The Lavalife of Science: Kathleen Bloom says Canada has a real opportunity here to nurture scientists who can foster the exploitation of R&D and put knowledge to work for Canadian innovation. Put in the words of *To Kill a Mockingbird*'s Atticus Finch, the knowledge transfer specialist has to be able to climb inside the skin of both the researcher and the innovator. Effective knowledge transfer understands the creation and the usefulness of the research from both points of view.

Key to robust innovation lies in effective matchmaking between scientists and stakeholders

The knowledge transfer between research and its beneficiaries, advocates, and stakeholders is essential to protect project development and stimulate innovation at a time when it is most needed.

BY KATHLEEN BLOOM

WATERLOO, ONT.—When budgets are tightened in industry and government, research laboratories are traditionally the first to feel the effects. I believe that knowledge transfer between research and its beneficiaries, advocates, and stakeholders is essential to protect project development and stimulate innovation at a time when it is most needed.

But efficient knowledge transfer and uptake of research findings is not so easy to achieve. As a result, research outputs can be choked and wasted. For example, in the face of more than a million research articles published annually in medical and health journals, it is estimated that 30 to 45 per cent of patients do not receive evidence-based care, and around 25 per cent receive care that has been shown by science to be useless or even harmful.

To paraphrase economist and political scientist Réjean Landry, knowledge transfer is about getting research findings and products into the hands of people who can use them to solve problems. It is also about using research to inspire people to think and act differently.

Cultural barriers present two challenges to research uptake and innovation. First, research is typically conceived, conducted, and disseminated by scientists, not by the very people who can put the findings into action. It is the industry planners, research managers, executives, policy-makers, practitioners, and researchers in other fields who need accumulated evidence unearthed, evaluated, and summarized in their own languages and for their own purposes. Journal articles won't cut it.

Who can do this work of strategic knowledge translation? It requires individuals who are trained in science but have the capacity and will to understand the uptake side of research and speak the language of the stakeholder. Researchers can't do this job from their laboratories. And news items of recent discoveries written for the general public don't lead directly to uptake and innovation.

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The second challenge that goes hand in hand with institutional barriers is the problem of research and organizational "silos." Knowledge transfer is a contact sport. One knowledge transfer specialist I know, a former wet-bench immunologist, refers to his present work as "the Lavalife of Science": matching the right researcher with the right stakeholder. Knowledge transfer specialists facilitate dialogue in which researchers can learn what question the stakeholder is *really* asking and how the findings will be used. Stakeholders learn how to frame their needs as questions that research can feasibly address, or might have already answered. This is how we build capacity for innovation. This is how we keep research departments alive.

The impact of knowledge transfer will increase by training a new breed of scholars who are able and eager to do this work. There are two reasons for my optimism. As a university professor, I know that students come to graduate school because they want to make a difference. As a consultant in knowledge transfer, I know too that nearly 50 per cent of those grad students will not take traditional research positions. We have a real opportunity here to nurture scientists who can foster the exploitation of R&D and put knowledge to work for Canadian innovation.

Kathleen Bloom is a professor at the University of Waterloo specializing in methods that make academic research more useful to decision-makers. This column was originally published at The Mark News, Canada's online source for news analysis and debate www.themarknews.com

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