Deutsche Bank 41st Annual Health Care Conference

May 4, 2016

NASDAQ: LGND

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 our and our partners' 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, drug development program benefits may not be realized and there can be no assurance that Ligand will achieve its guidance for 2016 or thereafter or that third party research summarized herein is correct or complete.

The forward-looking statements made in the presentation are subject to several risk factors, including, statements regarding intent, belief, or current expectations of Ligand regarding its internal and partnered programs, including Promacta® and Kyprolis® and related projected market sizes, Ligand's reliance on collaborative partners for milestone and royalty payments, royalty and other revenue projections based on third party research, regulatory hurdles facing Ligand's and partners' product candidates, uncertainty regarding Ligand's and partners' product development costs, the possibility that Ligand's and partners' drug candidates might not be proved to be safe and efficacious and commercial performance of Ligand's and/or its partners' products, risks related to its recent acquisition of OMT, including the number of partners to be added to Ligand's portfolio due to the acquisition and the potential for any such partners to terminate their partnership agreements for convenience, the intellectual property protection of the OMT platform, the possibility that CorMatrix® will not develop new products and that its current products may meet our expectations, risks related to Ligand's internal controls, its compliance with regulations, accounting principles and public disclosure, and other risks and uncertainties described in its public filings with the Securities and Exchange Commission, available at www.sec.gov. Additional risks may apply to forward-looking statements made in this presentation.

Actual events or results may differ from Ligand's expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our good faith beliefs (or those of the indicated third parties) and speak only as of the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement, and Ligand undertakes no obligation to revise or update this presentation to reflect events or circumstances or update third party research numbers after the date hereof. This caution is made under the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934.

Our trademarks, trade names and service marks referenced herein include Ligand, Captisol, OmniRat, OmniMouse, OmniFlic and OmniAb. Each other trademark, trade name or service mark appearing in this presentation belongs to its owner.

The process for reconciliation between adjusted financial numbers presented on slides 30, 31 and 33 and the corresponding GAAP figures is explained on slide 33.

Ligand: 2016 and Beyond

- Ligand is a high-growth company with economic rights to some of the world's most important medicines
- "Shots-on-Goal" business model is stronger than ever and projected to continue to drive the business significantly
- Cutting-edge innovations with Captisol, OmniAb, LTP and Selexis technologies making major drugs possible
- Strong outlook for revenue and profitability growth
- Company well positioned for the short, mid and long-term

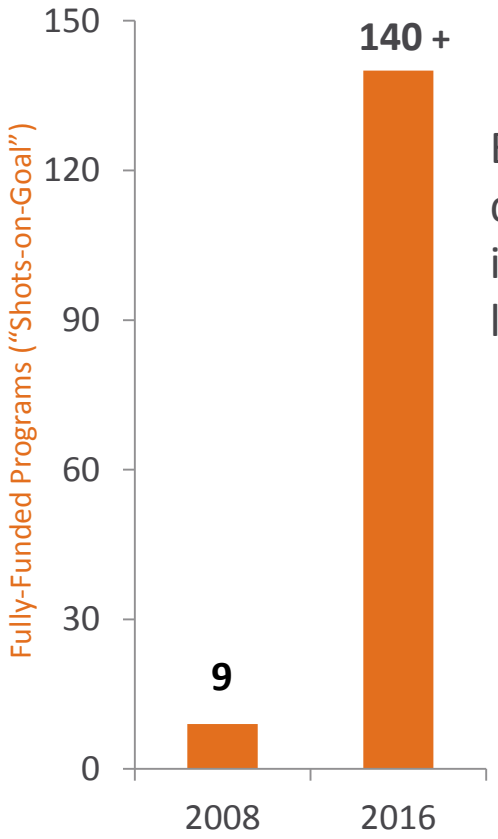
Ligand: A Unique Biotech Investment

Company Aims for Above-Average Growth, Below-Average Risk

- Ligand focused on building a large portfolio of fully-funded programs (“Shots-on-Goal”)
- Two primary business objectives:
  - Drive R&D to earliest inflection point for partnering
  - Acquire assets efficiently to further build portfolio
- The goal: Above average returns, below average risk
  - Economic rights to major pharma programs
  - High-margin, high-growth, recurring revenue
  - Low operating costs, low share count
  - Broad business diversity – technology, partner portfolio, IP

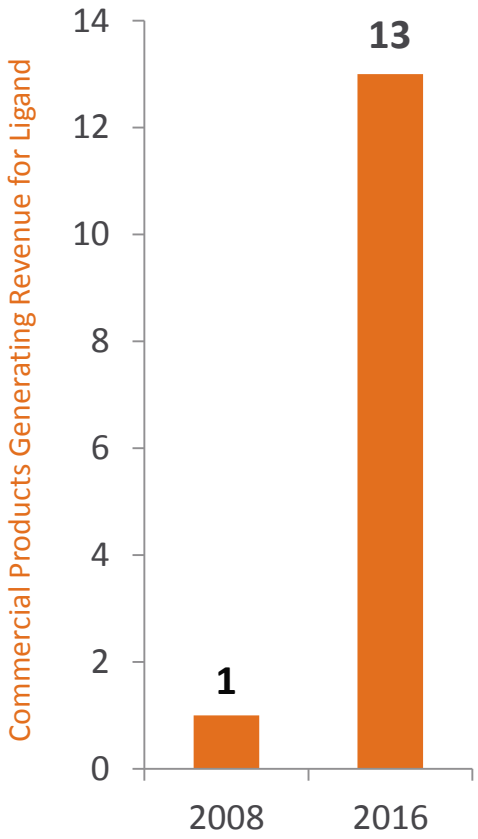
Ligand's Portfolio Continues to Grow

Ligand's Achievement:
Portfolio Expansion



Excellent record as drug researcher, innovator and licensor

Partners' Achievement:
Approved Products



Our partners are doing their job getting new products to the market

Latest product approvals are EVOMELA, iv Voriconazole and biosimilars for adalimumab and trastuzumab for which we receive royalties

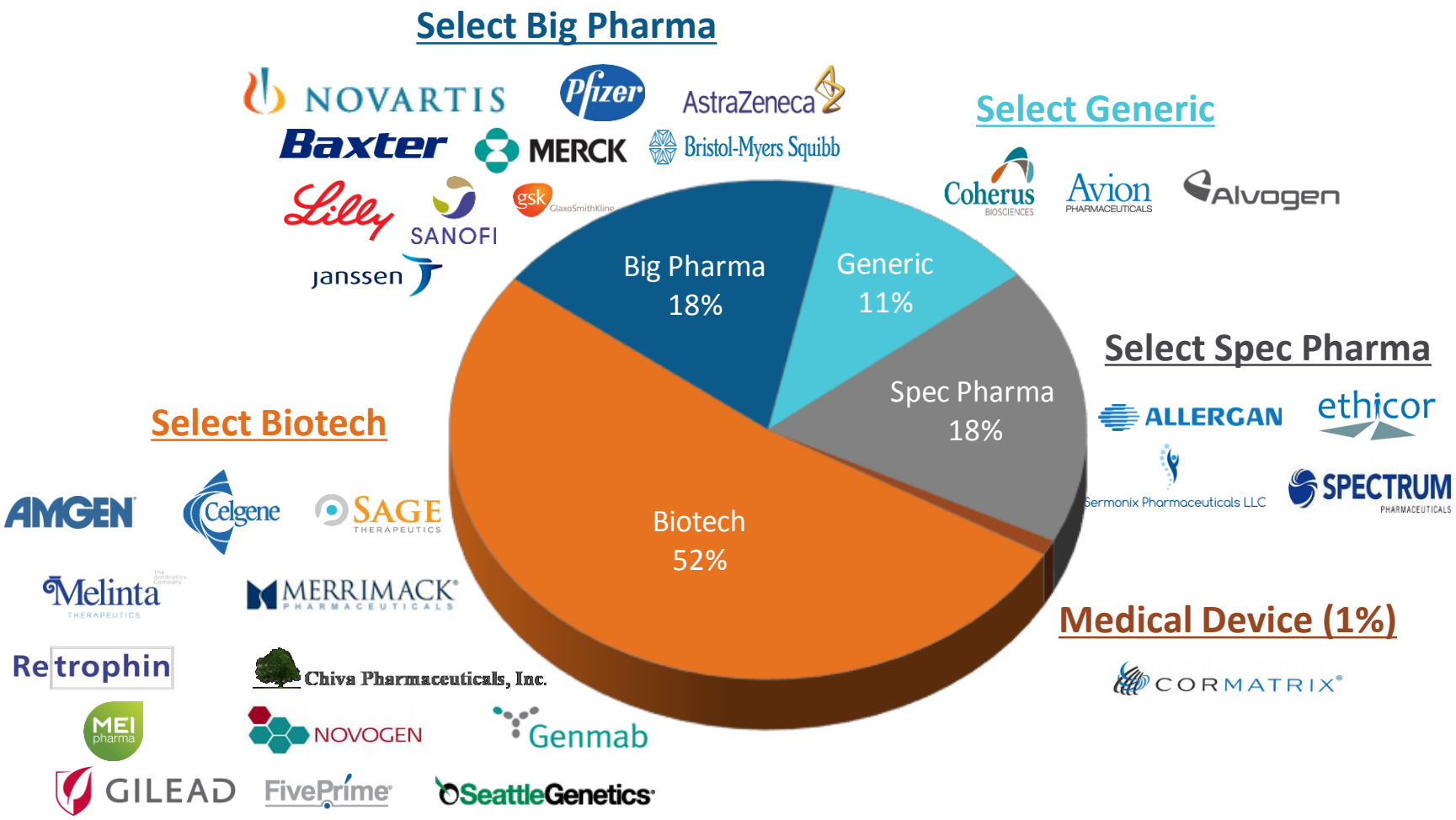
CorMatrix acquisition adds two additional commercial products

Ligand®

Ligand: More Diversified Than Ever

- **Revenue:** Significant contribution from each of three sources
  - **Royalties**: Promacta and Kyprolis approved in more indications and countries; more products generating revenue today and more approvals expected annually
  - **Milestones/License**: Driven by regulatory progress, as well as commercial success and business development. Newly acquired OMT adds potential additional license revenue
  - **Captisol**: Driven by commercial success and clinical progress, as well as increasing interest in technology
- **Portfolio:** 140+ programs; 13 commercial today
- **Partners:** Over 85 partners completely funding R&D to drive Ligand portfolio towards commercialization success
- **Technology:** 4 platforms with major new addition of OmniAb

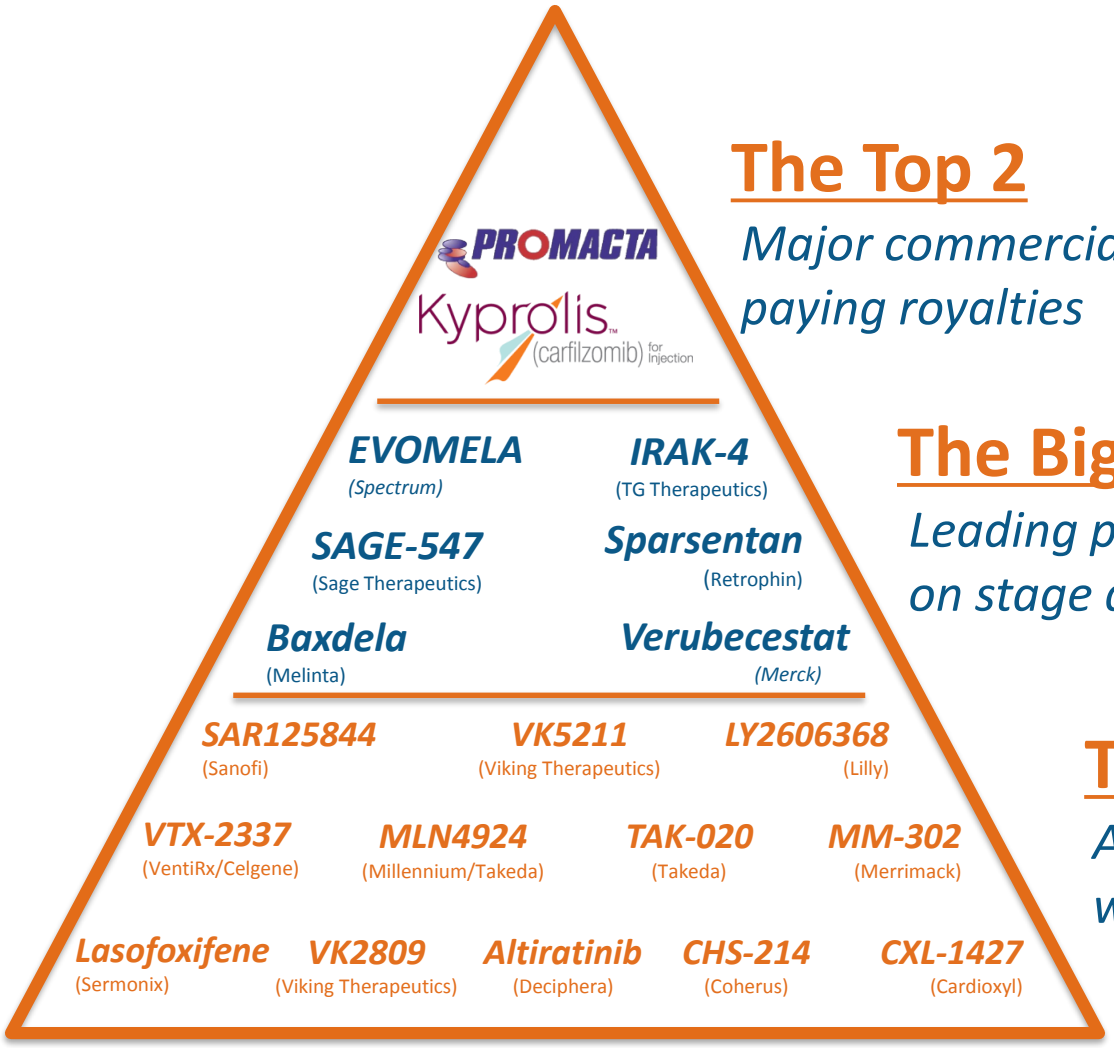
Diverse Portfolio Among Health Companies



Over 85 Partners and Licensees

Ligand

Ligand's Portfolio Pyramid



The Top 2

Major commercial assets paying royalties

The Big 6

Leading pipeline assets based on stage and/or potential value

The Next 12

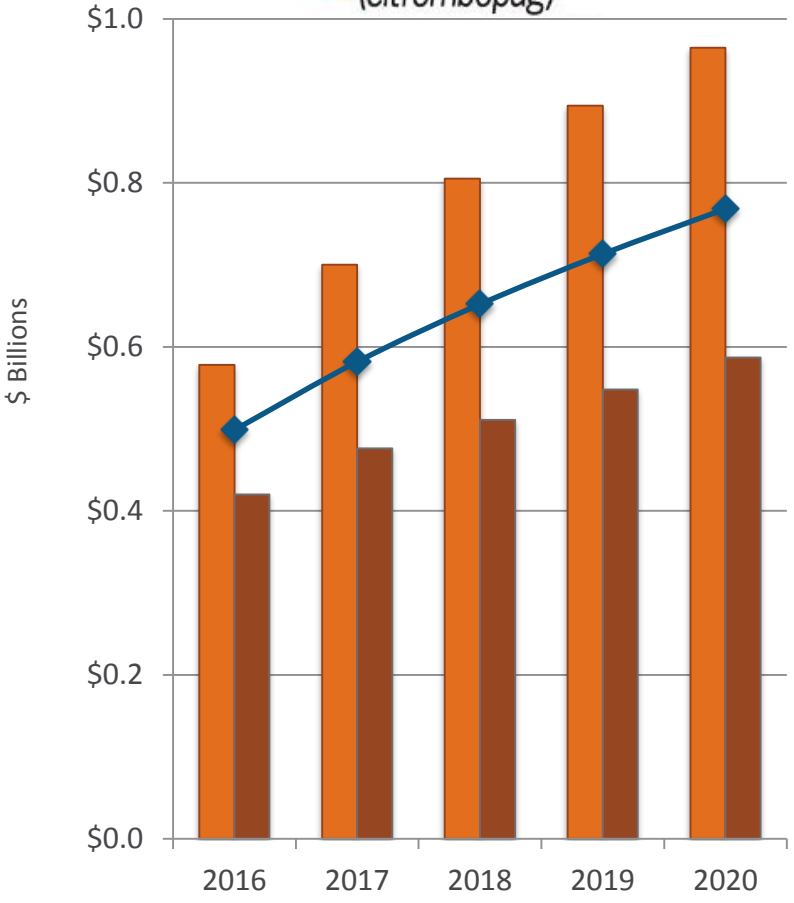
Assets emerging as next class with high revenue potential

Ligand®

Revenue Outlook for "Top Two" Blockbusters

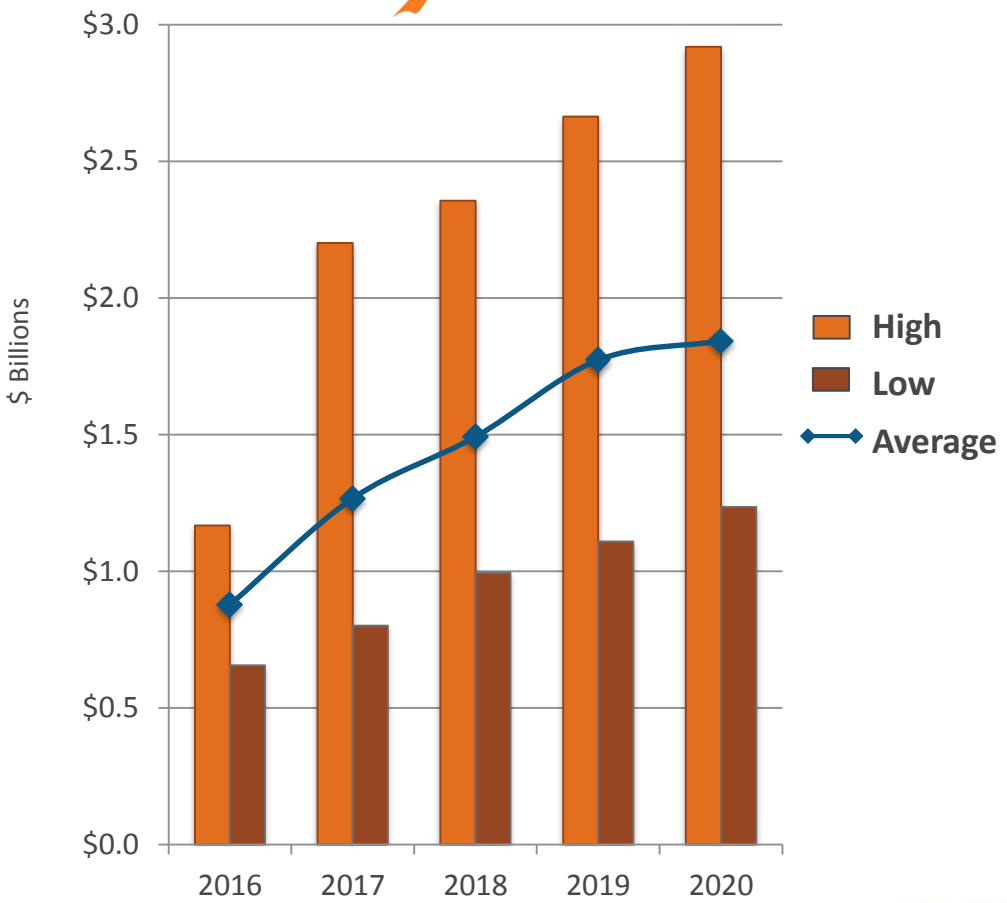
Sell-Side Analyst Projections

PROMACTA® (eltrombopag)



7 NOVN covering analysts reports as of 2/1/16

Kyprolis™ (carfilzomib) for Injection



18 AMGN covering analysts reports as of 1/29/16

Ligand®

Promacta® Overview

- Oral medicine that boosts platelets
- Long patent protection, Orange Book patent expiration in 2027
- Blockbuster commercial potential (>$1 billion) due to growing and large list of potential therapeutic indications, with largest indications in development

Currently Approved Indications

ITP

Idiopathic Thrombocytopenia

>100 Countries

HCV

Thrombo-cytopenia Induced by Hepatitis C

>50 Countries

AA

Aplastic Anemia

>30 Countries

Ongoing Development

ORT

Oncology-Related Thrombocytopenia

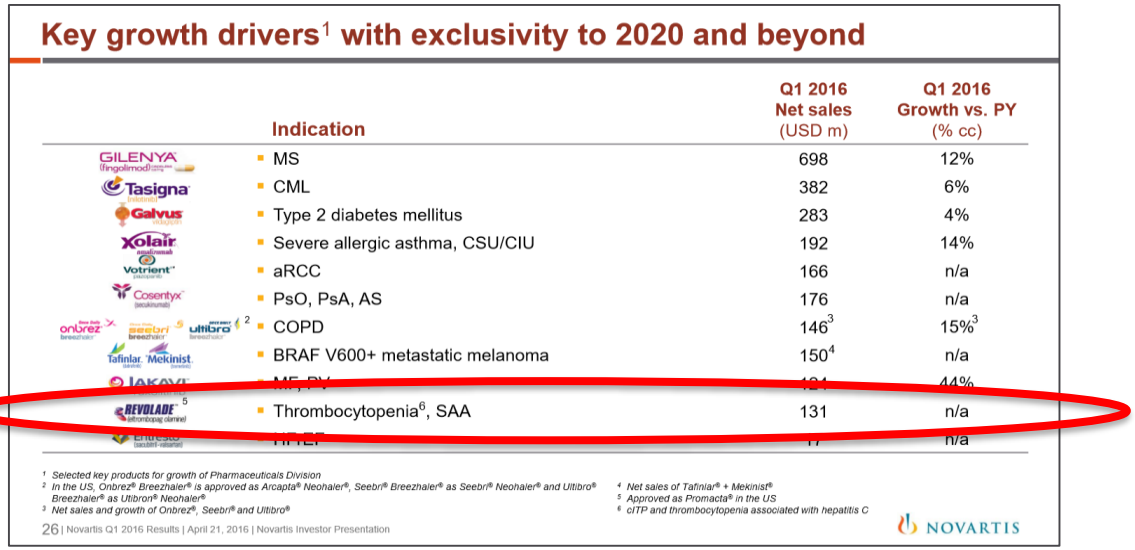
Major clinical investment ongoing:
MDS, AML, CLL, CIT, others

[1] National Cancer Institute, SEER Cancer Review, 2012

The Top Two: Promacta

Major Commercial Assets Paying Royalties

- Novartis executive management continues to highlight the promise of Promacta as a key growth driver for Novartis' global business



Key growth drivers[1] with exclusivity to 2020 and beyond

	Indication	Q1 2016 Net sales (USD m)	Q1 2016 Growth vs. PY (% cc)
GILENYA (fingolimod)	MS	698	12%
Tasigna	CML	382	6%
Galvus	Type 2 diabetes mellitus	283	4%
Xolair	Severe allergic asthma, CSU/CIU	192	14%
Votrient	aRCC	166	n/a
Cosentyx	PsO, PsA, AS	176	n/a
onbrez breezhaler / seebri breezhaler / ultibro breezhaler[2]	COPD	146[3]	15%[3]
Tafinlar / Mekinist	BRAF V600+ metastatic melanoma	150[4]	n/a
JAKAVI	MF, PV	121	44%
REVOLADE[5]	Thrombocytopenia[6], SAA	131	n/a
Entresto	HFrEF	17	n/a

[1] Selected key products for growth of Pharmaceuticals Division
[2] In the US, Onbrez® Breezhaler® is approved as Arcapta® Neohaler®, Seebri® Breezhaler® as Seebri® Neohaler® and Ultibro® Breezhaler® as Ultibron® Neohaler®
[3] Net sales and growth of Onbrez®, Seebri® and Ultibro®
[4] Net sales of Tafinlar® + Mekinist®
[5] Approved as Promacta® in the US
[6] cITP and thrombocytopenia associated with hepatitis C

NOVARTIS

*"I'd just add to that, the main reason for us doing the oncology part of the GSK transaction was Votrient, Mekinist, Tafinlar, **Promacta …** those were the real drivers."*

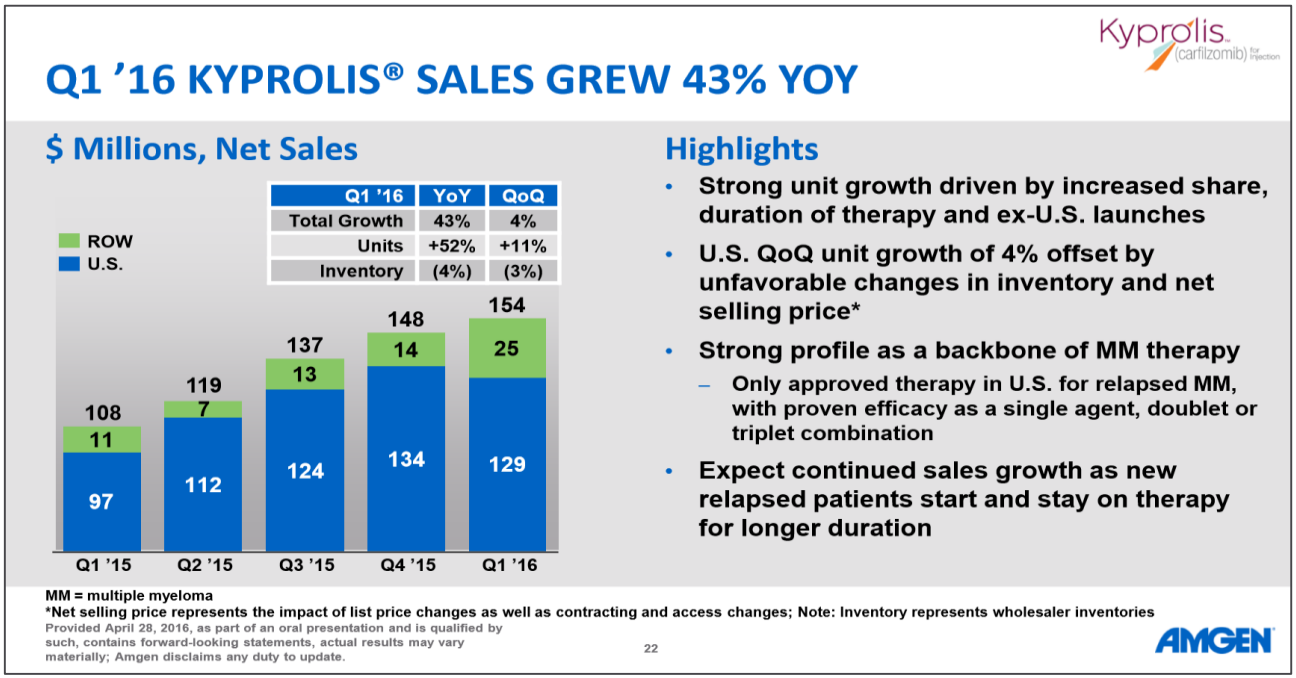
David Epstein
Division Head-Novartis Pharmaceuticals

Reference: Novartis Q1 earnings call, April 21, 2016

The Top Two: Kyprolis®

Major Commercial Assets Paying Royalties

- Developed and marketed by Amgen
- ASPIRE and ENDEAVOR Phase 3 data have positioned Kyprolis to be the backbone therapy in multiple myeloma (MM) treatment



*"We expect these products, **and especially Kyprolis** and REPATHA to pave the way for our long term growth."*

Robert A. Bradway

Chairman, President & CEO

Reference/Note: Amgen Q1 earnings call, April 28, 2016; see Amgen disclaimer above;
Kyprolis is a registered trademark of Amgen.

The Big 6: Major Pipeline Assets

Highlighted Programs Continue to Create Growth Opportunities

Partner	*Program (Therapy Area)*	*Stage*	*Royalty Rate*	*Potential 2016 Events*
SPECTRUM PHARMACEUTICALS	**EVOMELA (Oncology)**	Marketed	*20.0%*	**Commercial Launch**
Melinta THERAPEUTICS	**Baxdela (delafloxacin) (Infection)**	Phase 3	*2.5%*	**NDA Submission/Action**
SAGE THERAPEUTICS	**SAGE-547 (Neurology)**	Phase 3	*3.0%*	**Top-line Phase 3 data in SRSE (2H'16)**
Retrophin	**Sparsentan (FSGS - Kidney Disease)**	Phase 2	9.0%	**Phase 2b Data (Q3'16)**
MERCK	**Verubecestat (Alzheimer's Disease)**	Phase 3	*Undisclosed*	**Phase 3 Progress (Mid-2017 readout)**
TG Therapeutics	**IRAK-4 (Oncology)**	Pre-IND	6.0-9.5%	**Clinical Start/Progression**

Expansion of Commercial Assets

Selected Programs and FDA Action in 2016

Evomela™

SPECTRUM PHARMACEUTICALS

Captisol-enabled IV Melphalan

Stem Cell Transplantation and Treatment for Multiple Myeloma

20% Royalty

>$50 m in potential milestones

(including $6 m upon approval)

FDA approval March 10, 2016

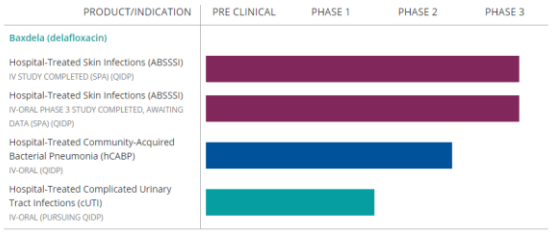
BAXDELA

Melinta THERAPEUTICS

Captisol-enabled IV delafloxacin

Multiple Indications:

Hospital-treated skin infections, community-acquired pneumonia, complicated urinary tract infection



2.5% Royalty

$3.6 m in remaining milestones

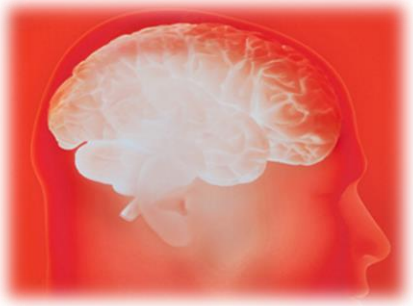
QIDP Designation and Priority Review Designation

Carnexiv™

Lundbeck

Captisol-enabled IV carbamazepine

for seizure treatment in hospital settings



2.75% Royalty

$2.75 m in remaining milestones

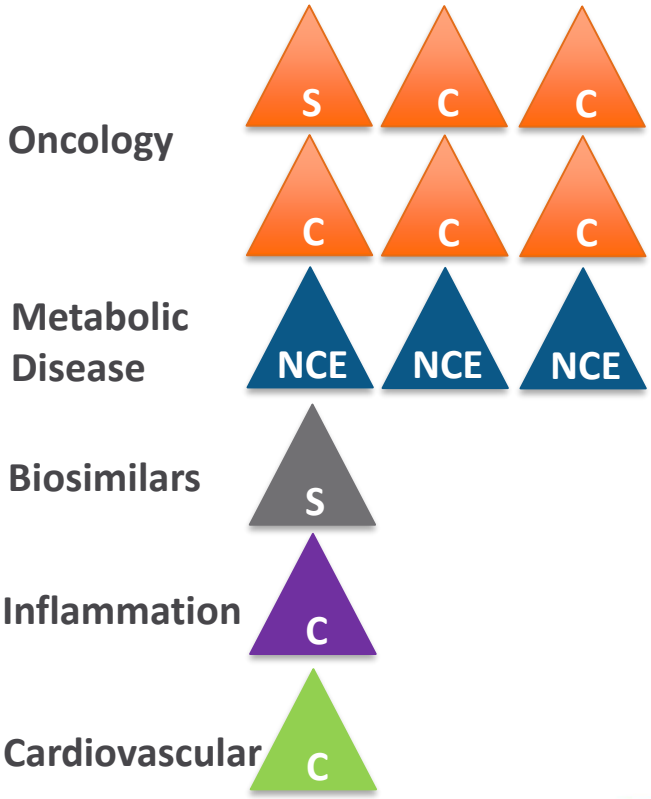
FDA Action in 2016

Ligand®

The Next 12

- Twelve additional pipeline programs continue to expand the breadth and diversity of Ligand's growing portfolio
- Diverse partners and therapy areas
- Diversity of underlying technology
  - 7 Captisol-enabled programs **(C)**
  - 3 New Chemical Entity programs **(NCE)**
  - 2 Selexis programs **(S)**
- All are well-resourced programs with highly-committed partners
  - Emerging data and progress
  - Positioned for additional data or events in the next 12-18 months
  - Ability to contribute meaningfully to Ligand's future growth

Composition of The Next 12



Next 12 - Overview

Partner	Program (Therapy Area)	Stage	Highlights	Potential Upcoming Events
Sanofi	**SAR125844** *(Oncology)*	Phase 2	Early evidence of anti-tumor activity in advanced/refractory solid tumors	Additional data in 2017
VentiRx/ Celgene	**Motolimod** *(Oncology)*	Phase 2	Trials ongoing in head/neck and ovarian cancer	Phase 2 ovarian data 1H2016
Lilly	**Prexasertib** *(Oncology)*	Phase 2	Multiple trials ongoing in various cancers	Data readouts in 2016, 2017, and 2018
Merrimack	**MM-302** *(Oncology)*	Phase 2/3	Robust activity in heavily pre-treated HER2+ metastatic breast cancer	Filing in 2017, potential accelerated review
Takeda/ Millennium	**Pevonedistat** *(Oncology)*	Phase 1	First-in-class NEDD8 activating enzyme inhibitor for various blood cancers	Three initial oncology trials with readouts 2H2016
Deciphera	**Altiratinib** *(Oncology)*	Phase 1	Oral multi-kinase inhibitor in trials for invasive tumors	Data expected 2H2016
Viking Therapeutics	**SARM/VK5211** *(Endocrine)*	Phase 2	Best-in-class SARM in Phase 2 for hip fracture	Data expected Q12017
Sermonix	**Lasofoxifene** *(Women's Health)*	Pre-NDA	Third generation novel SERM studied in over 15,000 women	Regulatory progress toward NDA expected in 2016
Viking Therapeutics	**TR-β/VK2809** *(Metabolic)*	Phase 2	Applicability in multiple indications, including XALD, NASH	Phase 2 data in hypercholestorlemia/ fatty liver to complete in 2016
Cardioxyl/BMS	**CXL-1427** *(Cardiovascular)*	Phase 2	Shown improvement in contraction and relaxation of heart muscle, acquired by BMS for $2B	Phase 3 start expected
Takeda	**TAK-020** ***(Inflammation)***	Phase 1	In Phase 1 for rheumatoid arthritis	Phase 1 expected to complete mid-2016
Coherus	**CHS-0214** *(Biosimilar Etaneracept)*	Phase 3	Positive phase 3 data in psoriasis and rheumatoid arthritis	MAA filing expected 2H016

Reference: Partner disclosures and clinicaltrials.gov

Ligand®

Diverse Capital Allocation

Building Asset Base and Increasing Returns for Investors

- Over last several years, Ligand has deployed capital in the following ways
  - Company acquisitions
  - Royalty acquisitions
  - Share buybacks
  - Invested in development of new technology platforms
  - Invested in biotech company with Ligand partnerships

- Ligand takes advantage of market knowledge and experience gained from our partnerships to find opportunities to invest and create value from the biopharma industry

- Ligand will continue to explore opportunities that our programs and the markets present

Major Expansion of Licensing Opportunities

Furthering Technology Diversification

CAPTISOL®

Solving solubility and stability challenges predominantly for small molecules

OmniAb

Proven, unrestricted Fully Human Antibody technology enabling drug discovery in infectious diseases, cancer and autoimmunity

SELEXIS

SURE*technology* Platform™

Allows for higher and more stable expression of recombinant proteins

LTP Technology™

Selectively delivers broad range of pharmaceutical agents to the liver

Note: SUREtechnology Platform™ owned by Selexis and Ligand does not have rights to future developments from the platform

OmniAb Antibody Platforms

- Ligand's recent acquisition of OMT provides the company a major platform to participate in the significant and growing field of antibody research
- OMT's genetically engineered novel, transgenic rodents produce fully human antibodies

Immunization ***OMT Transgenic Animal*** ***Human Antibodies***

- Key advantages:
  - Human antibodies have reduced immunogenicity
  - Using transgenic rodents avoids the need for genetic engineering to "humanize" antibodies and accelerates antibody discovery
  - Broad diversity of high-quality antibodies

Ligand®

Antibodies Are a Major Driver of Pharma

2015 Global Sales

5 of Top 10 Selling Drugs are Antibodies

Drug	*Therapeutic Area*	*2015 sales ($ billions)*
Sovaldi/Harvoni	Hepatitis C	$19.1
Humira	Autoimmune	$14.3
Enbrel	Autoimmune	$9.1
Remicade	Autoimmune	$9.0
Lantus	Diabetes	$7.2
Abilify	CNS Disorders	$7.2
MabThera/Rituxan	Cancer	$7.1
Avastin	Cancer	$6.8
Herceptin	Cancer	$6.6
Seretide/Advair	Asthma	$6.0

Top 10 Antibodies Sold $56 B in 2015

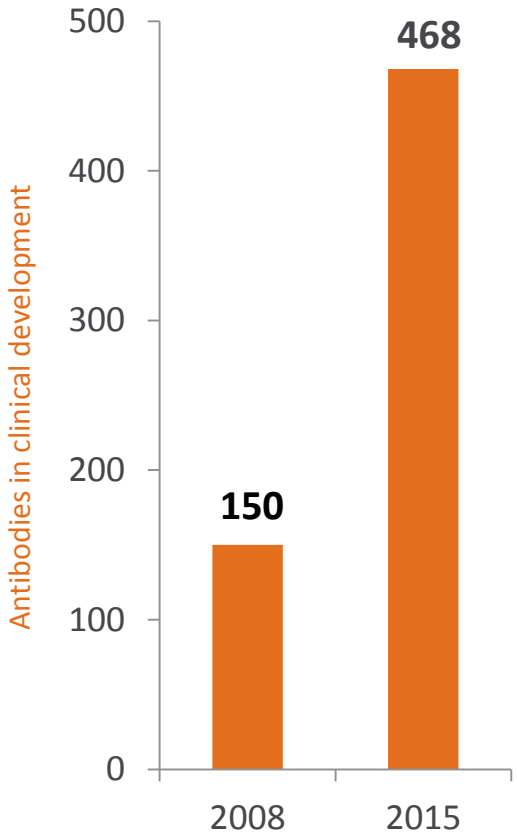
Drug	*Therapeutic Area*	*2015 sales ($ billions)*
Humira	Autoimmune	$14.3
Remicade	Autoimmune	$8.9
MabThera/Rituxan	Cancer	$7.1
Avastin	Cancer	$6.8
Herceptin	Cancer	$6.6
Lucentis	Ophthalmology	$3.6
Soliris	Orphan Diseases	$2.6
Stelara	Autoimmune	$2.5
Erbitux	Cancer	$2.0
Tysabri	Autoimmune	$1.9

Antibody-based medicine

Note: Lucentis is an antibody fragment

Source: 2015 Sales of Recombinant Therapeutic Antibodies and Proteins (La Merie Publishing, March 2016); company earnings

Increasing investment in Antibody Research



- Antibodies are a promising and rapidly growing category of therapeutic research
- Number of antibodies in clinical development has tripled since 2008

Sources: Nelson et al., ***Nature Reviews***, 2010.
Reichert Biotechnology Consulting LLC, 2015.

Ligand®

OmniAb Partners

19 Partnerships, with Potential to Grow

- Growing roster of currently active partners validates the utility of the technology

- Project up to three OmniAb antibodies will be in human Phase 1 trials by the end of 2017 and as many as 15 antibodies could be in Phase 1 or more advanced trials by 2020

CorMatrix® Synthetic Royalty Acquisition

- Ligand announced the synthetic royalty acquisition today, Wednesday May 4th
- Ligand to pay CorMatrix $17.5 million cash to acquire revenue rights on existing and potential future medical device products
- Initial cash revenue to Ligand estimated to be $2.75 million annually with the potential for revenue to double from existing product sales
- Ligand entitled to mid-single digit royalty on future potential products that could launch in the 2019 timeframe if successful
- Deal marks Ligand's entrance into the lucrative field of medical devices

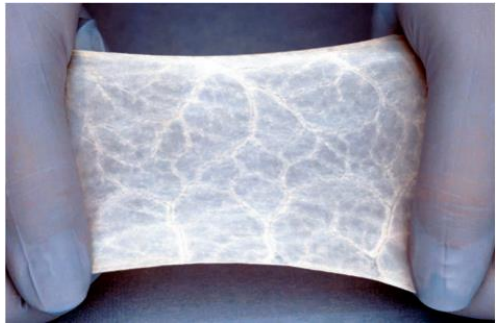
CorMatrix® Cardiovascular Inc.

- CorMatrix develops and sells a leading proprietary extracellular matrix (ECM®) technology for a variety of cardiovascular applications
- CorMatrix's products are medical devices that are used in human tissue repair
- ECM Technology products represent significant improvement over current products and technologies used in cardiac surgical procedures
- CorMatrix ECM Technology used at >825 hospitals across the U.S. and implanted in over 140,000 cardiac procedures
- Strong IP estate for marketed and pipeline uses

Source: CorMatrix Cardiovascular, Inc.

CorMatrix ECM Technology

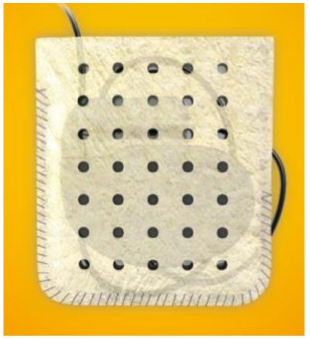
- ECM biomaterial supports native tissue repair by providing an interim bioscaffold
  - Enables patient's own cells to repopulate and repair damaged tissues, resulting in remodeled, functional tissue

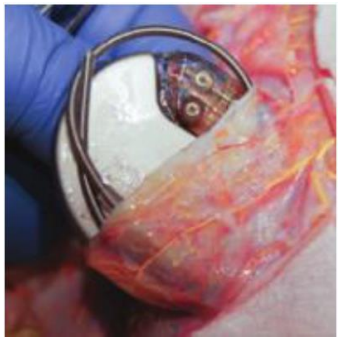


- ECM® Technology produced from a naturally occurring source
  - Superior alternative to synthetic or cross-linked materials
- ECM® Technology allows surgeons to restore the native anatomy of cardiac and vascular tissue in need of repair
  - Develops a permanent repair without the long-term presence of a foreign body

Source: CorMatrix Cardiovascular, Inc.

CorMatrix CanGaroo® Envelope





- Device intended to securely hold cardiac implantable devices (CIEDs)
  - Envelope conforms to CIED and, once inserted, restricts CIED migration to provide stability
- Devices compatible with the CanGaroo Envelope include:
  - Pacemaker pulse generators
  - Defibrillators
  - Other implantable electronic devices
- Device is easily removed from the pocket during exchange/revision
- Device does not calcify and remodels into vascularized tissue
- Primarily sold to electrophysiologists

Source: CorMatrix Cardiovascular, Inc.

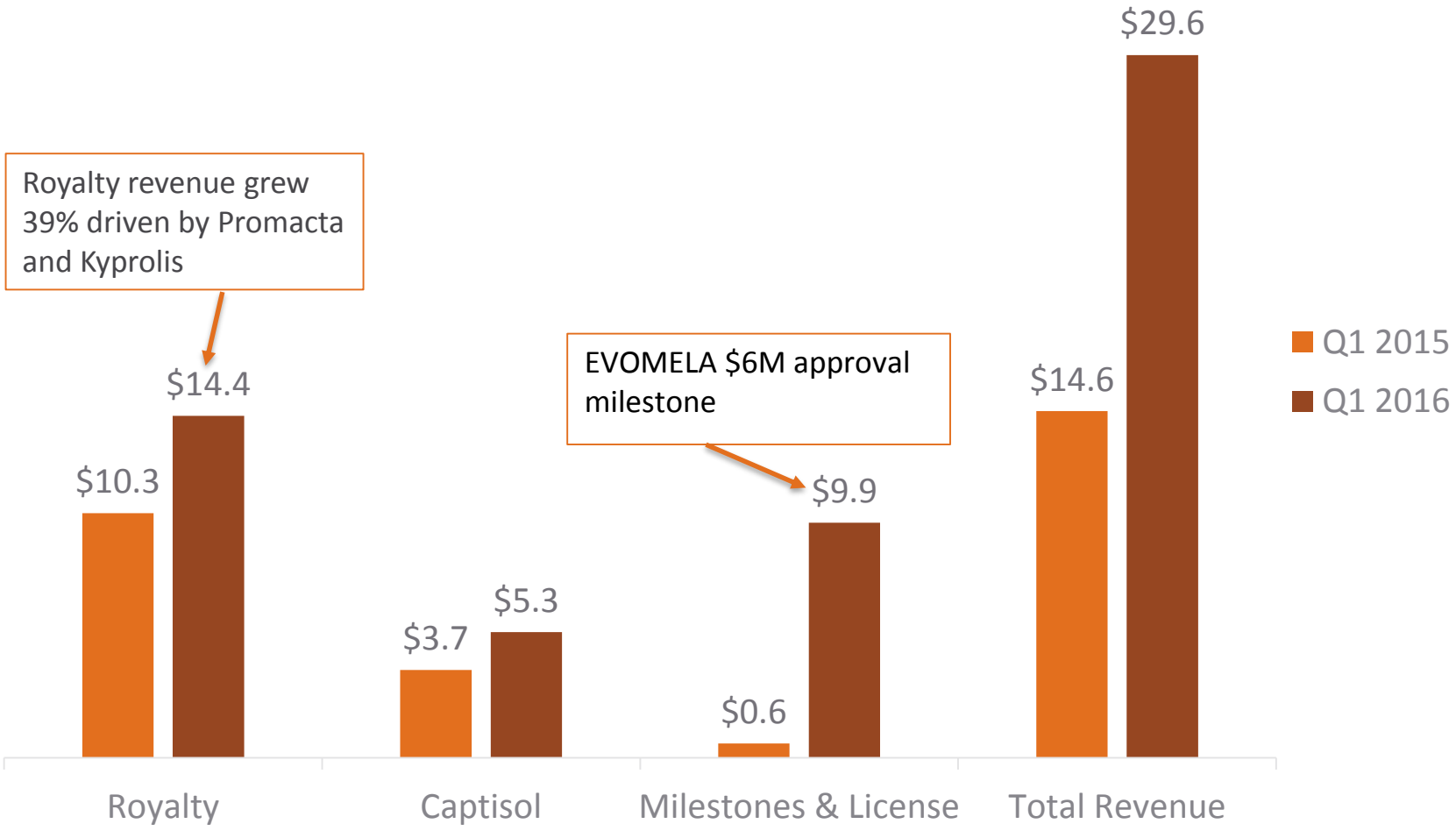
Current and Potential Future ECM Uses

- Current Uses:
  - Tissue Repair – Cardiac, pericardial and vascular repair following surgical procedures
  - CanGaroo Envelope – ECM envelope for use in implanting electronic devices (pacemakers and defibrillators)
- Potential Future Uses:
  - Micronized ECM – Injectable ECM for treatment of damaged heart muscle to due to congestive heart failure and myocardial infarction
  - Valves – ECM replacement heart valves
  - Grafts – ECM conduits designed to regrow into a new set of vessels in graft procedures

Source: CorMatrix Cardiovascular, Inc.

Q1 Financial Highlights

Q1 Revenue Review



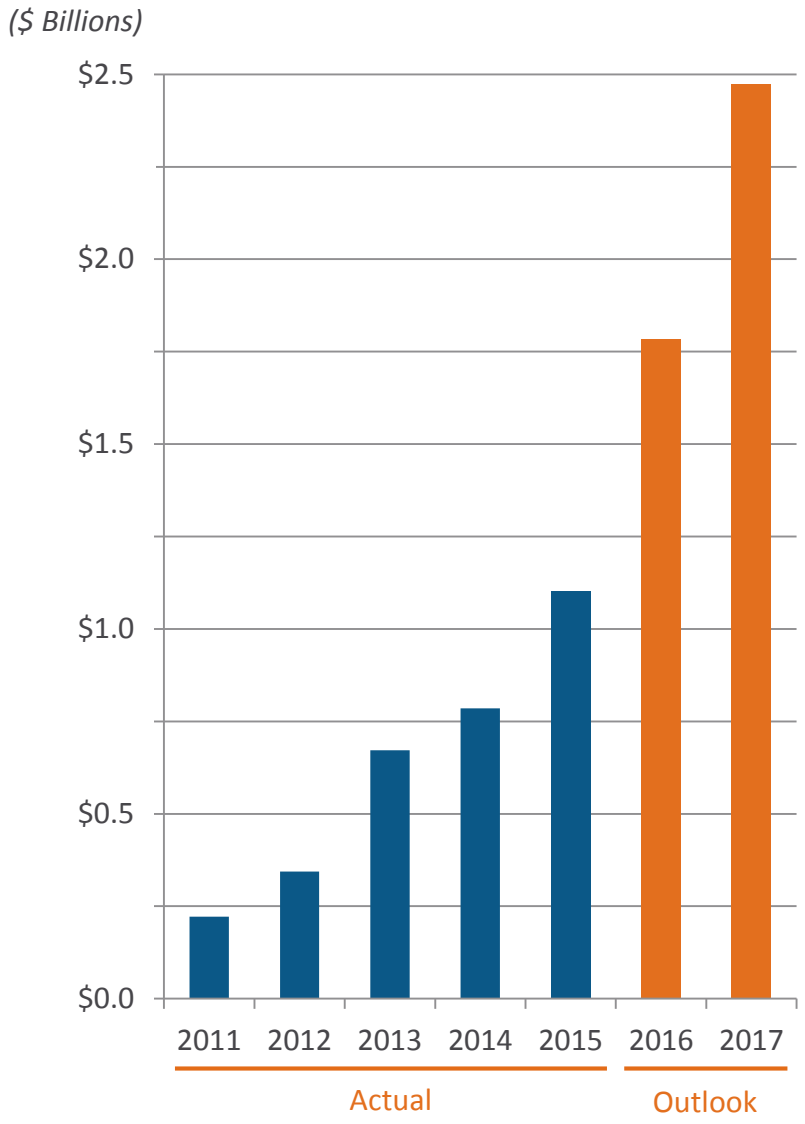
Q1 Expense Review

- COGS slightly lower than year ago due to mix and volume, with gross margin at 97% for Q1 2016 vs 93% Q1 2015
- Cash operating expenses $6.7M vs $6.3M a year ago, increased due to OMT and internal R&D spend
- Income tax expense for GAAP of $3.7M, effective rate 39%; cash tax rate of ~0%
- Adjusted Net Income of $20.9M or $0.97 per share compared to $6.9M or $0.33 per share a year ago
- Finished the quarter with cash and equivalents of $113.2

CorMatrix Impact

- Guidance of $1M additional revenue in 2016 and $2M in 2017
  - Annual minimum royalty of $2.75M, but booked net of deal amortization
- Currently marketed products have potential to double existing royalties with commercial success
- Pipeline royalty in addition to commercial portfolio; mid-single digit royalty on potential multi-billion dollar end user revenue opportunities
- Accretive to 2016 adjusted EPS by $0.04 and 2017 adjusted EPS by $0.08

Total Underlying Product Revenue



- Significant growth in revenue from products on which Ligand earns royalties
- Total underlying revenue for Ligand's programs projected to more than double to nearly $2.5 billion in 2017
- Ligand earns a blended average royalty of between 3.5% to 4.5% on its royalty-bearing revenue

Projected revenue consists of sell side analyst (where available) and Ligand internal projections

Ligand®

Financial Outlook

- 2016 quarterly breakdown unchanged; approximately 40% of revenue and adjusted EPS to be in first half
- High annual revenue growth projected
  - 2016: $115 - $119 million; 60% to 65% growth
  - 2017: >$160 million; 34% to 39% growth
- 2016 cash expenses of approximately $26 to $28 million
- Strong earnings per share growth projected next two years
  - 2016: $3.41 - $3.46
  - 2017: >$5.03

Note: The adjusted earnings per diluted share guidance does not include changes in contingent liabilities, mark-to-market adjustment for amounts owed to licensors, non-cash stock-based compensation expense, non-cash debt-related costs, pro-rata non-cash net losses of Viking Therapeutics, non-cash amortization of acquired intangibles, non-cash tax expense and unissued shares relating to the Senior Convertible Note.

Upcoming Potential Events

Potential Milestones for Ligand and Partners in Coming Quarters

Company	***Program***	***Milestone***
Lundbeck	Carnexiv	U.S. FDA Action
Melinta Therapeutics	BAXDELA	NDA Submission; U.S. FDA Action
Novartis	Promacta	Phase 2 completion (AML, MDS, CLL, aplastic anemia)
Coherus Biosciences	CHS-0214	Phase 3 trial completion (psoriasis)
Allergan	AGN-195263	Phase 3 start
Retrophin	Sparsentan	DUET Phase 2/3 completion (focal segmental glomerulosclerosis)
VentiRx	VTX-2337	Phase 2 completion (ovarian cancer; head & neck cancer)
Exelixis / Daiichi-Sankyo	CS-3150	Phase 2 completion (hypertension)
CURx Pharma	IV-Topiramate	Phase 2 start (epilepsy)
MEI Pharma	ME-344	Phase 2 start (breast cancer)
Precision Biologics	NPC-1C	Phase 1/2 completion (pancreatic cancer)
Millennium / Takeda	MLN-4924	Phase 1 completion (AML)

Upcoming Potential Events

Potential Milestones for Ligand and Partners in Coming Quarters

Company	***Program***	***Milestone***
Merrimack	MM-302	Phase 1 completion (breast cancer)
Merrimack	MM-141	Phase 1 completion (hepatocellular carcinoma)
Merrimack	MM-121	Phase 2 completion (NSCLC)
Cantex Pharma	ODSH	Phase 1 completion (pediatric cancer)
Otsuka	OPC-108459	Phase 1 completion (atrial fibrillation)
Gedeon Richter	RGB-03 (Rituximab)	Phase 1 completion (rheumatoid arthritis)
Deciphera Pharma	DCC-2701	Phase 1 completion (solid tumors)
ROAR Therapeutics	UC-961	Phase 1 completion (CLL)
Opthea	OPT-302	Phase 1 completion (macular degeneration)
F-Star / BMS	FS102	Phase 1 completion (solid tumors)
Takeda	TAK-020	Phase 1 completion (rheumatoid arthritis)
Marinus	Ganaxalone-IV	Phase 1 start (status epilepticus)

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