Traditionally venture capital and big pharma have acted like dysfunctional parents—they only communicate through their biotech children. There is a growing recognition, however, that the parents need to talk more, for the children’s good, if not their own.

Unofficial communication channels between venture capitalists and pharmaceutical executives are already thriving in certain areas of the country. Kendall Square in Cambridge, Mass., for example, has pharma powerhouses and emerging biotech companies adjacent to Boston’s vigorous venture community. The juxtaposition of the two groups has created a fertile breeding ground for cross-pollination.

By contrast, San Jose and San Diego are home to both biotechs and VCs, but major international pharmaceutical companies have not packed up and moved there en masse. Also, Pharmaceutical Row of New Jersey still needs to look north to New York for most of its biotech and venture capital opportunities. It would seem that propinquity encourages better communication.

But major pharmaceutical companies need the innovation of smaller, nimbler biotech companies, as over 20% of marketed pharmaceutical products in 2003 resulted from in-licensing. Biotechs also need venture capital, which pumped more than $5.1 billion into the domestic life sciences sector last year alone. Indeed, there are a number of reasons why venture capital needs big pharma, and vice versa—if only for the benefit of their biotech offspring. These factors may be driving the increase in communication.

For venture-backed biopharmas, strategic alliance payments are often the only realistic source of pre-product revenue. In the biopharmaceutical industry, even rare success stories can require more than a decade, plus hundreds of millions of dollars, to bring a product to market. Platform technology companies toyed with the “fee for service” model, using their proprietary drug screening technologies to generate some cash while they hunted for their own proprietary drug candidate. However, this model rarely could generate revenue significant enough to fund ongoing research and development—unless the screening technology was itself novel enough to become the focus of a strategic alliance in its own right, in which case the “fee for service” approach became moot.

Deep Pockets

Venture capitalists are aware that the millions of dollars offered by pharma in signature payments, licensing fees and preclinical milestones represent their portfolio companies’ most realistic near-term revenue opportunities. Equity investments by pharmaceutical companies in their smaller partners also ease the funding pressure on VCs. The value of these investments is often primarily symbolic, since the stock purchase piece of a pharma alliance may constitute only a small percentage of the announced potential milestone and royalty payments. Nonetheless, it is cash in hand, while the milestones and royalties are speculative.

The value of pharmaceutical strategic alliances to VC portfolio companies has become more obvious as pharma look to earlier-stage deals. Conventional wisdom holds that major pharmaceutical companies prefer to collaborate on developing compounds already in Phase III clinical trials. Despite that, many significant biotech-pharma deals in the past year focused on early-stage, preclinical compounds. Each of the following collaborations that drove IPO filings—Alnylam/Merck, Myogen/Novartis and NitroMed/Merck—were early-stage deals.

Serious Commitment

There is further evidence of pharma’s renewed commitment to early-stage research. In 2003, Novartis established a single hub in Cambridge, Mass., integrating all its worldwide early-stage research and development initiatives. Astra-Zeneca has set up Enabling Technology, Science and Information Centers at certain of its R&D sites to apply novel information science and other technologies to pre-clinical
drug discovery efforts. This trend is a boon to venture capitalists backing younger companies.

A generous deal from a major pharmaceutical company lends weighty credibility to a biotech IPO candidate. The absence of biotech IPOs in 2002 and the first half of 2003—down from 70 IPOs in that sector during 2000—badly hurt venture capitalists. The 32 life sciences IPOs between June 2003 and February 2004 have not performed dramatically well, but their occurrence has sparked cautious optimism that the window is opening. As venture capitalists groom the best of their portfolio companies for a possible public offering, they know that a significant strategic alliance with a Top 10 pharmaceutical company can set the stage for a successful IPO.

For example, Alnylam Pharmaceuticals Inc., which develops therapeutics that interfere with RNA to shut off harmful genes, announced a deal with Merck in September 2003, representing the first pharma-biotech RNA strategic alliance. The deal positioned Alnylam for filing its registration statement in February 2004 for an $86.25 million IPO.

Myogen Inc. develops drugs for chronic heart failure and other cardiovascular diseases by targeting the genes, proteins, and signal pathways involved in heart muscle disease. New Enterprise Associates owns some 30% of the company. Myogen held a $70 million IPO in the last week of October 2003. Two weeks earlier, Myogen announced a research collaboration with the Novartis Institutes for BioMedical Research, giving Novartis exclusive rights to license new drug targets and product candidates for cardiovascular disease developed in the collaboration.

Another example is NitroMed Inc., which develops nitric oxide drugs for heart failure. One of its drug candidates, BiDil®, specifically targets heart failure in African-Americans. In January 2003, NitroMed entered the initial research phase of a collaboration with Merck to develop nitric oxide-based COX-2 inhibitors, garnering commitments of up to $350 million in research and development payments from Merck. NitroMed's $66 million IPO became effective in late 2003. The benefits to venture capitalists of communicating with big pharma about their promising portfolio companies are obvious. The benefits go both ways, however. Major pharmaceutical companies are faced with a glut of licensing proposals from eager biotechs—several thousand proposals a year, according to one overworked business development and licensing chief.

Selective Weeding

The problem becomes one of weeding out the few great from the many good. While decisions are usually made with an eye toward the needs of a particular big pharma pipeline, at least one pharmaceutical strategic alliance head confirms that he is in regular communication with key VCs to locate the best opportunities. ‘They tell me what they have, and I listen, because I know they know the market,’ he says.

Even apart from the fact that some of the major pharmaceutical companies, like Novartis, have their own venture capital affiliates, there is increasing cross-pollination among the transactional decision-makers in these two industries. For example, Oxford Bioscience Partners paid respect to the pharmaceutical industry in 2003 when it brought aboard several major players with big pharma roots, such as Dr. Ellen Baron, whose experience includes 20 years managing strategic alliances at Schering-Plough.

In the opposite direction, several of the biggest pharmaceutical companies have engaged former venture capitalists as consultants to advise on selection of biotech deals.

Outlook

Will the increased interchange between pharma and venture capital lead to broader deal opportunities? Or will pharmaceutical companies establish preferred provider relationships with particular venture capital firms? The research collaboration chief at one pharma routinely inquires as to which VCs have invested in any biotech he is considering as a strategic partner. ‘It’s definitely one criterion for selection,’ he says. ‘We’ve seen the track record of some VCs. If they have a reputation of running the company into the ground, we don’t want to do alliances with their portfolio companies, because we see trouble for the companies ahead, and that’s going to impede the progress of the science. On the other hand, a company backed by great VCs is almost certainly going to be a better partner for us.’

Last year, pharmaceutical companies sought to be the biotech industry’s “partner of choice.” Now the partners of choice may be determining the VCs of choice.

Eileen Smith Ewing is a partner in the law firm of Kirkpatrick & Lockhart LLP. She leads the firm’s Life Sciences Practice Group.

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