140 patents, which, UB has said, may be more than any woman in the world.

Takeuchi's most important invention, the silver vanadium oxide battery, is key to the success of cardiac defibrillators, pacemakers and other medical implants now commonly used throughout the world.

"Dr. Takeuchi's innovations have saved and dramatically improved the quality of hundreds of thousands of human lives," the U.S. Department of Commerce said in a statement accompanying the White House announcement.

Takeuchi, an Ohio native who has lived in the Buffalo area for decades, said she was thrilled to hear that she had won the award.

"To receive a medal from the White House, from the president, is virtually incomprehensible," she said. "It's really gratifying to me because you can work hard and do a lot of things, and yet you never really know who's paying attention."

Takeuchi worked at Greatbatch -- the Buffalo company that pioneered the pacemaker -- for 22 years.

"What's really gratifying to me is to not just be able to do fundamental scientific discovery, but then to go the next step and refine that technology into a practical and effective product that improves human lives," she said.

Takeuchi, who lives with her husband, UB chemistry professor Kenneth Takeuchi, in East Amherst, left Greatbatch for UB two years ago.

The university trumpeted the move as one that could boost its Engineering School to new prominence, and the 55-year-old inventor acknowledged that her award could do just that.

"I'm hoping it means great things," she said. "It could help attract students, and maybe encourage young and bright people to do this kind of work. This sort of thing never hurts in fundraising, either."

Takeuchi is the second Buffalo-area scientist to win the award and the only woman to receive the award this year. Wilson Greatbatch won it in 1990.

Previous winners of the National Medal of Technology and Innovation include Apple Inc. founders Steven Jobs and Steve Wozniak, Microsoft founder Bill Gates and Internet pioneers Vinton Cerf and Robert E. Kahn.

In naming this year's winners, Obama said: "Their extraordinary achievements strengthen our nation every day -- not just intellectually and technologically but also economically, by helping create new industries and opportunities that others before them could never have imagined."

Meanwhile, Rep. Louise M. Slaughter, D-Fairport, lauded Takeuchi for inventing a product that saves lives.

"She is an invaluable asset to the University at Buffalo, and I know we will see more great things from her in the future," Slaughter said.

<http://www.buffalonews.com/101/story/799039.html>