

CUMBERLAND[®]
P H A R M A C E U T I C A L S

Investor Presentation

Safe Harbor Statement

This presentation contains forward-looking statements concerning our approved products and product development, our technology, our competitors, our intellectual property, our financial condition and our plans for research and development programs that involve risks, uncertainties and assumptions. These statements are based on the current estimates and assumptions of the management of Cumberland Pharmaceuticals as of the date of this presentation and are subject to uncertainty and changes in circumstances. Given these uncertainties, you should not place undue reliance upon these forward-looking statements. Such forward-looking statements are subject to risks, uncertainties, assumptions and other factors that may cause the actual results of Cumberland Pharmaceuticals to be materially different from those reflected in such forward-looking statements.

Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, among others, those set forth under the headings "Risk factors" and "Management's discussion and analysis of financial condition and results of operations" in our Form 10-K and Form 10-Q Reports on file with the SEC. The Company does not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. All statements contained in this presentation are made only as of the date of this presentation. For more information on our brands, including full prescribing and safety information, please see the links to the product websites which can be found at www.cumberlandpharma.com.



Company Overview

- **Specialty pharmaceutical company**
 - Portfolio of **eight** FDA approved products
 - Promoted by **two** national sales forces
- Several **near-term catalysts** for new growth opportunities
 - **Vibativ** post-acquisition integration and market expansion
 - **Next Generation Caldolor** product
 - **RediTrex** methotrexate product line
- **Four Phase II products** in development with upcoming study milestones
- Proven record of **successful** product development and product acquisition
- **Strong financial position** and positive net cash flows from operations



Marketed Brands



HOSPITAL

Acetadote®
(Acetaminophen Toxicity)

Caldolor®
(Pain and Fever)

Vaprisol®
(Hyponatremia)

Vibativ®
(HABP/VABP & cSSSI)



GASTROENTEROLOGY

Kristalose®
(Acute/Chronic Constipation)

Omeclamox®-Pak
(*H. pylori*)



ONCOLOGY

Ethyol®
(Amifostine)

Totect®
(Dexrazoxane)



IV ACETADOTE®

- IV treatment for **acetaminophen overdose**
- Developed and registered by **Cumberland**
- Acetaminophen is the **leading cause of poisoning in the U.S.***
- Acetadote now **standard of care**
- Cumberland offers both Brand and Authorized Generic
- Favorable court rulings upholding patents
- Maintaining **significant market share**



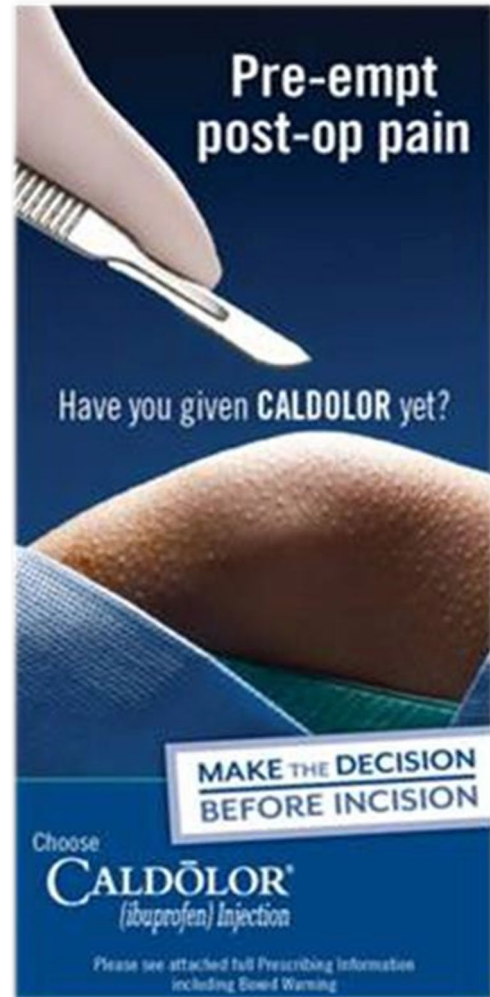
**National Poison Data System, American Association of Poison Centers*



CALDOLOR®

- Patented, **injectable formulation of ibuprofen**
- Developed and registered by **Cumberland**
- **First injectable** approved in the US for pain & fever
- Unresolved pain remains **leading cause for hospital readmissions**, with a total **market potential of over 700M units***
- Significant data supports pre-op management of inflammation
- **Pediatric labeling** approved by FDA and launched
- **Next Generation** product approved and prepping for launch

*Symphony Source Health



- **Unique** crystalline formulation of lactulose
- Prescription strength laxative
- **Clinically proven** increases in patient satisfaction
- Acquired from Mylan Laboratories
- Repositioned to reflect **branded status**
- New pricing allowed co-pay support
- Expanding **Managed Care coverage**



- Re-launch of an FDA-approved **oncology hospital brand**
- **Protects against** the harmful effects of cancer treatments
- **Protects the patient's healthy tissue, not the tumor**
- Indicated for use with **head & neck and ovarian cancers**
- Growing interest for use in **additional areas**



Commercial Portfolio Expansion Strategy



IDENTIFY

Late Stage Candidates



ACQUIRE

*Under-Promoted,
Approved Brands*



EXPAND

Existing Products



DEVELOP

Early-Stage Candidates

**PRODUCT
PORTFOLIO**



Acquisition Initiative



GOAL TO ADD ONE NEW PRODUCT PER YEAR

through business development initiative or internal product development



Active, ongoing initiative to identify, evaluate and acquire/license **new products** into the portfolio



Source opportunities through direct efforts and intermediaries



Seek commercial and late stage development assets that fit our **strategy and focus**

- Branded, Rx products in hospital acute care or gastroenterology
- Sales of **\$5-25 million or larger** with attractive margins



- **Acquired Vibativ[®]** from Theravance in November 2018
- Financial terms included:
 - \$20MM upfront payment
 - \$5MM milestone payment in 2019
 - Double-digit royalty on future net sales
- Transaction included the **global responsibility** for the product
- **FDA-approved** product with **favorable margins**



- Injectable antibiotic that treat serious, **life-threatening infections**
- **Hospital** product that **aligns well** with our current infrastructure
- Strong potential to **continue brand growth**
- Patent **protection through 2027**
- Established network of **worldwide licensing partners**



- **New delivery of methotrexate** designed for the treatment of various forms of **arthritis**
- **Exclusive U.S. rights** through a long-term partnership with the **Nordic Group** (based in Europe)
- **Widely used** throughout Europe with a **strong brand presence**
- The U.S. methotrexate market is seeing **significant growth**
- **FDA submission filed** and accepted for review



Ifetroban

Overview

- A **potent, selective** antagonist of thromboxane receptor (TPr)
- **Initially developed by Bristol-Myers Squibb** as an anti-platelet agent
- **Safety is well-established** in 26 clinical studies with **over 1,300 subjects**
- Cumberland is collaborating with Vanderbilt, Harvard, Scripps and other academic centers
- Cumberland successfully manufactures **both IV and oral formulations**



Rationale for Ifetroban

Ifetroban Inhibits The Thromboxane Receptor (TP α):

- Antagonist of smooth muscle contraction, platelet aggregation, and inflammation
 - New data also demonstrates impact on fibrosis
-
- **Hepatorenal Syndrome:** Renal Vasoconstriction, Liver Inflammation, & Fibrosis
 - **Aspirin Exacerbated Respiratory Disease (AERD):** Airway Constriction, Vasoconstriction, & Cellular Infiltration/Inflammation
 - **Systemic Sclerosis:** Vasoconstriction, Autoimmune Inflammatory Process, & Fibrosis
 - **Portal Hypertension:** Endothelial Dysfunction, Liver Fibrosis, & Inflammation



Ifetroban Development Pipeline

Existing Safety Profile of >1,300 Patients



Hepatoren® (*hepatorenal syndrome*)

Boxaban® (*aspirin-exacerbated respiratory disease*)

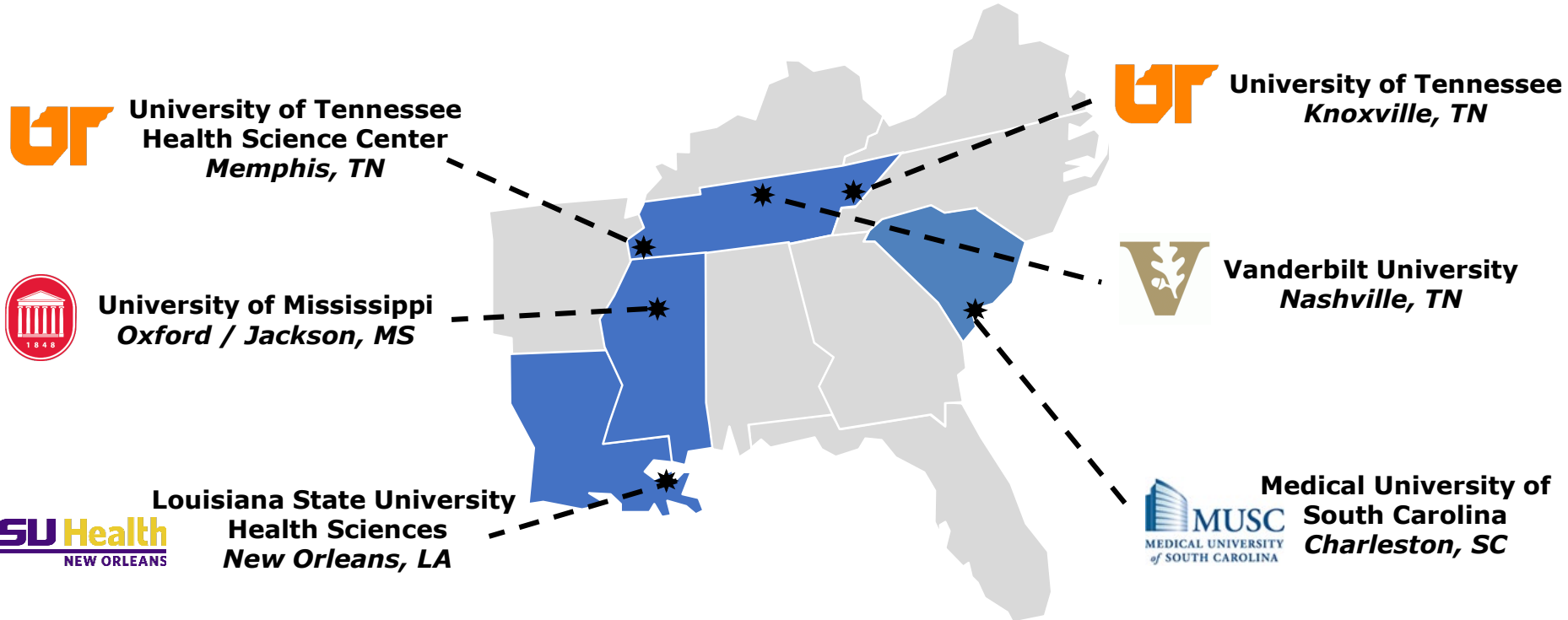
Vasculan® (*systemic sclerosis*)

Portaban® (*portal hypertension*)

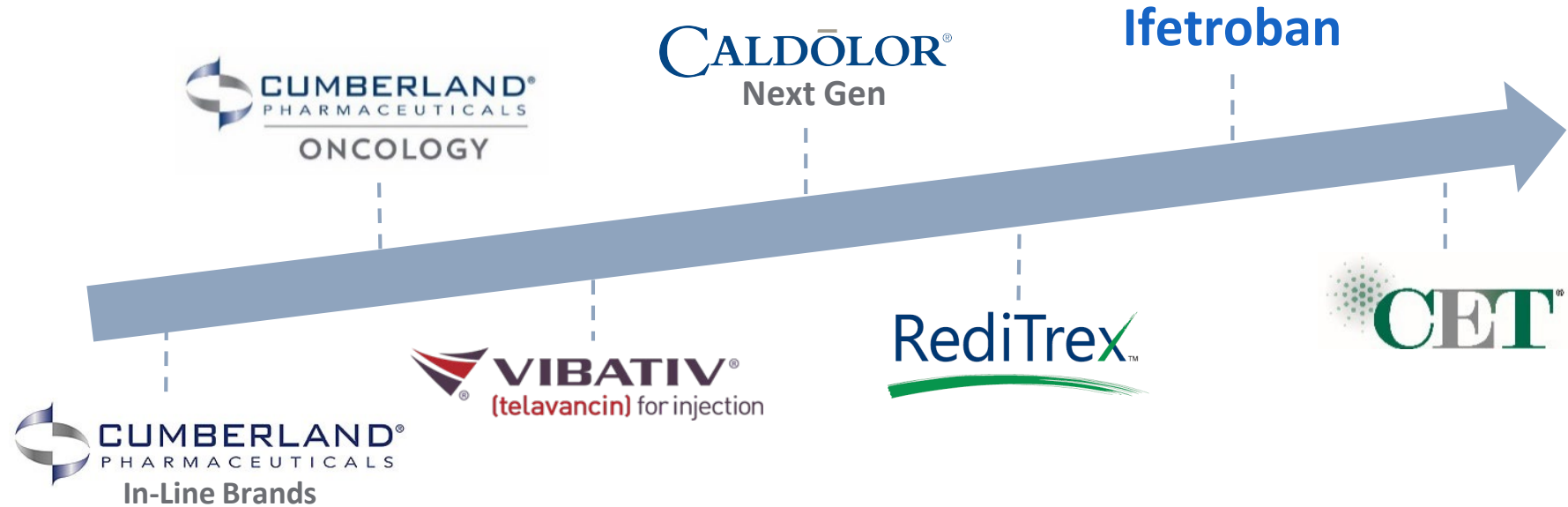
**Phase II
Study Data is
Next Milestone**

- Anti-inflammatory
- Anti-fibrosis





Expanding Our Product Portfolio



Deploying a Multifaceted Strategy to Create Value



Financial Overview

(\$ in millions)

Q4 2018

Net Revenues	\$13.5
Cost of Products Sold	<u>2.9</u>
Gross Profit	\$10.6
Selling & Marketing	\$5.7
Research & Development	2.7
General Administrative	3.7
Amortization	<u>0.8</u>
Operating Income (Loss)	(\$2.3)
Adjusted Earnings*	\$0.10

**Represents a non-GAAP financial measure. For a reconciliation, see the Appendix.*



Summary Balance Sheet

(\$ IN MILLIONS)

Q4 as of Dec 31, 2018

CASH & SECURITIES	\$36.2
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TOTAL ASSETS	112.7
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TOTAL LIABILITIES	57.1
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RETAINED EARNINGS	4.7
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TOTAL EQUITY	55.8
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**Continued Share Repurchase Program*

**Tax carry forward credits of \$44 million available*



Cumberland

Moving Forward



Diverse product portfolio **with 8 FDA approved brands**



Proven **development and commercialization capabilities**



Various initiatives in place to support **near-term growth**



Four Phase II products in development with upcoming study milestones

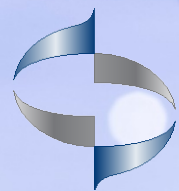


Strong financial position with positive net cash flows from operations



Valuation gap given assets, cash, sales, and pipeline





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Appendix





Vaprisol[®]

- IV treatment for **hyponatremia**
- Patented, branded hospital product
- Delivered in a pre-mixed bag
- Promotes free water secretion in hospitalized patients suffering from an imbalance of sodium and water levels
- Condition results from a variety of critical care conditions including **ICU, neurology, nephrology, & oncology**
- Acquired from Astellas



H. pylori Treatment for patients with duodenal ulcer disease

	Omeclamox®-Pak	PrevPac®	Pylera®
Number of Prescriptions/Co-Pays	1/1	1/1	2/2
Days of Therapy	10	10-14	10
Doses Per Day	2	2	4
Pills Per Day	8	8	14
Total Pill Burden	80	112	140

- **Newest treatment** for Helicobacter pylori (H. pylori) a frequent cause of stomach ulcers
- A triple therapy brand
 - Omeprazole (Prilosec)
 - Clarithromycin
 - Amoxicillin
- **Requires fewer pills** than other products that treat H. pylori
- **Shorter course of therapy** enhances compliance



- FDA-approved **oncology hospital brand**
- Indicated to treat toxic effects of **extravasation** (leakage) associated with anthracycline chemotherapy
- Can **limit damage** from extravasation and enable patients to continue treatment
- Anthracyclines are **widely used** in the treatment of breast cancer, soft tissue sarcomas and lymphomas



Partnership Strategy Slide

Streamline Operational Effectiveness and Expanding Market Penetration via Partnerships



U.S. distribution
partnership with
Cardinal Health



Co-Promotional partnership
to **expand our hospital
coverage across the U.S.**



Strategic alliance for
**brand representation
with the U.S.**



Co-Promotional partnership
to **expand medical
specialties covered** in
support of Kristalose



International Distribution Partners

Bringing our medicines to patients throughout the world through a growing network of distinguished international partners

North America



CardinalHealth™
United States



Canada

South America

GRIFOLS

Various Countries

Middle East & North Africa



Various Countries

hikma.

Various Countries



Israel & Palestine

Europe

GRIFOLS

Spain & Portugal



R-PHARM
Innovative health technologies

Russia & CIS

Asia



DBPharm Korea

South Korea



誉衡药业
GLORIA
PHARMACEUTICALS

Greater China

Sandor

India



Indonesia

Oceania



Australia & New Zealand



Australia



Hepatoren[®] in HRS

- Patients with HRS have **severe multi-organ dysfunction**
 - **No FDA approved treatment** for this unmet medical need
 - **Orphan Drug candidate**, with an estimated patient population of 175,000
-
- Cumberland has **completed initial Phase IIA study**
 - Ifetroban was **well-tolerated** across all doses with **no safety concerns**
 - Showed **signals of improved kidney function**



Boxaban® in AERD

- **Chronic condition** characterized by asthma, sinus infections and nasal polyps
 - **No FDA approved treatment** for this unmet medical need
 - Potential **Orphan Drug candidate**
-
- Cumberland has **completed initial Phase IIA study**
 - Ifetroban was **well-tolerated** with **no safety concerns**
 - Showed **signals of efficacy** and improved respiratory function



Vascular[®] in SSc

- **Chronic, life-threatening** multi-system autoimmune
- **Highest death rate** of any autoimmune disease
- **No FDA approved treatment** for this unmet medical need
- **Orphan Drug candidate**, with an estimated patient population of 165,000
- Cumberland is currently **conducting an initial Phase IIA study**



Portaban[®] in PH

- The **most serious** complications of **liver cirrhosis**
- **Median survival is 6 years** from diagnosis
- **No FDA approved treatment** for this unmet medical need
- **Orphan Drug candidate**, with an estimated patient population of 100,000
- Patient enrollment completed in **Phase IIA study**
 - Top line results show **ifetroban** to be safe and well tolerated



Reconciliation of Net Income to Adjusted Earnings

(\$ in thousands except per share data)

Q4 2018

Net Income (Loss) Attributed to the Common Shareholders	(\$2,220,097)
Net Loss at Subsidiary Attributable to Noncontrolling Interests	<u>17,015</u>
Net Income (Loss)	(\$2,237,112)
Income Tax Expense (Benefit)	\$4,159
Depreciation and Amortization	874,652
Share-Based Compensation	359,459
Interest Income	(166,064)
Interest Expense	<u>136,328</u>
Adjusted Earnings	\$1,557,947

