Published OnlineFirst January 19, 2012; DOI: 10.1158/2159-8290.CD-ND2012-004

Venture Capital Arms Flex Their Muscle

Why big pharmaceutical firms back small biotechs

A few years ago, companies developing solid tumor and hematologic cancer drugs called Smac (second mitochondrial-derived activator of caspases) mimetics hit a roadblock. These companies realized that their molecules, which act like endogenous antagonists for inhibitor of apoptosis proteins, might not benefit as many patients as hoped—and they didn't have suitable biomarkers to distinguish between patients who might be helped and those who wouldn't.

TetraLogic Pharmaceuticals of Malvern, PA, decided to delay clinical studies of its Smac mimetic compounds and return to the lab. John M. Gill, founder, president, and CEO, worried that a less-than-perfect drug would jeopardize his firm. But delaying entry to the clinic was risky, too: A "me-too drug" wouldn't sell nearly as well as the first to market, and his investors were anxious to get there first.

That's when Gill got crucial support from long-time investor Amgen Ventures of San Francisco. The venture capital (VC) arm of pharmaceutical giant Amgen convinced the other investors that it was smarter to wait. A year or so later, TetraLogic identified a biomarker that allows it to target patients most likely to be helped. Now, the tiny 22-person company has tested its molecule in 170 patients and is in phase II trials with a combination therapy including 2 chemotherapeutics.

Nearly all the world's biggest pharmaceutical firms have VC funds like Amgen's, designed to help the companies get involved early in promising research, supplement their own innovation pipelines, and keep an eye on competitors.

REBUILDING THE VC PIPELINE

Twenty years ago, most of the major pharmaceutical companies began closing their VC arms because they had an abundance of new products and didn't feel the need to seed more, says Tracy T. Lefteroff, global managing partner of the VC practice at PricewaterhouseCoopers. Slowly, the number of corporate VC funds has risen again, he said, as blockbuster drugs have come off patent, leaving pharmaceutical companies "scrambling to fill holes in their product pipeline."

There are no industry-wide figures, but a review of company websites suggests that 13 of the 15 largest pharmaceutical companies have their own VC arms, each with tens, if not hundreds of millions of dollars invested.

Lefteroff says large companies have learned that they are not always good incubators of innovation. Small biotechnology companies can be much better, but they're starved for cash, so both large and small firms benefit, he adds.

CONNECTING FOR CANCER

Cancer is a target-rich environment for biotech innovation, Lefteroff says, because there is so much unmet need for effective drugs.

Elaine V. Jones, PhD, executive director of VC for Pfizer Venture Investments of New York, estimates that half the investment requests that come across her desk are cancer related.

Amgen likes the cancer market, says Amgen Ventures' managing director Janis Naeve, PhD, because it's at the front end of personalized medicine. TetraLogic is 1 of 4 oncology companies in Amgen Ventures' portfolio.

However, Ed Torres, managing director of Lilly Ventures, says he thinks VC demand for new cancer drug candidates has slipped in the past few years, for 2 reasons: "First, pharma companies, and increasingly large biotech companies, have more in their own cancer pipelines than they can afford to fund." Second, he says acquirers are frequently willing to wait until private companies generate sufficiently advanced clinical data before wanting to buy the asset.

Torres says that interest is still strong for drugs with particular promise. He cites a 2011 deal by Genentech of South San Francisco, CA, to buy exclusive rights from Forma Therapeutics in Boston to a small-molecule program against a single, undisclosed cancer target. "For very hot targets, very interesting deals can be done with pharma," he says.

The big companies also sometimes get behind the same startups as their rivals. Pfizer Venture Investments joined Amgen Ventures 2 years ago to invest in TetraLogic, impressed, Jones says, by the small company's science and leadership. Both Pfizer and Amgen have observer seats on TetraLogic's board.

These investments aren't always successful. Drugs don't live up to their initial promise, and early investors don't always win acquisition deals. Pfizer Venture Investments has exited 5 of the 22 investments it has made since its 2004 formation, Jones says. But Naeve, Torres, and Jones all say they believe the investments are worth the risk.

The big corporate backing is obviously a benefit for startups, too. The support TetraLogic receives from Amgen and Pfizer, Gill says, "creates the financial base that keeps you from being vulnerable and exploited by new investors or some company that says, 'Okay, let's see if we can buy it on the cheap.'"
—Karen Weintraub ■

SEEKING STARTUPS

Major pharmaceutical companies are a significant source of capital for biotechnology startups. Here are some of their venture subsidiaries with publicly disclosed funding levels.

- Amgen: Amgen Ventures has $100 million in its investment portfolio.
- AstraZeneca: MedImmune Ventures has a $400 million portfolio.
- Eli Lilly: Lilly Ventures has $200 million under management.
- GlaxoSmithKline: SR One has invested more than $600 million since its 1985 founding.
- Merck: Merck Global Health Innovation Fund has $250 million in investments.
- Novartis: Novartis BioVentures Ltd. has invested $750 million in more than 65 companies.
- Pfizer: Pfizer Venture Investments invests $50 million a year in both new and ongoing relationships.
- Roche: Roche Venture Fund has allocated more than $500 million for investments in life science companies.

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CANCER DISCOVERY

AACR American Association for Cancer Research

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Cancer Discovery 2012;2:199. Published OnlineFirst January 19, 2012.