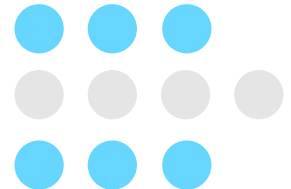




## University spin outs: a rich source of innovation and intellectual property



*Universities are hotbeds of innovation and moving the research from the realms of hypothesis to the practical via patenting can translate into dramatic improvements in the real world.*

One example is a spin out from University College London, where researchers developed a way to put (“transfect”) DNA into cells, in a targeted way, to silence ‘undesirable’ genes to better fight diseases such as cancer.

The University licensed the results of the initial research to a small company, NanoGenics, set up by three UCL academics and researchers involved in the discovery.

Fast forward a few years to 2017 and the intellectual property rights for the transfection complex were sold to a biotech company, Ryboquin, for the sum of £4.5 million.

NanoGenics’ executive chairman, Paul Murray, said in an interview with Herald Scotland in 2018 that “considerable effort had gone into convincing investors of the ‘huge potential’ of LipTide [a custom-built delivery system that can be modified to target different cell types]. ‘We plan to grow the company quickly to a stage where we can take it public as soon as that is feasible,’ he said. ‘It is very rewarding to be involved in the cutting edge of medical science.’”

Matthew Fletcher, Partner and specialist on chemical subject matter and drug formulations at Abel + Imray, a UK intellectual property firm, worked with the university on the patents. He explains, “Academic work is often transferred to the wider domain through this type of process, where it is protected through IP rights, and the revenue from IP licensing used to generate income for the University and for the researchers and academics involved in the discoveries, enabling them to carry out more groundbreaking research.






## IP FOR SMEs CASE STUDY




**MATTHEW FLETCHER**  
**Patent Attorney (Partner)**  
**at Abel + Imray (UK)**

“In the case of NanoGenics, the researchers had demonstrated that they had the technology to put DNA into cells at a lab scale. However, in the biotech sector, substantial resources are required to take an innovation that has been tested in the lab and scale it up for manufacturing or subjected it to regulatory approvals.”



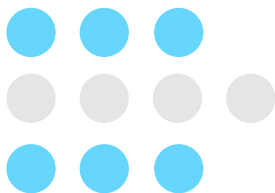
*Matthew notes, “Typically the only way for potentially lifesaving treatments to come to market is via intellectual property rights. Patents are an essential step in getting research commercialised and to ensuring that world-bettering technology gets from the lab, out to the market and finally to the public and health services. Bringing a new drug to market typically costs \$1 billion and can take up to 10 years, so without the promise of patent protection many drugs simply would not reach that final stage.”*



In this case, the technology and associated intellectual property rights netted £4.5 million, while the cost to file and prosecute the patent applications needed to safeguard the inventions was a fraction of that.

Matthew concludes: “Without the intellectual property rights, investment back to researchers and to Universities would not be possible”. “Working with an independent IP attorney brings in a critical breadth of experience and of market players of all sizes. The wider perspective that external counsel brings is essential and part of the bridge for translating innovations from university labs to the commercial field.”

For this particular discovery, work is still ongoing. Additional features of the research are still being produced by the University and the academics, and new related intellectual property is being patented and transferred to Ryboquin.



<https://nanogenics.co.uk/en/>  
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