

Event

The commercialization of technologies from research projects is an important factor in assessing the projects near-term impacts. With the increase in scale and scope of life science patents over the past 25 years, concerns exist regarding the freedom to operate within projects and to ultimately be able to commercialize an outcome from a project without patent infringement concerns.

Significance

A bioactive oils project study in Western Canada funded by AVAC (www.avacltd.com) provides an assessment of intellectual property (IP), generating insights for strategic planning regarding commercialization of project technologies. This study provides an in-depth example about patent search methods focused on identifying and resolving freedom to operate issues in the commercialization of new technologies.

Analysis

The six principal investigators (PIs) of the bioactive oils projects were asked to provide keywords based on their own research they felt would facilitate the identification of patents with the potential to impede their research. The keywords, as well as a series of other related keywords taken from the project proposal, were then used in a search for Canadian patents through the Canadian Intellectual Property Office website, and the search was then expanded to other industrialized country patent databases including the United States, Australia, Japan, the databases of the European Patent Office and the World Intellectual Property Office.

The patent database searches yielded a list of approximately 325 patents. The list of patents were divided into equally sized groups and sent out to the PIs, each of whom was asked study the set and identify which patents they felt were most relevant to the project, labeling them from 1 (most relevant) to 3 (least relevant).

After the PI review, there were 30 patents identified that could present freedom to operate (FTO) issues for the projects. Analysis indicates that large private companies, including Monsanto, Pioneer and Cargill, hold most of these patents. A further 80 patents were identified as 'maybe' (i.e. ranked '2') but were segregated from the main sample for further assessment. In hindsight, we would only use two categories next time: yes or no.

Since the patent search process had only identified product patents and that the key words had not identified any process patents, a second search of the Canadian patent database was undertaken, revealing a further 100 patents. An IP expert conducted further searches on patent family lines, based on patent authors and other cited patents, and identified another 400 patents of which only 75 were in common with the previous patent database created from key word searches. Finally, given the number of patents identified in the Canadian searches in particular, the analysis was focused on the Canadian and American patent databases since it is most likely that the technologies in question would be commercialized in these jurisdictions first.

The combined searches identified a group of patents held by one large multinational corporation in particular. Many of these patents could pose barriers to the projects' research. In 2010, the co-lead of the project and the host universities business development officer approached the corporation. The corporation indicated that they were not presently using this bundle of patents and were willing to allow the project to have access to the specific patents, thereby securing an acceptable licensing arrangement that removed at least potential restrictions on commercialization.

Conclusion

In this study of potential barriers to the commercialization of research caused by IP, a combination of patent search methods ultimately provided the greatest insight into freedom to operation issues. Each search revealed patents that the other searches did not identify, suggesting that multiple search process are needed in a patent landscape. Furthermore, the resolution to freedom to operate issues in the commercialization of research may come as a result of direct negotiation between those holding IP and those wishing to commercialize it.