

Gene that reverses blood flow to tumours found

Researchers probing how blood vessel growth inside tumours keeps cancers alive have stumbled on a discovery that can boost the chances of tackling threatening tumours.

They identified a gene called RGS5 that can reverse angiogenesis or the growth of blood vessels inside the tumour.

'It's the uncontrolled growth of blood vessels and the formation of abnormal blood vessels inside tumours that 'feed' them, allowing them to grow and stopping the immune system from wiping out the tumour,' said Ruth Ganss of the Western Australian Institute for Medical Research (WAIMR)

'What we've shown is that RGS5 is a master gene in the growth of blood vessels in tumours. When it is removed, the process is reversed and these blood vessels appear more normal.

'Importantly, this normalisation changes the tumour environment in a way that improves immune cell entry, meaning tumours can be destroyed and survival rates in laboratory tests improved.'

Reversing abnormal vessel growth represents a fresh approach to tackling angiogenesis, with most current research focussing on how to block or kill tumour-feeding blood vessels.

'We've long-suspected this research would deliver advances in knowledge about what impacts tumour growth and this publication recognises the innovation and importance of our work,' said Ganss.

The discovery has been published in the latest edition of Nature.

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