

#### **Investor and Analyst Day**

June 23, 2011

Nasdaq: LGND

### Ligand Pharmaceuticals Incorporated

## Investor and Analyst Day June 23, 2011 - New York

John Higgins
President and Chief Executive Officer

#### Safe Harbor Statement

- The following presentation contains forward-looking statements regarding Ligand's prospects, plans and strategies, drug development programs and collaborations. Forward-looking statements include financial projections, expectations regarding research and development programs, and other statements including words such as "will," "should," "could," "plan," etc. Actual events or results may differ from Ligand's expectations. For example, expense reductions and drug development programs may not be realized. In addition there can be no assurance that Ligand will achieve its guidance in 2011.
- The forward-looking statements made in the presentation are subject to several risk factors, including, but not limited to, Ligand's reliance on collaborative partners for milestone and royalty payments, regulatory hurdles facing Ligand's, CyDex's and partner's product candidates, uncertainty regarding Ligand's, CyDex's and partner's product development costs, the possibility that Ligand's, CyDex's and partner's drug candidates might not be proved to be safe and efficacious and commercial performance of Ligand's and/or its partner's products. Additional risks may apply to forward-looking statements made in this presentation.
- The risk factors facing Ligand are explained in greater detail in Ligand's filings with the SEC, including the most recently filed annual reports on Form 10-K and quarterly reports on Form 10-Q, as well as other public filings.
- While forward-looking statements reflect our good faith beliefs (or those of the indicated third parties), they are not guarantees of future performance. We disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.



#### Investor and Analyst Day Agenda

Welcome and Company Overview

John Higgins

Captisol® Technology

Matt Foehr

Melphalan Program

**Rick White** 

Promacta Highlights

Rob McKay

Thrombocytopenia in Hep C

Nezam H. Afdhal, M.D.

Chief of Hepatology, Director of Liver Center,

Beth Israel Deaconess Medical Center

Financial Highlights

John Sharp

Small Group Workshops

- Captisol Powerful Enabling Technology
- "Shots on Goal" Portfolio

Questions and Answers / Reception



#### Small-Group Workshops

1.	Captisol® – Powerful Enabling Technology	Room
	Matt Foehr – Executive Vice President, Chief Operating Officer	3
	JD Pipkin – Senior Director, New Product Development	
	Vince Antle – Senior Director, Technical Operations and Quality Assurance	e



2

Rob McKay – Senior Director, Business Development and Investor Relations

Syed Kazmi – VP, Business Development and Strategic Planning

Rick White - VP, Business Development and Marketing



#### Ligand's Business Model

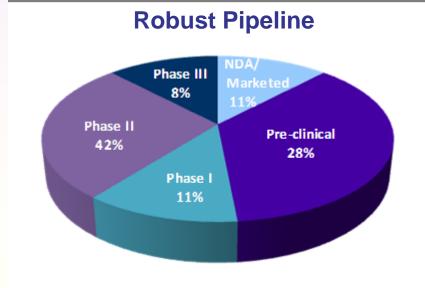
Ligand's focus is to build a large portfolio of high quality pharmaceutical assets that can drive substantial cash flow and profitability. We operate the business with an emphasis on focused drug development and partnerships, with a disciplined and highly selective cost structure.

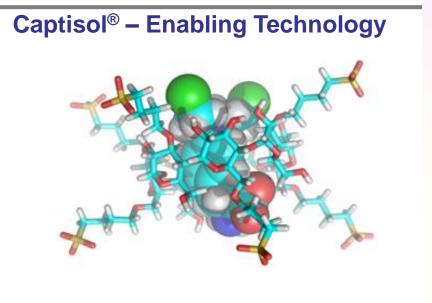


#### The Foundation of the Ligand Opportunity







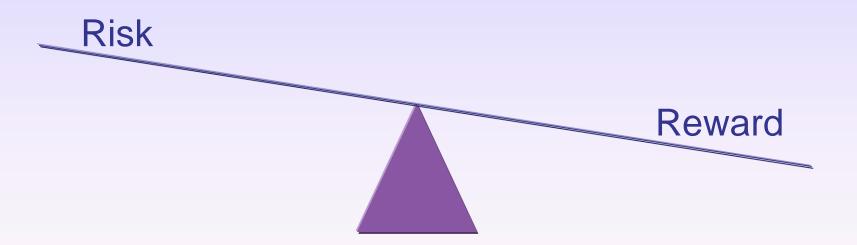


#### Ligand is Doing Great

- Significant expansion (doubling of portfolio to over 60 programs) in past 6 months as a result of Cydex acquisition
- A number of positive news events by partners in 2011
- Important new additions to senior management and Board of Directors
- Most revenue generating assets ever on lowest cost structure
- Positive clinical data announced in the past three months
- Promacta<sup>®</sup> is a "now" story
- Directors have personally purchased over \$1.2 million of Ligand stock (131,125 shares) over the past 6 months. Directors now own 10% of Ligand.
- Over past year, daily trading volume has increased by ~30%



#### The Investment Proposition: Risk vs. Reward



#### <u>Ligand's Potential Downside</u>

- Individual project set-backs
- Slower growth
- Partners drop programs

#### Ligand's Potential Upside

- Potential blockbuster product approved/ in-development
- Near-term profitability
- Well funded/financially disciplined
- More royalty partnerships than any peer co
- Attractive <u>fully-owned</u> pipeline
- Substantial calendar of news flow
- Large NOLs

We believe the upside reward is substantially greater than the downside risk



#### Ligand's Potential Upside

#### <u>List presented last summer (2010)</u>

<u>Updated Outlook</u>

Potential blockbuster product approved/ in development

Near-term profitability

Well funded/financially disciplined

More royalty partnerships than any peer co

Attractive fully-owned pipeline

Substantial calendar of news flow

Large NOLs

Data for Promacta® expected over next 6 months

Projected to turn profitable by year-end 2011

Lowest cost structure in company's history

Large portfolio of assets, doubled in over last 12 months

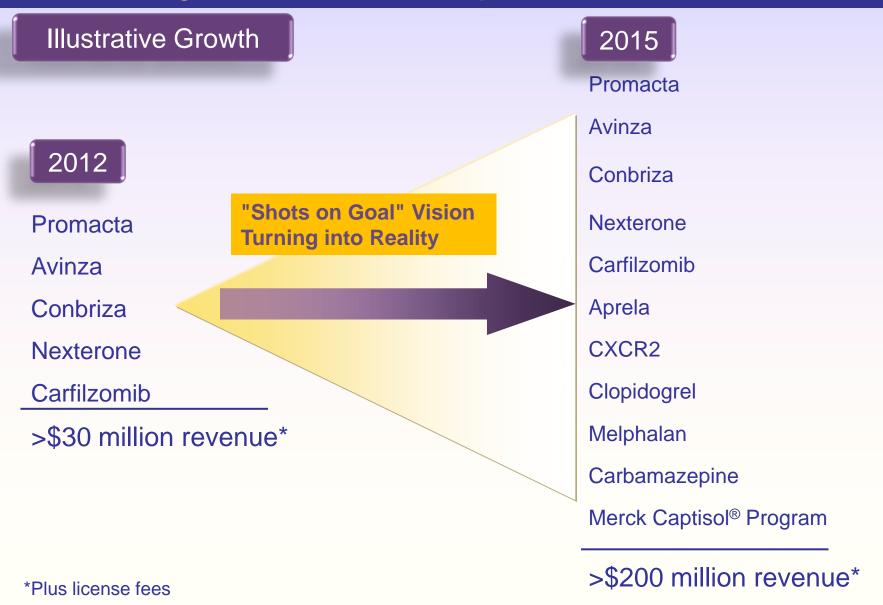
SARM, diabetes, JAK 3, and melphalan programs

Continued news flow

Continue to be ready to use following profitability

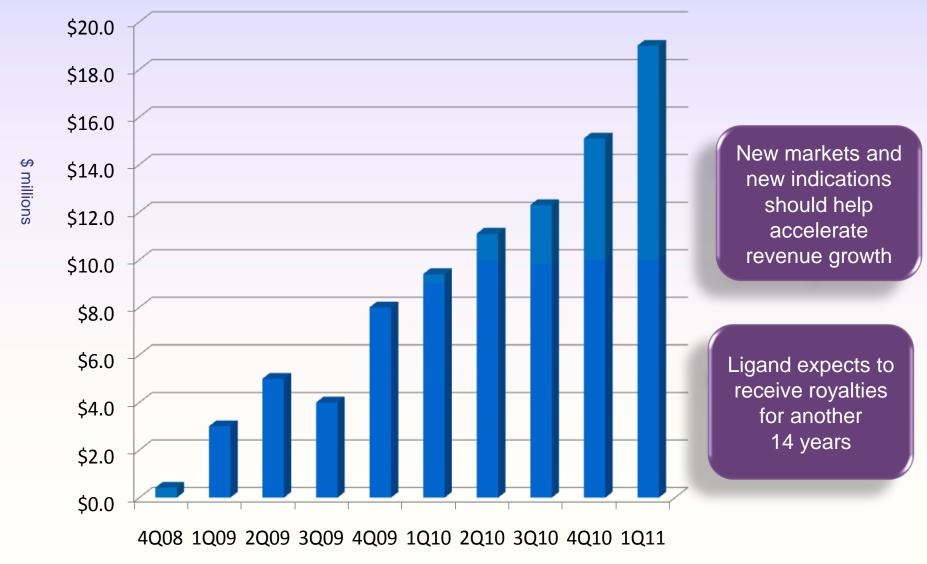


#### Potential Significant Revenue Expansion Over Next Several Years





## Worldwide Quarterly Promacta® Revenue Growth

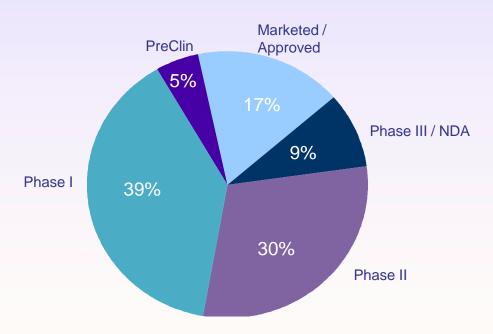


Ligand and GSK reports



### Ligand Portfolio: Partnered Programs

#### **Over 50 Partnered Programs**

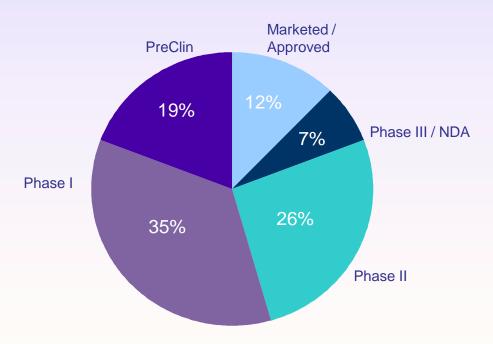


- Over half of the partnered portfolio is Phase II or later
- Portfolio is highly diversified across many partners, stages of development and therapeutic areas
- Merck, GSK and Pfizer are our partners with the most programs



### Ligand Portfolio: Total Portfolio Snapshot

#### **Total Portfolio (Over 60 programs)**



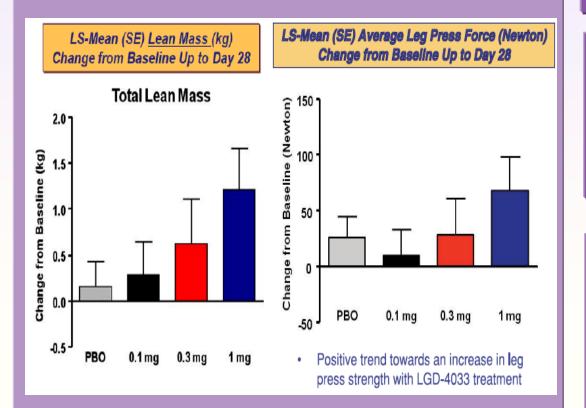
- Programs are highly diversified across more than 10 therapeutic areas
- The therapeutic areas most represented in the portfolio are oncology, inflammation, neurology and metabolic disease



#### Ligand's Internal Pipeline Focus

#### **SARM Program**

- Successful Phase I results
- Promising dose-dependent data
- Targeting large muscle health field



#### Melphalan Program

- Phase II data by year-end
- Potential NDA track for 2013
- Targeting multiple myeloma

#### **Topical JAK 3 Program**

- Highly selective compounds
- Promising pre-clinical data
- Targeting dermatology and ophthalmology specialties

#### **Diabetes Portfolio**

- Four programs
- Discovery thru early clinical
- Large and growing market



## Ligand Portfolio: Potential Upcoming News Flow

Timing*	Projected Event
3Q11	Carfilzomib NDA filing Platform Captisol Partnership
4Q11	Promacta PIII HepC Results Aprela NDA filing SARM program update
1Q12	Initiate pivotal Melphalan study Top Line IL-9 PII Results Clopidogrel 505(b)(2) study initiation
2Q12	Merck CXCR2/COPD Study Completion Carfilzomib NDA Approval Promacta sNDA filing for HepC

<sup>\*</sup>Ligand internal estimates



#### Ligand Pharmaceuticals Incorporated

## Captisol® Powerful Enabling Technology

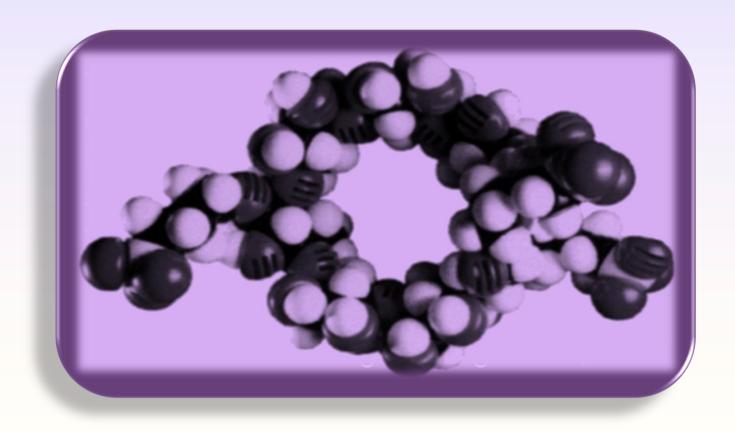
Matt Foehr
Chief Operating Officer

### CyDex Acquisition: What has it brought to Ligand?



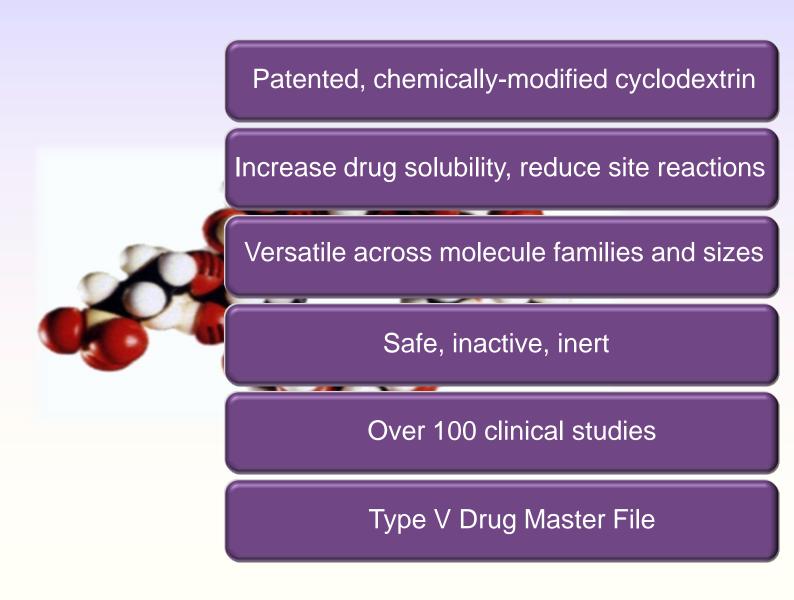


## Captisol®: The Need





## Captisol®: Enabling New Drugs



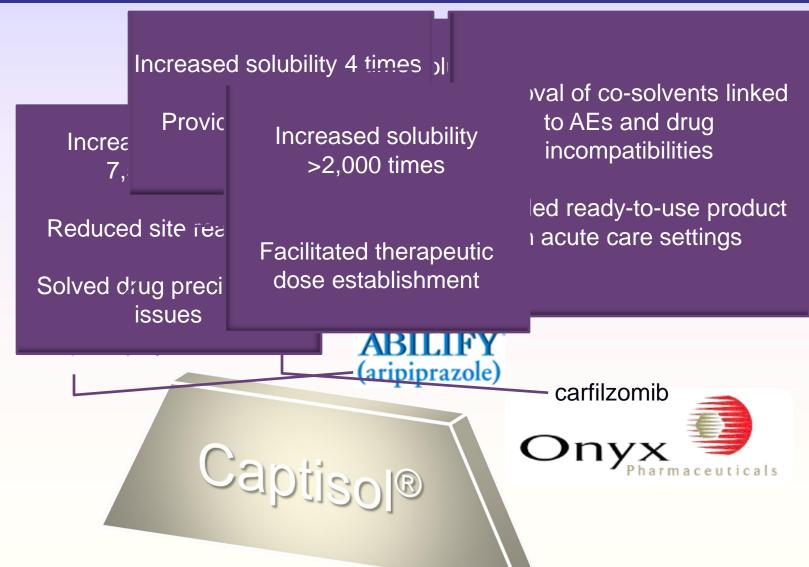


### Captisol®: Enabling New Drugs

- Strong manufacturing technology and IP estate
- Hovione Partnership
  - 50 metric ton capacity for Captisol<sup>®</sup>, ability to double
  - Exclusive relationship with built-in site redundancy
- Intellectual Property
  - 8 patent families covering technology, 12 patent families for products
  - Formulation and process-based patent portfolio providing protection through 2029
  - Trade secrets, Drug Master File
  - Continuing internal innovation



## Captisol®: The Value





## Captisol®: The Value

Approved or pending products

Broader
platform
relationships
with partners
who can
leverage
Captisol® in
more ways

Internal
Captisolenabled®
development
programs
with potential
for high
returns



## Captisol-enabled® Internal Development Programs

- Reformulation can bring meaningful innovation to established medicines
- Late-stage internal development can create significant value in exchange for relatively modest investment
- 505(b)(2) pathway leverages existing data
  - Lower development costs
  - Shorter timelines
  - Smaller infrastructure requirements



## Captisol-enabled® PG-Free Melphalan

- High dose conditioning treatment prior to hematopoietic progenitor (stem) cell transplantation for multiple myeloma
- Orphan Drug Status
  - Market exclusivity, PDUFA fee waiver
- Phase II dosing now completed
  - Interim results presented at ASCO
- Pivotal trial projected to begin early 2012



### Ligand Pharmaceuticals Incorporated

## Captisol-enabled® PG-Free Melphalan: Commercial Opportunity

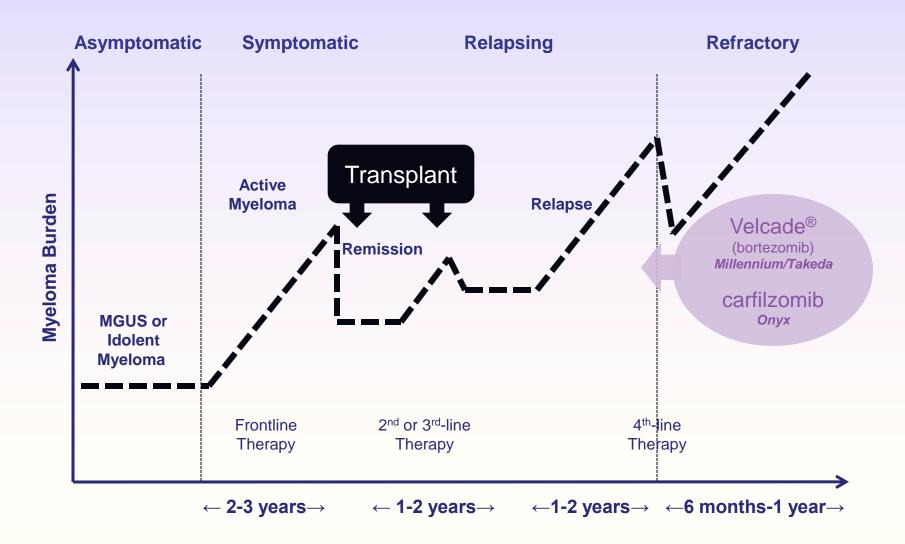
Rick White
Vice President,
Business Development and Marketing

#### Multiple Myeloma

50,000 patients Second most common in the U.S. 20,000 hematologic cancer diagnosed annually Transplant remains a centerpiece in managing disease progression Area of growing Continuing need for new and innovative therapies industry interest

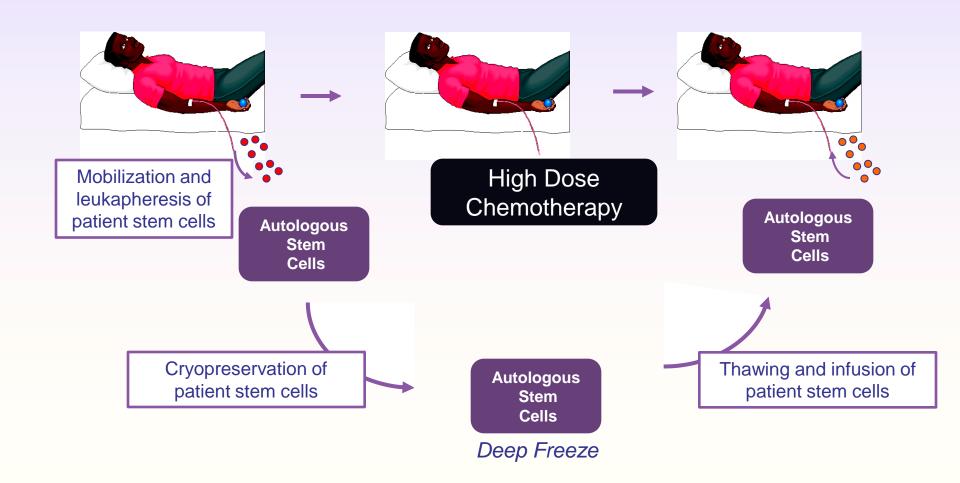


#### Multiple Myeloma: Disease Treatment and Progression





### Multiple Myeloma: Stem Cell Transplantation





### Melphalan Product Comparison

#### **Alkeran®**

Launched in 1993
GlaxoSmithKline

Two vial system

Propylene glycol diluent

60 min infusion window

Per label limitations







# Captisol-enabled® Melphalan for Injection

Ligand
Internal Development Asset

One vial system Propylene glycol-free

24 hr infusion window Treatment Flexibility



#### Melphalan Product Comparison

#### **Product Advantages:**

- Improved stability and use time in an all aqueous formulation
- Longer administration durations, slower infusion rates
- Elimination of two-vial system

#### Physicians expected to:

- Safely achieve higher dose intensity
- Easily deliver concomitant meds in highdose regimens
- Modulate dose to patient tolerability
- Higher dosage → potential for improved response rates



## Captisol-enabled® Melphalan for Injection

Ligand
Internal Development Asset

One vial system Propylene glycol-free

24 hr infusion window Treatment Flexibility



#### Melphalan Market

- IMS Reports Sales of \$85MM for Rolling 12 Month Period
- Majority of the Current Usage as a High Dose Conditioning Agent Prior to Autologous Stem Cell Transplant in Multiple Myeloma Patients (currently off label)
- Potential Label, and Orphan Designation, for Captisol-enabled<sup>®</sup> Propylene Glycol-Free Melphalan Addresses this Market
- Unmet Medical Need with the Current Standard of Care:
  - Stability following reconstitution (60 minutes)
  - Limits on Absolute Daily Dosing
  - Limits on Duration of Infusion
  - Potential Adverse Reactions Due to Co-Solvent (propylene glycol)



## Captisol-enabled® Melphalan: Opportunity

#### A Marketing and Sales effort could be relatively lean and efficient

- Melphalan therapy is well understood and entrenched, with few influential bone-marrow-transplant hospitals
  - "Ultra-niche" call universe
- Benefits of Captisol-enabled<sup>®</sup> Melphalan formulation are easily positioned
- Effective promotion with lean sales organization achievable
- Orphan Indication has favorable payer landscape (public and private)
  - Compass/Defined Health survey, 2009



## Captisol-enabled® Melphalan: Projected Timeline

Phase II Data Q4 2011 NDA Filing Mid-2013







Initiation of Pivotal Study Q1 2012



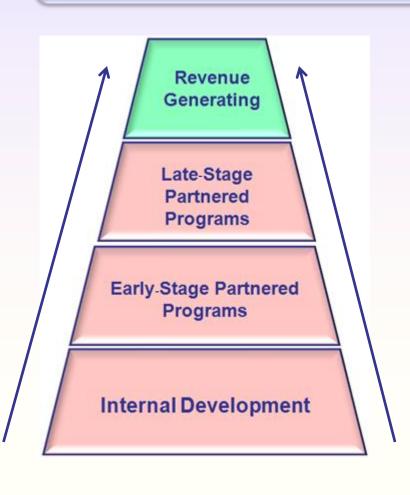
#### Ligand Pharmaceuticals Incorporated

## Promacta Highlights

Rob McKay
Senior Director, Business Development
and Investor Relations

#### The "Shots on Goal Model"

Minimizing Risk Through Portfolio Size and Diversification



8 Assets Currently
Generating Commercial
Revenue

Over 60 Total Programs

Over 25
Different Partners

10 Potential New Approvals in the Next 4 Years

Over 50
Partnered Programs

Over 10 Therapeutic Areas



## The Value Pyramid For Ligand Assets

The Top of the Value Pyramid for Ligand is Promacta



- There are numerous programs in the Ligand portfolio today which add significant value to the business
- But, Ligand's royalty interest in the Promacta franchise at GSK is the most valuable single asset Ligand owns

#### Promacta Background







#### What is Promacta

- Promacta is a once-daily oral medicine that activates the thrombopoietin (TPO) receptor
- Activation of the TPO receptor causes platelets to increase, relieving conditions of low platelets known as thrombocytopenia

#### History

- Ligand and GSK jointly discovered Promacta as part of a thrombopoietin (TPO) receptor agonist research collaboration started in 1995
- GSK later licensed from Ligand the follow-on TPO receptor agonist LGD-4665 in 2008



# Promacta®: The Foundation of the Ligand Growth Story

Aspects Of The Promacta Franchise Make It An Ideal Foundation For Ligand's Financial Growth Story

An Approved Drug in All Major Markets

Approved for ITP

Marketed by a Premier Pharma Company

Marketed by GSK

✓ Major Potential for Label Expansion

ITP→HepC →Oncology →Others

Long Patent Protection

Patented until July 2025

Significant Royalty Interest

5-10%, blended 9% on \$1B in Sales

✓ Major Upcoming Catalyst Events

PIII HepC Data Release in 3Q/4Q11

Life-Cycle Management Opportunity

Promacta Follow-On: GSK-5921



#### Promacta Program Recent Developments (1 of 2)

The Promacta ITP Franchise Has Continued To Generate Positive News In The Past Year

- New ITP Launches Around the World
  - EU, Japan, South America
- Increased ITP Sales
  - World-wide ITP sales in 1Q2011 increased 109% over 1Q2010



### Promacta Program Recent Developments (2 of 2)

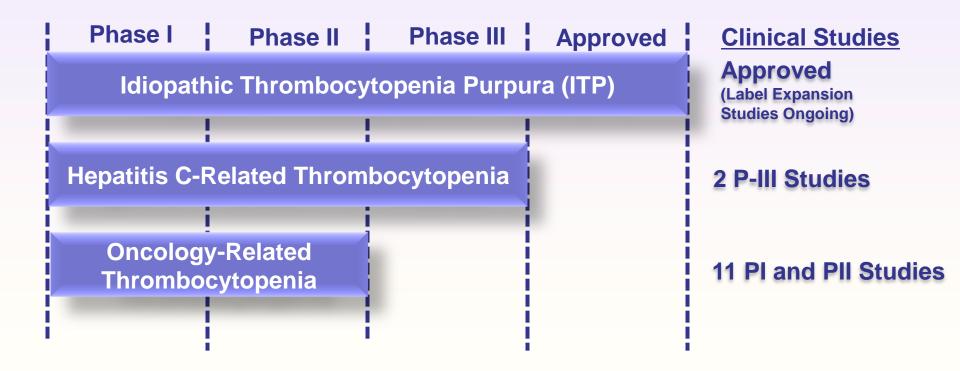
The Promacta ITP Franchise Has Continued To Generate Positive News In The Past Year

- Full ITP Approval Granted by FDA
  - GSK completed post-approval commitment of generating long-term safety data
  - Label now includes efficacy and safety data from RAISE, 6-month ITP study
  - Since 2008, GSK has been working with FDA. Studies submitted:
    - · 6-month efficacy and safety data
    - 2-year safety data in chronic ITP
    - Updates from chronic liver disease (ELEVATE) trial



#### GSK Investment in Promacta Franchise Expansion

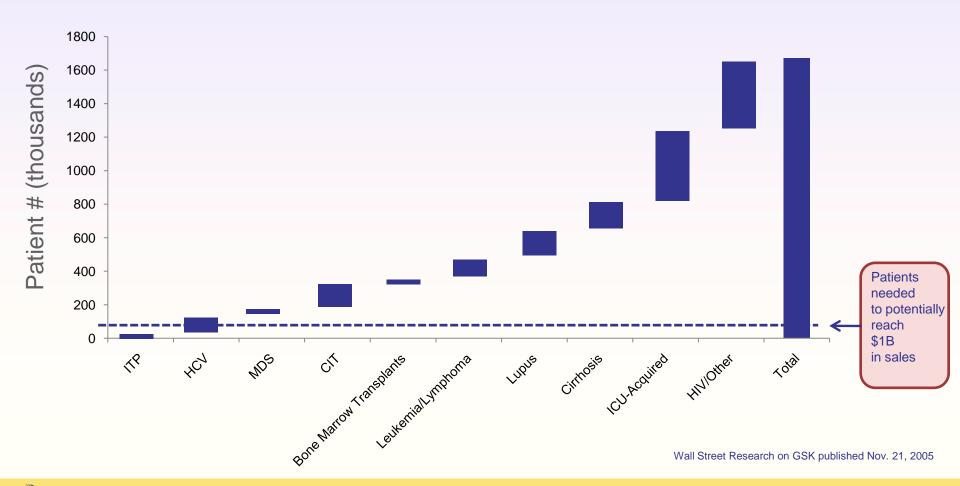
GSK Is Investing Significantly In The Growth Of The Promacta Franchise





#### Thrombocytopenia: A Multibillion Dollar Platelet Potential

Thrombocytopenia Is Comprised Of Multiple Sub-Markets of Thrombocytopenia-Inducing Diseases, Similar to Anemia and Neutropenia





#### Significant Revenue Growth Potential for Ligand

#### **Expansion of the Promacta Franchise**

## Territory Expansion



#### **Indication Expansion**

- HepC
- Oncology
- Others

#### **Long IP Protection**

2025

#### **Translates Into Significant Revenue Growth for Ligand**

#### Promacta Royalty

Annual Sales	Royalty
<\$100M	4.70%
\$100M-\$200M	6.60%
\$200M-\$400M	7.5%
\$400M-\$1.5B	9.40%
>1.5B	9.30%

#### **Illustrative Ligand Revenue**

Annual Sales	Blended Royalty	Ligand Revenue
\$500M	7.1%	\$36M
\$1B	8.3%	\$83M
\$1.5B	8.6%	\$130M



# Nezam Afdhal, M.D.



Beth Israel Deaconess Liver Center Harvard Medical School

# The Role for Eltrombopag (Promacta) in the Treatment of HepC-Related Thrombocytopenia

N. Afdhal M.D

Beth Israel Deaconess Liver Center

Harvard Medical School

## Agenda

- Eltrombopag and thrombocytopenia
- Current status of HCV therapy
- The ENABLE 1 and ENABLE 2 P-III Studies
- ELEVATE Study conclusions on Eltrombopag safety

## The Unmet Medical Need for Thrombocytopenia

- Thrombocytopenia is a major factor in patients being unable to achieve a desired clinical outcome in dozens of diseases
- Currently estimated to be nearly two million patients annually in the US who need to be treated for thrombocytopenia
- Current non-drug techniques used to increase platelets (i.e. platelet transfusion, splenectomy) are costly, risky, and inconvenient.
- The need for a more convenient and effective method for combating thrombocytopenia is clear

## Liver Disease-Associated Thrombocytopenia

- Platelet counts may be as low as 20,000–40,000/μL
- Prevalence of thrombocytopenia increases with severity of liver disease
- Degree of thrombocytopenia correlated with severity of liver disease

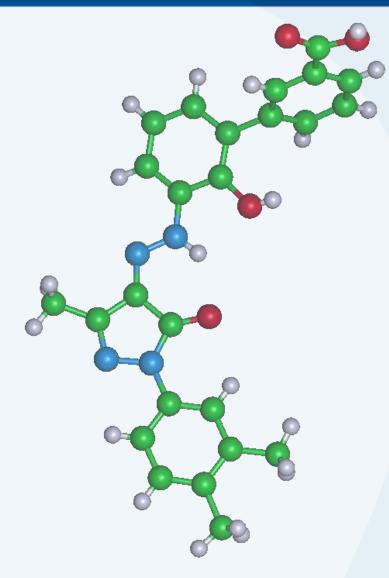
Thrombocytopenia predictive	of
reduced 5-year survival	

 Thrombocytopenia may develop or worsen with interferon-based therapy
 4% in recent DAA trials

Degree of Liver Damage	Thrombocytopenia Prevalence
Normal liver	2.3%
Fatty liver	5.1%
Chronic hepatitis	20.3%
Advanced liver disease	31.8%

### **Eltrombopag**

- Thrombopoietin receptor agonist
- Oral, once-daily tablet
- Induces megakaryocyte proliferation and differentiation
- Increases platelet counts in patients with HCV<sup>1</sup>

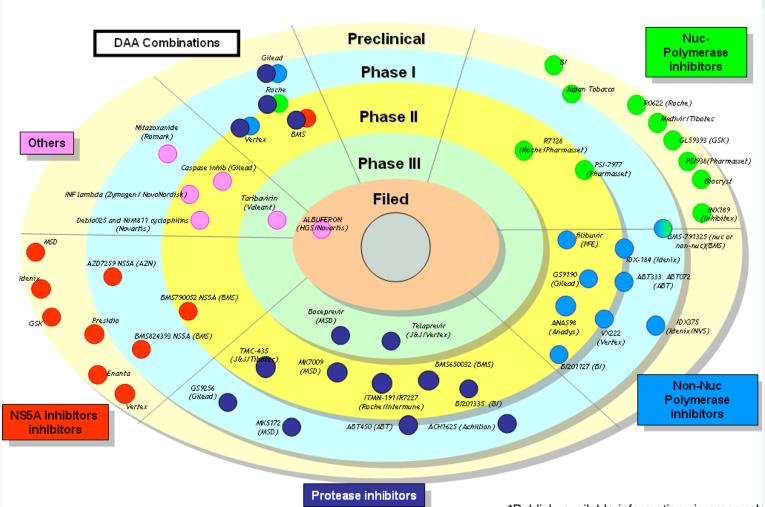


# **Current Status of HCV therapy** and the Role for Eltrombopag

# Thrombocytopenia, HepC, and Eltrombopag

- Nearly 10% of HepC patients in the US suffer from treatment-limiting thrombocytopenia
- These patients have significantly worse outcomes due to their underlying liver disease and inability to complete antiviral therapies
- Eltrombopag PII data demonstrates that this drug may be useful for these patients to overcome thrombocytopenia limitations and complete antiviral therapy
- Key question arising around the eltrombopag HepC opportunity
  - How will new HepC therapies impact the need for eltrombopag?
  - Is there a long-term safety concern for eltrombopag because of the ELEVATE study results?

#### HCV Pipeline\* by MOA and Stage of Development



\*Publicly available information via press release, corporate presentations, and assumptions based on patent filings.

#### Target "Regimen" Outcomes

#### Today's Regimen

IFN + Ribavirin (R)

#### G1-Naive

- SVR = 40%
- Duration = 48 weeks

#### G2-3 Naïve

- SVR = 75%
- Duration = 24 weeks

#### **G1-Experienced**

- No meaningful option
- Frequent dosing and poor tolerability

- 1. IFN + R + DAA
- 2. IFN + DAA + DAA
- 3. IFN + R + DAA + DAA
- 4. DAA + DAA (+ DAA)

2015+ **Target** 

New Triple / Quad Combo Regimens

- Highest possible SVR
- No / low resistance
- Better tolerability
- Shorter durations
- Simplified delivery

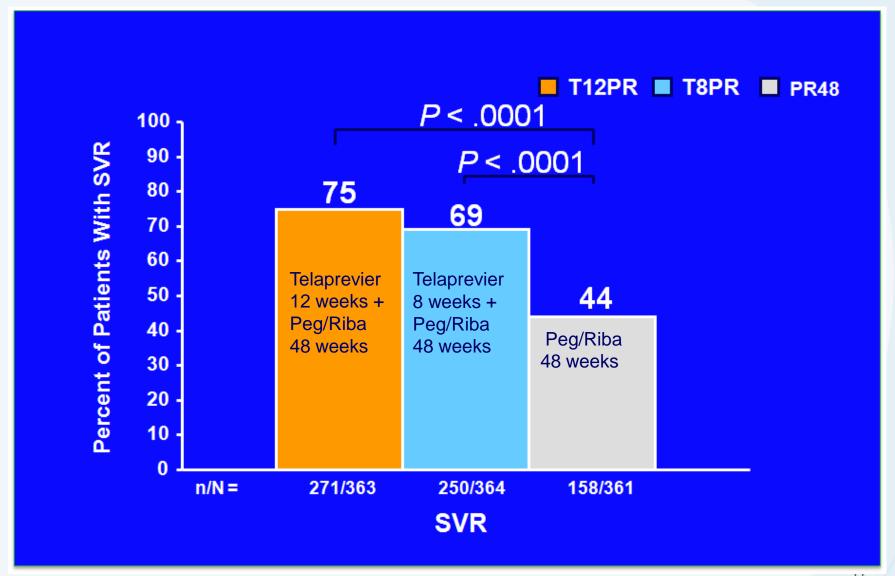
IFN = Interferon

R = Ribavirin

DAA = Novel Direct Acting Antiviral agents

Regimen 4. High risk / low probability / far away / no PoC

# SVR Rates in Telaprevir-Treated Patients Compared with Peginterferon/Ribavirin Alone



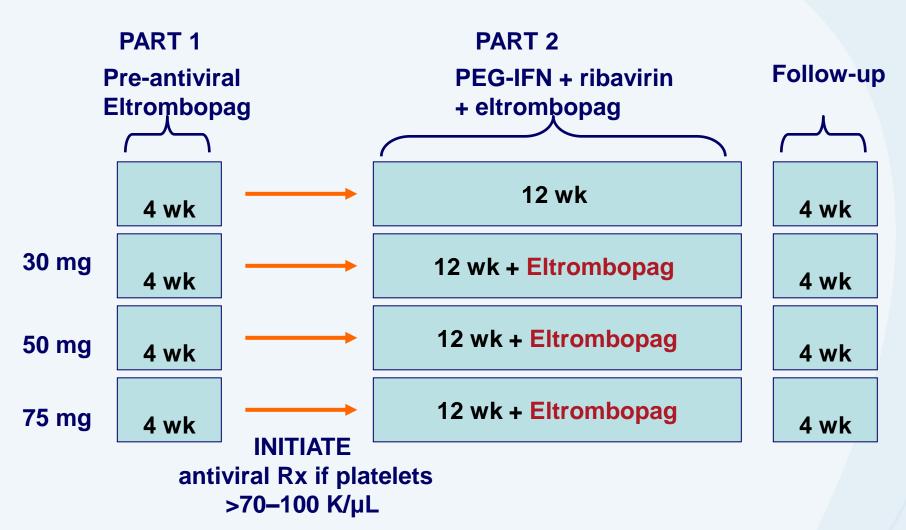
# The Impact of New HepC Therapies on the Use of Eltrombopag in HepC

- Underlying thrombocytopenia is still an issue for many HepC patients
- The new protease inhibitors do not change that fact
  - New protease inhibitor therapies slightly increase the rate of thrombocytopenia
- Due to increased SVR seen with new cocktails, the need for eltrombopag should actually increase
  - Higher SVR rates may encourage doctors to treat more aggressively those patients with thrombocytopenia

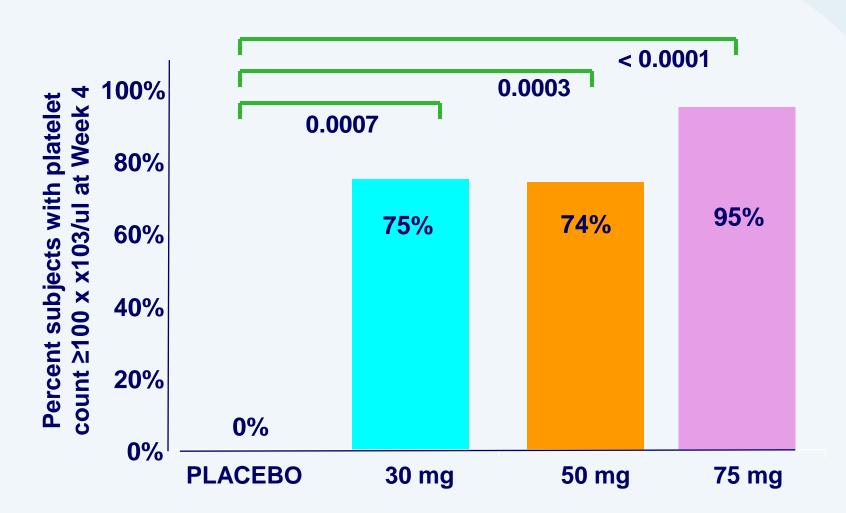
# **Eltrombopag Clinical Studies**

**HepC Studies** 

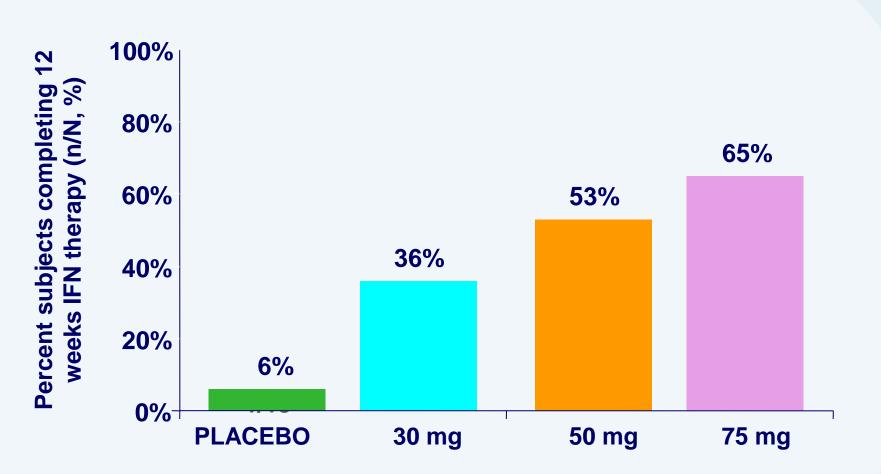
# Eltrombopag PII HepC Study Design



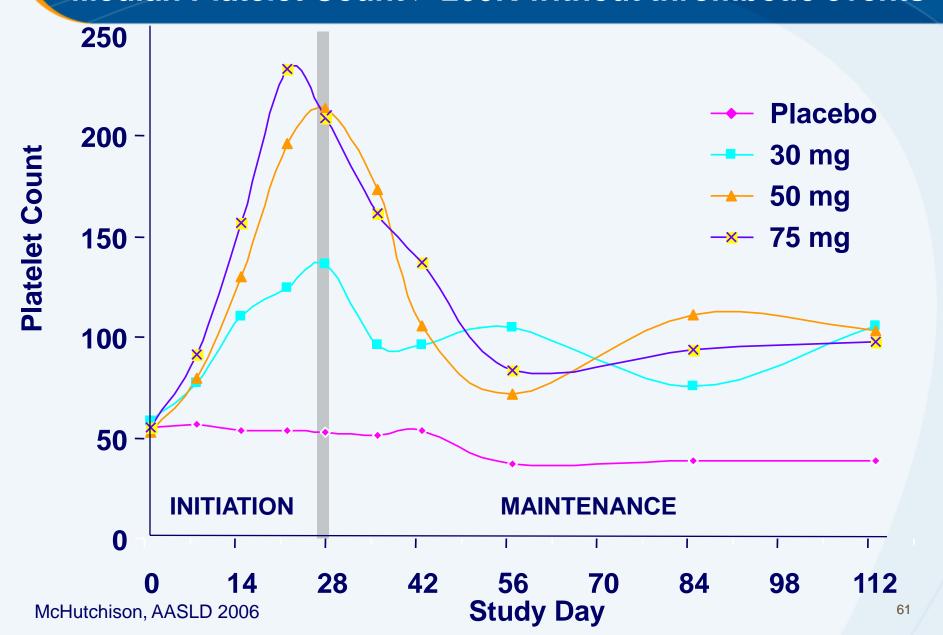
# Phase II: Primary Efficacy Endpoint Platelet count ≥ 100,000/uL at Week 4



# Phase II: Subjects Completing 12 Weeks of PEG-IFN Therapy



Phase II: Median Platelet Count > 200K without thrombotic events



#### Phase II: Adverse Events – Pre-Antiviral Phase

	Treatment Group, n (%)			
	PBO N=18	30mg N=14	50mg N=19	75mg N=23
Any AE	10 (56)	11 (79)	10 (53)	13 (57)
Headache	3 (17)	5 (36)	3 (16)	4 (17)
Dry mouth	1 (6)	2 (14)	2 (11)	2 (9)
Pruritus	0	0	0	2 (9)
Nausea	0	1 (7)	2 (11)	1 (4)
Fatigue	0	0	2 (11)	1 (4)
Upper abdominal pain	0	2 (14)	2 (11)	0
Insomnia	0	0	2 (11)	0
Arthralgia	0	2 (14)	1 (5)	0

No thromboembolic or elevated LFT events of concern

#### Phase II: Conclusions

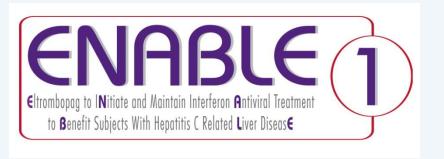
- Eltrombopag increased platelet counts in subjects in all dose groups
- A significant number of subjects achieved the primary endpoint (Week 4) in all dose groups compared to placebo
- Eltrombopag enabled 45/56 subjects to initiate IFN therapy
  - 31 subjects completed 12 weeks of IFN therapy
- Preliminary PK findings in general indicate exposure increases with dose with wide variability
- No safety signals of concern in this initial short term study
- Safety and efficacy data supports further investigation of eltrombopag in this patient population

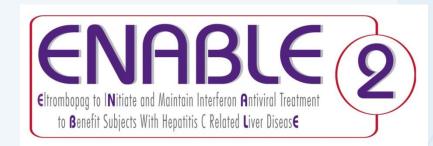
#### **ENABLE 1 and 2**

#### Two parallel global Phase III studies

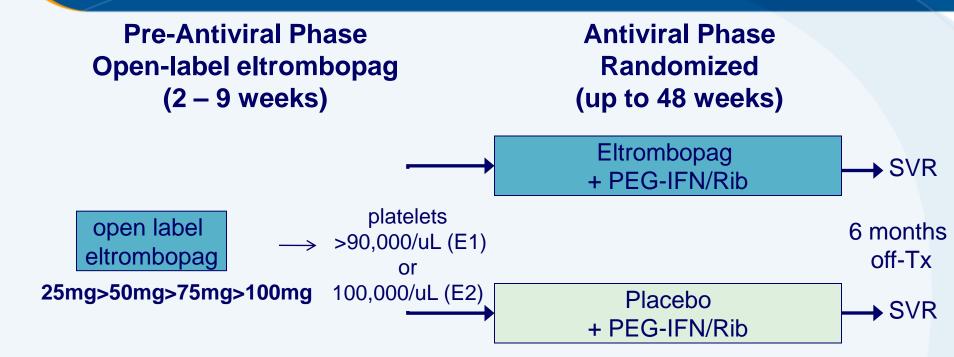
Eltrombopag to INitiate and Maintain Interferon Antiviral Treatment to Benefit Subjects with Hepatitis C related Liver DiseasE

- peginterferon alfa-2a (PEGASYS) plus ribavirin ENABLE 1
- peginterferon alfa-2b (PEG-Intron) plus ribavirin ENABLE 2





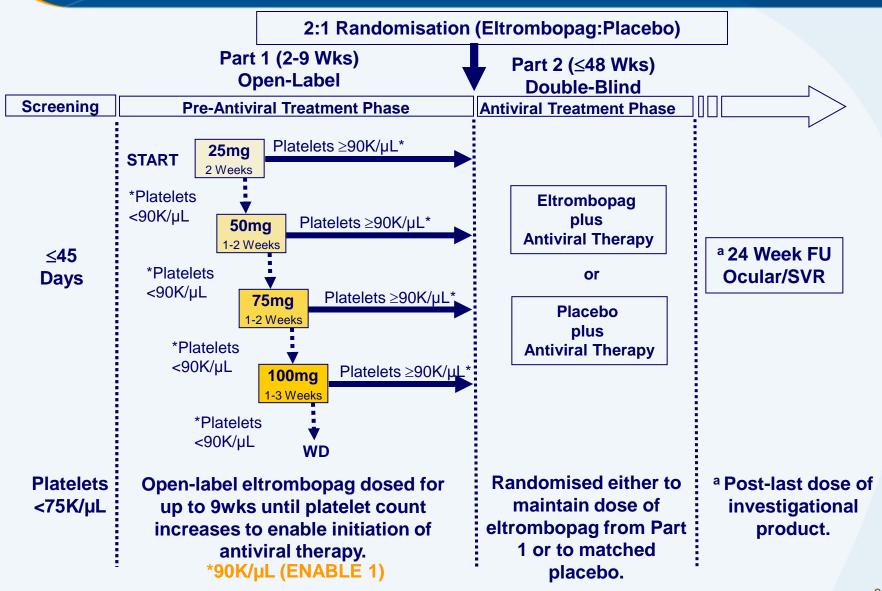
#### Randomized Withdrawal Design



- 2:1 randomization eltrombopag:placebo
- Dose titration of eltrombopag allowed throughout
- Primary endpoint = proportion of patients achieving SVR (6M off –Tx)
- N=750 dosed/675 randomized study
- 3 regions, 26 countries, >250 centres

## **ENABLE 1 and 2 Study Design**

100K/µL (ENABLE 2)



#### **Endpoints**

- SVR rate defined as percentage of subjects with non-detectable HCV-RNA at 24 weeks post-completion of the planned treatment period
- Platelet count ≥90-100,000/μL in Part 1
- Dose modifications
- Safety and tolerability
- Platelet counts
- PK
- RVR, EVR and ETR
- Health-related quality of life
- Safety modified to include risk of thrombotic events both studies completed without DSMB concerns

# **Eltrombopag Safety Summary**

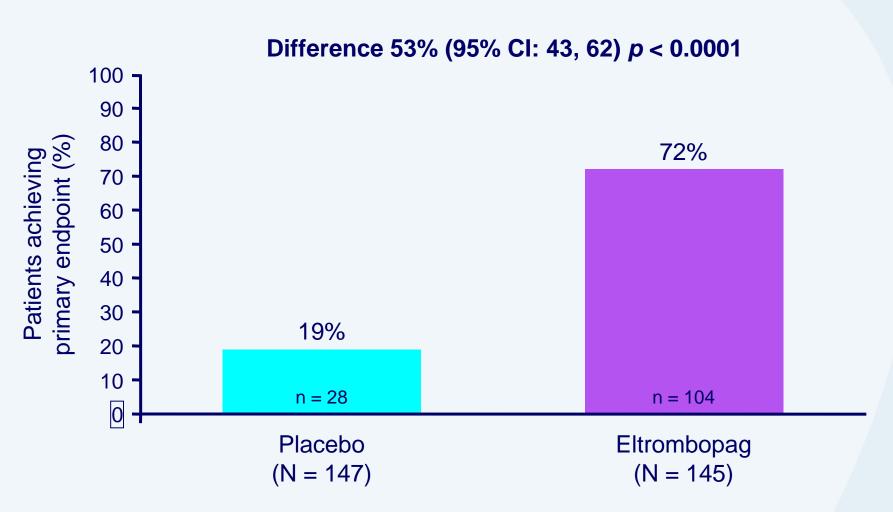
**ELEVATE Study and Safety** 

# Eltrombopag in Chronic Liver Disease Patients with Thrombocytopenia Undergoing an Elective Invasive Procedure: Results from ELEVATE, a Randomised Clinical Trial

N. Afdhal,<sup>1</sup> E. Giannini,<sup>2</sup> G.N. Tayyab,<sup>3</sup> A. Mohsin,<sup>4</sup> J-W. Lee,<sup>5</sup> A. Andriulli,<sup>6</sup> L. Jeffers,<sup>7</sup> J. McHutchison,<sup>8</sup> F. Campbell,<sup>9</sup> N. Blackman,<sup>10</sup> D. Hyde,<sup>9</sup> A. Brainsky,<sup>11</sup> D. Theodore<sup>12</sup>

Division of Gastroenterology/Liver Center, Beth Israel Deaconess Medical Center, Boston, MA, USA;
 Gastroenterology Unit, Department of Internal Medicine, University of Genoa, Genoa, Italy;
 Department of Medicine, Gastroenterology and Hepatology, Post Graduate Medical Institute, and Lahore General Hospital, Lahore, Pakistan;
 Department of Gastroenterology, Services Hospital Lahore, Services Institute of Medical Sciences, Lahore, Pakistan;
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 Clinical Development, GlaxoSmithKline, Research Triangle Park, NC, USA

# Primary Endpoint: Avoiding Platelet Transfusions with Elective Invasive Procedure



#### **Selected Adverse Events**

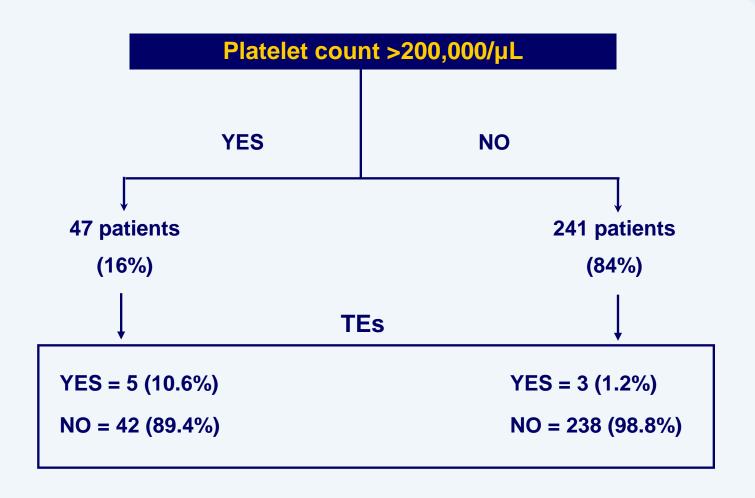
	Placebo (N = 145)	Eltrombopag (N = 143)	
	n (%)	n (%)	
Bleeding	25 (17)	19 (13)	
Thrombotic event	2 (1)	6 (4)	
Ocular (focus on cataracts / visual acuity decrease)	6 (4)	6 (4)	
Malignancies*	1 (<1)	1 (<1)	

<sup>\*</sup> Basal cell carcinoma (Grade 2) reported for one patient receiving placebo and B cell lymphoma (Grade 4) reported for one patient receiving eltrombopag; neither was considered to be related to treatment by the investigator.

# **Summary of Thrombotic Events**

Thrombotic event	Temporal relationship to last dose	Temporal relationship to procedure	Platelet count at event (Gi/L)	Procedure
Eltrombopag				
PV / SMV thrombosis	+1	-6 days	417	Brain tumour resection
PV thrombosis	+5	+4 days	288	Oesophageal variceal ligation
SMV thrombosis	+8	+7 days	235	Dental extraction
SMV / mesenteric thrombosis	+9	+7 days	289	HCC ablation
SPV thrombosis	+14	+13 days	241	TACE
PV thrombosis	+38	+34 days	33	Oesophageal variceal ligation
Placebo				
Acute MI	+20	+19 days	83	Colon resection
Non-occlusive PV and mesenteric thrombosis	+128	+128 days	Unknown	Oesophagoduo- denoscopy

### **Thrombotic Events and Platelet Count**



### **ELEVATE Conclusions**

- Eltrombopag 75 mg for 14 days
  - Reduced the need for platelet transfusions in CLD patients with thrombocytopenia undergoing elective invasive procedures
  - Increased platelets during treatment period and up to 2 weeks following treatment
  - Similar incidence of adverse events and serious adverse events
  - More thrombotic events in the eltrombopag group
    - Relationship demonstrated for elevation of platelets
    - Procedure with endovascular inflammation essential feature

# **Eltrombopag Summary**

- ENABLE studies are expected to confirm role of eltrombopag in HCV therapy in 2011
- Eltrombopag is expected to be more widely used in HCV increased
   SVR increased treatment
- Long term safety of eltrombopag continues to be better understood and continued expansion of the eltrombopag franchise is warranted

# Ligand Pharmaceuticals Incorporated

# Financial Highlights

John Sharp
Vice President, Finance
and Chief Financial Officer

### 2011 Revenue Outlook

2011 Revenue Breakdown\*



- Total 2011 revenue currently projected to be \$22 - \$24 million
  - \$11 \$12 million from Captisol sales
  - \$8 million from royalties
  - \$3 \$4 million from license and other

Potential for additional sources of revenue and cash in 2011 above these projections based on new license agreements

<sup>\*</sup>Excludes revenue from new deals, if any



### **Financial Guidance**

#### 2011 Guidance:

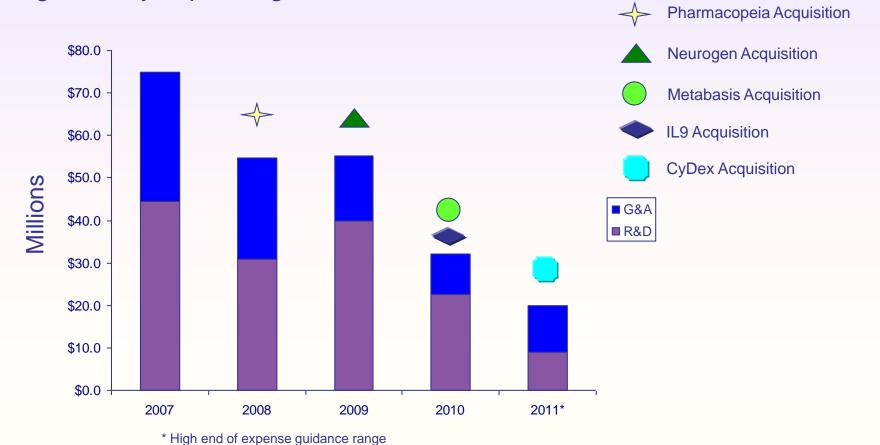
- Revenue of \$22 \$24 million
- Operating expenses projected to be ~\$20 million
- Projecting turning profitable on an operating basis and having positive cash flow from operations by the 4<sup>th</sup> quarter of 2011
- Cash at year-end projected to be ~\$20 million



### Low Cost Structure

Ligand has significantly reduced expenses over the last several years

 During the same period, the company closed 5 acquisitions while significantly expanding its asset base





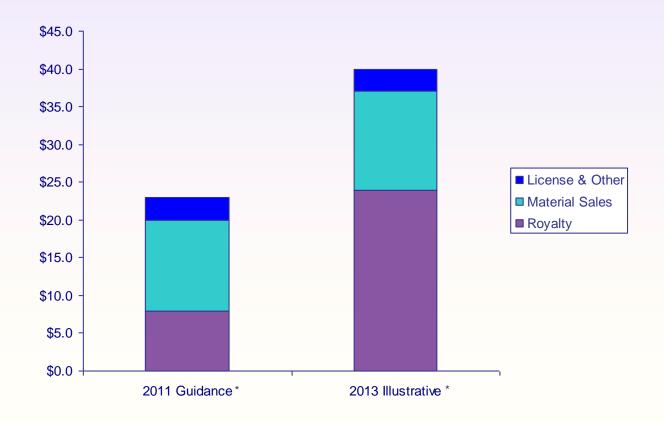
## Multiple Future Revenue Sources

- 8 programs currently generating royalty revenues
- Over 50 partnered programs
- Numerous internal programs
- Growing Captisol business



### **Expected Revenue Growth**

- Revenue could potentially double within two years on similar cost structure
- Recurring and high-growth royalty revenue projected to drive the majority of revenue in 2013



<sup>\*</sup>Excludes revenue from new deals, if any



# High Quality Revenue

#### Future revenue drivers:

- Increased royalties from multiple commercial products (Promacta, Conbriza, Carfilzomib, Nexterone, etc...)
- Steadily increasing Captisol sales
- Less dependence on "one-time" license/milestone events
- Continued potential for additional sources of revenue and cash from new license agreements



# Value of Net Operating Loss Carryforwards (NOL)

- Ligand has accumulated substantial NOL's through our operating history and acquisitions
- NOL's should provide significant relief on taxable income if the company turns profitable
- NOL's as of December 31, 2010 = \$438 million
- Due to tax code, NOL's are limited in the quantity and the timing in which they can be used, so we do not expect to get a full offset on taxable income immediately
- Estimated net present value of NOL's = ~\$100M
- In near-term, the NOL tax should reduce federal tax rate from 34% down to 2% (AMT)
- Additionally, Ligand has ~\$16 million of federal R&D Tax Credits



