Patent Search

Invention Title	AN OXYGEN DELIVERY OF HAEMOGLOBIN-EMBEDDED LIPID VESICLES
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Abstract:

ABSTRACT The present invention discloses an Oxygen Delivery of Haemoglobin-Embedded Lipid Vesicles. The present invention, in which to develop haemoglobin-embedded lipid vesicles instead of haemoglobin encapsulation and check their efficiency. Embedded haemoglobin would deal with target cells directly. Further, the present invention is comprised on its compatibility with biological surroundings to investigate its advantages over traditional oxygen delivery methods, including oxygen carrying capacity, shelf life, and toxicity. Accompanied Drawings [Figure 1-5]

Complete Specification

DESC:FIELD OF INVENTION:
The present invention relates to the field of an Oxygen Delivery of Haemoglobin-Embedded Lipid Vesicles. The present invention in particular relates to develop hemoglobin-embedded lipid vesicles instead of hemoglobin encapsulation and check their efficiency.
BACKGROUND OF THE INVENTION
The development of efficient oxygen carriers has been an elusive goal for both in vivo and in vitro applications. Hemoglobin-based oxygen delivery systems (HBODS) have been developed as a potential solution to oxygen supply issues, especially in medical emergencies, where oxygen supply is limited or absent. In vitro studies have demonstrated the potential of HBODS in various applications, including cell culture, drug testing, tissue engineering, stem cell research, and metabolic studies. In this regard, various methods have been reported, mostly based on hemoglobin encapsuled with artificial vesicles. However, they are still in the preclinical phase for some limitations.
There are few references made to the present invention as given below:
CN103781489A discloses a process for making hemoglobin-based oxygen carrier (HBOC) containing pharmaceutical composition suitable for oral delivery and the composition formed thereby are described. There are three exemplary composition configurations which include (1) hemoglobin-loaded nanoparticles solution, (2) enteric-coated hemoglobin capsules and (3) enteric-coated hemoglobin tablets. To facilitate the bioavailability and bio-compatibility of hemoglobin, intestinal absorption enhancers are added in each of the HBOC formulations. Protective layers ensure delivery of an intact hemoglobin structure in intestinal tract without degradation in the stomach. The HBOC formulations may be used for preventive or immediate treatment of high altitude syndrome (HAS) or for treatment of hypoxic conditions including blood loss

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