

BIOTECHNOLOGY

# Researchers not expecting fast money

*Effect of Obama's stem cell reversal could take years*

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Stem cell researchers said they have a lot of catching up to do after President Barack Obama lifted federal funding restrictions on human embryonic stem cell research Monday, but warned the financial impact in Maryland would not be immediate.

"We're ebullient, but also challenged," said Curt Civin, director of the **University of Maryland Center for Stem Cell Biology and Regenerative Medicine**, whose research has allowed scientists to isolate stem cells. "We feel challenged that we've got to make up in the next two years for eight years of partially lost time and money."

Obama's executive order reversed former President George W. Bush's 2001 ban on using federal funding for embryos to create additional stem cell lines based on his belief such work was morally wrong.

Researchers said the order will have the immediate effect of tearing down the wall between stem cell researchers funded by the state or private money and federally funded researchers.

"Most people do have their time divided between projects, but stem cell researchers

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could not work on a [National Institutes of Health] project," said Valina L. Dawson, director of the Neuroregeneration Program at the Johns Hopkins University School of Medicine's Institute for Cell Engineering. "So students would come in and want to do a side project and they couldn't because we have to be careful and don't want to lose that funding. Now we can work like we normally work."

In addition, researchers can now pool their resources and equipment instead of keeping everything from microscopes to supply closets separate.

"It will make things much more efficient, and we'll be able to do more with what we have," said Dawson.

But while Monday's action will make approximately \$8.2 billion in federal money available to the states for embryonic stem cell research, it could take a year or longer for the NIH to begin awarding grants for the projects. Obama's order did not outline how stem cell research should be overseen, instead giving the NIH 120 days to come up with guidelines.

After the guidelines are approved, then the funding application process can begin — which has researchers saying they don't expect federal money to reach Maryland until next year at the earliest and possibly in as many as three years.

In the meantime, stem cell research supporters hope that state funding will not dry up.

Over the past two years, the Maryland Stem Cell Research Fund, established by the legislature in 2006, has provided more than \$36 million to 82 researchers. But this year, it has 147 applications for funding and is expected to receive \$18 million from the state budget — a 20 percent increase in applicants and \$5 million less than last year to

award.

"What I would hate to have happen is for the state to abandon its commitment," said Karen H. Rothenberg, chair of the Maryland Stem Cell Research Commission, which administers the state funds. "Eighteen million dollars may sound like a lot, but in science it's not."

Don Fry, president of the Greater Baltimore Committee, said that reaction was not likely from the General Assembly.

"It's a major part of our governor's initiative ... and I think that the legislature will recognize that although federal dollars are important, it still needs to demonstrate its seriousness to life science in this region," he said.

But when that funding does become available, Rothenberg said, Maryland is primed to take advantage thanks to the last two years of state and privately funded research.

"Maryland scientists have already started to develop the initial data that will hopefully make them more competitive when federal funding is available," she said. "If you don't have that preliminary data, it's very hard to be able to compete well for NIH money."

Before Obama lifted the ban, states that did not fund stem cell research could only use taxpayer money for research using 21 stem cell lines that were created before Aug. 9, 2001.

"That is kind of like working with the beta version of a computer program," Johns Hopkins' Dawson said.

Maryland biotechnology companies also received a small boost from Obama's executive order Monday. Shares of Rockville-based Neuralstem Inc., which is seeking FDA approval for human studies using adult stem cells, rose 22 percent, to close at \$1.05 a share.

Osiris Therapeutics Inc. in Columbia, which focuses on adult stem cell-based therapies, peaked at \$18.75 per share in the morning but fell 4 cents, closing at \$17.92.