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, and the ability to take advantage of business opportunities, the granting of necessary approvals by regulatory authorities, and 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. 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.
## At a Glance

<table>
<thead>
<tr>
<th>TSX: EDT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Established</td>
<td>1991</td>
</tr>
<tr>
<td>Number of employees</td>
<td>21</td>
</tr>
<tr>
<td>Offices &amp; Facilities</td>
<td>Toronto, Canada</td>
</tr>
<tr>
<td>Recent Share Price</td>
<td>$0.45 - $0.50</td>
</tr>
<tr>
<td>Shares Outstanding</td>
<td>207.2M</td>
</tr>
<tr>
<td>Market Capitalization</td>
<td>~ $100M</td>
</tr>
<tr>
<td>Insider Ownership</td>
<td>~ 45%</td>
</tr>
<tr>
<td>Cash &amp; Cash Equivalents</td>
<td>$5M (Dec /16) – funded to complete regulatory pathway</td>
</tr>
<tr>
<td>Total Debt</td>
<td>Nil</td>
</tr>
</tbody>
</table>
| Shareholder Base | 70% - Institutional  
30% - Retail |
# Management & Board

## Senior Management

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Walker, M.D., Ph.D., FRCSC</td>
<td>President &amp; Chief Executive Officer</td>
</tr>
<tr>
<td>Anthony Businskas, C.A.</td>
<td>Executive Vice President &amp; CFO</td>
</tr>
<tr>
<td>Debra Foster, B.Sc.</td>
<td>Vice President, Clinical Development</td>
</tr>
<tr>
<td>Gualtiero Guadagni, Ph.D.</td>
<td>Vice President, Sales and Marketing</td>
</tr>
</tbody>
</table>

## Board of Directors

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony Bihl</td>
<td>Chairman of the Board, CEO, Bioventus LLC</td>
</tr>
<tr>
<td>Kevin Giese</td>
<td>Former CEO and Director, Medwell Capital</td>
</tr>
<tr>
<td>Guillermo Herrera</td>
<td>CEO Altan Pharma Ltd.</td>
</tr>
<tr>
<td>Masayuki Kaneko</td>
<td>Acting General Manager, Pharmaceutical &amp; Medical Products Division ,Toray Industries Inc.</td>
</tr>
<tr>
<td>Paul Walker</td>
<td>President &amp; CEO, Spectral Medical Inc.</td>
</tr>
<tr>
<td>William Stevens</td>
<td>Former Principal, Birch Hill Equity Partners &amp; Managing Director, Westerkirk Capital Inc.</td>
</tr>
</tbody>
</table>
Sepsis: A Significant Unmet Medical Need

Common: >30% of ICU admissions

Over 1M patients/annum are diagnosed with sepsis in the U.S.

Current cost of managing sepsis at ~$20B/annum in the U.S.

Sepsis is a global problem with no targeted treatments available

Extremely fatal with ~300K deaths/annum in the U.S.

Large market with no competition

Spectral has the only viable solution with a completed Phase 3 registration trial and is closest to potential FDA approval
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 bloodstream initiates the inflammatory cascade of sepsis.
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
Treatment Guided by a Diagnostic

Endotoxin Activity Assay (EAA™) – FDA cleared in 2003

Measure endotoxin levels

Remove endotoxin

Resolve Increase survival rate

Toraymyxin™ – (PMX)
  • A device that removes endotoxin
  • Approved outside of North America
  • >150,000 patients treated
EX-North America Evidence shows PMX Works

• EUPHAS Study in Italy (2009) showed a reduction in mortality of 64 patients from 53% to 32%

• EUPHAS 2 registry of over 400 treated patients showed same survival rate as the EUPHAS study

• Analysis of over 2,000 patients in Japan (2014) showed a reduction in mortality from 47% to 34.5%

• Over 150,000 patients to date treated outside of North America reflect similar positive outcomes

• Data also shows that the sickest patients benefit most and that 2 column treatment is most effective (same as our EUPHRATES trial design)
Evaluating the Use of Polymyxin B Hemoperfusion in a Randomized controlled trial of Adults Treated for Endotoxemia and Septic shock

Principal Investigator: Dr. Phil Dellinger
Steering Committee:  Dr. M. Antonelli,  Dr. J. Marshall,  Dr. S. Trzeciak,  C. Shorr, Dr. S. Bagshaw, Dr. P. Palevsky,  Dr. P. Walker (sponsor) & D. Foster (sponsor)

Clintrials.gov identifier: NCT01046669
**EUPHRATES**

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

**Setting:** Intensive Care Units in approximately 40 centers – US and Canada

**Intervention:** Two treatments with PMX-DHP within 24 hours each of 2 hours duration versus standard of care
The Population

- Patients who meet ACCP/SCCM consensus criteria for septic shock and have undergone initial resuscitation (consistent with surviving sepsis guidelines) but remain on vasopressors for at least 2 hours
- These are patients who **did not completely respond** to an initial resuscitation protocol
- Have endotoxemia based on EAA™ result \( \geq 0.6 \)
- Have MODS > 9
EUPHRATES Trial

- Patients meeting all clinical criteria for septic shock → 921

- Patients Randomized \( (EAA \geq 0.6) \) → 450

- Per Protocol* → 244

* MODS = >9; EAA ≥ 0.06; Received full 2 column treatment or 2 sham
Top Line Trial Results

• Primary end point (20% absolute reduction in mortality at 28 days) was not achieved

**BUT**

• Treatment proven to be safe
• 5% mortality reduction at 28 days in the per protocol group
• Mortality benefit increased as a function of the amount of endotoxin removed
• Cardiovascular function improved
• Use of vasopressors decreased
• Organ function improved
The Path Forward

• Further detailed analysis confirmed Company’s belief that PMX is safe, with clinically significant evidence of efficacy

• FDA approved the third of four PMA modules in March, 2017

• Company plans to submit the fourth and final module, containing clinical data, in Q2 2017

• Details of clinical data to be released after submission of final PMA module

• Publication of results in medical journal and presentation at major medical conference after submission of Module 4

• Potential FDA approval by end of 2017
U.S. Market Opportunity

- 240K - 300K PMX cartridges
- 600K - 750K EAA™ tests

High EAA ≥ 0.6 & MODS > 9
120K-150K patients/year

Severe sepsis and septic shock
250K patients/year

Sepsis
750K patients/year

(1M screening tests for endotoxin)

Market Exclusivity

- **Intellectual Property**
  - Patent protection for EAA expires 2022
  - Patent protection for PMX expires 2019
  - Patent Term Protection for up to 5 years can be added

- **Regulatory**
  - 6 year rules prevents dissemination of important knowledge to competitors
  - PMA approval demands a similar trial and demonstration of similar benefits for any competitor
  - No non-inferiority or equivalency regulatory pathway
  - Likely adds 5-10 years of market exclusivity

- **Manufacturing know how on PMX**
  - Toray manufactures PMX column primarily from proprietary products and uses specific process for Polymyxin binding, difficult to reproduce
Path To Commercialization - PMX

Q3 2016
Top Line Results

H1 2016
Enrolment Completion

H1 2017
Final FDA Module

H2 2017
Potential FDA Approval

H1 2018

Partnership/Go Alone?
Spectral Apheresis Machine (‘‘SAM’’)  

- A blood pump is needed to run PMX  
- Dialysis or CRRT machines are available and have been used in our trial  
- A proprietary blood pump optimized for running PMX could help with faster adoption of therapy  
- Market also exists for SAM, exclusive of the PMX treatment, for delivery of CRRT  
- 510K FDA review is in progress; potential approval in Q2/Q3 2017
Manufacturing Scale Up and Supply

EAA Manufacturing
- Sourcing of raw materials
- Automation and personnel

Supply Chain
- PMX
- Pump
- Luminometer

Warehouse and logistics
- Agreements with third party logistics providers

- Manufacturing automation
- Process optimization
- Vendor management

- Supply agreements
- Toray built a new facility for PMX

- Agreement in place with a third party logistic provider
Summary

• PMX remains the most viable treatment for endotoxemic septic shock
• No other specific treatments currently exist
• Regulatory process continues pursuant to encouraging results of detailed data analysis
• Market opportunity remains large; more than 300,000 patient deaths annually in the US due to sepsis
• SAM instrument has its own market potential
• Cash on hand is sufficient to complete regulatory programs for both PMX and SAM
Company Contacts

SPECTRAL Medical INC

135 The West Mall, Unit 2
Toronto, ON M9C 1C2

Paul Walker, M.D., Ph.D. FRCSC
President & Chief Executive Officer
pwalker@spectraldx.com
416.626.3233 x 2100

Anthony Businskas, C.A.
Executive Vice President & CFO
tbusinskas@spectraldx.com
416.626.3233 x 2200

spinnaker Capital Markets Inc.

10 King Street East,
Suite 1202
Toronto, ON M5C 1C3

Ali Mahdavi
Managing Director
am@spinnakercmi.com
416.962.3300

Investor Relations and Capital Markets
Advisory Services