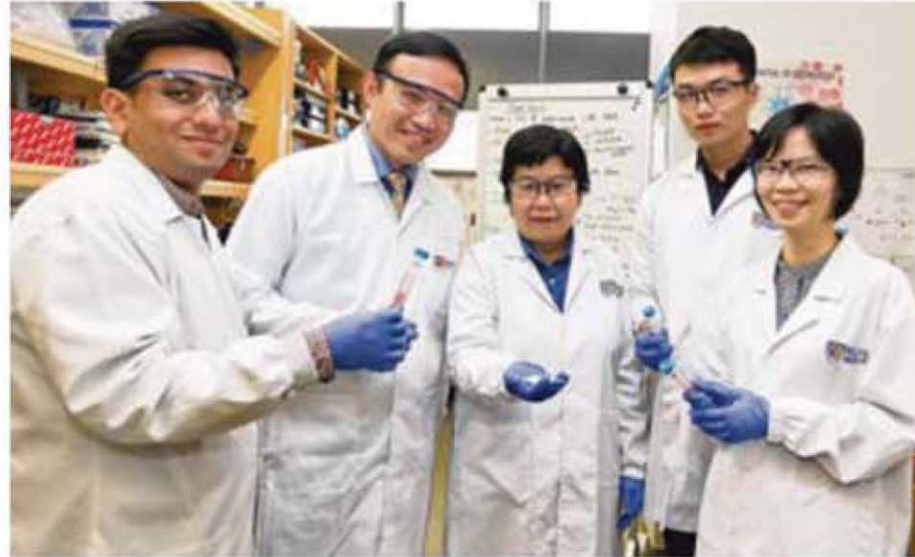


BOOST TO CANCER FIGHT

Research by local scientists finds better way for stem cells to treat leukaemia

PAGE 12



The researchers found that a lab-synthesised substance called C7 is able to expand the number of blood-forming stem cells in the umbilical cord. TNP PHOTO: JONATHAN CHOO

Local findings give hunt for blood cancer cure a boost

✓ AUDREYTAN

The search for a cure for blood cancers has received a boost, with new research by Singapore scientists shedding light on how stem cells can be more effectively used to treat diseases such as leukaemia.

The team said yesterday that they have discovered a laboratory-synthesised chemical substance that can help increase the number of stem cells harvested from umbilical cords.

This will help overcome the challenge of cell levels being too low to aid patients recover quickly, they said. The need for a quick recovery is to minimise the risk of infections, said Associate Professor William Hwang, medical director of the National Cancer Centre Singapore, one of the researchers.

Healthcare costs can also be reduced when a patient's recovery time is shortened, he added.

The other four researchers are from the National University of Singapore, Duke-NUS Medical School and the Singapore General Hospital (SGH).

More than 200 patients in Singapore undergo such stem cell treatments every year for diseases such as blood cancers.

In general, stem cells are

“elastic” cells, capable of regenerating and differentiating into various cell types in the body.

They can be induced to become blood, bone and tendon, among other things.

When stem cells differentiate, they become progenitor cells, which are more specialised and have shorter lifespans.

Those found in the bone marrow or peripheral blood are considered haematopoietic (blood-forming) progenitor cells.

These cells are slightly more specific, in that they regenerate to form cells that constitute blood – red blood cells, platelets and cells of the immune system.

The researchers found that a lab-synthesised substance called C7 is able to expand the number of blood-forming stem cells in the umbilical cord.

Said Prof Hwang, a senior consultant at SGH's department of haematology: “There are patients who are unable to find a fully matched bone marrow or peripheral blood stem cells.

“For them, umbilical cord blood is the only source of grafts. Expanded umbilical cord blood (using C7) would be a life-saving option.”

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