

Singapore researchers offer new hope for stem cells

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A group of researchers from the National Cancer Centre Singapore, National University of Singapore (NUS), Duke-NUS Medical School, and the Singapore General Hospital has discovered a laboratory-synthesised chemical substance that can be used to increase the number of stem cells harvested from umbilical cords.

Harvesting bone marrow stem cells typically involves an invasive procedure, and as a result there are few donors. As for peripheral blood, the cells collected usually have more immune cells. These cells could in turn attack the patient and cause side effects. Umbilical cord, however, is promising as it contains the highest number of undifferentiated stem cells but not high enough for rapid recovery in adult patients.

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So far, the trials involving mice were encouraging as they showed that the stem cells increased in numbers over time, and did not die. Clinical trials are expected to start in mid-2019. With support from industrial partners, the research team is optimistic that stem cell treatment could be available to patients within the next five years.