

Drug combo may boost cancer treatment: Study

Jose Hong

Fighting colorectal cancer, minus the toxic effects of conventional treatment, could soon be possible.

Scientists at the National University of Singapore have found a way to make a promising cancer treatment up to 10 times more effective.

They did this by combining two known substances – anti-malarial drug artemisinin and aminolaevulinic acid, which is already used to treat some cancers.

This points to a potential new way of treating Singapore's No. 1 cancer without the conventional options of chemotherapy or radiotherapy, which can lead to many side effects in patients.

In laboratory studies, the researchers found that combining artemisinin with the acid killed colorectal cancer cells and suppressed tumour growth significantly more than using artemisinin alone.

Artemisinin targets cells with high amounts of heme – a type of iron compound. As cancer cells contain much more heme than normal cells, artemisinin affects only them.

The researchers found that aminolaevulinic acid would make colorectal cancer cells produce much more heme, making artemisinin attack them more viciously.

There were 9,807 new cases of colorectal cancer diagnosed here from 2011 to 2015.

The findings of the study were published in the July edition of the

journal *ACS Central Science*.

Dr Lin Qingsong, who led the study with Dr Wang Jigang and Professor Shen Han-Ming, said the experiment was exciting as both substances are far less toxic than conventional cancer treatments.

“Chemotherapy or radiotherapy may kill cancer cells, but they will also kill a lot of other non-cancer cells. So they will have a lot of side effects,” said Dr Lin.

He said he does not know how much the treatment will cost as it is still early days. His team is now seeking funds to conduct clinical trials.

National University Cancer Institute, Singapore consultant Tan Ker Kan said that the results were promising as the study involved two drugs known to be safe.

“But the treatment needs further human studies to determine its safety profile,” said Dr Tan, who was not involved in the study.

“And after that you will need to test it against the efficacy of current chemotherapy drugs.”

josehong@sph.com.sg