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**[Caffeine protects from UV damage](#)**

DOI: 10.1038/jid.2008.435

The mechanism by which caffeine may protect the skin against the damage of UV exposure is revealed in a study published online this week in the *Journal of Investigative Dermatology*. Studies in mice have already shown that caffeine helps to eliminate UV-damaged cells by causing them to commit suicide, but this marks the first study to assess the effect in human cells.

Several studies have reported that in humans, consumption of tea or coffee is associated with lower incidences of nonmelanoma skin cancers. To find out why this might be, Paul Nghiem and colleagues studied the effects of caffeine on cultured human skin cells after exposure to UV. They showed that caffeine interrupts a checkpoint in the cell cycle known as ATR-Chk1, causing

the cell to self-destruct. This effect was seen only in cells that were damaged by UV, and therefore more likely to become cancerous, whilst healthy cells were left unchanged.

With over a million new cases in the United States each year, nonmelanoma skin cancer is the most common form of cancer in humans. These results suggest that a topical application of caffeine might one day be developed to minimize or reverse the effects of UV damage in humans.

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