

# Bloodchip Technology Could Change The Face Of Blood Testing

University of the West of England, Bristol



Bloodchip® is a new approach to testing blood groups that could save many lives and significantly improve patient care in Europe and worldwide.

The new test is intended to replace traditional methods of blood grouping with a highly accurate genetic test, giving a much clearer picture of the many different and often small variations in blood types. This will enhance the accuracy with which blood donors are matched with recipients (patients). The Bloodchip testing solution will be particularly beneficial to patients who are receiving multiple blood transfusions and require perfectly matched blood types. Over time these patients develop antibodies that reject imperfectly matched blood transfusions, a process known as alloimmunization, which can lead to serious illness and life-threatening side effects.

Particular beneficiaries of Bloodchip® include those affected by sickle cell disease and thalassemias, which are hereditary disorders involving defective hemoglobin production, and result in low production and destruction of red blood cells.

“ The Bloodchip test will help ensure people with sickle cell disease or thalassemias receive

*perfectly matched blood to enable them to better manage their conditions.*

Bloodchip has been developed by the panEuropean Bloodgen consortium led by scientists at the University of the West of England, Bristol. The consortium is a mixture of academic institutions, national blood transfusion services and commercial organizations involving the following participants:

- University of the West of England, Bristol
- Progenika Biopharma S.A.
- Sanquin, Amsterdam
- Bristol Institute for Transfusion Sciences
- University Hospital Blood Centre, Lund
- Transfusion Centre and Tissue Bank (CTBT), Barcelona
- Institute of Haematology and Blood Transfusion (UHKT), Prague
- Biotest A G

The European Union's Fifth Framework Program, which promotes research and technological development, funded the consortium's work.

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