Spinout company ValiSeek is currently awaiting the go-ahead from the regulator to carry out clinical trials of lung cancer drug VAL401, a reformulation of an existing drug found using the company’s innovative screening technology. The technology was developed during more than a decade of research funded by BBSRC, EPSRC and Innovate UK.

Research also suggests the drug could have applications in the treatment of pancreatic, prostate and breast cancers. The company arose from the work of Dr Suzanne Dilly and colleagues at the University of Warwick. Joint BBSRC and EPSRC funding in 2003 enabled the researchers to develop the ‘Magic Tag Kit’. Magic Tag exploits advances in genomics, allowing researchers to attach small bioactive molecules onto its surface. The kit can then be used for rapid biological screening to identify receptor molecules that bind to the small bioactive molecules. This can be used during drug development, for instance, to identify target proteins for potential new drugs.

A follow-up grant and a BBSRC-funded Royal Society of Edinburgh Enterprise Fellowship awarded to Dr Dilly in 2006 enabled her to investigate applications for the Magic Tag Kit and develop a business plan. Subsequently, she set up a University of Warwick spinout company called a2sp Ltd. Using the tag kit, the company aimed to make screening services available to the pharmaceutical industry.

In 2008, following an approach by a private investor, a joint venture was agreed between a2sp, the University of Warwick and start-up company Tangent Reprofiling. The intellectual property rights for the tag kit were acquired by Tangent and Dr Dilly became the CEO of the company. As proof-of-concept, an existing small-molecule drug that already had approval for clinical use was successfully run through the Magic Tag Kit.

In support of the work, Tangent was awarded Innovate UK (formerly the Technology Strategy Board) funding in 2012. This enabled further developments to take place with the reformulation of the existing drug, now known as VAL401, and identification of potential new uses for VAL401 in the treatment of cancers.

VAL401 is a reformulation of a central nervous system drug that has been used safely to treat non-cancerous conditions for over 20 years. Consequently, there is a great deal of knowledge about how it reacts in people. Dilly and her team have, however, put the drug together in a revised format that enables access to different biological outcomes from its original use. In particular, the anti-cancer activity of VAL401 is enabled in a way that is not seen in its existing application.

In 2014 life-sciences company ValiRx plc became interested in developing a drug for use in the treatment of lung cancer. Spinout Valiseek has developed a new lung cancer treatment based on an existing drug, using screening technology developed during BBSRC-funded research. The drug, VAL401, is soon to enter clinical trials. BBSRC and EPSRC supported the initial research in 2003, leading to a BBSRC/Royal Society of Edinburgh Enterprise fellowship and further funding from Innovate UK to develop the technology.

IMPACT SUMMARY

Spinout Valiseek has developed a new lung cancer treatment based on an existing drug, using screening technology developed during BBSRC-funded research. The drug, VAL401, is soon to enter clinical trials. BBSRC and EPSRC supported the initial research in 2003, leading to a BBSRC/Royal Society of Edinburgh Enterprise fellowship and further funding from Innovate UK to develop the technology.
Spinout Valiseek takes reformulated lung cancer drug through clinical trial

There are more than 41,000 new cases of lung cancer in the UK each year\(^1\), costing the economy £2.4Bn\(^2\). ValiRx saw potential in VAL401 and was also willing to match-fund a further award from Innovate UK to continue the development work. A joint venture was formed between Tangent and ValiRx, and a new company launched\(^3\). ValiRx acquired 60% of the joint venture for £110K.

The new company, ValiSeek, is led by Dilly and has progressed VAL401 through its remaining preclinical development. This included regulatory-quality toxicology\(^7\) and formulation studies, and carrying out further efficacy studies to prove that the drug will work appropriately when administered to cancer patients.

‘We first interacted with Dr Suzanne Dilly while she was leading a2sp, and have followed the development of the VAL401 compound from its academic roots,’ says George Morris, Chief Operations Officer, Valirx plc and a director of ValiSeek. ‘The encouraging preclinical data generated by Suzy compelled us to establish the joint venture to exploit this project’s amazing potential.’

Currently, ValiSeek is preparing for negotiations with the Medicines and Healthcare products Regulatory Agency (MHRA) for its agreement to take VAL401 into clinical trials. Depending on the response of the MHRA and any suggestions it may make for additional research, the company anticipates that trials will begin shortly.

‘I would have hardly dared to dream that the research I started at the University of Warwick 12 years ago would have led to the VAL401 clinical development programme I’m working on today,’ says Dr Dilly, Chief Executive Officer of ValiSeek Limited. ‘To have followed the project from academia through early commercialisation and to now be moving into planning to treat patients in a clinical trial setting has been a remarkable experience.’

In view of the original drug’s established clinical use with patients, ValiSeek is hoping to avoid early-stage clinical trials of VAL401, such as ‘first-in-man’ and toxicology tests. Instead, it will be looking for an immediate effect in lung cancer patients.

REFERENCES

1 ValiSeek Overview: http://www.valirx.com/valiseek/valiseek-overview
2 See, for example:
3 SEEK: New use for old drugs: [Reference/webpage no longer available – July 2016]
5 ‘Cancer costs the UK economy £15.8bn a year’, University of Oxford: http://www.ox.ac.uk/news/2012-11-07-cancer-costs-uk-economy-%C2%A3158bn-year
6 ValiX In Joint Venture With Tangent Reprofiling For Cancer Drug Development: http://www.lse.co.uk/AllNews.asp?code=hj7fze23&headline=ValiX_In_Joint_Venture_With_Tangent_Reprofiling_For_Cancer_Drug_Development
7 London Stock Exchange: ValiSeek Development Update: [Reference/webpage no longer available – May 2016]