Nature Reviews Drug Discovery | Published online 1 Sep 2017; doi:10.1038/nrd.2017.172

AN AUDIENCE WITH…

Nigel Blackburn

Cancer Research UK

In 2007, the charity Cancer Research UK (CRUK) launched its Clinical Development Partnerships (CDP) initiative to run trials of deprioritized anticancer candidates that still offered glimmers of promise. 10 years on, these reprioritization efforts have yielded mixed results. Despite generating some promising clinical data, none of their biopharma partners has as yet fully reprioritized any candidates. There is still hope for these drugs, although likely with new sponsors. In the case of an Aurora kinase inhibitor that was initially discovered by GlaxoSmithKline (GSK), for example, Nemucore has since licensed CRUK's data and further development rights. Now, however, smaller biotech firms are increasingly turning to the CDP for help with clinical trials of lead drug candidates. Nigel Blackburn, CRUK's Director of drug development, discusses the CDP's changing strategy with **Asher Mullard**.

What lessons did you learn in attempting to reprioritize once deprioritized assets?

What we experienced was that because a company had already shelved a project, they often didn't want to put any more resources into it. Putting the CDP deal in place with GSK, for example, was quite a monumental effort. We wanted to get the project up and running, but we couldn't get any traction within the company because they didn't want to spend any time talking about it. So that project was slow out of the blocks.

A project with Merck KGaA on a CD19 monoclonal antibody hit exactly the same situation. Having already deprioritized it, they didn't want to commit any resources to it.

I guess that there is this cognitive trap where after a company makes a decision to deprioritize a project, they may offer it out but they won't want to commit resources to help the partner actually revitalize the programme.

So now you are focusing on 'prioritized' projects?

Over the years, we've gotten more and more interest from small biotechs. And whereas big pharma firms are happy for us to run a trial on a deprioritized candidate and come back to them when we've got interesting data, biotechs are much more engaged. They want to collaborate with us on their lead assets and new platform technologies because of our track record, our research network and what we offer.

We never formally said that we were going to move in this direction. It's just that as we've been out at partnering conferences, we've ended up with far more interest from biotech companies. To give you a very rough idea of the math, we look at probably up to 60 opportunities a year, of which probably 6–8 get to our formal peer review process. Of those, 4 or 5 make it into our portfolio. The assets that we've been offered by big pharma just fall by the wayside as we go through this process, because they tend not to be the kind of things that we want to work on.

Our recent deal with Bicycle Therapeutics is an absolutely prime example of where we've got to and where we want to be. This company has a brand-new platform technology — which links bicyclic peptides to therapeutic payloads — with applications in oncology and beyond. We started talking to them in the beginning of last year and have since set up with a joint project team. They are very pleased with the way the project is going; they've got other oncology assets that came from the same platform technology, and we're already talking to them about doing further collaboration around those.

We used to view the CDP as a way of giving new life to drugs that had stalled. Now, we view it as giving new drugs the best possible chance of progressing through clinical trials.

Why do you think biotechs are increasingly coming to you?

I think it's our track record and experience. We've got a lot of knowledge and experience within the organization, and we sit in the middle of this academic network of clinicians and scientists that is very attractive to potential partners.

Another element may be that it is becoming harder to partner with pharmaceutical firms on phase I trials. If you are in big pharma's position, and you can pick and choose which project to work on, what are you going to go for? You are going to go for the de-risked assets.

What do you see as the next big scientific frontier in cancer therapeutics?

We ask ourselves this question all the time, and I wish I knew the answer. We haven't yet landed on a single concept that we believe is going to be the next big thing. But it's no secret that the microbiome is potentially hugely influential in patients' responses to different treatments. I'm not suggesting that this is going to be as big as immuno-oncology, but it is a space that we want to be in.

Our primary interest here for now is the basic science. There are reports that immunotherapy responses are to some extent influenced by the microbiome, and this raises 101 different questions. How is the colonic bacterial population influencing responses? Is it to do with the way the drug is processed in the body? Is it to do with how the microbiome affects the tone of the immune system? We are at the moment just starting to scratch the surface, and we want to be a player in this area.

We're also trying to get a lot more traction in early detection, looking at liquid biopsies, circulating tumour cells and modern imaging techniques.