

Hemopure: Blood Substitute

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One in every twenty Americans require a blood transfusion at some point in their life. A blood transfusion might be needed in situations ranging from a car crash, or a battle wound to an anemic patient or a patient in surgery. The average blood transfusion is about 3.4 pints. The obvious demand for blood can not always be met by the standard supply of donations. Therefore the need for a blood substitute has been pursued for the past several decades. A blood substitute is defined by a substance that recreates two main functions of blood: oxygen transport, and Hemostasis, or blood clotting.

The solution to the blood substitute problem was addressed and solved by a company named Biopure. Biopure has been developing and testing their product, Hemopure, for the last ten years.

Under refrigerated conditions, the average shelf life of red blood cells is forty-two days. Hemopure, a Bovine based hemoglobin [hemoglobin glutamer - 250 (bovine)], has a shelf life of up to three years at room temperature. This obvious plus is not the end of the benefits Hemopure offers. Hemopure is put through an ultra-purification process that removes potential infectious agents in the substitute. Due to this process, Hemopure is made compatible to all blood types by the removal of all A and B antigens.

As of right now Hemopure is the most FDA approved blood substitute available. At this point it is approved for use in animals up to dogs.

So far Biopure has conducted one major study on its product Hemopure. This study was an eighty-one person trial in which participants were given low doses of Hemopure in order to test blood compatibility. The results of this trial showed that all participants well tolerated the low doses of the substitute.

Though this is a hopeful sign, Hemopure is still far from being used in commonplace. The FDA is taking great caution with this substitute due to several failures of previous substitutes. The future for Biopure is to prove that Hemopure can be well tolerated in the dosage range of a full transfusion.



Sources

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- <http://www.biopure.com>
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