

Singapore repurposes existing cancer drug to fight certain aggressive cancers

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A step closer to developing a targeted therapeutic option for ALT cancers



A team of scientists led by Nanyang Technological University, Singapore has found that an existing cancer drug could be repurposed to target a subset of cancers that currently lack targeted treatment options and is often associated with poor outcomes.

This subset of cancers makes up 15 per cent of all cancers and is especially prevalent in aggressive tumours such as osteosarcoma (bone tumour) and glioblastoma (brain tumour).

These cancerous cells 'stay immortal' using a mechanism called the alternative lengthening of telomeres (ALT), but the team has demonstrated that ponatinib, a cancer drug approved by the US Food and Drug Administration, blocks key steps in the ALT mechanism that leads it to fail.

In mice with tumours treated with ponatinib, they found a reduction in a biomarker for ALT cancer as compared to untreated mice. The findings are published in the scientific journal Nature Communications. The researchers say that the findings move them a step closer to developing a targeted therapeutic option for ALT cancers, which lack clinically approved targeted treatments to date.

The scientists are also assessing potential ponatinib-based combinatorial drug treatments for ALT cancers.