


ErythroMer™

Artificial Red Blood Cell Substitute

DEVELOPING A SOLUTION
FOR WHEN BLOOD IS NOT AN
AVAILABLE OPTION



KaloCyte is developing **ErythroMer**, a dried, bio-inspired artificial red blood cell, to treat life-threatening blood loss when stored red blood cells are **unavailable**, **undesirable** or **in short supply**.

There is a Critical Need...

Blood loss is the leading cause of preventable death after trauma. However, stored blood products are at times **unavailable** (pre-hospital care, austere environments, underdeveloped countries), **undesirable** (risk of immune response), or **in short supply** to meet demand (mass casualty event).

Our mission at KaloCyte is to develop an innovative bio-inspired artificial red blood cell to meet this critical need.

ErythroMer has the potential to transform how we treat patients who need transfusion when stored red blood cells are not an option and save thousands of lives in pre-hospital settings, on and off the battlefield.

ErythroMer provides a bridge to hospital-based blood transfusions

Nano-encapsulated human hemoglobin

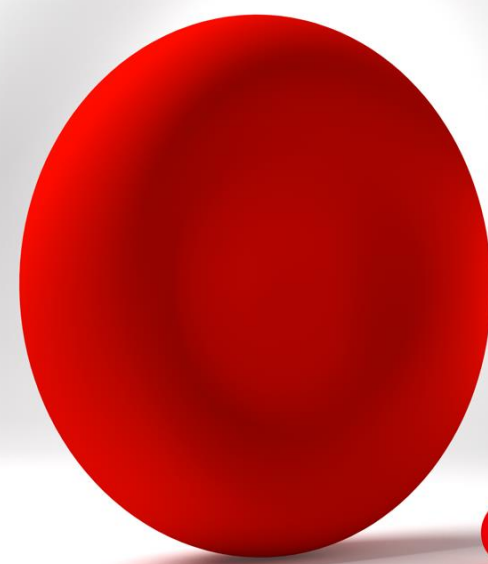
- Bioengineered to **mimic RBC physiology**
- Toroidal “donut” shape maximizes surface area
- Context-sensitive oxygen affinity

Synthetic nanoparticle structure

- Does not require blood typing; **universal option**
- Benign interaction with vasculature
- Clears rapidly from bloodstream (~3-7h)

Freeze dried (“lyophilized”)

- Amenable to **long-term dry storage** at ambient conditions
- **Lightweight; no cold chain** required
- Easily reconstituted and administered



Red Blood Cell (RBC)
(7 microns)



ErythroMer
(0.12 - 0.15 microns)



2016

KaloCyte, Inc. Formed
Patents Issued
First Published Results



2017

NIH NHLBI STTR Grant **\$2M/3Y**
DoD CDMRP Grant **\$3M/3Y**



2018

Seed Funding - **\$800K**
First Scientists Hired
Lab Transfer Initiated
BOD Expanded
CEO Recruited
NIH CAP Program
Joined MTEC

KaloCyte

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