



PHARMACEUTICALS

Scientific war chest to seed drug incubator

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Sachdev Sidhu calls it his "war chest."

It's a catalogue of discoveries that Dr. Sidhu and his colleagues have amassed using a technology that he pioneered while working in the U.S. biopharmaceutical industry and then continued to develop after coming to the University of Toronto in 2008.

The war chest consists of the recipes for thousands of complex molecules known as antibodies that have been matched with hundreds of targets in human cells, all developed at the University's Donnelly Centre, where Dr. Sidhu collaborates with genomicist Jason Moffat among others. Follow-up work by researchers in the University Hospital Network (UHN) suggest many of those finds could be engineered into entirely new classes of drugs.

Now, with an eye toward building a new community of fledgling biotech companies in Toronto, Dr. Sidhu is ready to open up the war chest. "You can't keep building a catalogue forever," he said. "You have to let things out."

The first indication of that transition was made public on Wednesday with the launching of **Northern Biologics**, a Toronto-based company that will work with a choice selection of antibodies drawn from Dr. Sidhu's war chest with the hope of turning them into new therapies for cancer and fibrosis.

The development is part of a larger shift under way across the pharmaceutical industry, which is increasingly turning to biologic drugs — drugs that are produced inside living systems such as yeasts or microbes — as a route to new treatments and long-term profits. Biologics now account for about half of the top selling drugs



Alevtina Pavlenko recovers clones on Wednesday for use in the production of plasma DNA at the University of Toronto's Sidhu lab in the Donnelly Centre for Cellular and Biomolecular Research. FRED LUM/THE GLOBE AND MAIL

worldwide, including well known examples such as Humira, an anti-inflammatory agent used to treat rheumatoid arthritis, and the cancer drug Avastin.

Northern Biologics has attracted international investors with deep pockets. This signals a welcome development in a community that has long been considered strong on science but short on capital and entrepreneurial leadership relative to U.S. biotech hubs.

"To me, the big change here is that a company has been started with the commitment of talent and capital that can take it all the way to the market," said John Reid, UHN's director of technology development and commercialization.

The key player in the deal is **Versant Ventures**, a Bay-area

venture capital firm that specializes in biotech and medical devices. Its \$10-million infusion into Northern Biologics will be among the first investments for a new \$305-million fund that Versant unveiled Wednesday in a separate announcement. The firm says the fund will likely include further forays into Canada's underdeveloped biotech sector as well as the United States and Europe.

Northern will operate under what Versant calls its "build to buy" model in collaboration with **Celgene Corp.**, a large biopharma corporation headquartered in New Jersey that also has a presence in Canada.

Under the model, Celgene has the right to negotiate an R&D relationship with Northern Biologics, which could ultimately in-

clude buying up the company at a future point.

By then there could be a number of similar startups on the scene as Dr. Sidhu's war chest spins off more companies. To facilitate this, the University is now in the midst of launching its Centre for the Commercialization of Antibodies and Biologics, led by Dr. Sidhu. The Centre is supported by a \$15-million grant from the federal government.

Brenda Andrews, director of the Donnelly Centre, added that the effort would help keep more of the commercialization activity spawned by the university's biotech researchers closer to home in Canada.

"There's a huge talent pool here but very little biotech activity, so all our graduate students who want to work in industry leave."