In the last few years as the financial climate for early stage drug developers and their investors deteriorated, many calls were made for an innovation in business models, to keep vital funds flowing towards technologies for the future. Those calls are gradually being answered.

From big pharma’s growing participation in the venture capital industry - seen in the explosion in corporate funds and projects like GlaxoSmithKline and Johnson & Johnson’s collaboration with Index Ventures - to the emergence of new entrants like the Wellcome Trust’s £200m ($319m) investment fund, new models are appearing. It will be a while before these various strategies can be judged a success or otherwise at keeping the money flowing, but it is clear that many investors remain convinced money can be made from this very high risk sector. And that can only be good news for the fledgling companies courting their attention.

A step further

The diminishing pot of money available to high risk enterprises like drug development, largely driven by many investors’ inability to generate sustainable returns and not helped by the credit crunch, is well documented (Vantage Point – VC funding slump in first half points to tougher times ahead, August 17, 2011). But the desire to fund cutting edge innovation remains strong in many quarters. Not least at big pharma companies, where their own productivity woes mean they are ever more reliant on acquiring innovation from outside their own labs.

As traditional life science venture firms have retrenched in the last few years corporate venture capital has stepped in and filled a funding gap. While many proclaim their focus is on financial return their strategic objectives are also undeniable – to support a sector on which they need to draw while enabling the mothership to keep eyes and ears, albeit at a distance, on where various fields are moving.

Several pharma companies have now taken this move into the venture world a step further, and the ultimate strategic aim of big pharma is becoming more apparent. As seen in Glaxo and J&J’s project with Index Ventures, the two drug companies providing half of a €150m ($200m) fund to be invested by the venture firm (Index Ventures adds big pharma to asset centric model, March 21, 2012).

The two pharma companies were explicit about their motivation – to support early stage research and the development of new technologies, that one day they might buy. For its part, Index has its sights firmly fixed on the exit and improving returns.

The firm believes that the input of industry – via an advisory board comprised of executives from the two companies and its own managers – should add valuable commercial insight to its investment decisions. The backing of Glaxo and J&J also endorses the VC firm’s pursuit of the “asset centric” model of investing - directing funds at one molecule and driving its progress through clinical trials via a lean, outsourced model, with the end game to sell to a bigger partner.

“Whether a company goes public or stays private, you expect to see late stage molecules in the hands of big companies, so really this is helping us to devise programmes that pass the test of what will be picked up,” said Kevin Johnson, a partner at Index, after announcing the deal last week.

Capital plus

The Glaxo/J&J move is not dissimilar to Merck & Co’s Research Venture Fund that emerged last year, with a $250m budget. The company is offering to act as a strategic limited partner to traditional venture capital firms, making available its own scientists as advisors to portfolio companies, in return for a peek at what is in development.

Glen Giovannetti, Ernst & Young’s global biotechnology leader, points out that these new models that are emerging between big pharma and the venture capital industry tend to be tilted towards technology access, rather than just rate of return like the corporate funds that preceded them.
“They’re typically around a bit of an angle, capital plus something – capital plus a look at the technology, capital plus giving advice and being part of a scientific advisory board,” he says.

“This is one of the things corporate venture capital funds have somewhat struggled with, in the sense that most of them will say they exist to provide a rate of return just like any VC and that’s certainly true, but then you have to ask the question – with life science investing so challenging its got to be about more than rate of return because even if you have a great exit are you really going to move the needle on the corporation?”

Big pharma’s more recent moves into the venture capital world are more clearly addressing other objectives, he says.

Clear objectives

These strategic goals can be clearly identified in other venture capital collaborations, such as Shire and Atlas Venture’s deal in rare diseases. The two firms will work together to identify early-stage investments in the space, while the UK drug developer gets the option to buy any companies formed; no financial details have been disclosed.

Meanwhile Sanofi’s co-investment with Third Rock Ventures earlier this year was a more explicit move to capture potential future technology. Warp Drive Bio, which was “incubated” by Third Rock for two years while its founders developed a genomics platform to help discover new drugs among natural products, was launched earlier this year with a $125m investment from the venture capital firm and French drug maker. Sanofi has an option to buy the company if certain milestones are hit, although in the meantime it remains independent and can seek other partnerships.

Few doubt that more of these collaborations will emerge.

“Every time we’ve had constrained funding environments in the history of biotech we’ve seen different models pop up. We have a different funding reality now for early stage life sciences and innovation will continue. I don’t know that we’ll see a dominant model, but lots of variations,” Mr Giovannetti says.

“On the corporate side they are not looking for incremental rate of return as much as to foster technology innovation. For the venture guys it’s how do you continue to have adequate returns to keep the doors open.”

Addressing timelines

To certain extents these new models have been created to meet need from both sides. However, some view these developments more as creative funding solutions for an investment opportunity, rather than being driven by necessity.

“In some ways these funding solutions are needed to address the timelines necessary to really build value in the early stages of technology,” says Martin Murphy, former partner at MVM Life Science Partners and now chief executive of the newly forged Project Sigma, the Wellcome Trust’s foray into the venture capital world.

“The fundamentals haven’t changed on the technology side. Clearly the market has changed in the sense that broader healthcare drivers, the payer market and the need to demonstrate value, are a very profound change that any early stage investor will need to take account of. But there is a very rich seam of differentiated technology that offers the potential to benefit patient care and address unmet need.”

“Some of these alternative funding solutions offer the prospect to see that technology developed,” he says.

Exploiting opportunity

A long time investor in the medical sphere, Wellcome Trust announced its first venture capital-style fund last week. With a £200m to invest in companies at all stages of development, the fund’s ability to take a longer term view than traditional VC firms will not only mean very early stage investments are possible, but will hopefully improve returns.

“I think it will be incredibly helpful to have a long term perspective and not be under pressure to sell investments too early, and be able to support them. A lot of venture capitalists have moved later stage, so there is a need for this capital in the market and I think Sigma will play an important role,” Mr Murphy says.

Another early stage investor will certainly be welcome and Sigma’s alternative structure to the traditional VC model – essentially its ability to stick around – confirms that investors willing to back the very highest risk propositions need to think differently. Another active operator in this space includes Imperial Innovations, a UK-listed company incubator that invests from its balance sheet.

Mr Murphy is clear however that Sigma is there to take advantage of opportunities that others might be missing.

“We see a great opportunity [in early stage investing],” he says. “There is substantial unmet need, there is substantial technology development that can be applied against that and there will be a demand to see that
technology employed in an effective way.”

**Comfortable presence**

With new funding solutions only now emerging to meet the needs of cash-starved early research, from both big pharma and the investment industry, it will many years before successful models can be judged.

The asset centric model for example has really only scored once so far for Index, when PanGenetics sold an anti-NGF antibody to Abbott in 2009, for a princely sum of $170m ([PanGenetics cashes in on Abbott's early stage bet, November 13, 2009](https://www.evaluatehealth.com/insights/news/2009/11/13/pangenetics-cashes-in-on-abbott-s-early-stage-bet/)). Widely viewed as an exciting yet unproven way to improve R&D productivity and, by implication, investors’ profits, further exits are awaited.

“In project financing versus company building, there’s a role to be played there to balance out a venture firm’s portfolio, in terms of timing and risk,” says Mr Giovannetti. Eli Lilly’s Chorus venture provides an interesting analogue – a lean, fail fast-fail early approach to R&D that the pharma company views as a success, he says. The unit now manages a significant portion of Lilly’s early stage drug portfolio.

And just as it seems certain these new funding structures will continue to emerge, big pharma will play an increasingly active role.

Many of these collaborations between industry and VC firms would have been unthinkable a few years ago, on the part of both parties. But the life science industry has become much more comfortable with big pharma’s presence, particularly around the venture capital table. And with growing acceptance of the role it is playing, big pharma is becoming more honest about its motivations.

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