Patents: Not as absent at Swedish universities as it looks like

Lisbeth Olsson
Entrepreneur

Lisbeth Olsson, professor in Industrial Biotechnology

Politicians in Sweden often claim that there is a paucity of patents and licence agreements emanating from the academic sector. The number of patent applications resulting from academic research in Sweden is not easy to follow as the 'Professors Privilege' means that the universities do not automatically claim ownership of employed researcher's innovations. Instead, these are owned by the individual researchers, or collaborative institutes or firms and thus including the responsibility for enabling knowledge, technologies and results to outside academia.

In a survey of 10,000 university researchers (including PhD students), 1.8 per cent applied for a patent in 2006.[1] This is equivalent to 115 out of the approximately 2500 Swedish patent applications that year, filed with a Swedish applicant. These university researchers would thus be applying for at least four per cent of the Swedish patent applications filed that year.[2] For comparison, we took a closer look at what has been produced in terms of patents among the researchers reporting to the Chalmers Energy Initiative, within Chalmers Energy Area of Advanced. In a patent inventory made in 2014 we found that 42 patent applications had been granted between the years of 2003 and 2013, among the 74 researchers responding to the Chalmers Energy Initiative. 14 per cent of these patents were fully invented and applied for by academics. In the remaining cases the patent applications was made by academic inventor together with firms or institutes (36%) or by firm/institutes only (50%). The 2010 inventory survey showed similar results.

A process to be taught

One of the researchers at Chalmers Energy Area of Advanced with experience in patenting is Lisbeth Olsson, professor in Industrial Biotechnology, and co-inventor to a handful of patent applications, all filed together with industrial partners. Her latest patent applications result from a second generation ethanol research projects aiming at developing ethanol from biomass by applying yeast strains designed to efficiently convert lignocellulose based substrates to ethanol. *"In this area patents are used for protection and commercial strategies"*, Lisbeth Olsson says, pointing at the importance of turning knowledge into intellectual property. She continues: *"Taking an invention all the way to the market takes a company. It is outside the academic mission"*. Lisbeth Olsson and her fellow inventors have chosen to work with a small clean-tech company, covering related costs and supporting with patent related administration. Lisbeth Olsson has mainly been involved in the IPR strategy work together with the patent attorney; a process she thinks has been very interesting. *"Writing a patent is very different from writing an academic paper"*, she says and tells me that she strongly supports that young researchers in her group acquire knowledge on the IPR protection process. *"One good thing we did at the department was to invite the European Patent Organisation (EPO) to inform us about the different issues relating to patenting"* Lisbeth Olsson says.

Industry apply

At the moment the technology Lisbeth Olsson and her fellow inventors have developed is completely owned by the company and is currenty being tested by industries at demo-sites for commercial verification. *"It looks very good, but these types of technologies are not easy to launce since they are parts of a larger industrial transformation towards biomass and renewable materials"* she says.

Lisbeth Olsson's story is very representative for what was found in the two patent inventories, made 2010 and 2014, where three out of four filed patent applications involved an industrial partner as applicant. This strong industrial involvement indicates that the inventions are highly relevant for the industry. In addition, different researchers[3], have also

[1]Wahlbin and Wigren, 2007
[2]Jacobsson, Elg, Dahlstrand, 2013
[3]Geuna and Rossi, 2011; and Lissoni et al., 2009

found that the Swedish share of academic patent applications with business ownership is around 80 per cent and thus higher than in other European countries and US. The statement that Swedish academics perform poorly in terms of filing patents with high industrial relevance is simply wrong.

Text: Niklas Fernqvist

Making Science Useful

Roles: Seven types of roles are identified in relation to making science useful. The roles are developed from different activities for diffusion and utilisation, carried out by one or a group of researchers, or by an entire part of the organisation. The roles are; researcher, educator, advisor, debater, entrepreneur, infrastructure developer and networker. These roles are in general intuitive but develop differently, based on personal characteristics, area of research, the recipients of results within the area, and by different local traditions of how to work with utilisation.
More information: This framework is developed by Staffan Jacobsson, Eugenia Perez Vico, Chalmers University of Technology, Hans Hellsmark, SP Technical Research Institute of Sweden and Merle Jacob, Lund University. For more detailed information, please contact Eugenia Perez Vico (eugenia.perez@chalmers.se) or Hans Hellsmark (hans.hellsmark@sp.se).

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