

## CELEBRATING TEN YEARS OF RESEARCH COMMERCIALIZATION

### Q&A SESSION WITH NADINE BEAUGER AND STEVEN KLEIN FROM IRICOR

RICoR (Institute for Research in Immunology and Cancer – Commercialization of Research) is a research commercialization hub, specializing in drug discovery. Its team identifies and invests in the best projects from the academic world in order to transform them into therapeutics innovations.

Q&A session with Nadine Beauger, Chief Executive Officer, and Steven Klein, Vice President, Business Development, at IRICoR.

**Q:** IRICoR is celebrating ten years of activities in research commercialization. Can you tell us more about your business model and how it is unique?

**NB:** IRICOR as a hybrid business and research model, combining both scientific excellence and business expertise. At its inception in 2008, it was created as a Centre of Excellence in Commercialization and Research (CECR) and through the last decade, we have developed new and innovative ways of doing business to transform academic and basic research into tangible assets, such as innovative therapeutic solutions for cancer patients.

### **Q:** What would you consider to be IRI-CoR's main milestones and successes of the past decade?

**NB:** The life cycle of the process of drug discovery and development is usually long, tak-

ing fifteen to twenty years. Considering this, I would say our major accomplishment is to have developed an effective way to accelerate this time line starting from the identification of promising projects in basic research and offering our support in drug development maturation towards the creation of partnerships with the biopharmaceutical industry, the creation of spin-off companies, and the development of potential therapeutic solutions for cancer patients.

**SK:** The flexibility of our model and business dealings speaks for our success over the last ten years. From a commercialization point of view, we have established a number of partnerships with the private sector, working

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alongside larger companies such as Bristol-Myers Squibb (BMS), and AbbVie as well as with smaller companies such as Domain Therapeutics and Imagia, along with other companies based in Canada and internationally. The goal being to accelerate the development of new products and technologies and move them into the clinic. In the last ten years, we have had five projects reaching the clinic, a number through partnerships with the industry and two programs by the direct creation of companies, which have moved those assets into the clinic with the support of IRICOR.

A good example of collaboration is with one of our spin-off companies, ExCellThera. It only took seven years for the concept around using stem cells to treat certain cancers, such as leukemia, to come to life with the development of molecules to help expand those stem cell populations, the creation of the company, and moving the asset into the clinic. In our field, it is very short period. The very promising results of the first clinical trial led to the initiation of a second trial for another cancer indication and the product will continue to move towards the market.

Another example is our partnership with Domain Therapeutics, based in France. We have been working together for the past five years and completed two licences with them in order to develop a new technology to profile GPCRs (G protein-coupled receptors; the largest class of drug targets). With our support, the company has created a successful subsidiary in Montreal that has grown from two to eight employees. We are now looking at working with the team at Domain not only on technology to develop new therapeutics targeting various GPCRs.

**Q:** IRICoR recently received a \$25-million dollar grant from the Network of Centres of Excellence of Canada (NCEC), a real show of confidence from the government. Considering this new support and additional resources, what are your

#### main objectives for the next five years?

**NB:** One of our main objectives is to broaden our sourcing of projects, which has been mainly from our initial network (the Université de Montréal and the Institute for Research in Immunology and Cancer [IRIC] of the Université de Montréal), to other centres across Canada and abroad as well.

We want our model and best practices, such as building close relationships to the investigators, understanding the scientific excellence of projects, and the skill set we provide in business development, management and intellectual property, to benefit to the greatest number of potential projects.

Additionally, we have the goal to highlight the excellence of the infrastructure and expertise developed in Canadian centres such as IRICOR and transfer this knowledge and know-how to new projects in order to advance them further in development.

## **Q:** Could you tell us more about the projects you will support?

**SK:** We are looking for innovative high-risk/ high-reward types of projects that could benefit from our expertise around high throughput screening, assay development and medicinal chemistry in particular.

We are open to other therapeutics approaches such as cell therapies and focusing on promising, early-stage research that would attract interest from the venture community and the pharmaceutical industry.

#### Q: How will you select those projects?

**SK:** We are looking at two approaches to source projects. The first one being targeted calls for proposals and the second one being a proactive scouting.

We are putting in place an advisory committee composed of external experts in drug discovery, commercialization and venture capital to complement our in-house expertise and bring different skills to the table to help us select the best projects, increase their chances of success, maximize our return on investment, and offer Canadians new options for the treatment of cancer.

## **Q:** Are you looking for Canadian-based projects in priority?

**SK:** Since we are based in Canada, we are going to be looking at many Canadian-sourced projects, but we have the mandate to look internationally and build ties between Canada and other regions such as the United States, Europe and Israel. We have taken steps in all those directions and we will continue along that path moving forward.

**Q:** IRICoR builds bridges between various areas of activity and stakeholders that do not necessarily always interact smoothly together, namely universities and the industry. How do you explain your success in this regard?

**SK:** The academic culture is certainly different from the industrial culture. This bridge needs to be traversed and those two solitudes need to better work together. The fact that IRICoR is directly based within an academic environment and the fact that our team has significant industry experience helps us develop the best practices to benefit both parties. We are smoothing the existing cultural issues by helping each party understand and speak to each other, instead of past each other. When trust is established and both parties speak the same business and scientific languages, it helps solidify partnerships.

## **Q:** What differentiates IRICoR from other organizations evolving in the same field or with a similar business model?

**NB:** From our creation, we have put a lot of emphasis on the expertise we have developed in specific indications within our initial

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network, revolving mainly around cancer. Over the years, we have broadened our scope to attract projects from other areas linked to cancer, such as cancer immunotherapy. By leveraging the scientific knowledge from academia, we helped raise interest from the pharmaceutical and venture capital sectors looking exactly for these kinds of opportunities.

We also leverage the expertise and infrastructure present at the IRIC in particular, having access to the largest medicinal chemistry group in an academic centre in Canada, also for the benefit of other Canadian centres. Our flexibility and access to cutting-edge drug discovery expertise help us add value to the projects we select.

### **Q:** How and to which extent do your activities benefit Canadians?

**NB:** Our model allows us to capture the value of research for which the provincial or federal governments have funded only the first stages, and that could remain trapped within those stages without further investments. IRICOR identifies those projects within universities, research centres, and even biotech companies, and provides them with drug discovery and development infrastructure needed to bring them to the next value inflection point.

We aim to have exit events either through collaborations with biopharmaceutical companies or through the creation of companies. Entrepreneurship is also a way for us to bring value by adding these new assets into the Canadian network, creating collective expertise and attracting expertise internationally.

# **Q:** You are also committed to training the next generation workforce in life sciences. What does this engagement entail?

**SK:** There is an evolution from the traditional scientific career path. Students today are much more open to working with the industry and we feel their enthusiasm for entrepreneurship.

We have recognized the need and demand for training and coaching from students to develop an alternative set of skills in life sciences. For example, we have partnered with Montréal InVivo, Concordia University's John Molson School Executive Centre, and Université de Montréal's Faculty of Pharmacy to develop the Life Sciences Entrepreneurship Development Program, exposing students to entrepreneurship and different aspects of drug discovery: preclinical research, market access, regulatory affairs, pricing and reimbursements, etc. These are all topics that they are not necessarily familiar with or have not explored in traditional studies. We will be announcing new initiatives in the near future.

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### **Q:** Innovation is part of your mandate. How do you foresee the next few years in the field of drug discovery?

**NB:** We have observed several trends in the past years in the field. It is important to follow them, not to be limited by them, and use them to drive our progress. There is a chain commonly established in drug discovery and development, but our network and the opportunities we seized, for example our partnerships with the Montreal Institute for Learning Algorithms based at the Université de Montreal led by Yoshua Bengio, allows us to include those emerging trends with the traditional drug discovery and development path and bring innovation further to develop new therapeutics for cancer patients. We also combine the drug discovery path with medical technologies developed in other centres, for instance, and bridge the gap between

those two to help a better delivery of the therapeutics.

## **Q:** What kind of outreach do your activities have at the international level?

NB: We have developed a number of collaborations on a project-by-project basis starting from the initiative of researchers themselves and with other centres in Europe, Israel, and the United States. Through the support of the Québec government, and a recognition of the need for international collaborations to help grow the biotech sector in the province, we have been taking part in missions to visit a few countries including Israel, Belgium, France and the United Kingdom. We will be attending industry events and conferences in the next months to continue our outreach in the academic and biotech sectors to find new ways to create interest for early-stage research from potential partners or investors.

## **Q:** Where would you like IRICoR to be in five to ten years?

**NB:** I see IRICOR being the reference for drug discovery in cancer therapeutics. With our innovative business model, the expertise we bring to each project we select and the renewed support and vision of the provincial and federal governments that has been crucial and a key of success through their innovation strategy and financial support, I am confident we will reach this vision.

**SK:** IRICOR will be globally recognized as a leader in cancer drug therapeutics, bringing early stage research to the market.

Nadine Beauger, Chief Executive Officer, IRICoR and Steven Klein, Vice President, Business Development, IRICoR

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