

Emerging Drug Developer: BrainCells

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BrainCells' development IQ wins \$30M in venture funding

Remember when they used to say that you'd have all the brain cells you ever could have when you reached adulthood?

Turns out, they were wrong.

San Diego-based BrainCells has set out to find existing drugs that can spur the development of new neural stem cells, building on research that demonstrates that the process can have a therapeutic effect on a host of diseases of the central nervous system, including major-market targets like depression, anxiety and schizophrenia. And its platform technology is geared to spotlight the most likely drug candidates from a slate of therapies that have pushed past early-stage safety trials for other indications -- a strategy that allows researchers to advance swiftly into mid-stage trials while striking up new research and development pacts with other biotech companies.

"Rather than start new targets and new chemistry, we believe there are a number of mechanisms in a number of compounds that could be neurogenic," says BrainCells CEO Jim Schoeneck.

That's proven to be a winning argument for a high-profile group of venture funds. This morning BrainCells will announce its second round of \$30 million, with MedImmune Ventures joining Bay City Capital, Oxford Bioscience Partners, Technology Partners, Pappas Ventures and Neuro Ventures in the round. Their money goes to the mid-stage development of BrainCells' lead candidate--BCI-540--and the hunt for more therapies that can advance quickly into Phase II.

The scientific research on the company's neurogenesis platform dates back more than nine years, says Schoeneck, "but the technology for the company really isn't that old, maybe five years." Less than two years ago, BrainCells in-licensed BCI-540 from Mitsubishi Pharmaceutical, shortly after the company was founded.

"Mitsubishi had done the Phase I work and had taken it into Phase II for Alzheimer's." And now BrainCells has the cash on hand to begin dosing patients in a mid-stage trial for depression and anxiety.

Some 70 different mechanisms may be neurogenic, says Schoeneck. And the company has been going back to do the basic research needed to determine if about a dozen different compounds could be used in the therapeutic process.

“In the hippocampus part of the brain, in patients with depression and anxiety, there’s a natural turnover of cells in this area,” explains Schoeneck. “The theory is that it deals with memory formation and transference.” But without enough cells at work, circuits don’t form and the natural chemistry at work is derailed, leading researchers at Columbia University to tie depression and anxiety and other CNS illnesses to the condition.

“SSRIs and Prozac crank this process up,” says Schoeneck. “We’re finding drugs that bring this back up but don’t rely on the serotonin mechanism. And we’re hoping to avoid side effects as well as reach patients who are not responding to SSRIs--a new generation of drugs for these conditions.”

Other developers have been intrigued by BrainCells’ approach. The developer has already inked deals with two other companies that want to employ BrainCells’ platform technology.

“In the case of Lundbeck, we focused on novel targets, things they’ve identified as targets that are unique,” says Schoeneck. “They’ve filed the IP, and they’re looking to see if those targets are neurogenic. BrainCells wouldn’t look in that area for several years.

“Organon is different. It’s a screening collaboration.” BrainCells is taking 50 of their shelf compounds and screening them to see if they are neurogenic. In that partnership BrainCells is retaining co-development rights for any promising discoveries.

The developer is also advancing its own programs.

In a short period, Schoeneck adds, researchers will start dosing about 90 patients in Phase II. Data, he adds, is probably a year out. Beyond that, there should be at least one other compound in the clinic by year’s end.

The new venture money is enough to get to “multiple Phase II results” and a couple of more years of operation. After that, he says, licensing deals could help fund the next stage, or “we could look for some sort of M&A type of transaction.”

That’s an area Schoeneck knows something about already. In 2004 he was the CEO of ActivX BioSciences when it was sold to Kyorin. But it’s a little too early to know which way BrainCells will go, says the CEO, who oversees the work of 25 employees.

Says Schoeneck: “The platform pieces we do in-house and on the development side we have people who do the strategy and oversight and direction, implemented through a CRO.

“I think the opportunity to develop new compounds for these conditions can offer new things for depression and anxiety is an exciting area.” Demonstrating that the platform works as advertised will improve its odds of success.

“CNS can be a tough area,” Schoeneck sums up, “but we hope the platform can stack the odds in our favor.”

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