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Scientists convert skin to blood vessels

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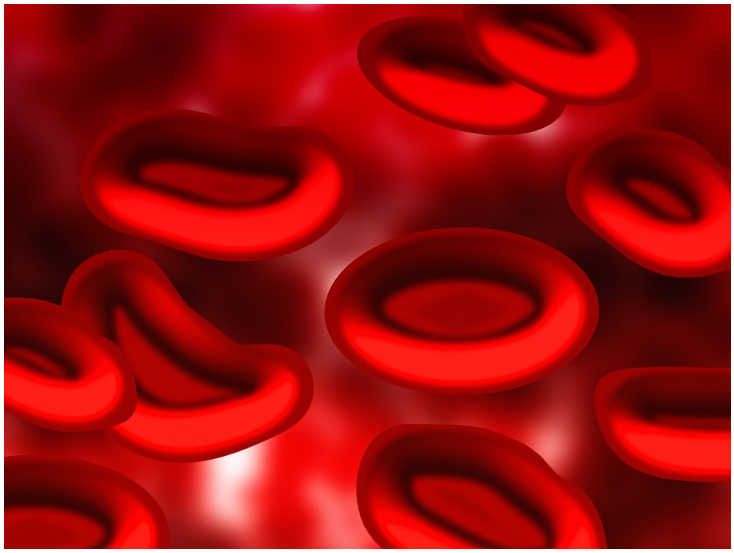

A molecular switch has been identified that converts skin cells into cells found in blood vessels, raising hopes of aiding heart disease sufferers.

This technique boosts levels of an enzyme that keeps cells young and could also potentially help cells avoid ageing as they are grown in the lab. Although this technique has been used before, this is the first time it has been understood by scientists.

Researchers at the University of Illinois at Chicago discovered that progenitor cells could be converted into blood vessel endothelial cells or erythrocytes depending on the level of a gene transcription factor.

When human progenitor cells were embedded into a gel implanted into mice, the cells formed functional human blood vessels. Mice that were suffering from heart damage formed functional human blood vessels in their hearts – even interlinking with existing murine vessels to improve heart function.