

who works for GSK and also argues that closer pharmaceutical industry-academic cooperation is the future of drug development.

The over-riding question, however, may well be how to judge the success of precompetitive, open innovation research. It is not easy because “open innovation spans a great variety of models and has become something of a catch-all term,” remarks Lilly’s Munos.

On the one hand, Friend says Sage assumes the present patent structure is staying in place for compounds and biologics, a situation that “would allow companies to have an ability to develop something and have a return on it others couldn’t copy.” Edwards, on the other hand, argues for collaborative precompetitive research going right up to clinical trials.

But with the attrition rate so high in drug

discovery and open collaborations still relatively young in terms of drug development timelines, it is hard to track which successes might have resulted from precompetitive research. “We have to develop very structured metrics as opposed to feel good, ‘oh, look we are getting together and working together’ arguments,” remarks Edwards.

Stephen Strauss *Toronto*

New tech transfer models gain traction with deal flow

One view of the acquisition in June of respiratory drug discovery company Respivert by Centocor Ortho Biotech of Horsham, Pennsylvania, is that it is just another commonplace example of an established public biotech company swallowing a minnow. Another perspective is that the deal represents a whole new take on tech transfer, providing seed investors with proof of concept that early-stage life sciences technology not only has value, but also can return value tangibly and quickly.

Imperial Innovations, the tech transfer group for Imperial College London, invested a total of £2 (\$2.8) million in London-based Respivert in 2007 and 2008. The sale of its 13.4% stake in the company yielded £9.5 million in cash, a 4.7-fold return on its three-year investment. It also yielded profits for co-investors, the global firm SV Life Sciences, London-based Advent Venture Partners and Fidelity Biosciences of Cambridge, Massachusetts. Although this is not the first time that Imperial Innovations has profited from the disposal of a biotech asset, it is much more financially significant than the December 2008 sale of its peptide obesity drug firm, Thiakis, to Wyeth Pharmaceuticals (now Pfizer, New York), which generated £2.9 million in cash upfront.

“We are probably now the most active early-stage investor in the UK,” says Susan Searle, CEO of Imperial Innovations. “This may be because the venture capital investors have largely moved upstream, leaving this investment gap that you need to cross—which is where we specialize.” Imperial Innovations is not a typical tech transfer organization. It is a public limited company that raised £26 million in July 2006 when the company listed on London’s Alternative Investment Market and another £30 million in October 2007. It has invested significantly in its portfolio companies, with over £16 million invested in 2009 and nearly £6.0 million so far in 2010. This has meant it can attract co-investors to its portfolio companies. Even then, the current economic climate has made it “more challenging to find investors in this early-stage space,” says Searle. But she is hopeful that more firms will co-invest as more successful exits are made.

The technology transfer picture is changing elsewhere, too, in different ways. For instance, more groups of universities are channelling their commercialization efforts through inter-institutional technology management groups. One of the earliest models was the Flanders Institute for Biotechnology (VIB) in Ghent, Belgium, established way back in 1995. Backed with regional government funds, VIB acts both as a funder of research and a commercialization arm for biotech projects from four Flemish universities. Some 15 years later, Wallonia, the French-speaking region of Belgium, is adopting a similar model. WelBio (Walloon Excellence in Life Science and Biotechnology) has received a €15 million (\$18.5 million) commitment from the Wallonia government to fund basic

research projects at the Catholic University of Louvain, the University of Liege and the French-speaking Université Libre de Bruxelles, and is gearing up to launch soon.

Jean Stéphenne, the president and chairman of GlaxoSmithKline (GSK) Biologics in Rixensart, Wallonia’s largest life science company, says the idea is to create dynamic groups of research that will provide added value in future. “If we generate IP [intellectual property], it will lead to spin-offs and, in the long run, WelBio will become self-financing.”

At least initially, WelBio will commercialize only technology arising directly from the €15 million worth of research projects it has funded rather than the broader universities’ research activities. Stéphenne’s colleague at London-based GSK, Pierre Hauser, says that it is still a “relatively touchy” subject for the universities.

Facilitating tech transfer through the provision of research funding is undoubtedly a way of winning research cooperation. However, it doesn’t really address the absence of significant early-stage investment. To fill this gap, tech transfer offices are turning to ‘soft’ money. In the UK, for instance, there is some support for translational research from the Wellcome Trust, the UK Strategy Board, Medical Research Council or seed investment funds associated with universities. However, Sam Ogunsalu, principal executive, commercial development at Queen Mary College, University of London, points out that accessing that money means dealing with granting agencies that are inundated with applications.

Another evolving tech transfer model is that from PBL Technology, a group established in Norwich, UK, to commercialize the research outputs of some of the UK’s Biological and Biotechnological Sciences Research Council (BBSRC) institutes. PBL has an established reputation in agricultural biotech. As well as commercializing work from BBSRC institutes, PBL’s deal flow emanates from European universities in Belgium, Denmark, Finland, France and Spain as well as further afield in Argentina and the US. PBL’s managing director, Jan Chojcecki, points to the fact that PBL can be a broker for single or multiple bits of IP. “If there are two bits of overlapping IP from two different laboratories—not only co-inventions, but also completely synergistic bits of IP—to have someone independent handle things may make it easier to commercialize,” Chojcecki argues. “Companies like that,” he says, “because we come with at least a worthwhile package if not the full freedom to operate.” One example is a package of plant gene silencing patents that PBL has pooled from both Yale University and the Sainsbury Laboratory in Norwich. PBL has noticed a much greater interest in its services from university departments. “Perhaps now they are seeing the advantage of having a specialist [in agbio] deal with selected IP,” he adds.

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