How a Tumour Evaded the Immune System for Years

Description

Pancreatic ductal adenocarcinoma is a very aggressive cancer. It often does not make the immune system respond. Scientists have known that high levels of the MYC protein help the tumor grow. However, it was unclear how these tumors avoid being detected by the immune system.

A team of researchers from the University of Würzburg and MIT found a way that MYC helps tumors stay hidden. They call this the "invisibility switch." MYC can switch from helping DNA to reducing immune signals.

MYC is important for cell division. It usually works with another protein called MAX. However, this study shows that MYC sometimes moves away from DNA. When there is stress in the cells, MYC binds to a type of RNA instead.

The study also shows that MYC can stop immune responses from activating. MYC limits the build-up of RNA that can be recognised by the immune system. This avoids alarms going off that could help fight the tumor.

The researchers found that MYC's function is vital for tumor growth in a healthy immune system. They believe targeting MYC’s RNA binding could help treat this cancer.

CATEGORY

1. Health - LEVEL1

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