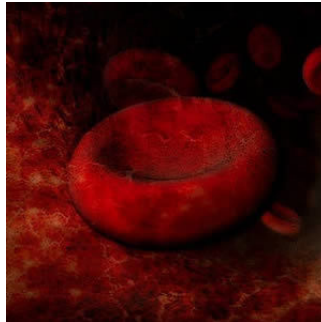


Mass Produced Platelets



Scientists at the NHS and University of Cambridge have discovered how to grow the body's platelet factories in the laboratory. This is a significant leap towards mass producing platelets. However, the researchers still need to make the process more efficient before they can start trials. The breakthrough is reported in the journal Nature Communications.

Platelets are generally needed after trauma, surgery, leukaemia therapy and haemophilia. For now, doctors are dependent on blood donation for these platelets but the researchers are trying to grow megakaryocytes, the platelets mother cell that is found in the bone marrow and that manufacture the clotting platelets.

Dr Ghevaert, from NHS Blood and Transplant believes this could be a major step forward and the next step would be to get enough platelets out of each megakaryocyte..

Each lab-made cell produces around 10 platelets but each one functioning normally in the bone marrow would produce up to 2000. The researchers hope that by recreating the same conditions as in the bone marrow, they could make the cells more effective and the lab-grown platelets could be more useful than those collected in a blood donation.

Dr Ghevaert added: "We can modify the platelets so they can trigger the clotting even better which would have huge advantages indeed for patients who have had a crash or a bleed or even in soldiers who have been injured."

In addition, doctors would be able to have stockpiles that would be customised to different patients since platelets come in different forms.

Source: Nature Communications
Image Credit: Wikimedia commons

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