Study uncovers potential to alleviate tissue damage during strokes or transplant

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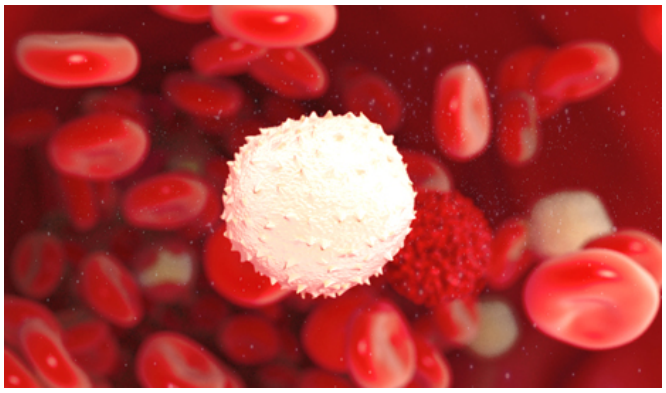

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A new study from Yale School of Medicine uncovers clues as to how a key part of the immune system is regulated to avoid tissue injury to human organs after stroke or transplant. The study, in the journal *Developmental Cell*, focuses on a type of white blood cell called a neutrophil, and how regulation of the granules inside can protect organs such as kidneys from injury.

The research team uncovered a previously unknown role of a protein complex of STK24 and CCM3 in regulating the release of granules from neutrophils. The complex acted in a way that prevented the release of too many granules, which would acerbate tissue damage.

Senior author Dianqing Wu, professor of pharmacology, explains the implications of the study for stroke patients and those who have undergone tissue transplants. "This study provides potential new therapeutic targets to alleviate tissue damage during strokes and tissue transplantation," he said.

Wu added, "This study, by revealing the basic cellular function of CCM3, also points a new direction for the investigation of the pathogenic basis for Cerebral Cavernous Malformation (CCM) disease." CCM is a life-threatening neurovascular disease, which can be caused by mutations in CCM3.

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