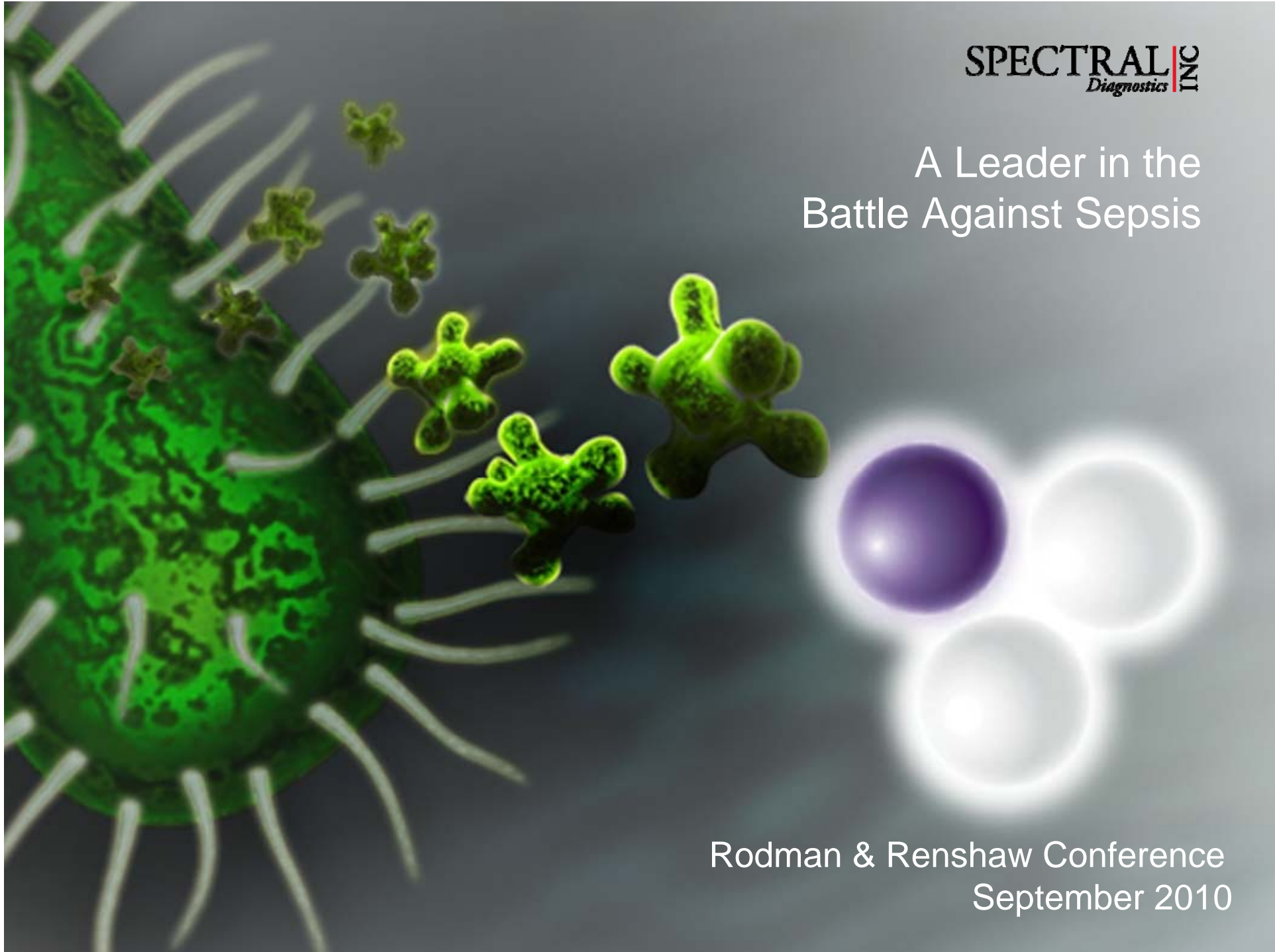


The logo for Spectral Diagnostics, featuring the word "SPECTRAL" in a bold, black, sans-serif font, with "Diagnostics" in a smaller, italicized font below it. To the right of the text is a vertical red bar with the letters "IN" in white, stacked vertically.

SPECTRAL  
*Diagnostics* IN

A Leader in the  
Battle Against Sepsis



Rodman & Renshaw Conference  
September 2010



# Forward Looking Statements

Certain statements contained in this presentation constitute forward-looking information within the meaning of securities laws. Forward-looking information may relate to our future outlook and anticipated events or results and may include statements regarding our future financial position, business strategy, budgets, litigation, projected costs, capital expenditures, financial results, taxes and plans and objectives. In some cases, forward-looking information can be identified by terms such as “may”, “will”, “should”, “expect”, “plan”, “anticipate”, “believe”, “intend”, “estimate”, “predict”, “potential”, “continue” or other similar expressions concerning matters that are not historical facts. These statements are based on certain factors and assumptions regarding, among other things, expected growth, results of operations, performance and business prospects and opportunities. While we consider these assumptions to be reasonable based on information currently available to us, they may prove to be incorrect. Forward looking-information is also subject to certain factors, including risks and uncertainties, that could cause actual results to differ materially from what we currently expect. These factors include, among other things, the availability of funds and resources to pursue development projects, the successful and timely completion of clinical studies, the ability of Spectral Diagnostics Inc. to take advantage of business opportunities, the granting of necessary approvals by regulatory authorities as well as general economic, market and business conditions. For more exhaustive information on these risks and uncertainties you should refer to our most recently filed annual information form which is available at [www.sedar.com](http://www.sedar.com). Forward-looking information contained in this presentation is based on our current estimates, expectations and projections, which we believe are reasonable as of the current date. You should not place undue importance on forward-looking information and should not rely upon this information as of any other date. While we may elect to, we are under no obligation and do not undertake to update this information at any particular time.



# Corporate Summary

TSX: SDI

Shares outstanding: 75M

Market capitalization: ~\$30M

Cash and short term investments: \$18M

Low cost operating structure

US FDA and ISO compliant



# Management and Board of Directors

## Paul Walker, M.D., Ph.D. FRCSC

President & Chief Executive Officer  
Professor of Medicine, University of Toronto

## Anthony Businkas, C.A.

Executive Vice President & CFO

## Robert Verhagen, B.Sc., MBA

Vice-President, Business Development

## Debra M. Foster, RN, B.Sc., CCRC

Director, Sepsis Program

## R. Ian Lennox

Chairman  
Executive Chairman of Ricerca Biosciences

## Paul Walker

President & CEO of Spectral Diagnostics Inc.

## Anthony Bihl

CEO of American Medical Systems

## Kevin Giese

CEO and Director of Medwell Capital

## Guillermo Herrera

Former SVP of Abbott Laboratories

## Edward McCormack

Former CFO and Director of Novopharm Limited

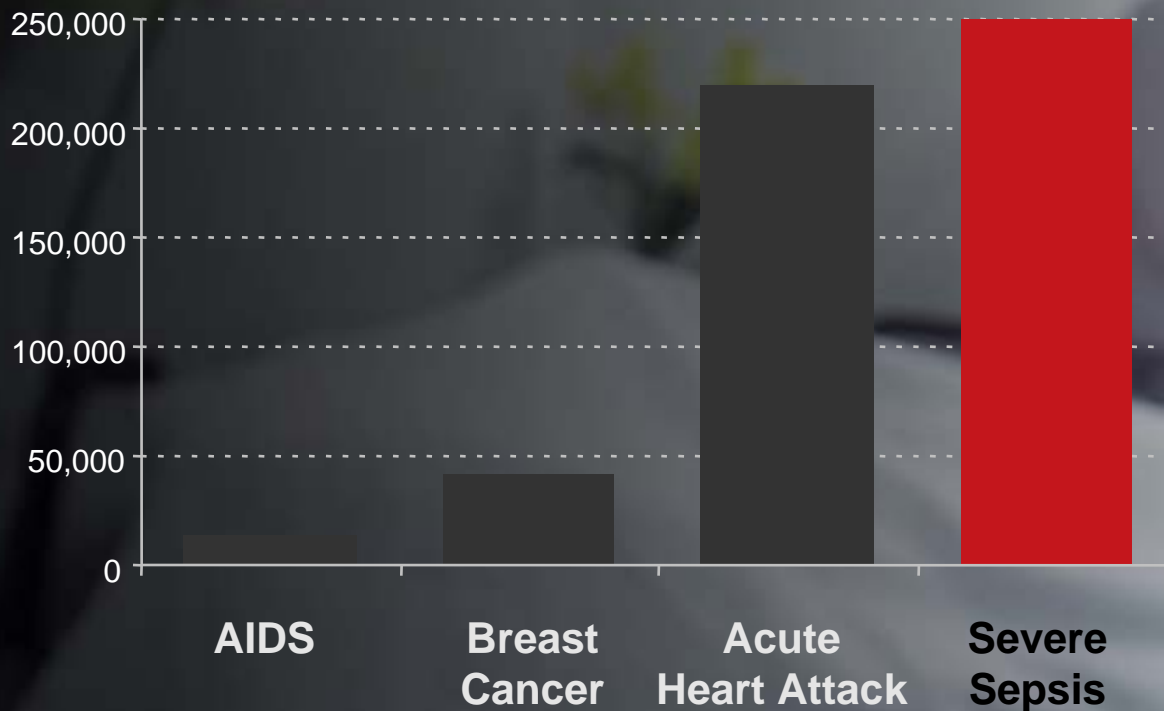
## Laine Woollard

Senior Legal Counsel of TEC Edmonton

# Sepsis is a Major Killer

**250,000** deaths due to Sepsis in the US each year

Annual mortality of Severe Sepsis in the US



Sepsis remains a major health care problem:

**COMMON**

1 out of 10 ICU admissions in the US each year

**FATAL**

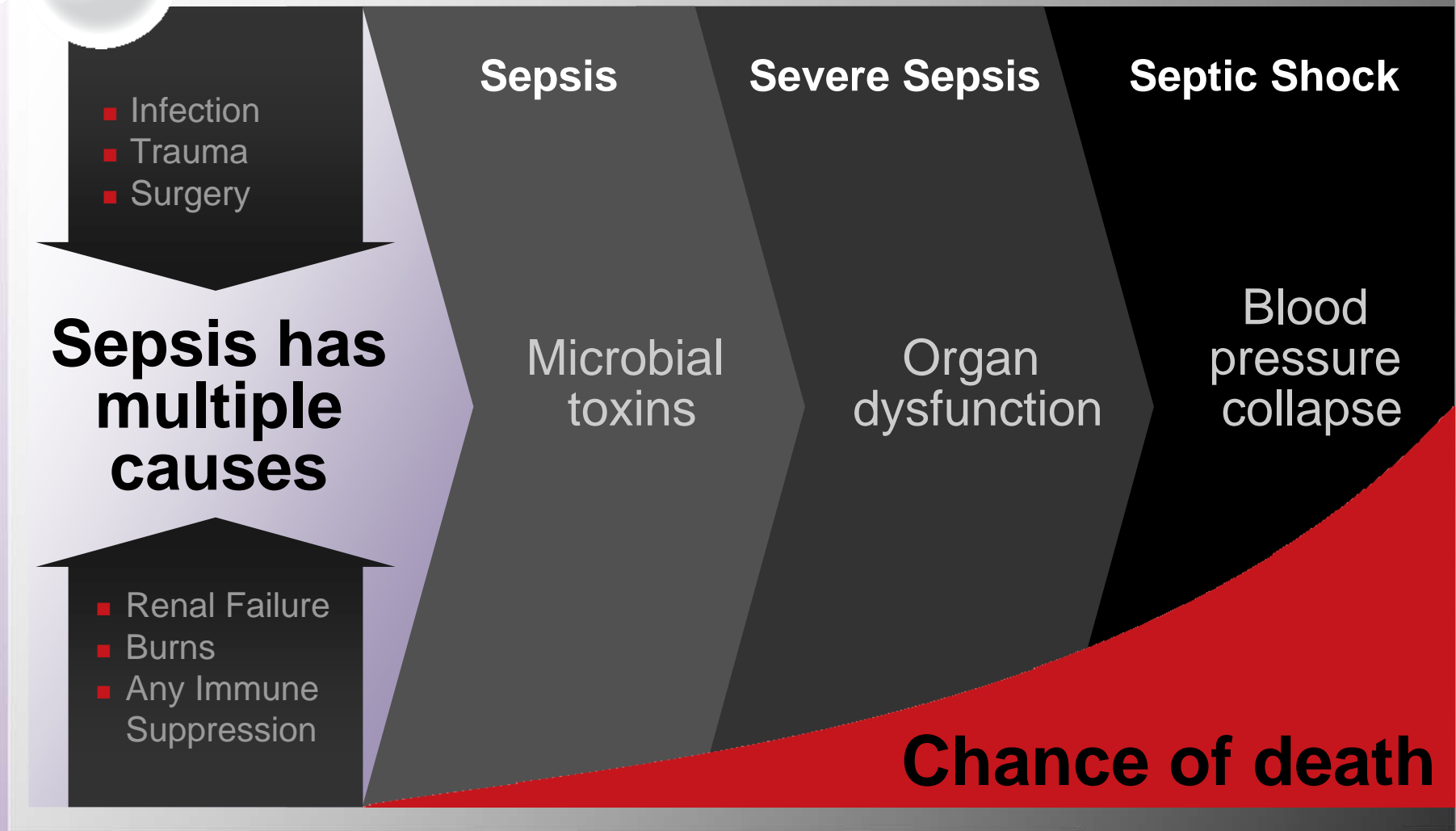
10<sup>th</sup> most common cause of death in the US

**EXPENSIVE**

\$17B cost to US healthcare annually



# Sepsis is a progressive disease





## Our focus is Endotoxin

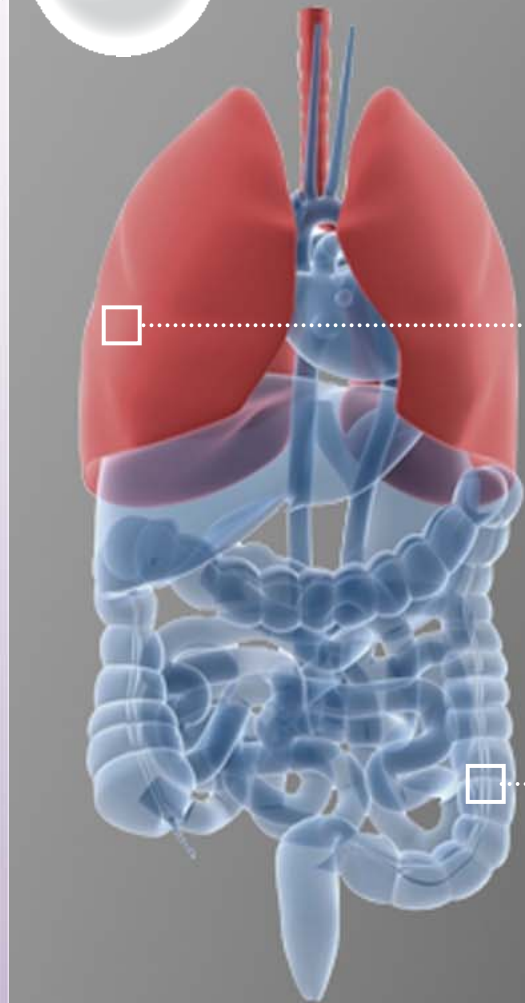


Endotoxin is a component of all Gram negative bacteria.

Endotoxin is released from replicating or dying Gram negative bacteria.

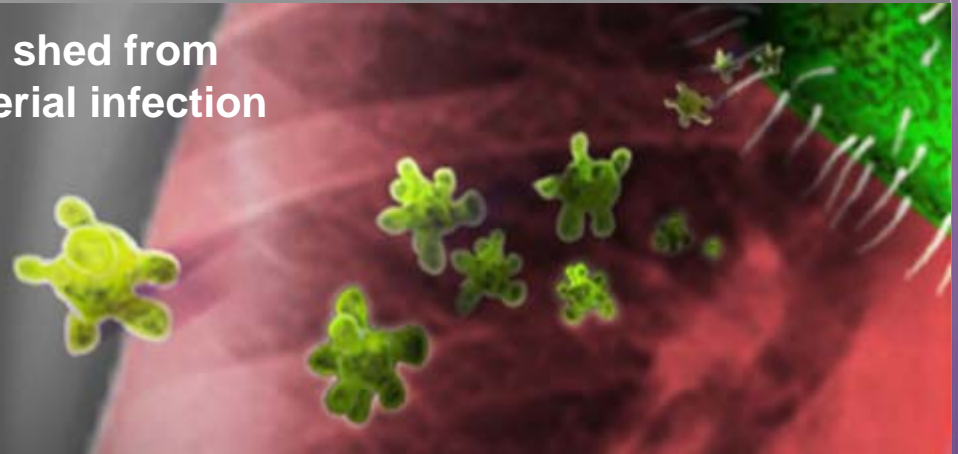
Endotoxin in the blood stream initiates the inflammatory cascade of sepsis

# Sources of endotoxin moving into the blood stream



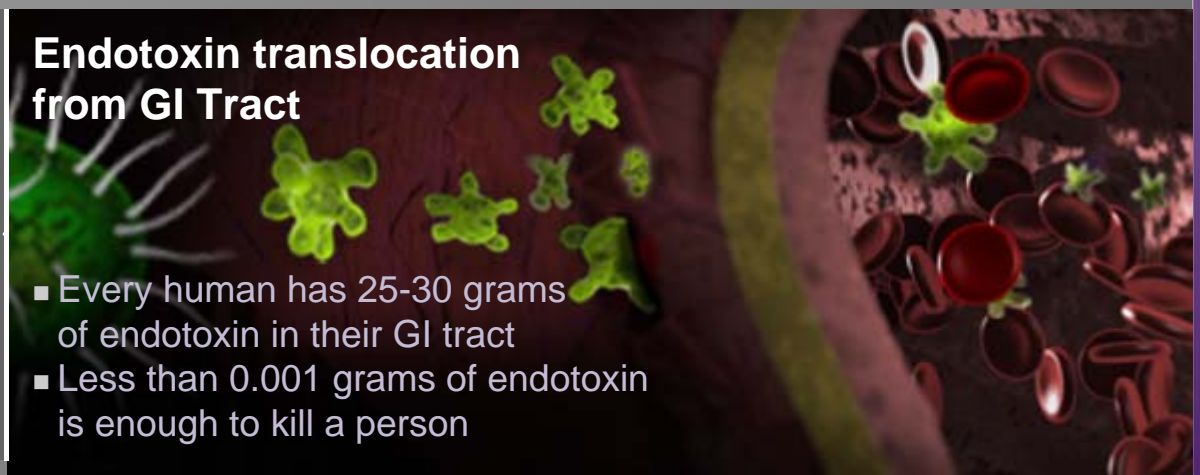
## Endotoxemia

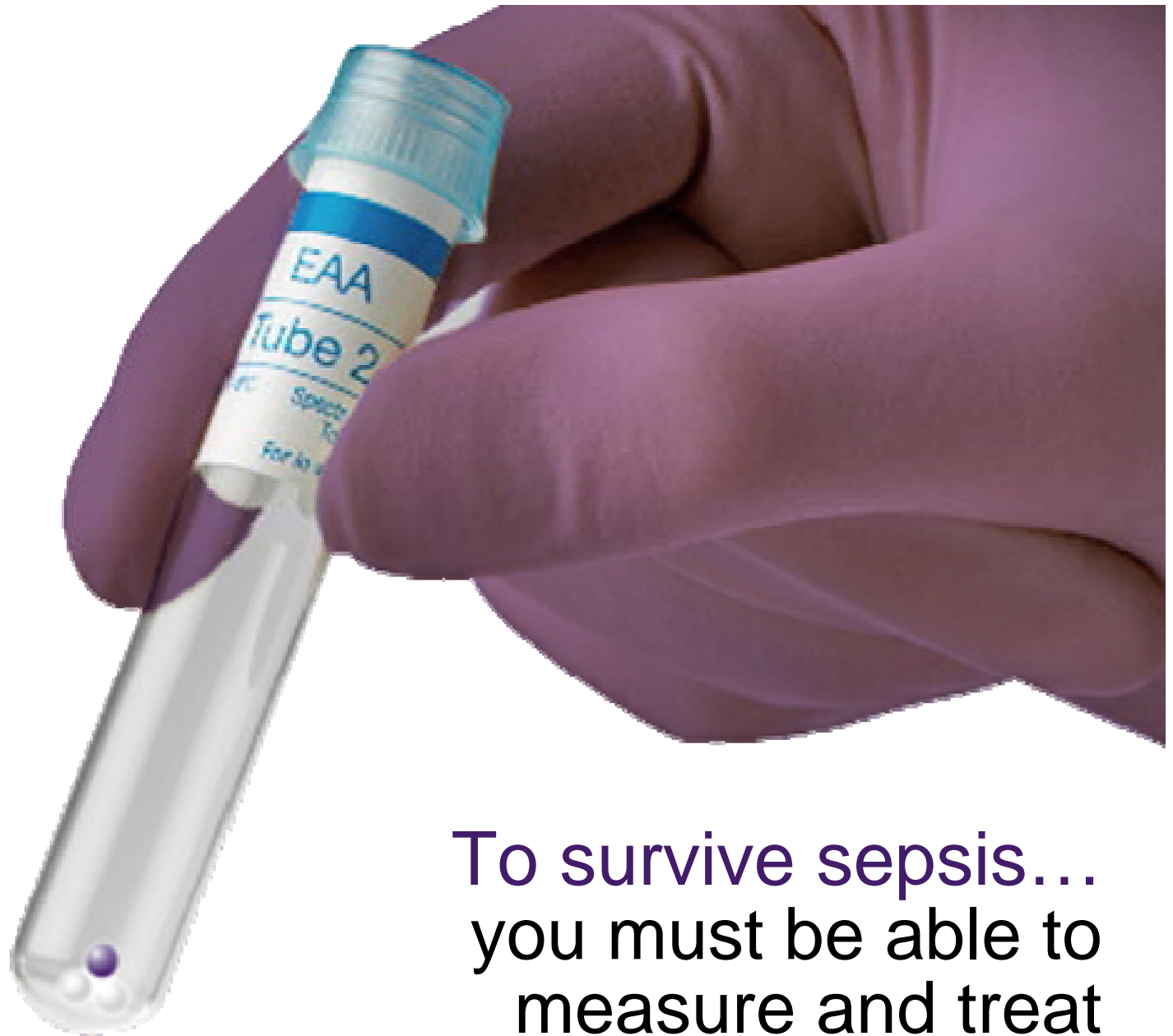
Endotoxin shed from local bacterial infection



Endotoxin translocation from GI Tract

- Every human has 25-30 grams of endotoxin in their GI tract
- Less than 0.001 grams of endotoxin is enough to kill a person





To survive sepsis...  
you must be able to  
measure and treat  
**endotoxemia**



# Spectral's Unique Clinical and Commercial Opportunity in Sepsis

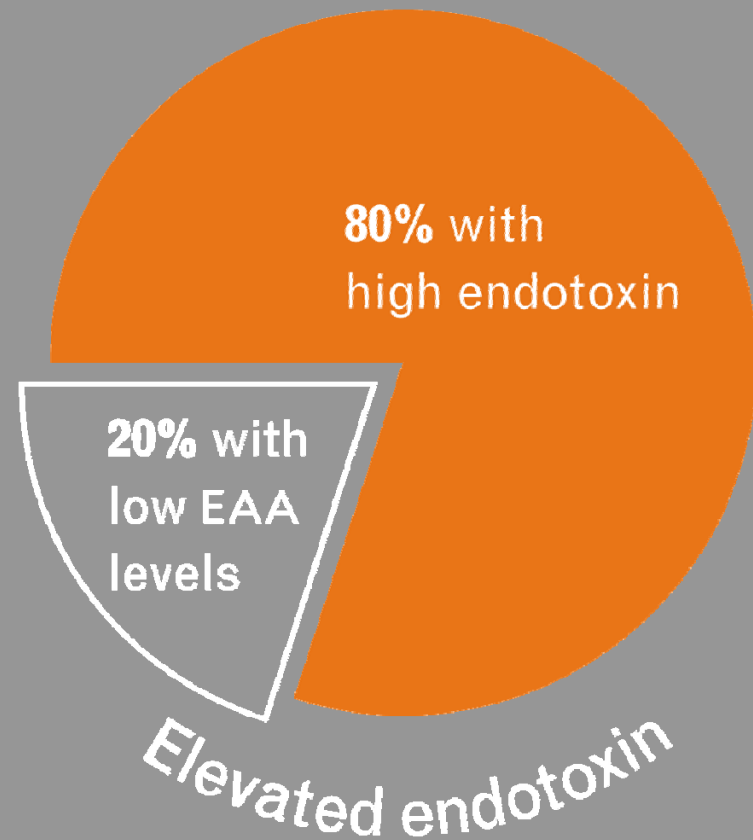
For the first time in sepsis:  
A Diagnostic and Therapeutic  
Combination

Endotoxemia is common in patients with severe sepsis

## Endotoxin Activity Assay (EAA™)

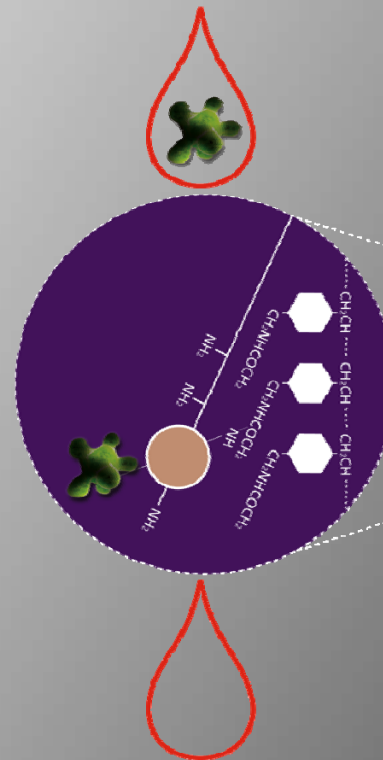


The only FDA cleared test for detection of endotoxin

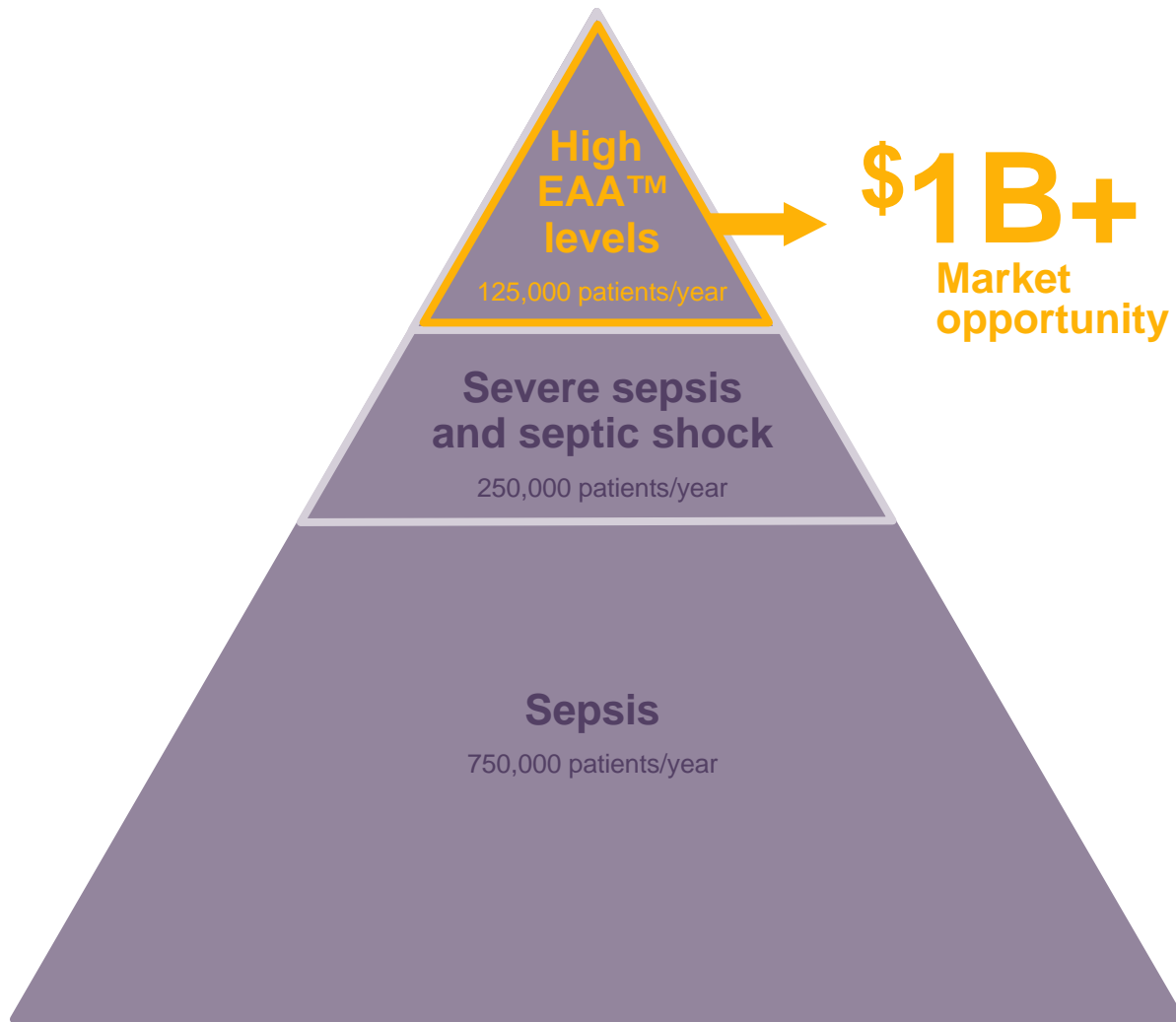


# The Therapeutic: Toraymyxin™ (PMX)

- Adsorption column that removes endotoxin from the bloodstream
- More than 70,000 patients treated safely
- Removes >90% of endotoxin
- More than 50 published papers demonstrating its significant mortality benefits
- Exclusive US rights acquired by Spectral in 2009



# Large unmet need in the U.S. market



**\$1B+**  
Market opportunity



## Huge U.S. commercial potential

- 250,000 patients develop septic shock/severe sepsis per year in the United States
- 125,000 severe sepsis patients have a high EAA™
- No existing effective treatment
- PMX significantly reduces mortality
- Current reimbursement rate of \$10,000
- Gross margin: >70%



# The First Theranostic Trial in Sepsis

## The EUPHRATES Trial

Evaluating the **Use** of  
**Polymyxin B Hemoperfusion**  
in a **Randomized** controlled trial of  
**Adults Treated for Endotoxemia and Septic**  
**shock**

**ClinicalTrials.gov**  
**Identifier: NCT01046669**



# EUPHRATES

Design: Blinded, randomized controlled trial of standard care versus PMX cartridge plus standard care

Setting: Intensive Care Units in approximately 15 centers - all US

Population: Approximately 360 patients (180/arm) with septic shock



# The EUPHRATES trial

## *Primary objective*

- **28-day mortality** in subjects with severe sepsis with hypotension including those subjects with septic shock who have high levels of endotoxin and are treated with standard medical care plus use of the PMX cartridge twice within 24 hours, versus subjects who receive standard medical care alone



## The PMX Intervention

- The PMX cartridge will be administered using two cartridges, approximately 24 hours apart. Each treatment will last for 2 to 3 hours, at a flow rate of approximately 100 ml/minute, but will be used within the range of 80 to 120 ml/minute.

# Sponsor affiliates

Group	Members	Role
DSMB	<p>Dr. Bert Spilker: Chair</p> <p>Dr. Chengjie Xiong: Biostats</p> <p>Dr. John Kellum: Critical Care</p> <p>Dr. Ron Wald: Nephrology</p> <p>Dr. Steve Opal: Infectious Disease</p>	Interim safety
Steering committee	<p>Sponsor: Dr. Paul Walker</p> <p>Principal Investigator: Dr. Phillip Dellinger</p> <p>International: Dr. John Marshall, Dr. Massimo Antonelli,</p> <p>Dr. Paul Palevsky</p> <p>CC-MD: Dr. Steve Trzeciak</p> <p>CC-CTS: Dr. Christa Schorr</p>	<p>Design protocol</p> <p>Define population, outcomes</p> <p>Primary manuscript</p>
CRO	<p>Dr. Cees Wortel</p> <p>Dr. Jack McLean</p>	Regulatory, final protocol, CRF, contracts, monitoring, database



# The EUPHRATES Trial

- First use of an approved and very specific diagnostic as an inclusion criteria
- Mechanism of action for the therapeutic is known and confirmation of efficacy will be documented
- Endotoxin levels will be measured during trial
- The trial will be doubled blinded, so that the principal investigator will not know the allocation of each patient
- The trial is large enough to demonstrate significant difference in survival

# EUPHRATES trial milestones

