



## NHLBI Mid-Atlantic Innovation Conference

**Martin Cannon, President and CEO**

[martin.cannon@newhealthsciences.com](mailto:martin.cannon@newhealthsciences.com)

Office Phone: 301-493-4586

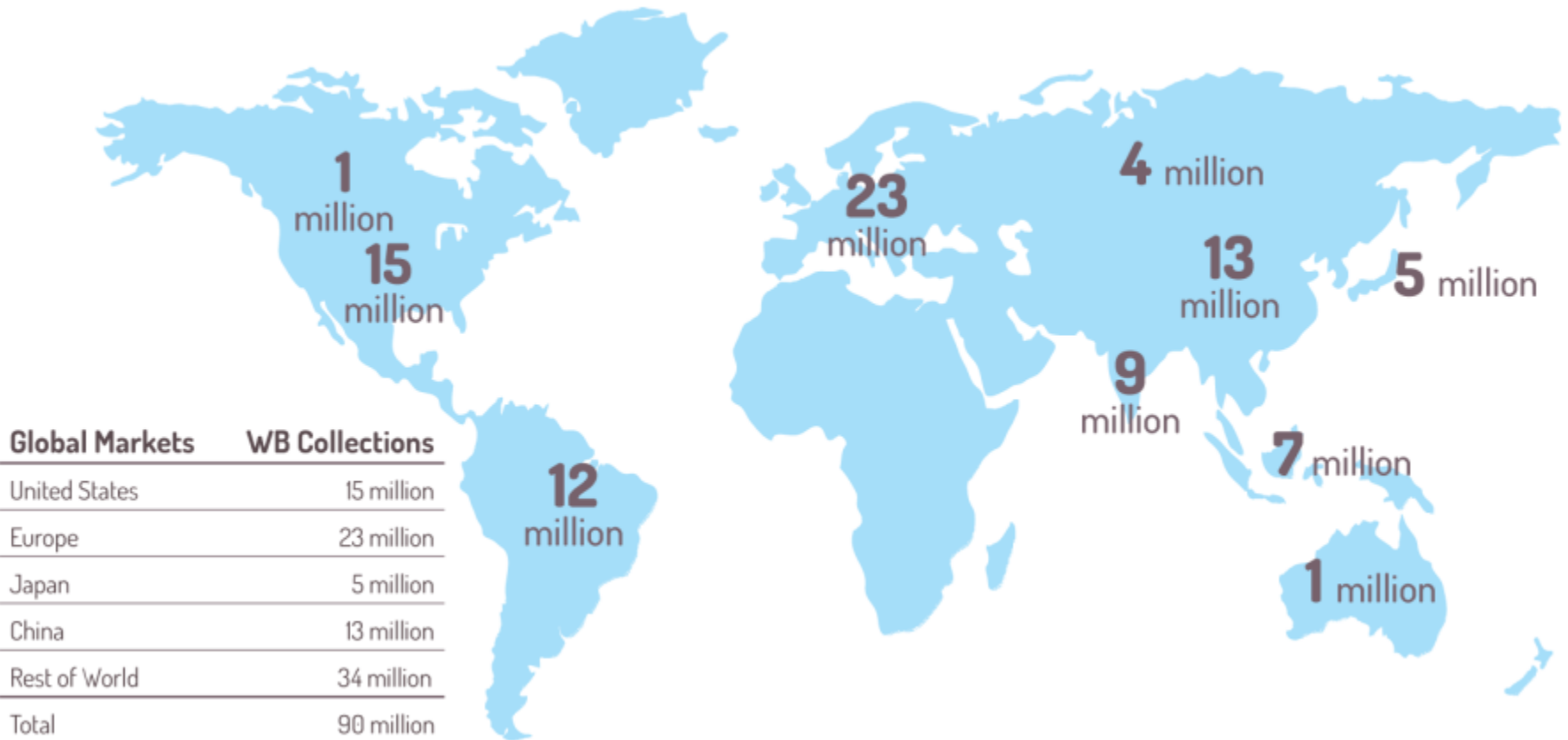
*A blood storage system that delivers a more physiologic, therapeutic and durable Red Blood Cell to transfusion recipients globally.*

Hemanex+™

October 15, 2012

# Red Blood Cell Market

Global red blood cell collection market – millions of collections



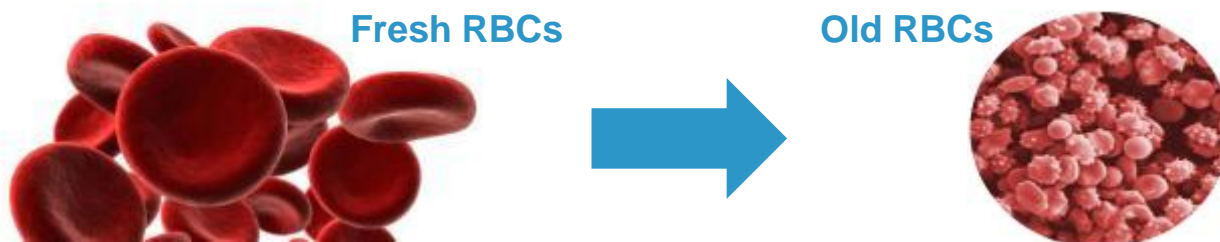
## Market Need and NHSi Proprietary Solution

**Need:** Protecting Patients from the Effects of “The Storage Lesion” (The Negative Age Effects of Red Blood Cell (RBC) Storage)

- + RBC degrade progressively over the 6 week storage period
- + RBC degradation **driven by oxidative damage to packed hemoglobin**

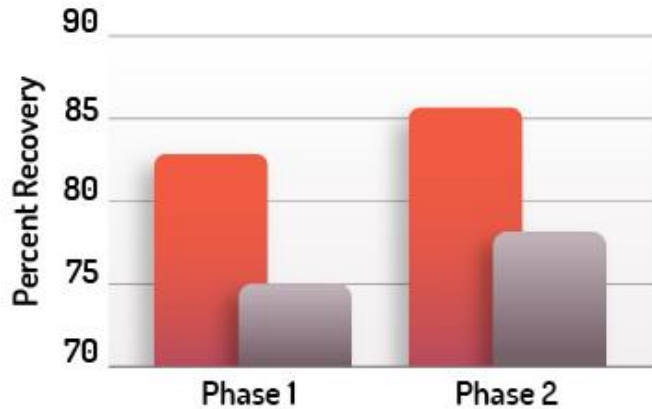
**Solution:** The Hemanext Storage System Removes O<sub>2</sub> and CO<sub>2</sub>, the Fuels for Oxidative Damage

- + Creates and maintains an anaerobic environment for up to 9 weeks
- + Has repeatedly demonstrated substantial improvements in a comprehensive array of RBC quality metrics at 3, 6 and 9 weeks vs. current methods

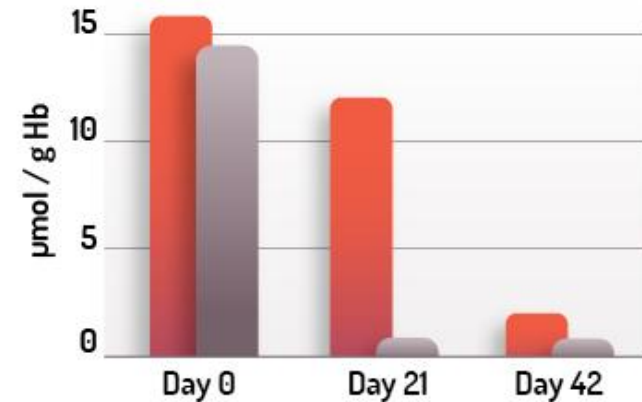


# Phase II Clinical Data: Standard Metrics

**24-Hr Recovery (Adj):** Measures % of transfused RBCs surviving 24 hours in recipient



**2,3 DPG:** Modulates hemoglobin's ability to deliver oxygen in tissues

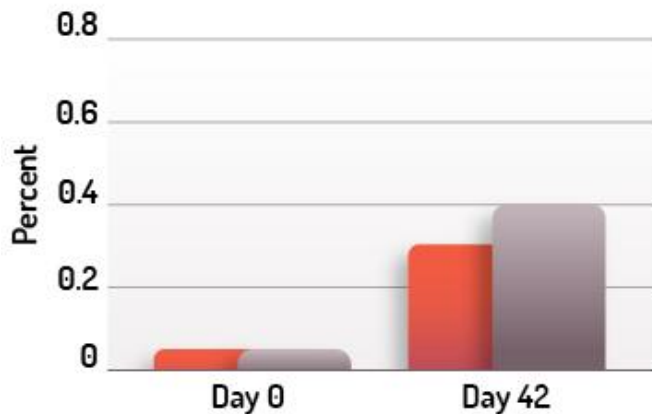


Hemanext

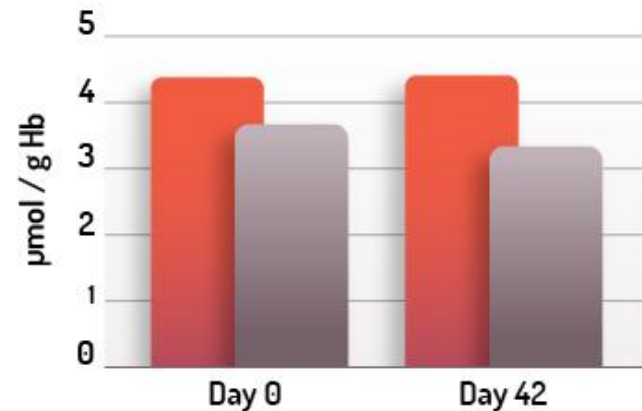


Control

**Hemolysis:** A process involving progressive RBC destruction yielding harmful effluent

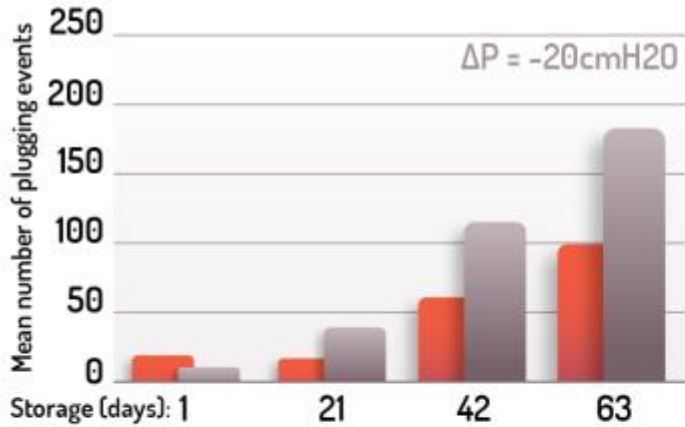


**ATP:** 'Energy currency' of RBC; Indicator of overall health of RBC

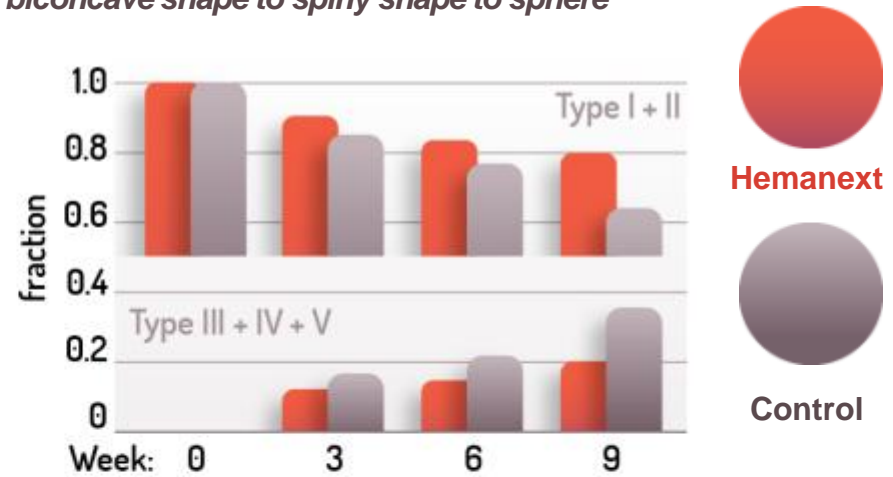


# Phase II Clinical Data: Novel Metrics

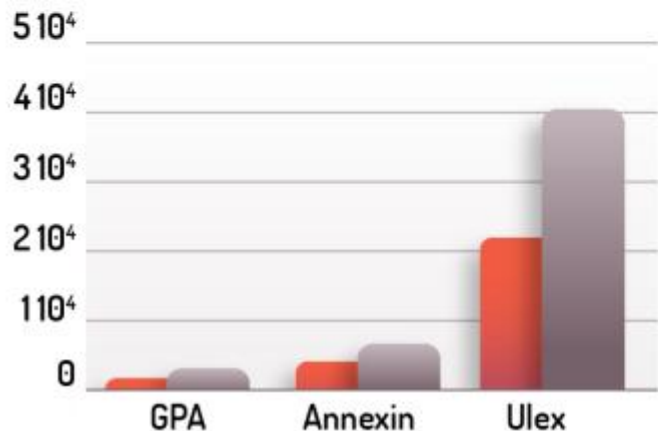
**Deformability:** RBC's ability to deform into narrow capillaries to deliver oxygen (capillary plugging frequency measured with Micro Vascular Analyzer)



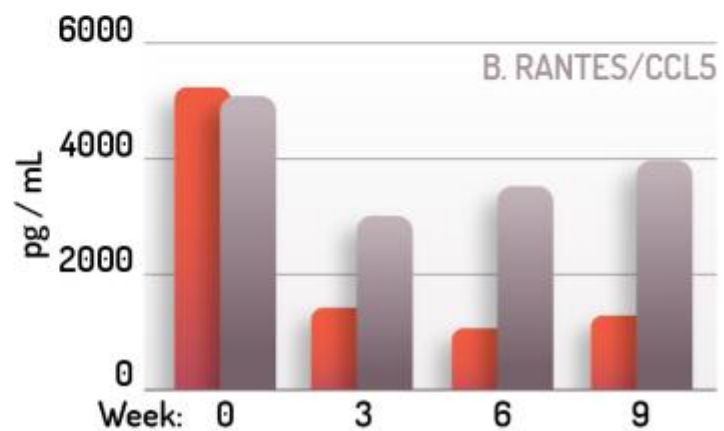
**Morphology:** Physical appearance of RBC: Healthy biconcave shape to spiny shape to sphere



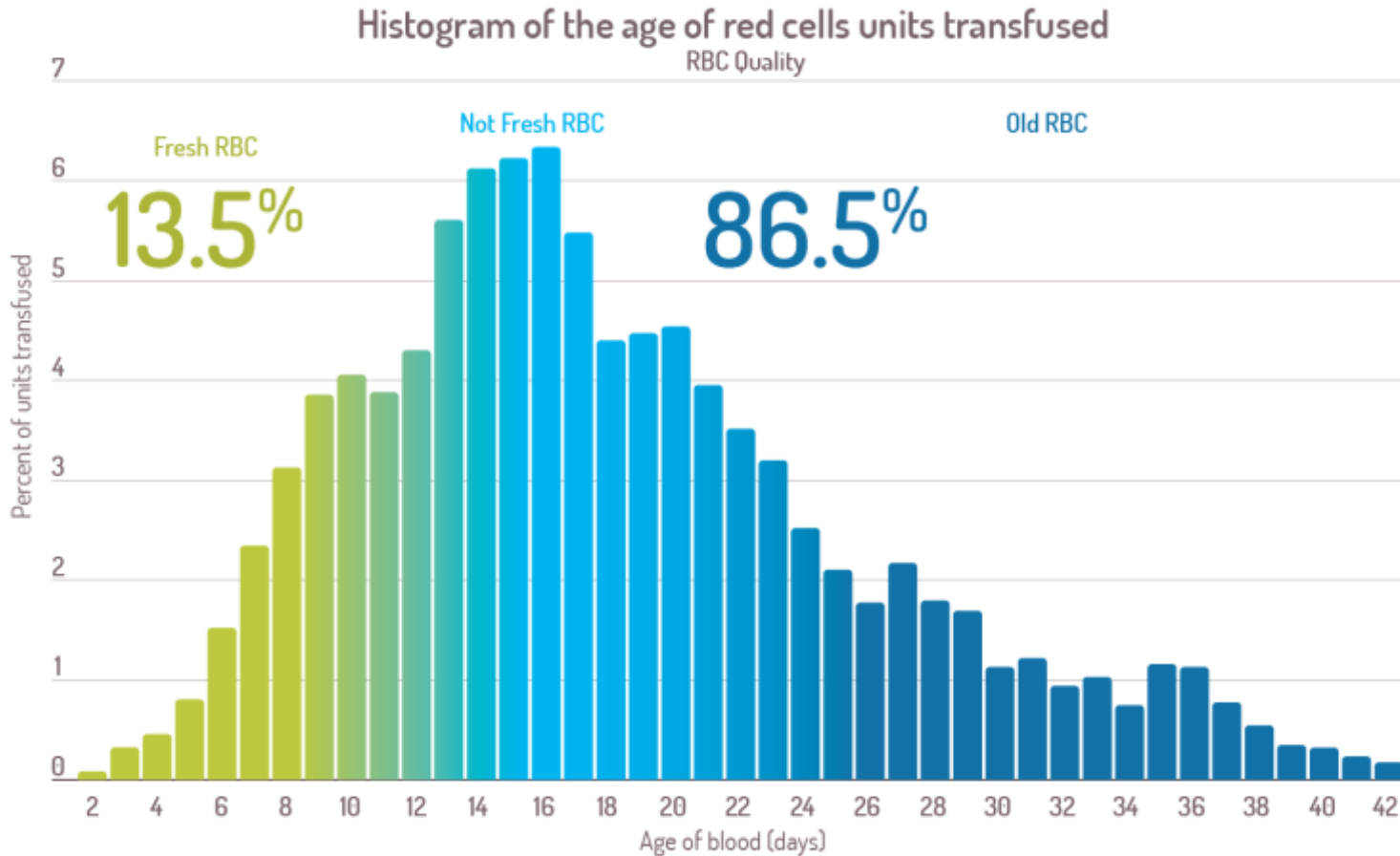
**Micro-particles:** Small particles shed by blood cells for waste disposal, or during cell damage and aging



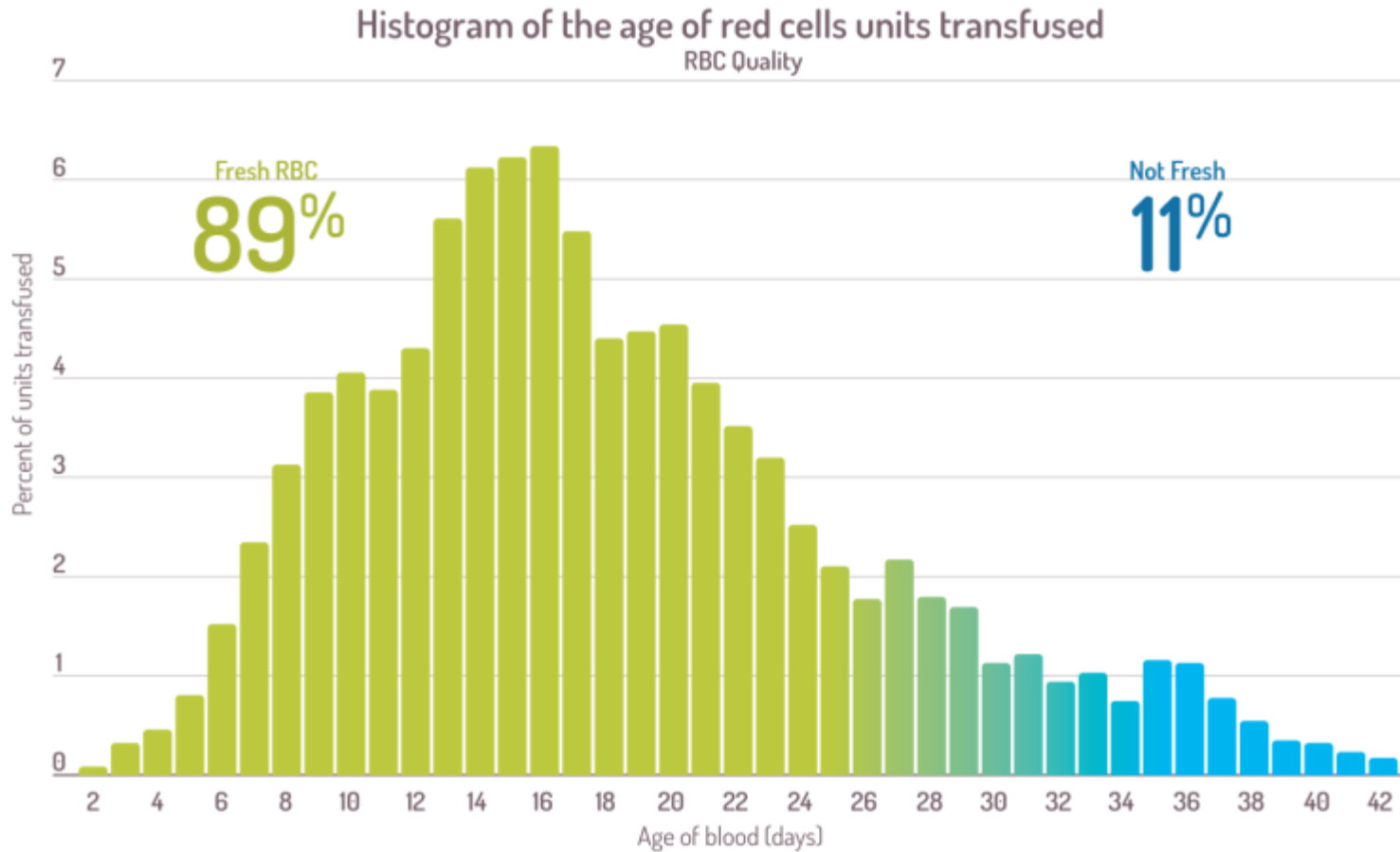
**Biologic Response Modifiers:** Substances made by cells or product of cells that provoke systemic response in the body



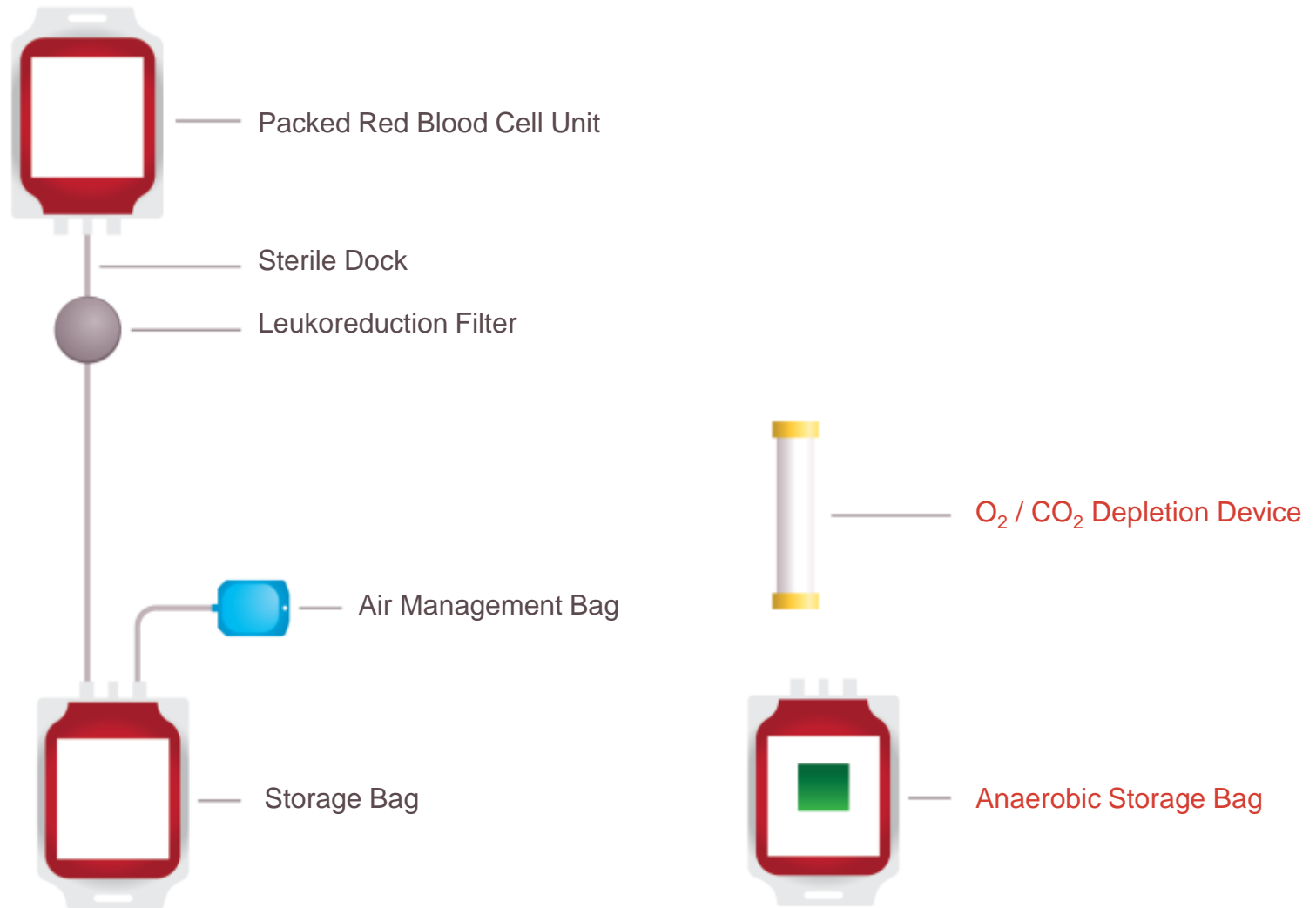
# Only 13.5% of Existing RBC Meet Criteria of “Fresh”



# Hemanext Extends “Fresh” Characteristics to 89% of RBC

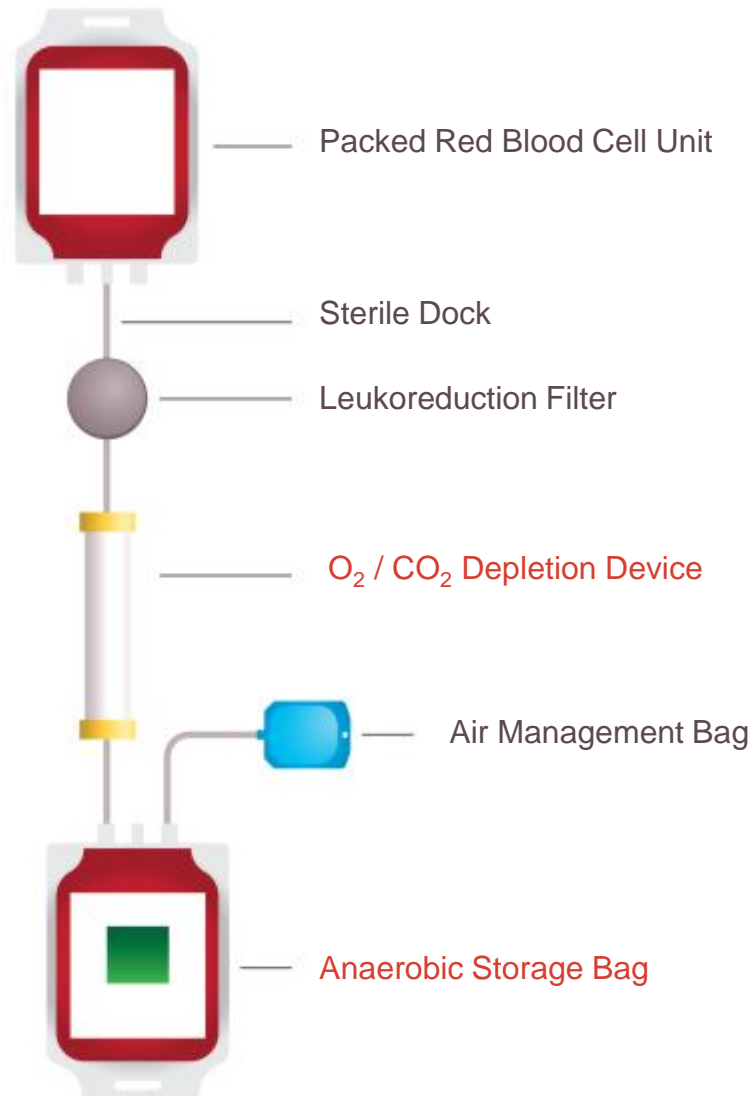


# Hemanext Anaerobic Storage Platform

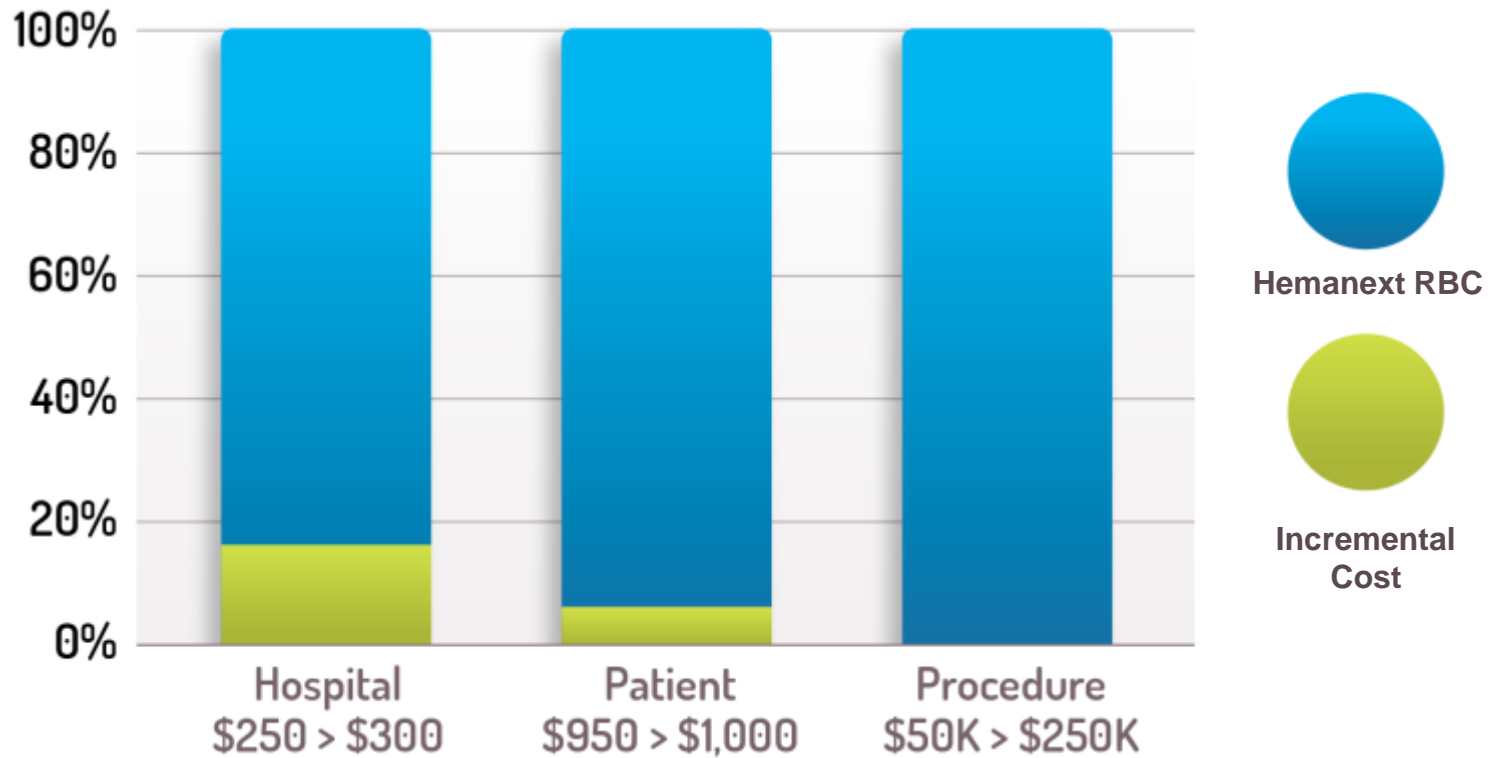




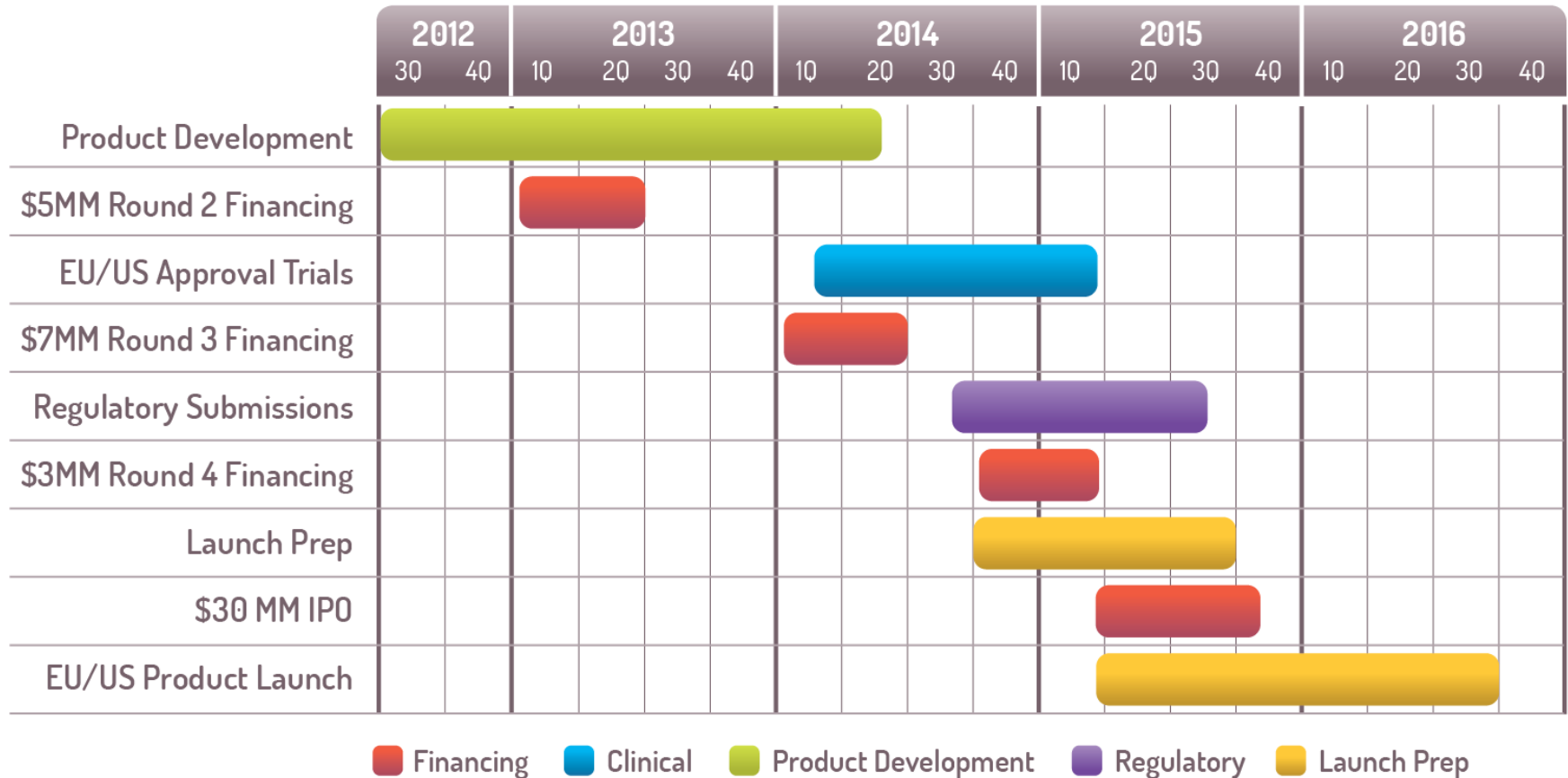
# Hemanext Anaerobic Storage Platform



# Hemanext Impact on Transfusion “System Economics”



# Hemanext Business and Financial Milestone Timeline



# Financial Projections

<b>\$ MM</b>	<b>Global</b>
+ 5 Years	
- Sales	<b>310</b>
- EBITDA	<b>133</b>
+10 Years	
- Sales	<b>679</b>
- EBITDA	<b>327</b>
20 Year Cumulative Cash Flow	<b>3,000</b>
NPV (5%)	<b>1,500</b>
NPV (10%)	<b>750</b>
IRR	<b>63</b>

All key assumptions derived from discussions from 1 or more key strategic players.

# Capitalization Table

	Pre-Money Valuation	Raise	Post-Money Valuation
<b>Legacy Investments:</b>			
NIH SBIR Phase I + II Grants	\$5,473,000	\$2,027,000	\$7,500,000
Round 1: Product Dev't Through Type B	\$9,763,334	\$10,600,000	\$20,363,334
<b>Future Investments:</b>			
2Q 2013: Transfer to Manufacturing	\$25,000,000	\$5,000,000	\$30,000,000
2Q 2014: US and EU Clinical Trials	\$38,750,000	\$5,000,000	\$43,750,000
1Q 2015: US/EU Regulatory Submissions	\$50,000,000	\$5,000,000	\$55,000,000
4Q 2015: IPO	\$150,000,000	\$30,000,000	\$180,000,000

# Management Team

- + **President and CEO – Martin Cannon**
  - Partner Bain & Company
  - Founder, CEO Cannon Associates (sold to EDS)
  - Division President AppNet (acquired by Commerce One)
  - Co-Founder NHSi (led acquisition of Hemanext)
- + **Sr. Director, Product Development – Steven Levesque, Ph.D.**
  - 30 years biomedical product development
  - Led 5 products' FDA clearance
  - Inventor of 6 patents
- + **Director, Research & Development – Tatsuro Yoshida, Ph.D.**
  - Co-inventor of Hemanext
  - 20+ years researching storage lesion
  - Inventor of 10 patents
- + **Director, Finance and Administration – Michael Bavonese**
  - Prior 15 year career at Johnson & Johnson
- + **Regulatory Consultant – Emily Rossiter**
  - Highly regarded regulatory consultant with extensive experience in transfusion medicine
- + **Business Development Consultant – Steven Urdahl**
  - Former Business Development EVP TerumoBCT

# Board of Directors and Scientific Advisors

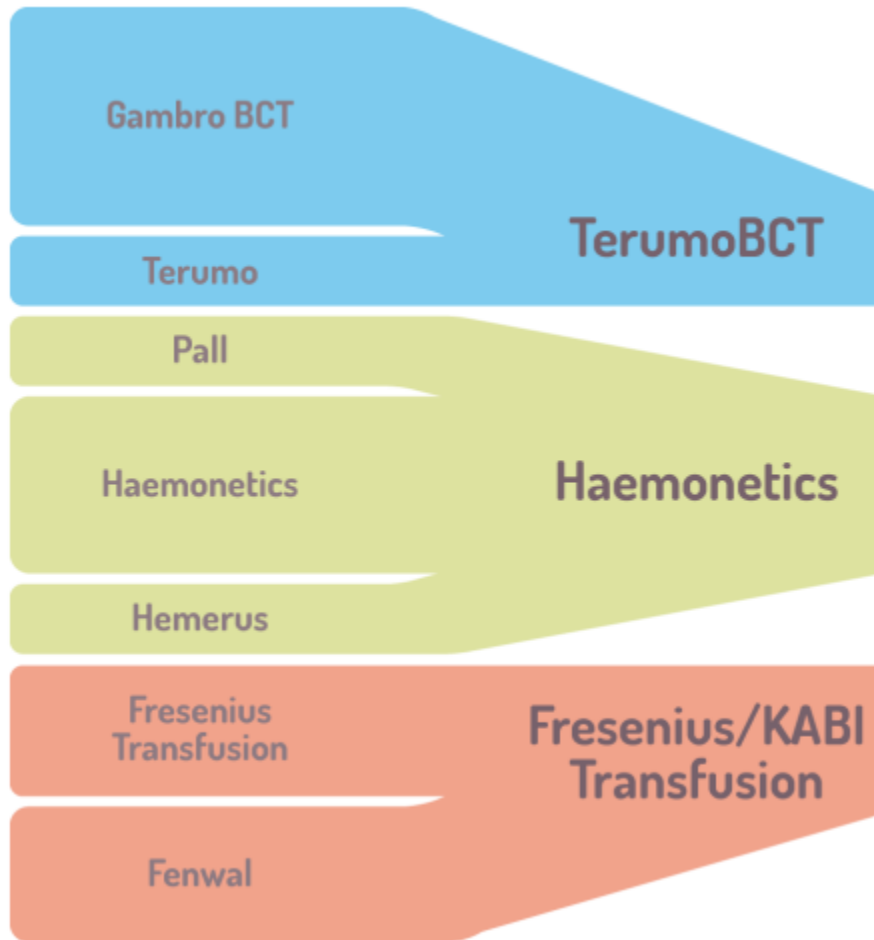
## + Board of Directors

- Guy Cogan, Chairman of **The Monitor Group**
- Stephen Eckert, President and CEO of **Classic Communities Corporation**
- David Testa, Retired Vice Chairman and Chief Investment Officer of **T. Rowe Price**
- David Herman, Former Chairman and CEO of **Adam Opel AG**
- Richard Perle, Resident Fellow of **The American Enterprise Institute**

## + Scientific Advisors

- Jim AuBuchon, MD, President and CEO of **Puget Sound Blood Center**
- Larry Dumont, MBA, PhD, Cell Labeling Lab Director, **Dartmouth-Hitchcock Med. Ctr.**
- Jose Cancelas, MD, PhD, Director of Research at **Hoxworth Blood Center** (Univ. of Cin.)
- Gary Moroff, PhD, Retired Head of Blood Components Research, **American Red Cross**
- Ralph Vasallo, MD, Northeast Division Chief Medical Officer, **American Red Cross**
- Giancarlo Liembruno, MD, Director, **Complex Operative Unit of Immunohematology and Transfusion Medicine and Clinical Pathology**, Rome, Italy

# Transfusion Medicine Corporate Consolidation





# Exit Strategy

- + **Plan A:** Acquisition By Major Industry Player
  - 3 global players remain following 10 year industry consolidation
  - Hemanext can provide “game changing” competitive advantage
  - NHSi under NDA with all 3 companies
  
- + **Plan B:** IPO To Fund Production and Go-To-Market Infrastructure
  - Viable option following regulatory approval
  - Existing partnerships provide clear path to low cost contract manufacture
  - IPO funds would be used for go-to-market scale up
  
- + **Plan C:** Acquisition Following IPO and Initial Commercialization



## NHLBI Mid-Atlantic Innovation Conference

**Martin Cannon, President and CEO**

[martin.cannon@newhealthsciences.com](mailto:martin.cannon@newhealthsciences.com)

Office Phone: 301-493-4586

*A blood storage system that delivers a more physiologic, therapeutic and durable Red Blood Cell to transfusion recipients globally.*

**Hemanex+**<sup>TM</sup>

October 15, 2012