

CLAIMS.

1. A method for preparing a growth-factors containing platelet releasate from
a fluid mammalian platelet concentrate, comprising the consecutive steps
5 of
 - a. subjecting the platelet concentrate to a first pathogen concentration
reduction step with the purpose of disrupting both DNA and RNA of
micro-organisms present in the platelet concentrate;
 - b. subjecting the platelet concentrate to an activation step by contacting
10 it with an activating agent, with the purpose of causing the platelets
to release at least part of alpha granules and growth factors present
therein, thereby providing a fluid platelets releasate ;
 - c. subjecting the fluid platelet releasate to a fibrinogen concentration
reduction step and recovering a fibrinogen depleted fluid platelet
15 releasate;
 - d. subjecting the fibrinogen depleted fluid platelet releasate to a second
pathogen concentration reduction step with the purpose of disrupting
enveloped viruses;
 - e. subjecting the platelet releasate to sterile filtering and recovering
20 from the filtering step a filtrate liquid containing the growth factors.
2. The method of claim 1, wherein the filtrate liquid obtained in step e.
which contains the growth factors, is subjected to lyophilisation.
3. The method of claim 1 or 2, wherein the activating agent is a solution
containing one or more compounds selected from the group of a calcium
25 salt, thrombin, collagen, thromboxane A2 and adenosine diphosphate
(ADP), preferably a thrombin containing solution.
4. The method according to any of the previous claims, wherein the first
pathogen concentration reduction step comprises incubating the platelet
concentrate with a photochemical active agent and exposing the platelet
30 concentrate to UV irradiation.
5. The method according to claim 4, wherein the UV irradiation is UVA
irradiation, preferably UVA radiation of an energy density between 1

and 10J J/cm², more preferably UVA radiation of an energy density of of 3 J/cm².

6. The method according to claim 4 or 5, wherein the photochemical active agent is a psoralen, in particular amotosalen or riboflavin.
- 5 7. The method of any of the previous claims, wherein the second pathogen concentration reduction step comprises incubating the platelet releasate with a solvent and/or detergent, followed by removing the solvent and/or detergent and recovering the platelet releasate depleted in solvent and/or detergent.
- 10 8. The method of claim 7, wherein the solvent for incubating the platelet concentrate is selected from the group of di- or trialkylphosphates, preferably tri-n-butylphosphate.
9. The method of claim 7 or 8, wherein the detergent is selected from the group comprising one or more of polyoxyethylene derivatives of fatty
15 acids, partial esters of sorbitol anhydrides, non-ionic detergents, sodium deoxycholate and sulfobetaines, and is preferably Triton X-45, Triton X-100 or Tween 80.
10. The method according to any of claims 7-9, wherein the solvent and/or detergent is removed from the platelet releasate by means of an oil
20 extraction.
11. The method according to claim 10, wherein the oil extraction is carried out in the presence of an amount of oil which ranges from 2 to 20 weight %, preferably from 5 to 15 weight %, more preferably from 5 to 10 weight %, based on the total weight of the mixture of the platelet concentrate
25 and the solvent and/or the detergent.
12. The method according to any of the previous claims, further comprising at least one step of centrifugation of the platelet releasate, after removal of the solvent and/or detergent in the second pathogen concentration reduction step.
- 30 13. The method according to any one of claims 2-12, wherein in advance of lyophilisation, the filtrate liquid is divided in individual portions, wherein the volume of the individual portion is adjusted such that each

portion contains the releasate of approximately the same number of platelets

14. The method of claim 13, wherein the liquid filtrate is divided in individual portions which contain the releasate of about $2 \times 10^5 - 2 \times 10^7$ platelets per cm^3 , preferably the releasate of about 2×10^6 platelets per cm^3 .
15. The method according to any one of claims 2 - 14, wherein human albumin is supplied to the filtrate liquid obtained in step e, in advance of subjecting the filtrate liquid to lyophilisation,
16. The method according to any of the previous claims, wherein in advance of subjecting the platelet concentrate to the activation step b, the platelet concentrate is subjected to a leukocyte inactivation step.
17. The method according to any of the previous claims, wherein the mammalian platelet concentrate is rich in growth factors from human platelets or horse platelets.
18. The method according to any of the previous claims, wherein the mammalian platelet concentrate comprises a pool of platelet concentrates which originate from different subjects.
19. A growth-factors containing platelet releasate obtained with the method of any one of claims 1-18 for use in regenerative medicine, in particular for one or more applications selected from the group of enhancing the proliferation of multi lineage cells and the promotion of wound healing and ulcer healing.
20. A growth-factors containing platelet releasate obtained with the method of any one of claims 1-18 for use in one or more cell culture media selected from stem cells, fibroblasts or dendritic cells.
21. A formulation containing the growth factors containing platelet releasate obtained with the method according to any one of claims 1-18, selected from one or more of the group of an aerosol, a treatment fluid, a spray, a mist, a lotion, a cream, an ointment, a gel, a gum, a bandage, a dermal patch, a plaster.