Potential melanoma treatment uses protein that repairs damaged DNA

Scientists have discovered that the immune environment inside melanomas with mutations in the protein ATR…is altered in ways that promote tumor growth. They suggest that the finding could help to improve immunotherapies for melanoma and identify patients more likely to respond to them.

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The more that researchers discover about the interplay between cancer and the immune system…the better are the chances of developing immunotherapies that target specific types of cancer.

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For their investigation, the team decided to focus on ATR – a protein that recognizes and repairs DNA damaged by exposure to UV light and which plays a role in cell reproduction.

They showed that introducing mutations that impair these functions in ATR into mice with melanomas accelerated tumor growth and the accumulation of mutations.

The authors also note that mouse melanomas with these ATR mutations “recruited proinflammatory macrophages while repelling T cells important for the anti-tumor response.”

Researchers suggest that their findings pinpoint a mechanism by which melanoma cells themselves can alter the immune microenvironment inside tumors to promote their continued growth.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Melanoma: Mutations that alter immune system to promote tumor growth identified