

## Aligning interests

As sources of funding dwindle, could the health insurance sector do more to support biotech innovation and help itself at the same time?

Biotech has remained relatively unscathed by the turmoil on US financial markets, but the aftereffects of the global credit meltdown on the sector are now manifest. Most market caps of public biotech companies are half what they were last year. At present, more than a third (around 160 firms) have a market capitalization under \$50 million, and less than 12 months' cash in the bank. Access of many of these firms to debt capital is now also in doubt as stock prices plummet below the levels where credit facilities will honor deals. If venture capital battens down the hatches and shifts emphasis away from startups to their portfolio firms or even to opportunities in cash-strapped public companies with products, the next generation of biotech startups should prepare for a long dark winter. That is, unless a new source of funding can be found.

There are two ways to look at the current crisis. On the one hand, stock prices in healthcare have held up much better than those of the financial sector, or general manufacturing, or industrials, or leisure. People still have to buy pills. And although the absolute risk of any biotech investment has probably not altered much, the relative risk of biotech looks much better when virtually any investment appears risky. Biotech might not be "as safe as houses," but it is undeniably true that houses (and indeed banks) don't look quite as safe as they did.

Looking through the glass more darkly, public capital markets have dried up for biotech. In September, Fluidigm canceled an \$80 million initial public offering (IPO), the first (and only) of the third quarter. This year, biotech IPOs have raised only around \$160 million worldwide, compared with just over \$3.0 billion in 2007. And although venture capital has been more resilient, since the beginning of 2008, fewer investments have been made in early-stage companies and more money is going into refinancing of companies that have already attracted large amounts of venture capital. Venture capitalists are at it again—"feeding their older children" just as they did following the genomics investment boom of 2000.

Even setting aside the financial data, there are other reasons for concern. In essence, biotech venture capital sits at the very bottom of a financing cascade. It starts with the money that 'ordinary people' invest in their pension plans, savings banks and insurance policies. That money only ends up in biotech by stepping through tiers of increasing technical or industrial specialization and increasing risk. At each tier is a fund that invests in other funds, and each fund has to show a return. By the time the money finally reaches those venture capitalists considered competent enough to make good investment decisions in biotech, it has to work extremely hard: it has to pay back not only the venture capitalist but also all of the other investors along the path.

In a credit crunch when fear of risk predominates, the easier risk reduction strategy is likely to be to withdraw money, as far as is possible, from high-risk areas such as biotech. The knee-jerk reaction will

be to cut biotech off at the knees, to truncate the cascade. And in an environment when funding and adventure are both restricted, seed funding for biotech is likely to lose out heavily, unless new sources of capital are found.

One relatively untapped source that comes to mind is the health insurance industry. Health insurers already account for a small portion of the money invested in biotech, but to a large extent life science innovation and health insurance—which ought to be close bedfellows—are presently strangers.

In an IPO-free finance environment, many biotech companies (and their investors) view acquisition by pharmaceutical companies as a viable exit route. Indeed, the biotech-pharma link is so strong that the business plans of many biotech companies read as if they are pharmaceutical service units from the outset. And yet big pharma in truth has only one driver—revenue from drugs sales. Because its business depends on income from a relatively limited set of therapeutic approaches, for pharma, novelty can be as much a threat as an opportunity. Thus, the spate of acquisition that will characterize the financial crisis will likely represent not the advancement of 'innovation-for-healthcare-in-general' but rather the capture of 'innovation-for-pharma-company-X'.

In contrast, the overall aims of health insurers and biotech firms are aligned at a much more fundamental level—both thrive on health innovations that push healthcare to be patient centered, predictive and preventative. Insurers collect premiums from their clients and regrettably have to spend money if the clients get ill. Health insurers are perforce buyers of healthcare solutions that save money. They buy therapeutics solutions that convert money-draining patients back into premium-paying clients. They buy diagnostic solutions that catch illness early and save payments for years of treatment for avoidable complications. They have a clear appreciation of the value of innovations that address specific health costs.

And the synergy goes further. Insurance companies have a great deal of highly reliable information on the incidence and severity of disease and on the cost of treating it. This information could orient the research efforts of small biotechs that might otherwise flounder in identifying the ideal market niche towards which to develop their technology.

Of course, in the current climate where fear trumps logic, the likelihood of this alignment between the health insurance and biotech spheres seems remote. But perhaps there are some insurers who have the boldness and vision to back innovative biotech solutions, with a view to ultimately driving down their costs and boosting their profits. All of which would provide not only a convenient solution for cash-starved biotech, but also a much more directed way to advance predictive and preventative healthcare. **LB**