



## STEM CELL REPORT

# Mouse heart beats again

A newly beating heart is part-mouse, part-human. For the first time, a mouse heart has been made to pulse again by stripping it of its own cells and rebuilding it with human ones. To create the hybrid heart, Lei Yang at the University of Pittsburgh, took the heart from a mouse and removed all its cells. Then they repopulated with human heart stem cells that had differentiated into the three types of cell required for a heart. After a few weeks, the organ started to beat again. The engineered hearts contain about 70 per cent human heart cells.

The stem cells came from induced pluripotent stem cells generated from human skin cells, and were then turned into heart cells. The hearts beat but aren't strong enough to pump blood effectively.

Yang's long-term goal is to create human hearts that can be used for transplants, for drug testing and to better understand how a heart develops.

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