

Researchers confirm gene p73's role in tumor growth

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A team of researchers at National Cancer Centre Singapore (NCCS) and Singapore General Hospital (SGH) has determined dual functionality gene p73, in both the promotion and suppression in tumour growth. The NCCS team also receives a S\$2.5m grant to aid the research in the next five years.

Early studies have shown that type p73 gene exists as two-major forms: the TAp73 which displays [tumour](#)-suppressor functions and the DNp73 form that have been associated with [tumour growth](#) activities. While it is known that p73 is related to the master [tumour suppressor](#) p53, its role in promoting the growth of tumours is unclear.

Following on the research, the team further explored the tumour-supporting functions of p73 and the correlation with hypoxia, a condition in which tumours are commonly deprived of oxygen in cancers. The findings showed that p73 is stabilised and activated by hypoxic conditions, and promotes efficient blood vessel formation in tumours, which in turn supports the tumour development.

Professor Kanaga Sabapathy, Principal Investigator and Head, Division of Cellular and Molecular Research NCCS said, "Tumours in an oxygen deprived environment acquire genetic alterations that are required in order for the tumour to grow. Our study shows the amount of p73 is elevated in tumours, and correlates with the size and growth of the tumour."

Professor Sabapathy, who has been awarded for the inaugural National Research Foundation's NRF Investigatorship award (Class of 2015), has received S\$2.5m grant boost to further the research on the molecular mechanisms of p73. Disbursed over the next five years, he will continue to conduct researches targeting the tumour promotion as well as suppressive functions of p73, opening up the possibilities of restricting the cell [growth](#) function of the protein and developing novel treatments for cancer.

The findings were recently published in *Nature Cell Biology*.

Provided by SingHealth

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