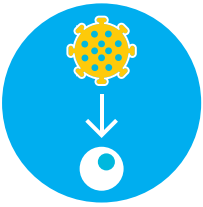
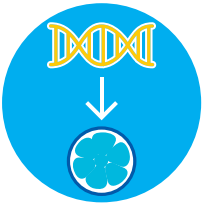
How genetically modified pigs could become organ donors

1 Researchers discovered that porcine retroviruses hidden in pig DNA were able to infect human cells that were grown in the laboratory.



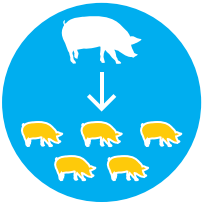
2 Using the new gene-editing technology CRISPR, scientists took cells from pigs and snipped the viral DNA from their genomes. Then they cloned the edited cells.

3 Each pig cell was brought back to its earliest developmental stage and then slipped into an egg, giving it the genetic material to allow the egg to develop into an embryo.

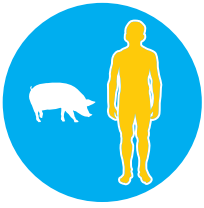


4 The embryos were implanted in sows and grew into piglets that were genetically identical to the pig that supplied the initial cell.

5 Of the successfully cloned piglets that survived, none was found to have the retroviruses.



6 Pigs are promising sources for transplants because their organs closely match the size and shape of human organs.



Sources: CHICAGO TRIBUNE, BBC STRAITS TIMES GRAPHICS