

nature biotechnology

VOLUME 20 • NO 9 • SEPTEMBER 2002

Changing partners

Despite profits in the billions of dollars, big pharma wants even more. Even the giants of the industry, such as Pfizer, claim they have to be bigger to do it better and faster (see p. 857). For companies with an increasing number of existing products going off-patent and few new products in the pipeline, consolidation is a simple and quick fix for sustaining profit growth. Unfortunately for biotechnology, it may also signal that the environment for alliances and/or licensing agreements with the main pharmaceutical houses is about to become more hostile.

The new Pfizer company, formed in July by its takeover of Pharmacia, has a whopping \$41 billion in projected yearly revenue, dwarfing the income of its closest competitor, GlaxoSmithKline. And it will spend \$7 billion—almost half the total budget of the US National Institutes of Health—on R&D. The problem is that it also plans to save about \$6 billion by 2006 through judicious cost cuts, many of which are likely to be made in early-stage projects involving biotech companies (Pfizer has around 510 existing R&D collaborations, according to its 2001 annual report).

This would hardly be a serious problem if funding were not currently in such short supply for the biotech sector. Public markets have remained firmly ill-disposed to biotechnology companies in 2002, creating an environment that has not been helped by several high-profile disappointments, including Corixa's Bexxar cancer drug, Abgenix's

ABX-IL8 treatment for rheumatoid arthritis, and the widely publicized debacle of ImClone's Erbitux treatment for cancer. Most publicly traded companies are now trading at a fraction of their 52-week highs, with little hope of new cash. At times like these, funding from big pharma collaborations often represents the lifeblood for many young biotechs.

But, as always, there are reasons for optimism. In 2001, for example, 440 alliances were formed between biotech and big pharma companies, the largest number in over 20 years of collaborations. This value has retained a positive and constant slope over the past five years, and most importantly, pharma is highly unlikely to scale down any important biotech partnerships, as these have proven extremely fruitful in the past. According to Recombinant Capital (<http://www.recap.com>), GlaxoSmithKline counts 5 biotech-derived products among its top 33 therapeutics; Johnson & Johnson has 2 among its top 10 therapeutics; Eli Lilly 3 among its top 10; and the new Pfizer-Pharmacia company has two among its top-selling products.

If increasing consolidation in the pharmaceutical industry does curtail investment in early-stage biotechnology companies, we predict it will be only temporary. Although this is not a hard prediction to make, we would be hard pressed to say exactly how temporary. But even if companies like Pfizer cut partnerships during reorganization, there will surely be opportunities for bigger, cash-rich biotechs to step in and do some bargain hunting themselves.

Beating back the bushes

A recent survey by the Brookings Institution in Washington (<http://www.brook.edu/dybdocroot/>) of almost 1,200 biotechnology companies in the 51 largest metropolitan centers in the United States reports that the industry is heavily concentrated in nine regions or "clusters." These nine areas excel, apparently, because of their strong research and the ability to convert that research into commercial activity.

This is not at all surprising. Everybody in biotechnology loves clusters, defined as company groups sharing, roughly speaking, the same geographical location. In clusters, companies can efficiently use the high-cost, specialized physical infrastructure that has been put there by incubator centers or forward-looking real-estate developers—buildings that contain vented laboratory space, expensive equipment, and so forth. Clusters also provide an organizational infrastructure: crowds of venture investors, business angels, image consultants, intellectual-property and contract lawyers, and assorted advisors.

Outside clusters, companies struggle to dip into the pool of highly trained research and management personnel. Given the relatively short circulatory half-lives of many in the biotech industry, clusters offer employees the convenience of being able to recommit themselves wholeheartedly to a nearby bioscience firm when the company they had first committed to shows signs of wavering. And there is always the reassurance of having a nearby CEO or a neighborhood management consultant available when you need the odd word of encouragement.

According to the report, clusters seem to form semi-spontaneously and very slowly around centers of academic excellence. Perhaps this is because innovative scientific founders sometimes seem reluctant to leave their academic homelands and forsake their alma maters.

The biggest advantage of clusters may be the intensity of the local competition they produce. Such proximity in the personnel market makes the jobs of head hunters a lot easier and ensures that compensation packages are competitive. Local investors have a ready crop of nascent life-science companies that have been eased into existence by incubator centers and midwifely professionals. The demand for laboratory space close to academic centers is high, and so are the rents.

The romantic nostalgia that comes with the dog days of summer brings along with it, for some of us, a longing for the time before biotech clusters. Two decades ago, when today's senior executives were PhD candidates, there were hardly enough biotechnology companies to make a respectable cluster, even if they had all been stuffed into the same science park. Looking back, it is nothing less than miraculous that venture capitalists managed to beat the bushes to find those companies, that they survived and prospered without the full range of professional services now so conveniently offered, and perhaps most wondrous strange, that they managed to attract more-than-capable people to the hitherto déclassé hinterlands of Slough, South San Francisco, or Thousand Oaks. 