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Singapore discovers potential for new colorectal cancer treatment

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Possibility of a new therapy for colorectal cancer could be achieved by blocking DUSP6

Researchers from the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) have made a discovery that could change how – colorectal cancer (CRC) is treated.

The study has revealed that a molecule called Dual-Specificity Phosphatase 6 (DUSP6) plays a major role in helping CRC grow. The CRC cells with higher DUSP6 tested in this study proliferate approximately 40% more than those with lower DUSP6 levels.

In CRC, higher levels of DUSP6 have been found in tumours, where it helps cancer cells grow faster, spread more easily, and leads to poorer outcomes for patients. This unexpected role highlights why DUSP6 is now seen as a possible target for new treatments. This research not only explains why some colon cancers are so aggressive, but also gives us a clear target to develop new treatments.

The possibility of a new therapy for CRC could be achieved by blocking DUSP6. In laboratory models, researchers were able to significantly slow down tumour growth through blocking the protein. High levels of DUSP6 are linked to worse survival, so it could also be used to predict how aggressive a patient's cancer might be. While the study focused on CRC, the findings could also help in other cancers where DUSP6 plays a role.

The team will be looking at research to further understand the pathogenesis of CRC, and to develop DUSP6 targeted therapies for treatment of the cancer, to improve health outcomes for patients.