

Local biotech giant reaches out to academia

A Biogen Idec executive talks about his company's new incubator for small biotech spinoffs and how the drug industry needs to change the way it does R&D.

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Large biotech and pharmaceutical companies have a lot to worry about: fewer of their drug candidates are making it through clinical trials and getting regulatory approval, despite their investment of billions of dollars into research and development. So companies are trying new approaches to get more molecules into their product pipeline. Many have set up research centers next door to major universities in Boston and Cambridge in hopes of collaborating more with academic labs. They're also buying up smaller biotech companies and partnering with others.

Cambridge's Biogen Idec is trying a different approach. Earlier this year, it started up an incubator, where it will provide office and lab space (across the street from its headquarters), funding, access to equipment, business support, and drug development expertise to small biotech startups with promising drug-like molecules. The goal is for an incubator company to have its molecule well on its way towards clinical trials within two to three years, at which point Biogen Idec would buy the company and take that molecule into clinical trials.

Rainer Fuchs, executive director of the [Biogen Idec Innovation Incubator](#), plans to recruit two companies by the end of this year and has been visiting local universities and labs, searching for researchers working on molecules that could one day become Biogen Idec's next drugs. He recently spoke with *Nature Network Boston* about the incubator and how it's one example of how drug companies need to change the way they develop drugs.



Biogen Idec's Rainer Fuchs heads up a new incubator for small biotech companies. (Source: Biogen Idec)

Why did you set up this incubator?

We had been talking for a while about new ways of reaching out to the academic community and getting our hands on innovation earlier on. We have also been talking about the need for us to try some bold experiments and not get stuck in traditional ways of thinking. So we thought that the incubator approach would be a good way to get us access to interesting drug candidates earlier on and allow us to move into emerging biology more rapidly than by trying to build up similar capabilities in-house.

What stage of research projects are you looking for?

We're not interested in really basic discoveries. If someone comes along and says, 'I've found this interesting new pathway and I need help screening compound libraries against that target', that's too early for us.

What we want to see as a starting point is some sort of crude molecule that has the potential to become a drug. We're not expecting to see true drug-like activity. But we'd like to find someone who has found a molecule—and that could be from screening public compound libraries—and has demonstrated that hitting a pathway with that molecule has an interesting therapeutic effect in an animal model.

What disease areas do you want the incubator companies to be in?

On the one hand, it would be nice to stay in our core areas of neurobiology, immunology and cancer, but we really want to push the boundaries. We see the incubator as a way to get into new, emerging areas of biology. So we're looking for ideas that go beyond where we are internally.

More broadly, what changes do you think need to happen in the drug development industry to improve R&D productivity?

In big companies, there is inevitably a higher level of risk aversion in research than in startup companies. There's nothing wrong with internal R&D research at big companies. You need a strong internal R&D base to be able to evaluate external opportunities.

But if you hope that internal R&D programs alone will create a sustainable product pipeline—I'm not sure that's a reasonable assumption. I believe we need mechanisms that complement internal R&D programs and can help buffer the inevitable spikes and troughs in productivity.

The industry has really fallen short in coming up with innovative ways of doing early stage R&D, in terms of balancing the risks of internal research with flexible access to external ideas.

There are a few examples of companies trying new ways of doing this. But there's not enough. I think we'll probably need more regulatory pressure before people begin to think of more dramatic ways of changing the way we do business. There are other industries that have evolved into more collaborative models and I think this is inevitable for us.