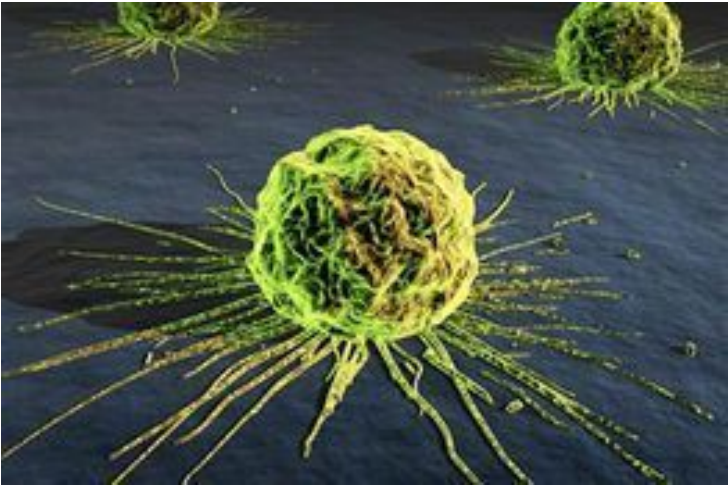


MiReven micro RNA 'miR-7-5p' inhibits melanoma

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Singapore: MiReven, an Australian micro RNA (miRNA) company that is involved in commercializing discoveries from the Western Australian Institute for Medical Research (WAIMR) on the anti-cancer potential of miR-7, has published an in vitro study where the micro RNA 'miR-7-5p' significantly inhibited the migration and invasion of metastatic melanoma cells.

The study has been published in the peer reviewed journal, *Biochemical and Biophysical Research Communications* (volume 430, issue 2, pages 706-710) and is titled, 'miRNA-7-5p Inhibits Melanoma Cell Migration and Invasion'. The other co-authors of the paper include Mr Keith M Giles, Mr Rikki Brown, Mr Michael R Epis, Ms Felicity C Kalinowski and Mr Peter J Leedman.

In the study, miR-7-5p expression was shown to be reduced in metastatic melanoma-derived cell lines when compared with primary melanoma cells. When the micro RNA was reintroduced and expressed ectopically, migration and invasion of the melanoma cells was significantly inhibited in vitro. The study authors also investigated the mechanism of miR-7-5p and found that insulin receptor substrate-2 (IRS-2) is a functional target of miR-7-5p, which then decreases activity in the protein kinase B (Akt) signaling pathway, which is a key regulator of many oncogenic processes including cell migration.

Dr Keith Giles and Professor Peter Leedman from WAIMR, who led the study, explained: "There is considerable interest in the molecular pathogenesis of malignant melanoma and a focus on finding ways to improve survival of patients with metastatic disease. Our study shows that miR-7-5p may represent a novel therapeutic approach to prevent or limit melanoma metastasis."

Dr Stephen Thompson, chairman of MiReven, said that, "This now published study is one-of-several in press or already published demonstrating the utility of micro RNAs in the treatment of cancer. Alongside antibodies and small molecule inhibitors, a picture is emerging where micro RNAs offer a new direction for cancer therapeutic interventions. Specifically, this study shows that miR-7 acts on other pathways in cancer beyond EGFR."