

CLAIMS

1. An isolated blood preparation consisting of platelet- and lymphocyte-enriched plasma, comprising:
 - 5 - platelets at a concentration ranging from $110 \times 10^6/\text{ml}$ to $330 \times 10^6/\text{ml}$, preferably from $150 \times 10^6/\text{ml}$ to $330 \times 10^6/\text{ml}$;
 - white blood cells CD45^+ , CD31^+ and CD34^- at a concentration ranging from $0.1 \times 10^6/\text{ml}$ to $2.0 \times 10^6/\text{ml}$, preferably from $0.1 \times 10^6/\text{ml}$ to $0.7 \times 10^6/\text{ml}$;
 - red blood cells at a concentration ranging from 0 to $0.03 \times 10^9/\text{ml}$, preferably less
 - 10 than $0.01 \times 10^9/\text{ml}$,
 for use in wound healing, in the regeneration of skin tissues or in a method of stimulating angiogenesis.
2. The isolated blood preparation for use according to claim 1, wherein the white blood cells CD45^+ , CD31^+ and CD34^- comprise lymphocytes, monocytes and granulocytes.
- 15 3. The isolated blood preparation for use according to claim 2, wherein lymphocytes range from 46.2% to 80.6%, preferably from 61.6% to 73.7% of total white blood cells CD45^+ , CD31^+ and CD34^- .
4. The isolated blood preparation for use according to claims 2-3, wherein lymphocytes comprise T cells, angiogenic T lymphocytes (Tang), B cells, NK cells and EPC cells.
- 20 5. The isolated blood preparation for use according to claim 4, wherein T cells, angiogenic T lymphocytes (Tang), B cells, NK cells and EPC cells are in the following 25%-75% percentiles, as determined by flow cytometry analysis:

T cells	51.54-66.11
B cells	6.65-10.66
NKs	4.92-10.89
Tang ($\text{CD3}^+/\text{184}^+/\text{31}^+$)	19.20-27.32
$\text{CD31}^+/\text{146}^+/\text{90}^+$ (EPCs)	0.195-0.565

6. The isolated blood preparation for use according to claim 2, wherein monocytes are
 - 25 CD14^+ and CD16^+ or CD16^- and they range from 7.7% to 40.0%, preferably from 15.9% to

23.1%, of total white blood cells CD45⁺, CD31⁺ and CD34⁻

7. The isolated blood preparation for use according to claim 6, wherein said monocytes are in the following 25%-75% percentiles, as determined by flow cytometry analysis:

Monocytes	6.44-13.02
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5 8. The isolated blood preparation for use according to claim 2, wherein granulocytes are CD15⁺/16⁺ and they range from 3.3% to 32.9%, preferably from 5.9% to 16.7%, of total white blood cells CD45⁺, CD31⁺ and CD34⁻.

9. The isolated blood preparation for use according to claim 8, wherein granulocytes are in the following 25%-75% percentiles, as determined by flow cytometry analysis:

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Granulocytes	2.87-10.87
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10. A method for preparing the blood preparation of claims 1-8, which comprises the following steps:

(i) centrifuging from 2 to 7ml of whole blood in a centrifugation tube at 293-660g, preferably at 458g, for 5 up to 10 min at room temperature, thereby obtaining the separation of an upper and lower phase, wherein the upper phase contains plasma enriched in platelets and lymphocytes and the lower phase contains red cells;

(ii) collecting the upper phase containing the plasma enriched in platelets and lymphocytes.

11. The method of claim 10, wherein said centrifugation tube comprises a rubber stopper (1); a membrane separating the tube in an upper and a lower volume (2), defining the corresponding upper and lower phases according to claim 10; a ring nut placed at the bottom end (4) and operating an inner piston (3), which is allowed to move up and down the tube lower volume.

12. The method of claim 11, wherein the membrane consists of a hydrophobic disk barrier or membrane with 15 to 200 micron porosity and provided with a central hole of 1.5 to 2.5 mm diameter.

13. A blood preparation obtainable by the method of claims 10-12.

14. The blood preparation according to claims 1-9 or 13, for use in the treatment of lesions of orthopedic or oncological origin such as bone and cartilage damages, post-surgery lesions or wounds; skin ulcers, decubitus sores, pressure ulcers, venous leg ulcers, arterial ulcers, diabetic foot ulcers, corneal lesions such as scarring of the cornea and corneal ulcers;
5 periodontal tissue damages or periosteal lesions.
15. The use of isolated blood preparation consisting of platelet- and lymphocyte-enriched plasma as defined in claims 1-9 or 13 for the following cosmetic treatments: anti-aging, scar repairing, wrinkle, acne, alopecia and burns.
16. A pharmaceutical or cosmetic composition containing the isolated blood preparation
10 of claims 1-9 or 13.