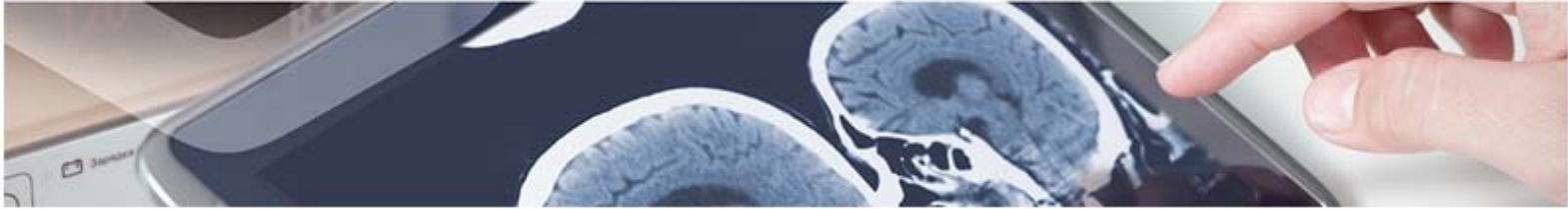




## Laboratory material and reagents

# Method for obtaining megakaryocytes and platelets

A research group from Andalusian Public Health System (SSPA) has developed a new method to obtain megakaryocytes and platelets for use in hematopoietic diseases or for drug screening.



### Description

Platelet transfusion has several limitations that mainly reside in their short average life and the limited number of donors in hospitals. There is therefore a need to create an independent donor system that is capable of constantly and efficiently providing platelets.

To date, megakaryocytes and platelets have been produced *in vitro* from human pluripotent stem cells (hPSCs); however existing techniques are relatively inefficient and production is limited.

The research team has managed to identify a specific gene, whose super-expression increases the level of hematopoietic differentiation of hPSCs and boosts the differentiation effect toward megakaryocyte lineage. It was also demonstrated that the use of a specific compound is able to boost this hematopoietic differentiation. The compound is a fundamental part of this method.



### Advantages

1. Continuous production in large quantities, solving the problem of the short average life of the platelets and the limited number obtained from donors.
2. Greater efficiency in the processes of megakaryopoiesis and thrombopoiesis.
3. The super-expression of the gene in question does not, a priori, represent a risk at the time of transfusion.
4. Possibility of creating human models of platelet diseases for testing new drugs.



### Intellectual Property

This technology is protected by patent.



### Aims

The research group is looking for a collaboration agreement for further development or a licence agreement.



### Classification

Area: Laboratory material and reagents  
Technology: Stem cells  
Pathology: Blood and Lymphatic systems