

CLAIMS

1. Pharmaceutical composition comprising L-triiodothyronine or a pharmaceutically acceptable salt thereof, for use in the treatment of inflammatory response or one- or multi-organ dysfunction in subjects with sepsis, wherein said composition is administered in the range of 5 to 9 μg L-triiodothyronine per kg of body weight, more preferably 6 to 8 μg L-triiodothyronine per kg of body weight, most preferably 7 μg L-triiodothyronine per kg of body weight.
2. Pharmaceutical composition for use according to claims 1, in the treatment of kidneys, liver, brain, lung, heart, gastrointestinal system, haemopoietic system or coagulatory system.
3. Pharmaceutical composition for use according to claims 1 and 2, in subjects with tissue hypoxia and microvascular dysfunction caused by sepsis, coronavirus infection, severe injury, cancer and/or extracorporeal organ protection.
4. Pharmaceutical composition for use according to claim 3, in the treatment of prolonged hypoxia due to sepsis of at least 30 minutes, or at least 3 hours, or at least 4, 6, 12, 18, or 24 hours.
5. Pharmaceutical composition for use according to claim 4, in the treatment of the right ventricular systolic function, wherein the Tricuspid Annular Plane Systolic Excursion (TAPSE) is between 16 and 30 mm, preferably between 20 and 25 mm.
6. Pharmaceutical composition for use according to claims 4 or 5, in the treatment of right ventricular systolic function, wherein the value of central venous pressure is measured between 1 and 10 mm Hg, preferably between 3.7 and 7.4 mm Hg.
7. Pharmaceutical composition for use according to claim 4, in the treatment of inflammatory response and coagulatory system dysfunction, wherein the erythrocyte sedimentation rate is reduced by

50% over a period of 48 hours and measured preferably below 30 mm within the first hour.

8. Pharmaceutical composition for use according to anyone of claims 1 to 7, wherein L-triiodothyronine or a pharmaceutically acceptable salt thereof is formulated either as a solution for injection or as a lyophilized powder for reconstitution.
9. Pharmaceutical composition for use according to claim 8, wherein L-triiodothyronine or a pharmaceutically acceptable salt thereof is in the form of an injectable solution in a concentration from 2 to 20 µg/mL, preferably from 5 to 15 µg/mL, most preferably in a concentration of 10 µg/mL.
10. Pharmaceutical composition for use according to claim 9, wherein L-triiodothyronine or a pharmaceutically acceptable salt thereof is administered as a continuous injection in a rate from 0.08 to 0.20 µg/kg/h, more preferably in a rate from 0.12 to 0.16 µg/kg/h, most preferably is 0.14 µg/kg/h for 48 hours.
11. Pharmaceutical composition for use according to claim 9, wherein L-triiodothyronine or a pharmaceutically acceptable salt thereof is administered as an initial bolus from 0.6 to 1.0 µg L-triiodothyronine per kg of body weight, more preferably from 0.7 to 0.9 µg L-triiodothyronine per kg of body weight, most preferably is 0.8 µg L-triiodothyronine per kg of body weight, following by a continuous injection in a rate from 0.10 to 0.20 µg/kg/h, more preferably in a rate from 0.10 to 0.14 µg/kg/h, most preferably is 0.112 µg/kg/h for 24 to 72 hours, preferably for 48 hours subsequently to the bolus administration.
12. Pharmaceutical composition for use according to claims 9 to 11, wherein a subject of 75 Kg receives intravenously from 375 µg to 675 µg T3 in total, preferably from 450 µg to 600 µg T3, most preferably 525 µg T3 in total.

13. Pharmaceutical composition for use according to anyone of claims 1 to 12, comprising pharmaceutically acceptable excipients.
14. Pharmaceutical composition for use according to anyone of claims 1 to 13, comprising one or more further active substances.