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## Method for Manufacturing Patient-Specific Human Platelets

*Skin cells from humans can be revamped into pro-clotting cells called "platelets", according to a study published on November 22, in the Journal of Experimental Medicine. Patients with diseases causing thrombocytopenia -- platelet deficiency -- often require repeated transfusions with platelets obtained from healthy donors.*

But donor platelet isolation is expensive and labor intensive, and donor platelets can be attacked by the patient's immune systems as "foreign." Therefore, Koji Eto and colleagues sought a method for generating custom-made platelets from patients' own cells.

The team first reprogrammed human skin cells to a more primitive, stem cell-like state; these cells were then cultured in a cocktail of platelet-promoting soluble factors. The resulting platelets circulated and accumulated in blood

clots when injected into platelet-deficient mice, behaving just like normal platelets.

Although additional work is needed to ensure that the culture-derived platelets function like normal healthy platelets, these findings represent an important step toward making patient-specific platelets clinically available.

**Editor's Note:** This article is not intended to provide medical advice, diagnosis or treatment.