

# Conflict of Interest in University Technology Transfer

## ÉTUDE DE CAS / CASE STUDY

Ghislaine Mathieu<sup>1</sup>

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### Résumé

Les conflits d'intérêts (CI) et les conflits d'engagement dans les universités ne sont pas seulement des questions limitées aux chercheurs universitaires ; ils peuvent devenir des problèmes pour les actes professionnels individuels ou les décisions au niveau du personnel administratif. Par exemple, les gens associés à l'autorisation du transfert de technologie doivent également être attentifs aux CI pour s'assurer qu'ils prennent les mesures appropriées pour respecter leurs engagements et pour travailler en accord avec les intérêts de leur employeur (l'Université) ainsi que les chercheurs avec lesquels ils travaillent.

### Mots clés

conflit d'intérêts, conflits d'engagements, l'université, transfert de technologie, commercialisation, brevet

### Summary

Conflicts of interest (COI) and commitment in universities are not only issues limited to university researchers; they may become issues for individuals' professional actions or decisions at the level of administrative staff. For example, people associated with technology transfer licensing also need to be alert to COI, and to ensure they take appropriate measures to meet their commitments and work in line with the interests of their employer (the University) and the researchers with whom they work.

### Keywords

conflict of interest, conflict of commitment, university, technology transfer, commercialization, patent

### Affiliations des auteurs / Author Affiliations

<sup>1</sup> Programmes de bioéthique, Département de médecine sociale et préventive, Université de Montréal, Montreal, Canada

### Correspondance / Correspondence

Ghislaine Mathieu, [ghislaine.mathieu@umontreal.ca](mailto:ghislaine.mathieu@umontreal.ca)

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### Conflit d'intérêts

Bryn Williams-Jones est le directeur de la thèse de doctorat de l'auteur.

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### Conflicts of Interest

Bryn Williams-Jones is director of author's PhD thesis.

*This case study is inspired by a story of interest that occurred at the University of Texas at Austin in December 2011 [1]. The individual and institution mentioned in this case study are fictional.*

## Background

Many US and Canadian universities host technology transfer offices (TTO), sometimes called technology licensing offices or university-research partnerships offices. These offices have been put in place to facilitate the translation of university research findings into commercial products [2]. The

development of TTOs has been supported over the past 30 years by both public and private incentives to encourage universities to be proactive in moving research findings from the laboratory to the marketplace, to stimulate university entrepreneurship and thus economic development.

In the United States, the Bayh-Dole Act, enacted in 1980, created a uniform patent policy among the many federal agencies that fund research, enabling small businesses and non-profit organizations, like universities, to retain title to inventions made under federally-funded research programs. Through such legislation, universities have an implicit obligation to collaborate with companies to commercialize research findings arising from federal funding [3]. In Canada, federal and provincial governments, mainly through research funding agencies, have put in place numerous university-industry partnership programs to stimulate technology transfers at the industrial level [4, 5].

TTOs act as intermediaries between industry, universities and researchers to assess the potential economic value of research findings, so that they can be translated into commercial products. While research findings may prove to have a potential economic value, they are often unproven at the industrial level. Thus companies must often commit to investing further in both Research and Development (R&D) to bring university innovations to market.

The TTO may assist researchers in obtaining R&D funding support (e.g., from venture capital), negotiating research contracts and licences with funding agencies and industry, filing for patent protection, and seeking industrial financial support for further development [6]. Instead of negotiating a licence agreement with an existing company, researchers might also prefer to launch start-up companies to develop an innovation because they want to be actively involved in moving it to market. In such a case, the TTO will work with the researcher and external venture capitalists in the creation of the start-up. License agreements between companies or start-ups are usually subject to upfront fees, royalties or milestone payments to the university (which vary depending on institutional intellectual property agreements). In the case of start-up companies, the university may even claim equity as recompense for their investment (i.e., the support of the TTO) and support of the researcher (i.e., the institutional research environment).

Administrative staff from the TTO must be technically trained, have good communication and negotiation skills, and act as “neutral” intermediaries between researchers and industry to protect the university’s and researcher’s intellectual property rights. It is common knowledge to people active in the TTO sector that they should pay attention to their institutional conflict of interest (COI) policy. Some US universities – such as Harvard University, the University of Minnesota and the University of North Carolina – have even implemented specific guidelines addressing the management of COI in technology transfer [7-9].

## The Case

Eric has a PhD in mechanical engineering and is a full-time technology transfer officer in the Office for Technology Licensing and Industry Collaboration (OTLIC) at Lewiston University. Eric’s activities include technical reviews, negotiating research agreements with industry partners, promoting University researchers’ expertise and innovations to external enterprises, and facilitating the launch of start-up companies.

Over the past three years, Dr. Fennec – a professor in bioengineering at Lewiston – has benefited from important public funding from the National Science Funding Council to support some of his research, specifically in the field of battery longevity for active implantable medical devices (AIMD). Batteries are responsible for supplying electrical energy to such devices, and they have a current lifetime of 3 to 8 years. Patients benefiting from battery-powered implantable devices have to undergo multiple surgeries throughout their lives because of limited battery life. AIMD procedures are expensive and risky, so increasing the lifespan of implant batteries could provide important benefits

both to patients (fewer surgical interventions) and to the health care system (cost savings). During the course of his research, Dr. Fennec developed a new power system that, according to preliminary findings, increases the battery lifespan of AIMD by 50%. If commercialized, Dr. Fennec anticipates that this technology could be a “game changer” by making these devices more patient-friendly, thereby increasing their application in clinical practice. This could also generate significant revenues and an excellent visibility for Lewiston University and for Dr. Fennec’s research group.

Dr. Fennec sought to file a patent and a trademark for the technology he developed, called *TechLight*. According to the University Intellectual Property Policy, Dr. Fennec had to submit a patent disclosure to the OTLIC, and specifically to Eric who is the technology transfer officer dedicated to working with faculty members in the biomedical sciences. After a technical review to evaluate the patentability and potential commercialization of the technology, Eric worked with an external patent agent to file a patent application under the international Patent Cooperation Treaty (PCT). The PCT procedure essentially leads to a standard national or regional patent application, which may be granted or rejected according to applicable national laws, in each jurisdiction in which a patent is desired.

Dr. Fennec has discussed with Eric his strong interest in creating a start-up (to be named *LightCo*) to commercialize *TechLight* because Dr. Fennec would like to keep control of the development of his technology. But Eric has some doubts about the “entrepreneurial capacities” of Dr. Fennec, who has absolutely no business expertise or experience working with entrepreneurs or venture capitalists. Eric anticipates that *TechLight* could be easily licensed to an already established medical device company. Nevertheless, Eric respects Dr. Fennec’s determination to create his own start-up and proposes that they meet with a representative from *VenCo*, a venture capital firm with which the University usually works under a non-exclusive agreement. The aim would be to discuss arrangements to facilitate the creation of the start-up *LightCo*, to determine the best approach to obtaining the necessary leverage financing to cover initial operating costs and R&D expenses, and to develop a business plan that could then attract further venture capital support.

Dr. Fennec is concerned by a bad experience that one of his colleagues had with the venture capital firm *VenCo* and so he fears losing control of his start-up. Yet, he also recognises that he needs practical guidance in becoming an “academic entrepreneur”, so he has suggested to Eric that they could instead work with *PatCo*, a for-profit consulting firm offering services to small and medium enterprises and start-ups. *PatCo* provides support in developing R&D programs, preparing business plans, searching for external funding, and recruiting professional expertise. In exchange for this technical and financial support, *PatCo* asks for up to 5% equity in their clients’ business. Dr. Fennec mentions to Eric that he has already met with the scientific advisor of this firm.

Eric expresses concerns over Dr. Fennec’s initiative because his brother, William, is an active founding member of *PatCo* who deals with the firm’s business matters, including intellectual property negotiations and company registration [10, 11]. Although Eric has no direct financial interest in the firm, he does not feel comfortable with the fact that Dr. Fennec first consulted with *PatCo* and so Eric raises the issue with him.

From Dr. Fennec’s point of view, the fact that Eric has no direct interest in *PatCo* and will not profit directly from the commercialization of *TechLight* means that there is no problem. In his professional judgment, Eric thinks that *TechLight* could prove to be a real break-through in the field and is an innovation that has the potential to generate important revenues both for Dr. Fennec (via his spin-off, *LightCo*) and for Lewiston University. Eric wants to maintain good relations with Dr. Fennec and so works actively with him throughout the development of his start-up and the commercialization of *TechLight* in collaboration with *PatCo* – even if he feels not completely at ease working with his brother’s firm. Eric has confirmed that according to the University’s policies, provided that the University is compensated for Intellectual Property rights, it would be possible to initiate a technology transfer agreement for Dr. Fennec once the start-up has been created.

## Questions to consider

1. What challenges does Eric face in meeting the expectations of both the University and its researchers?
2. Does Eric's professional interest in technology transfer (e.g., promotion) influence him to inappropriately value researchers' innovations primarily in terms of their commercial success?
  - Should technology transfer focus primarily on transforming researchers' findings into profitable outcomes?
3. Once Eric has disclosed the potential conflict of interest involving his brother William, how should he deal with the issue? Should he have only disclosed the conflict to Dr. Fennec or to his superiors as well?
4. Is there a conflict between the role of the University as a research organization and that of becoming a commercial partner in innovations when the time comes to commercializing patents?
  - Could the technology transfer process in which Eric and Dr. Fennec are involved be blurring one of the primary missions of the University, that is, knowledge production?
5. How important is the possibility that Dr. Fennec, as an "academic entrepreneur", may have conflicting interests and responsibilities with his role as a "university researcher" and professor?
  - Does Eric have any responsibility to discuss or address these issues with Dr. Fennec?

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