

California's stem cell agency ponders its future

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(AP) -- The creation of California's stem cell agency in 2004 was greeted by scientists and patients as a turning point in a field mired in debates about the destruction of embryos and hampered by federal research restrictions.

The taxpayer-funded institute wielded the extraordinary power to dole out \$3 billion in bond proceeds to fund embryonic stem cell work with an eye toward treatments for a host of crippling diseases. Midway through its mission, with several high-tech labs constructed, but little to show on the medicine front beyond basic research, the California Institute for Regenerative Medicine faces an uncertain future.

Is it still relevant nearly eight years later? And will it still exist when the money dries up?

The answers could depend once again on voters and whether they're willing to extend the life of the agency.

Several camps that support stem cell research think taxpayers should not pay another cent given the state's budget woes.

"It would be so wrong to ask Californians to pony up more money," said Marcy Darnovsky of the Center for Genetics and Society, a pro-stem cell research group that opposed Proposition 71, the state ballot initiative that formed CIRM.



Last December, CIRM's former chairman, Robert Klein, who used his fortune and political connections to create Prop 71, floated the possibility of another referendum.

CIRM leaders have shelved the idea of going back to voters for now, but may consider it down the road. The institute recently submitted a transition plan to Gov. Jerry Brown and the Legislature that assumes it will no longer be taxpayer-supported after the bond money runs out. CIRM is exploring creating a nonprofit version of itself and tapping other players to carry on its work.

"The goal is to keep the momentum going," board Chairman Jonathan Thomas said in an interview.

So far, CIRM has spent some \$1.3 billion on infrastructure and research. At the current pace, it will earmark the last grants in 2016 or 2017. Since most are multi-year awards, it is expected to stay in business until 2021.

So what have Californians received for their money so far?

The most visible investment is the opening of sleek buildings and gleaming labs at a dozen private and public universities built with matching funds. Two years ago, Stanford University unveiled the nation's largest space dedicated to stem cell research - 200,000 square feet that can hold 550 researchers.

There are no cures yet in the pipeline and CIRM has shifted focus, channeling money to projects with the most promise of yielding nearterm results. Most of the money early on was funneled toward learning the basics and recruiting scientists.

One researcher lured to California was Paul Knoepfler, a stem cell and cancer expert who was deciding between positions at University of



California, Davis and an East Coast school.

"I was getting more interested in embryonic stem cells and I knew California would be a more friendly climate for that," said Knoepfler, whose work focuses on why some embryonic stem cells trigger tumor growths.

Knoepfler favors another bond measure to keep CIRM afloat, but recognizes the average Californian may disagree.

Scientists have prized embryonic stem cells since their discovery over a decade ago because of their potential to transform into any cell of the body. If researchers could harness these flexible cells, they might create replacement tissues to treat diabetes, spinal cord injury and other debilitating conditions.

For all the medical promise that <u>embryonic stem cells</u> hold, the payoff will take years and it's not surprising that there are still no treatments on the market. Their use has been debated because human embryos from fertility clinic leftovers have to be destroyed to harvest the cells.

When Prop 71 was approved, there were limits on federal spending to a small number of cell lines made before 2001. The restrictions, enacted by the Bush administration, were lifted eight years later by President Barack Obama in 2009 - a move that expanded the number of stem cell lines available for government funding. With that hurdle gone, some question whether California should stay in the stem cell business once funding ends.

Some observers say CIRM lost precious time because legal challenges prevented it from getting off the ground for nearly two years.

"The initial hope was that CIRM would give California a head start," and



ramp up <u>stem cell research</u>, said Roger Noll, professor emeritus of economics at Stanford.

Despite the delay, Noll said CIRM's legacy has yet to be written.

"CIRM spent a lot of money and there's a lot of stuff going on, but it's too early to know whether it was worth it," Noll said.

While CIRM has found its stride, it is a victim of its early supporters' hype, said John Simpson of Consumer Watchdog.

"The impression you got was, if you just passed this bond measure, Christopher Reeve will be jumping out of his wheelchair and walking next week," said Simpson, referring to the late paralyzed actor who appeared in TV ads backing Prop 71. "They're having to live down the super high expectations that they raised."

Since handing out the first pot of money in late 2006, CIRM has been dogged by questions about its grant-awarding process with critics charging that many of the awards have gone to universities associated with the agency's board. CIRM says all proposals go through peer review and board members with a stake recuse themselves. The institute employs 50 people and has an operating budget of about \$18 million.

CIRM suffered a blow last year when Geron Corp. abandoned the stem cell field to concentrate on its lucrative cancer therapies instead. CIRM had loaned the company \$25 million to support its spinal cord injury trial, the first embryonic stem cell trial approved in the U.S.

Though Geron paid back the amount spent plus interest, the episode put increased pressure on CIRM to support work with more practical payoff.

David Jensen, who runs the blog California Stem Cell Report, said



Californians have benefited, but whether it will be worth the \$6 billion the state has to pay back remains unclear.

"The agency's responsibility is now to get the biggest bang for the buck, which is no easy task given the tentative nature of much of the science involved," he said in an email.

Some think CIRM has left a mark whether or not it will exist in the future.

Its "legacy will be felt in part by the stimulus that it has had on stem cell" research in California, said Fred Gage of the Salk Institute for Biological Studies.

More information: <u>http://www.cirm.ca.gov/</u>

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