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Biotech gets \$720 million in taxpayer money, but the miracle economic cure isn't quite here yet

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Ten years after then-Gov. [Jeb Bush](#) laid out plans to bring tens of thousands of [biotechnology jobs](#) to South Florida, the cluster is taking shape – just not as quickly as some had hoped.

Critics are asking what kind of return the state has seen on its \$719.7 million investment to fund biotech organizations. They dreamed of thousands of well-paid scientists elevating the economy and curing the diseases that plague the senior-heavy state.



We're not there yet, but we've made progress.

Scripps Florida and the Max Planck Institute for Neuroscience have recruited elite scientists to Jupiter, the [University of Miami](#) Life Science & Technology Park is buzzing with exciting young companies, and local universities have grown their life science research programs.

It's still hard to call this a cohesive cluster. Major obstacles remain for biotech company growth, including workforce skills, available real estate and venture capital funding.

Scripps and biotech recipients of the Innovation [Incentive Program](#) (IIP), a combined \$719.7 investment, have created 1,345 jobs. They are required to create 971 more in the future.

Four out of the nine life science projects missed interim job requirement goals, the state says. For instance, the University of Miami's Hussman Institute for Human Genomics has created 175 of

the 194 required [jobs](#) and received \$59.2 million of the \$80 million in state incentives. It must reach 296 jobs to meet its final goal and collect the rest of the money.

The university recruited more than 200 research faculty and receives over \$350 million a year in grant funding, said Dr. [Norma Kenyon](#), vice provost for innovation. The Hussman Institute made UM more competitive for research [grants](#), she added.

UM cut nearly 800 jobs from its medical school in mid-2012, mostly in administration and non-funded research.

[McDonald Hopkins managing member](#) Raquel “Rocky” Rodriquez, Bush’s former general counsel, said the IIP contract didn’t default institutions for not meeting the jobs goal if it happened because of factors beyond their control, such as cuts in federal funding. Part of their disbursements are withheld until they catch up on job requirements.

For the 12 months ended May 2012, UM received \$300,000 in IIP funds instead of the budgeted \$10 million because it missed the jobs goal. UM spent \$92.3 million funding the Hussman Institute over its first five years and attracted \$65.1 million in additional grants.

Rodriguez would like to see the state revive the IIP, which ended in 2012, and build upon the research institutions it has attracted instead of chasing other industries.

“After Bush left office the focus on building the biotech industry in Florida was lost,” Rodriguez said. “People wanted to move onto other things. They wanted [solar panels](#), green energy and film. It requires consistent effort.”

Big bio dreams at the start

It started on Oct. 10, 2003. The state was coming out of the 2001 recession that battered the tourism industry and exposed Florida’s vulnerability to fickle travelers and low-wage jobs. Bush had a vision to attract the high-wage biotech sector, a life-saving industry that is a major economic force in San Diego, San Francisco and Boston.

The governor’s announcement that the La Jolla, Calif.-based [Scripps Research Institute](#) would open a campus in Palm Beach County was a game-changer.

The numbers floated to help the nonprofit were eye-popping: \$310 million from the state and \$210.1 million from Palm Beach County.

The payoff? By year 15, the Scripps campus on Mecca Farms was expected to have 2,800 [jobs at Scripps](#), 3,700 jobs at spinoff companies and an additional 44,000 jobs at companies doing business with them, according to a study by [J. Antonio Villamil](#), president of Coral Gables-based Washington Economics Group. The cumulative economic impact would be \$6 billion. The former Bush economic adviser did not comment for this report, and neither did Bush.

Lagging projections

We're growing, but well behind the pace Villamil had expected.

Florida is one of seven states to gain more than 5,000 bioscience [jobs](#), experiencing 19 percent growth from 2001 to 2010, according to the Battelle/BIO State Bioscience Industry Development Report in 2012. It recognized 78,000 jobs and 5,102 companies, ranking it in the top quintile of states. The average annual wage was \$71,150.

More recently, the Florida Department of Economic Opportunity, using a more restrictive definition than the Battelle study, said bioscience jobs increased 0.9 percent in the two years ended March 31 to reach 25,329.

Somewhat disappointing: [Employment](#) was down by 2,446 since the December 2008 peak. Even Palm Beach County, where the bulk of the public money was spent, saw a 2.8 percent decline in life science jobs since 2008.

FDEO Executive Director [Jesse Panuccio](#) said the context is that Florida lost 830,000 private-sector jobs during the recession. Some subsets of biotech have grown very well, including research and development.

[Business Development Board of Palm Beach County](#) President and CEO [Kelly Smallridge](#) said it's hard to gauge the development of the life science cluster during the recession. Biotech companies didn't have the capital to open new facilities, and the venture capital market slowed to a crawl.

"I wouldn't create the perception that we are bursting at the seams with [jobs in](#) this industry," she said.

Smallridge said the cluster isn't anywhere near Villamil's projections, but the county was starting from scratch, as far as infrastructure, venture capital and education.

"We are building from the ground up, so we have a ways to go for our maturity and the development of our ecosystem," Smallridge said.

FDEO found the number of bioscience [companies in Florida](#) increased by 417 since 2007 to reach 1,078 in March. The [University of Florida's](#) BioDatabase found 219 biotech companies in the state this year, a 60 percent increase from five years ago. The South Florida/Treasure Coast region has the most, with 53.

That's well above the 5 percent national growth in biotech companies found by an [Ernst & Young](#) study.

FDEO projects annual statewide growth of 0.9 percent, or 513 jobs, in the biosciences industry through 2021 – a big disappointment compared to Villamil's projection.

Then again, it's still early in the game.

“The state made investments knowing [that], over 20 years, there would be some payoff,” [Enterprise Florida](#) President and CEO/Florida Secretary of Commerce Gray Swoope said. “You are seeing Florida now considered a serious contender in the life science industry in any measure.”

Swoope said we shouldn’t look only at the [direct jobs](#), but the overall economic impact. The total employment impact was 205,798 jobs, according to the Battelle study.

The presence of Scripps and Max Planck has encouraged homegrown companies to expand and do spinoffs, Smallridge said.

Dyadic International, which has been in Jupiter for years, never would have raised millions of dollars on the public market and struck licensing deals with major clean energy companies without Scripps helping advance its technology, CEO [Mark Emalfarb](#) said. Having Scripps at Abacoa kept [real estate](#) values from plummeting further, and brought business to restaurants and [hotels](#), he added.

Smallridge admits Palm Beach County hasn’t landed a big biotech firm yet.

“They aren’t going to be moving here. It was unrealistic,” said [Phil LoGrasso](#), a professor in the molecular therapeutics department at Scripps Florida. “Expectations have to be very modest, in terms of the business and companies that are going to be germinated here.”

Missed opportunities

The massive projections were based on putting Scripps on the nearly 2,000-acre Mecca Farms, with much of it reserved for 8 million square feet of biotech space, plus homes and mixed-use developments. It could have been a research city.

A lawsuit from environmentalists forced the project off Mecca Farms and onto [Florida Atlantic University’s](#) Jupiter [campus](#), with less developable land around it. The delay slowed Scripps’ growth, as its scientists were packed like sardines in a temporary lab for much longer than intended, said [Peter Hodder](#), senior scientific director at its Lead Identification Translational Research Institute and one of its earliest Florida hires.

Despite the delay, Hodder said Scripps is better off in Jupiter. It’s closer to Interstate 95 and a nice place to live, he said. Plus, the real estate meltdown could have stalled private development on Mecca Farms.

Smallridge said Palm Beach County would have been further along in the development of the cluster if Scripps had stayed on Mecca Farms. The plan was to give land there to other research organizations to entice them to come, then add a university consortium building and medical centers.

Palm Beach County could have had four research institutions instead of two, Smallridge said. It was the first choice of the Sanford-Burnham Medical Research Institute, but Smallridge couldn’t

ask the county commission to consider it in the midst of a political firestorm over Scripps' location. It ended up at Orlando's Lake Nona development, a massive medical city that Smallridge says resembles the vision for Mecca Farms.

The county commission rejected the Torrey Pines Institute for Molecular Studies, so Port St. Lucie gave it an incentive deal instead.

“People want to criticize us for not having the amount of growth expected, but we landed Scripps and Max Planck – and they were the largest,” Smallridge said. “Had we had Mecca Farms, we would have had a little bit better negotiating position, and had all four of those sitting in Palm Beach County.”

Smallridge said the BDB is courting two life science companies.

Without one massive site, there are numerous vacant parcels with the potential for biotech space, and Smallridge said many property owners have approached her with questions about the industry's requirements.

The only significant private lab built near Scripps was the Alexandria Innovation Center. The 46,000-square-foot lab/research and development building was completed in 2007, but Smallridge said it had trouble filling up because it opened too early for Scripps to generate enough spinoffs. Much of that building has been converted to professional offices.

“The next person needs a financially attractive model because the startups don't have the capital to pay top dollar for rent,” she said.

Scripps to be self-sustaining

[Dawn Johnson](#) was a post-doctoral fellow at UM in 2002, and left just before the Scripps announcement because there weren't many employment opportunities. After a career at the [National Institutes of Health](#), she returned to Florida in 2012 as senior director of scientific operations for Scripps Florida. She found the number of biotech companies here has blossomed, and there are more job opportunities in the field.

“It's gaining momentum, but it's still got a long way to go,” Johnson said.

Scripps has 525 employees, and is on target to meet its goal of 545 by year-end, she said.

“We had some significant challenges,” Johnson said. “When the recession started, that didn't help us at all. That impacted people's relocations and ability to move around the country.”

The last check from Florida is to arrive in December, and Johnson said Scripps would be self-sustaining after that. The \$18.8 million in state funding in Scripps' 2013 budget was exceeded by the \$60.9 million it received from federal and [private grants](#). That includes 40 licensing agreements, some which generate fees or stock from products in development.

The \$355 million in federal and private funding Scripps Florida has attracted was spent on jobs, equipment and services, causing an enormous economic ripple effect, Johnson said. People should also consider the economic and quality of life impact if Scripps develops a treatment for a disease, she added.

Another impact came from Scripps' Kellogg School [graduate program](#) – ranked seventh by U.S. News & World Report in both biological sciences and chemistry. It has 40 students and has awarded 14 Ph.D.s, said [Bill Roush](#), associate dean of the [graduate program](#). Many have gone on to work for major drug companies or do post-doctoral training at top universities, he added.

“The vision and the intent of what the institute wanted to accomplish has worked,” Roush said. “The environment for biotech is certainly far brighter than it was nine years ago when I arrived.”