New research set to improve traditional Chinese cancer treatment

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Chan Su is a traditional Chinese medicine derived from toad by-products. Credit: University of Queensland

Dried skin secretions from toads could soon be used in a treatment for the benefit of cancer patients.

Researchers from The University of Queensland are collaborating with colleagues at The Hong Kong Polytechnic University (PolyU) in China to develop a cancer treatment originating from Chan Su, a traditional Chinese medicine derived from toad by-products.

Dr Harendra Parekh from the Pharmacy Australia Centre of Excellence (PACE) in UQ's School of Pharmacy said Chan Su was used in China to treat heart failure, sore throats, skin conditions and other ailments.

"It also contains molecules - some of which are toxins and steroids - that are used in Chinese clinics for the treatment of various cancers," Professor Parekh said.

"Our collaboration with PolyU researcher Dr Sibao Chen has focussed on developing a soluble formulation of purified bufalin steroid, a key component of Chan Su which doesn't dissolve easily, making it difficult to administer as a medicine.

"Working together, the two research teams hope to show bufalin's anti-cancer effect in cell-based laboratory tests.

"Given the market acceptance of Chan Su as a traditional medicine in China, the jointly-developed technology will be further advanced and taken to market there."

PolyU will lead the patent prosecution process in China and facilitate further development of the treatment, having collaborated with UniQuest, UQ's main commercialisation company.

UniQuest CEO Dr Dean Moss said the collaboration presented some exciting opportunities.

"This deal is a good example of a commercial outcome from UQ's China engagement strategy," Dr Moss said.

"Our partner will lead on the commercialisation of our joint technology in China and, at any time, we could look to commercialise into other parts of the world with the right partner."

Director of PolyU's Innovation and Technology Development Office Professor Terence Lok-ting Lau said he was delighted to see the project progress from humble beginnings.

"This Australia-China collaboration began with a seed grant from the Shenzhen Government of China, so we are delighted that it has progressed into a potential product which combines novel technologies with traditional Chinese medicine," Professor Lau said.

Provided by University of Queensland