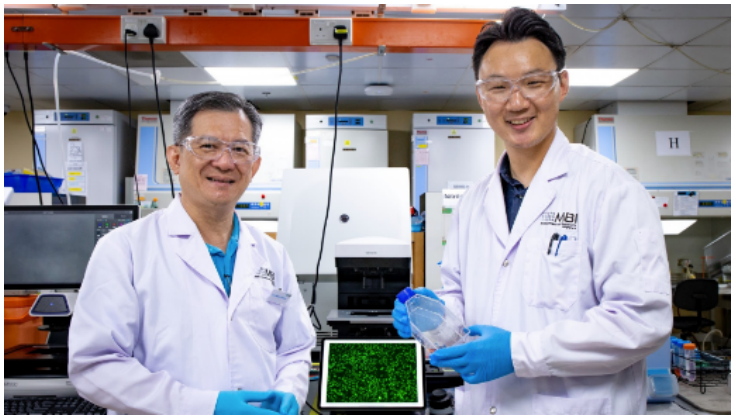
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ASIA EDITION

Singapore explores new targeted therapies for cancer treatment

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Metastasis is a composite process with limited treatment options focusing on relieving symptoms instead of targeting the root cause



Cancer is a leading cause of death worldwide, accounting for approximately one in six deaths, with metastatic cancers making up more than 90 per cent of cancer-related deaths. Metastatic cancers occur when cancer cells break away from their original tumour in the body, travel through blood vessels or the lymph system, and attach to other organs or tissues. The processof cancer cells developing the ability to spread to other parts of the body is a point of interest for scientists to discover potential checkpoints for cancer therapies.

A team of researchers from the Mechanobiology Institute at the National University of Singapore (NUS) and the Department of Biological Sciences under the NUS Faculty of Science, as well as external collaborators, worked together to gain a deeper appreciation for the cellular activities involved in causing cancer cells to change and move through blood vessels.

Through their research, the team discovered how an essential protein, BPGAP1, works in cancer cells to bring together two other proteins, GTPases Rac1, and RhoA, to enable structural changes in cancer cells for them to travel from their original site and attach to another organ or tissue.

“We can use BPGAP1 as both a marker for cancer prognosis and a target for cancer intervention across different cancer types,” said the researchers, “We hope that with this breakthrough, we can inspire new approaches for therapeutic designs pertaining to cancer and metastasis.”