



# Bridging the biotech commercialization gap

*The non-profit Centre for Drug Research and  
Development offers infrastructure and expertise*

**By Greg Felton**



**"It's a very expensive endeavour to put a corporate infrastructure around a technology, spin it out and produce money. It's our feeling that you can keep them as projects for longer if you use shared infrastructure, so we're not building new laboratories for each project."**

- Natalie Dakers, CEO, Centre for Drug Research and Development

University researchers investigating new drugs face a classic Catch 22 – they need funds for early-stage development, but venture capitalists are hesitant to inject serious dollars unless the drug has advanced to clinical trials.

To bridge this commercialization gap, eight B.C. universities and research institutions formed the non-profit Centre for Drug Research and Development (CDRD). Its primary goal: to provide the infrastructure and expertise needed to help mature technologies developed at these research institutions to a point where they are able to attract investors' interest, and then be commercialized by the private sector.

**“The CDRD uses this project as a test case. We don't have a small molecule yet, but we have leads”**

- Sandra Dunn, professor of cancer research,  
B.C. Research Institute for Children's and Women's Health

The centre is a hybrid research/commercial entity comprising various drug research institutes and the private, profit-oriented Drug Development Inc. DDI selects, evaluates and licenses discoveries to existing companies, or spins off new companies based on the discovery, with all profits accruing to affiliated agencies and reinvested in the centre.

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TIME ►						
Development phases	Basic research and discovery	Proof of concept	COMPANY FORMATION	GLP pre-clinical toxicology	Clinical Phase I	Clinical Phase II
Funding sources	Government programs, foundations	"Commercialization gap" (CDRD)		Initial 'angel investors,' NRC (UILO)	Risk capital	

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Natalie Dakers, CEO of both the centre and DDI, says one of the benefits of the CDRD is that its R&D infrastructure can be used many times over – which means researchers won't have to start from scratch.

## "The UILO writes grant proposals and lines up angel investors. We protect intellectual property. We don't do a lot of tech development."

– Angus Livingstone, who heads the University Industry Liaison Office

"It's a very expensive endeavour to put a corporate infrastructure around a technology, spin it out and produce money," she said. "It's our feeling that you can keep them as projects for longer if you use shared infrastructure, so we're not building new laboratories for each project."

Recommendations to undertake a given project will be made by a drug evaluation and selection committee for the DDI board of directors. Dakers has just begun to recruit members of the committee, who will all be pharmaceutical industry experts with financial, regulatory and commercial backgrounds.

"These are individuals coming to us as independent experts to give us advice about whether an idea could be commercialized."

Once a drug receives the go ahead, DDI expects results. One such example is the work of Dr. Sandra Dunn, a professor of cancer research at the B.C.

Research Institute for Children's and Women's Health. She is developing a molecular drug to target a component of a cancer cell protein that is expressed in large numbers of cancers that afflict children and adults – particularly prostate and breast cancers. Her six-month association with the centre has

brought her into contact with experts in medical chemistry and pre-clinical toxicology who have helped her advance her research.

"The CDRD uses this project as a test case," said Dunn. "We don't have a small molecule yet, but we have leads."

On the other hand, if a drug doesn't meet performance milestones, it can be sent back into R&D for further work. Or, if it doesn't pan out, it is returned to the inventor rather than languishing in research limbo. "We don't see ourselves as people that are necessarily better at collecting the winners, but do think we have created an organization that will be much more able to make decisions to end support for certain projects," said Dakers.

Dakers emphasizes that the CDRD is a complement, not a competitor, to existing technology transfer offices, because it is filling a specific niche, not competing for investment funds. The best sense of this complementarity comes from Angus Livingstone, who heads the University Industry Liaison Office and was a member on the initial advisory board for the CDRD.

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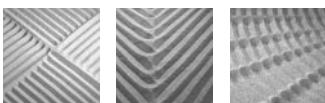
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Funding from the Canadian Institutes of Health Research, the premier federal granting agency, hovers between \$100,000 and \$150,000, which only buys initial work and a couple of animal models, added Livingstone.

Between that and the initial angel investors lies the “commercialization gap,” which the CDRD fills. One reason for this gap, say Livingstone and Dakers, is the disappearance of early-stage technology funding since 2000 as a result of the collapse of the high-tech market.

“Most funding goes toward the main compound in clinical trials, and it is very difficult for companies to justify funding a pipeline, so they’re not picking up early-stage technology,” explained Dakers.

For its part, the CDRD receives funding from a variety of governmental and industrial sources. Dakers is especially proud of the \$8 million award from the Canadian Foundation for Innovation, which, when matched by the province and other sources, will become \$20 million.”

At present, the CDRD is housed on the third floor of a non-descript building on UBC’s Lower Mall, but Dakers says this is merely temporary. “The intent is to have a floor at a new building for pharmaceutical sciences. The CDRD never intended to build its own building. We wanted to come in and share facilities with a group compatible with the kind of work we’re doing. Pharmaceutical sciences needs a new building and so it made sense to go in with them.”

According to Dakers, it also makes sense educationally.

“I think we can enhance the faculty’s courses on drug development and work with the faculties of the business, science, applied science, medical science to develop academic programs for practical experience.”

The centre hopes to develop a pool of local talent and expose students to a wider variety of technologies than might be available via experience with a single biotech company. ■

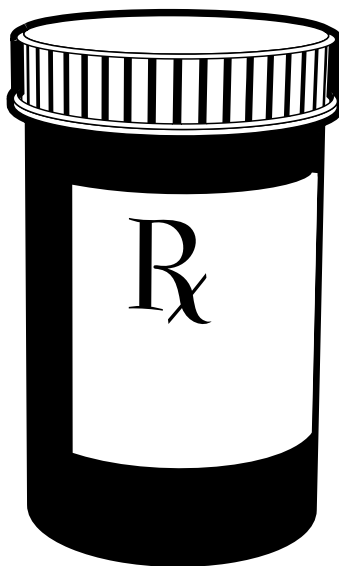
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