

# Superscience me!

Is it a bird? Is it a plane? No, it's Boston's Supercluster!

First, there was the biotech cluster, a grouping of companies and institutions in close proximity, interrelated and linked to life science entrepreneurship. Then there was the biotech meta-region, linking cities and regions with the desire of turbo-charging venture creation. Now there is Supercluster, a conglomeration of world-class science, talent, mentors and funding, quality of life, laboratory and office space, inter- and intra-institute collaboration, established biotech firms and support services, access to patients and markets, and last but by no means least, tax incentives. From the floor of the Biotechnology Industry Organization's (BIO) annual meeting in Boston, Governor Deval Patrick and Mayor Thomas Menino announced that Massachusetts's Supercluster will be getting a \$1 billion secret weapon to fight those clandestinely working to undermine the state's lead in biotech.

That Supercluster was brought to life at Planet BIO—a utopian world where everyone wears rose-tinted glasses and business suits, investor confidence is high, consumer resistance low and no one worries about the sorry state of biotech startup creation and sustainability—is no surprise. By gubernatorial announcement, Supercluster's special powers include, but are not limited to: financial muscle to lift ideas out

of academia and propel them into the commercial world; superscience from the centers of academic excellence (Harvard, MIT and hundreds of other research institutions); invulnerability to animal rights activists and ecoterrorists; and above all, superhuman vision that will allow the local biotech sector to prosper far into the 21<sup>st</sup> century.

While former Massachusetts governor, Mitt Romney, has performed a volte-face on stem cells as part of his makeover as a Republican presidential candidate, Deval Patrick is demonstrating through Supercluster funding that he is wholeheartedly behind the state's premier industry.

Patrick's goal is to make a massive investment in stem cells and RNA interference (RNAi) technology. Some \$500 million for his program will come from taxes, with a similar amount raised by a bond issue. Half the sum will be used for facilities and equipment, \$250 million will be used for tax breaks (to create jobs in biotech companies, which already employ one in seven Massachusetts workers), and the rest will bankroll grants, training and fellowships. Patrick hopes the private sector will provide another \$250 million in matching funds.

The centerpiece of the initiative is a stem cell bank at the University of Massachusetts Worcester campus, and is intended to distribute and share the more than 25 human embryonic stem cell lines generated by the Harvard Stem Cell Institute and other local research centers. According to insiders, ~\$66 million is earmarked for stem cell facilities and \$38 million

for an RNAi therapeutic center, headed by last year's local Nobel prize-winner Craig Mello.

It's an open secret that this billion dollar initiative is designed to help Supercluster defeat Boston biotech's nemesis, CIRM—The Californian Institute for Regenerative Medicine. CIRM was the multibillion dollar 'gorilla in the room' when Patrick made his announcement. And it is CIRM that threatens to suck companies, people and jobs out of the Boston metropolis' heart and allow California to usurp the Massachusetts area's crown as the number-one biotech cluster.

Surrounded by a posse of House, Senate, medical and biotech leaders, however, Patrick was having none of this. He threw down the gauntlet

to CIRM, saying he wouldn't let another state steal what has taken root! "My administration will compete for every single job available," he thundered.

Will Supercluster triumph over CIRM? Who knows? But in the interests of balance, and without wishing to deflate the Governor's important message too severely, it's fair to point out that Massachusetts's investment will be spread over ten years and therefore represents just a fraction of the revenue or profit generated each year by the local companies: Biogen-

Idec and Genzyme between them generated \$5 billion in revenue and over \$500 million in profit in 2006.

One thing is for sure, both Massachusetts and California will continue to be the major centers of biotech economic power in the US for the foreseeable future. The most important message for other US states, and for would-be biotech clusters everywhere, lies not in the detail of specific Supercluster or stem cell proposals, but in a much more subliminal notion—the notion that these two states can each make a billion or multibillion dollar bet on the future of biotech without taking much risk.

There is little risk in financing the Boston Supercluster with public money, because Boston already has all the necessary elements and experience necessary for a life science sector. The stem cell case and CIRM might be seen as riskier, but California has already shown that it can grow high-quality employment in healthcare and agricultural biotech.

California and Massachusetts are not throwing money at a problem. They are investing it in a proven solution. Elsewhere, however, the proposition is not proven. Without a similar business and science environment, billions of dollars or Euros put into biotech may be put to better use in other business sectors. The simple fact is that a billion dollar biotech Supercluster is unlikely to fly in most parts of the world. 

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