Ligand®

14th Annual Craig-Hallum Institutional Investor Conference

May 31, 2017

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," "outlook, " "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 revenue estimates and its goals and projections for product development and commercialization 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, Ligand's reliance on collaborative partners for milestone and royalty payments, royalty and other revenue projections, 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 Ligand's intellectual property protection, 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.

This presentation describes the typical roles and responsibilities of Ligand and our partners, and is not intended to be a complete description in all cases. 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 adjusted earnings per diluted share on pages 29 excludes stock-based compensation expense, amortization of debt-related costs, amortization related to acquisitions, changes in contingent liabilities, net losses of Viking Therapeutics, mark-to-market adjustment for amounts owed to licensors, fair value adjustments to Viking Therapeutics convertible note receivable and warrants, and unissued shares relating to the Senior Convertible Note.

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The Balance in Our Business

"Shots-on-goal" business model

What We Do:

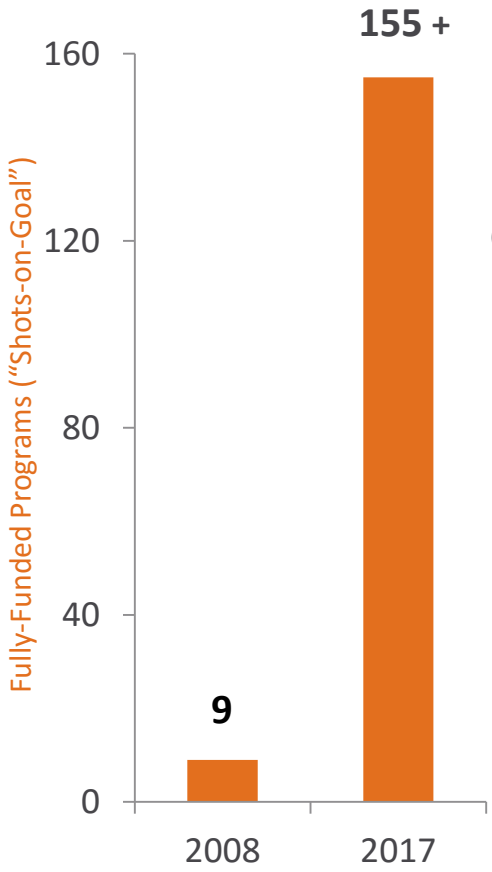
- Discover drugs
- Conduct early research
- Provide tools that make drugs possible
- License data and patents

What Our Partners Do:

- Decide which indications to pursue
- Design studies and regulatory plans
- Price drugs and secure reimbursement
- Market drugs
- Fund all development and commercialization costs

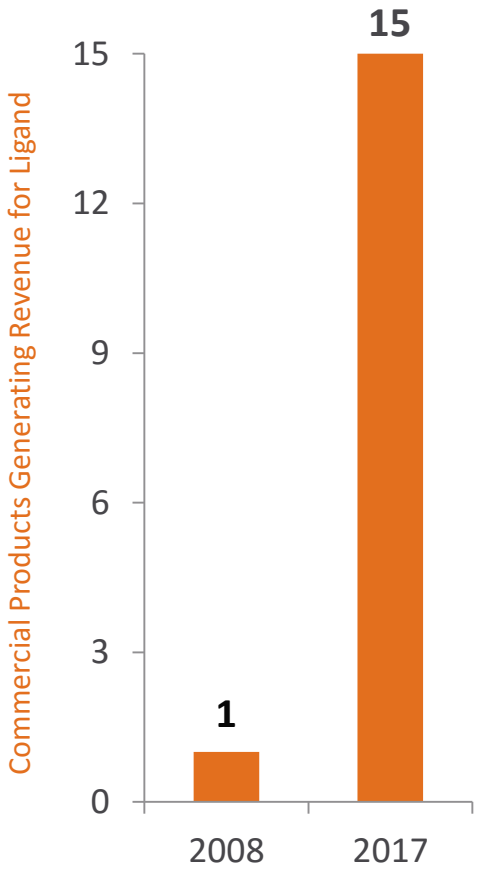
Ligand's Portfolio Continues to Grow

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 include EVOMELA, Carnexiv and an interferon beta-1a biosimilar

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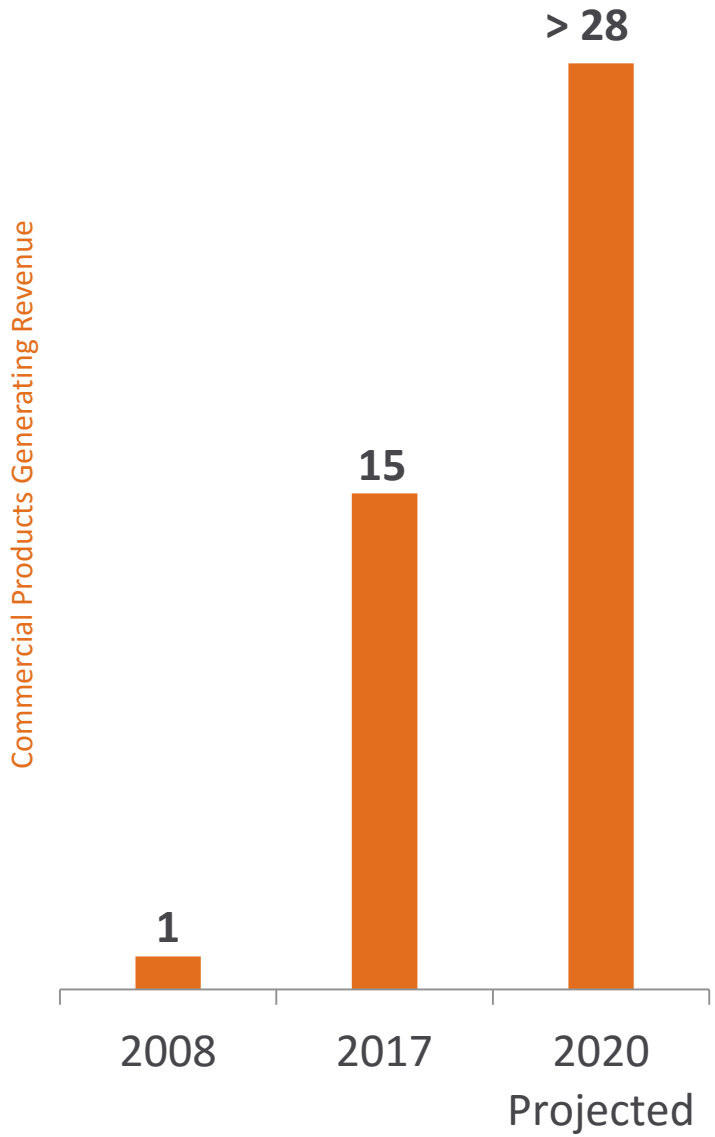
28 Commercialized Products by 2020

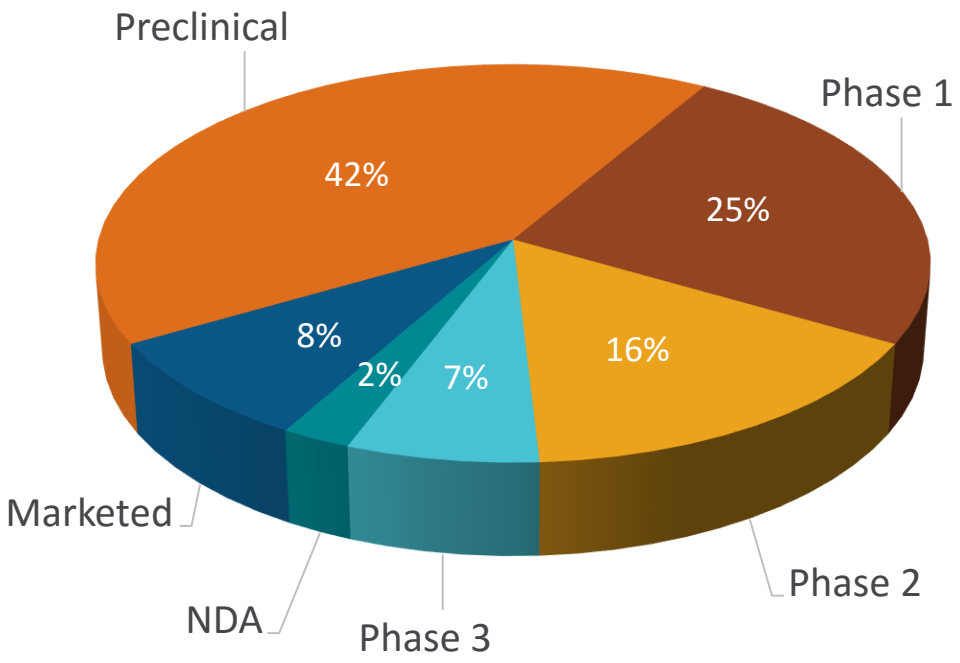


- Over 28 products projected to be generating commercial revenue for Ligand by the end of this decade, a doubling over current levels
- These revenue-generating assets expected to come from existing portfolio; any future deals would be additive to this outlook

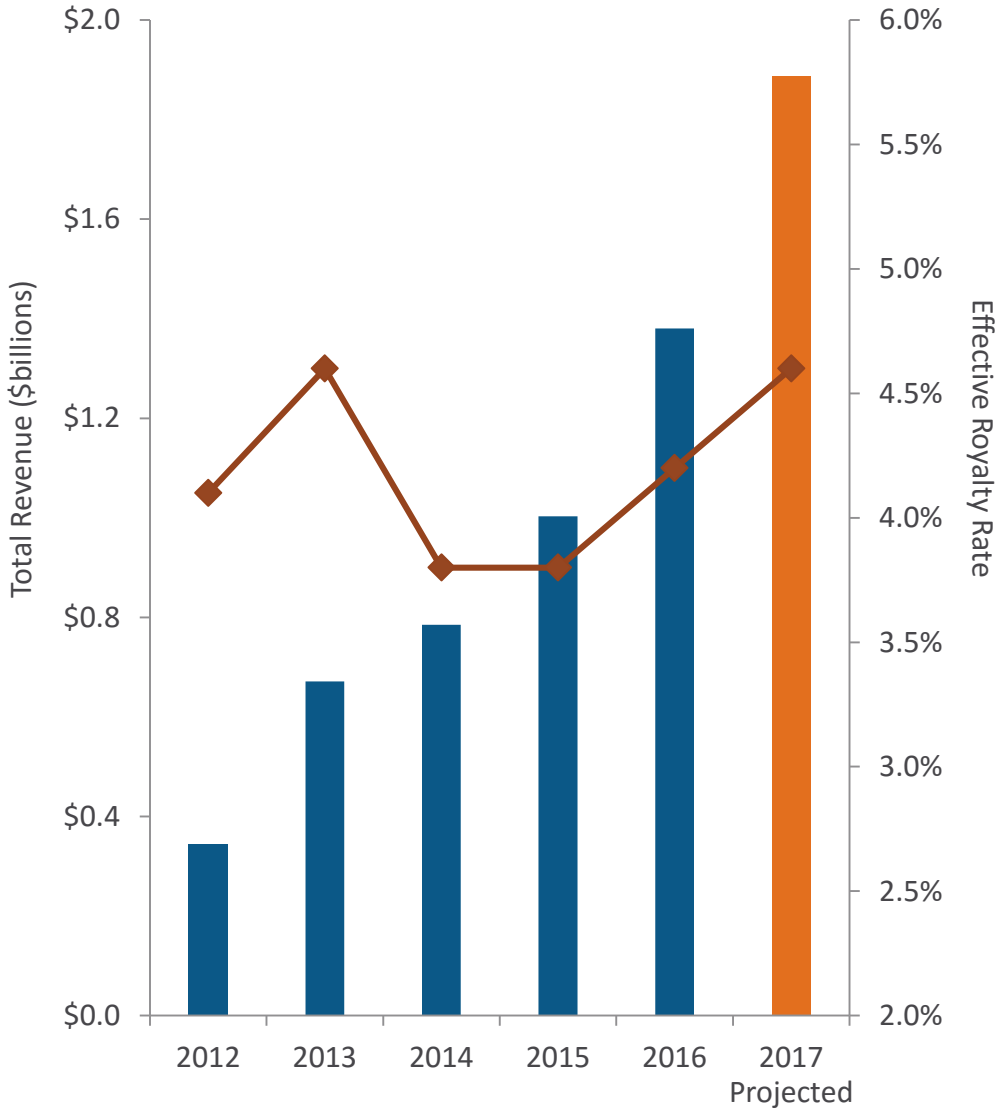
Ligand's Portfolio Continues to Grow

Over 155 partnered programs

- Portfolio remains diversified across development stages
- Over 92 different partners
- Nearly 60% of programs in clinical development or later
- 10% are marketed or NDA stage
- Over $2 billion of potential milestone payments under contract with our partners



Underlying Revenue & Effective Royalty Rate



- Product approvals and increased sales of existing partnered products are strong Y/Y growth drivers for underlying revenue in 2017
- Average royalty rate on underlying revenue has increased over past few years.
  - Average rate is a function of mix of product sales and royalty tiering

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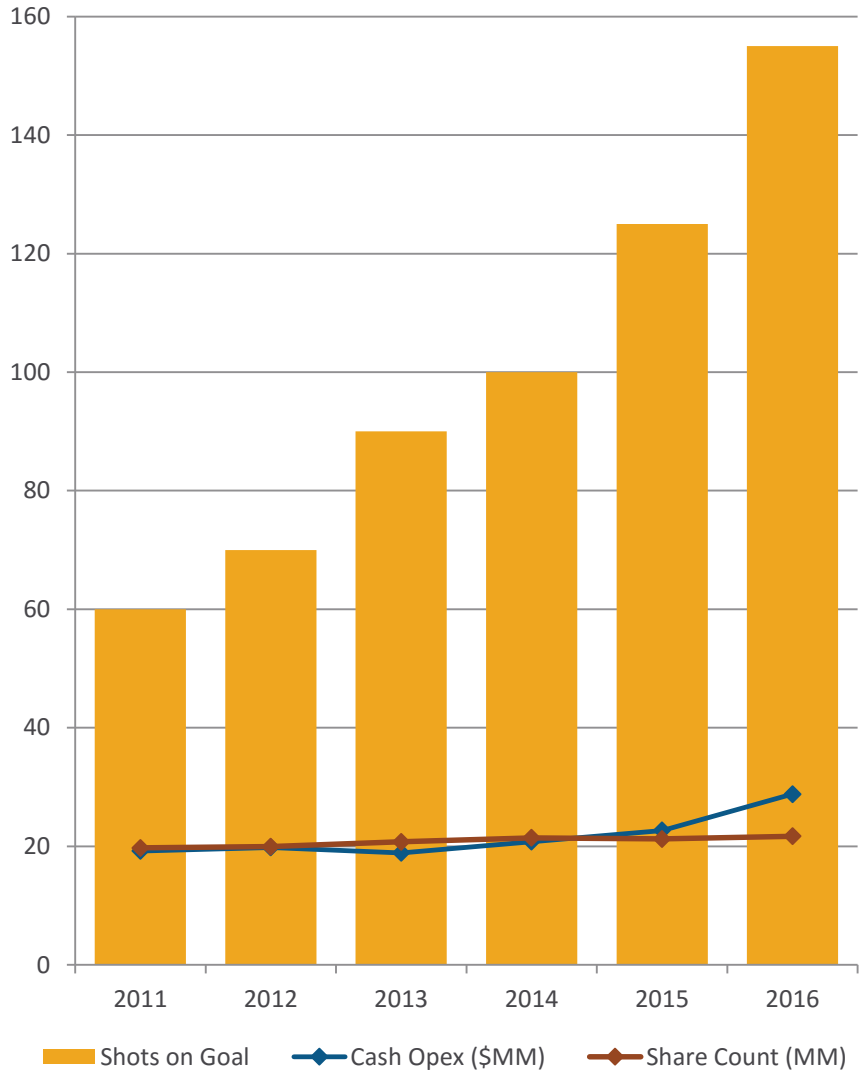
Ligand's Portfolio Growth

Shots-on-goal business model creates strong financial leverage



- Number of Shots on Goal has increased from 60 to 155 over the past five years
- Ligand's share count and cash operating expenses have remained low and relatively flat, along with the significant expansion of fully funded programs from which we are eligible to earn revenue

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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
  - Early stage, venture-type investment in partners
- Ligand takes advantage of market knowledge and experience gained from our partnerships to find opportunities to invest and create value from the biopharma industry
- We will continue to explore opportunities that our programs and the markets present us

Technology and Novel R&D Drive Deal Making

Underlying Technologies

OmniAb

Best-in-class antibody discovery platform

CAPTISOL®

Solving solubility and stability challenges

LTP Technology™

Designed to selectively deliver broad range of pharmaceutical agents to liver

SELEXIS SURE*technology* Platform™

Novel DNA-based elements that enable higher and more stable expression of recombinant proteins

Focused R&D

Novel GRA for Type 2 Diabetes

Phase 2 data expected Q3 2017

Positive Phase 1b data showed robust effects

Oral GCSF

Preclinical

Leveraging our technology and heritage in small molecule discovery

Captisol-enabled Busulfan

Preclinical

Novel Captisol® formulation for use as a conditioning agent prior to stem cell transplantation

Highlights of Key Portfolio Assets

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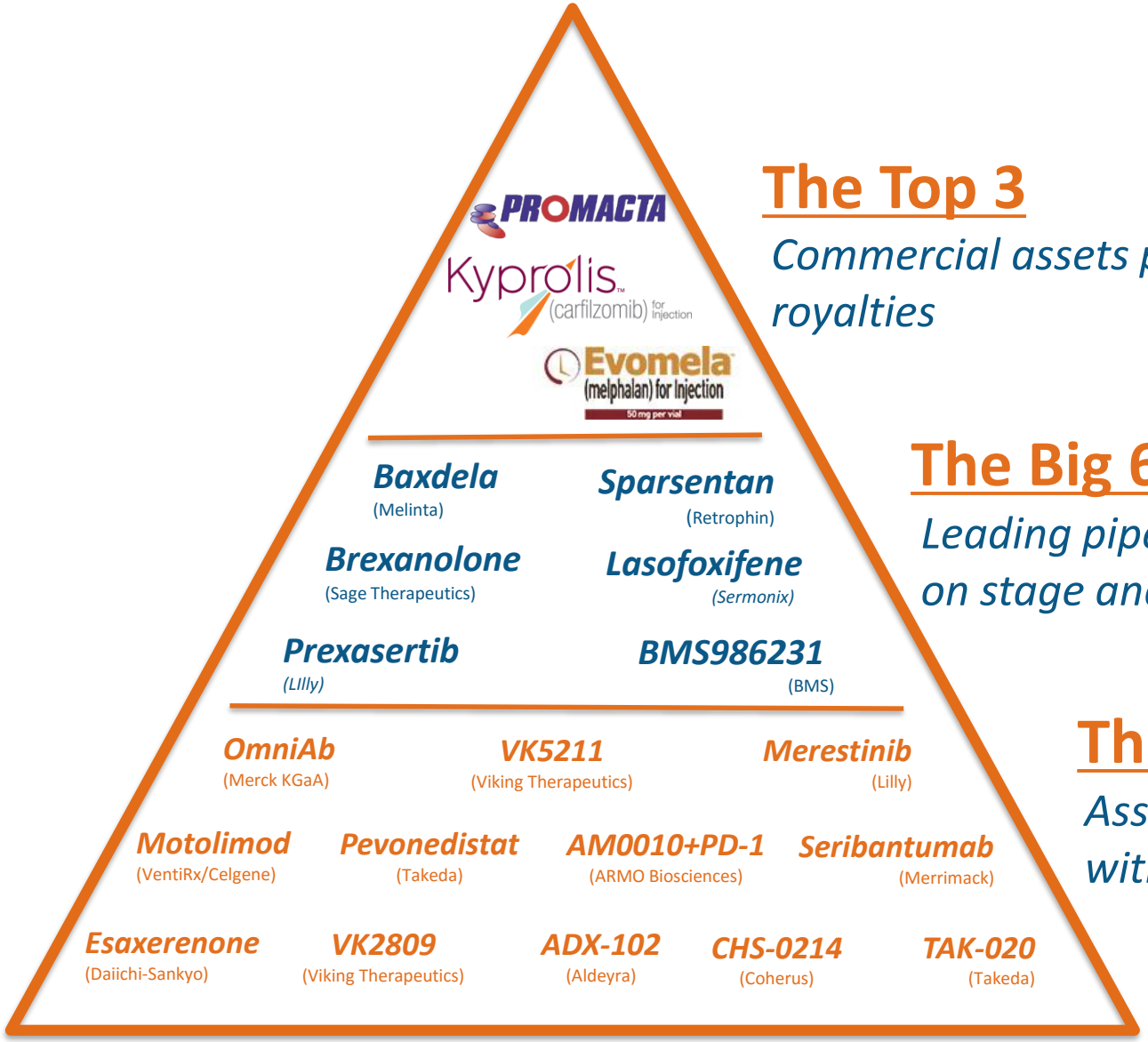
Portfolio Pyramid



The Top 3

Commercial assets paying significant 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

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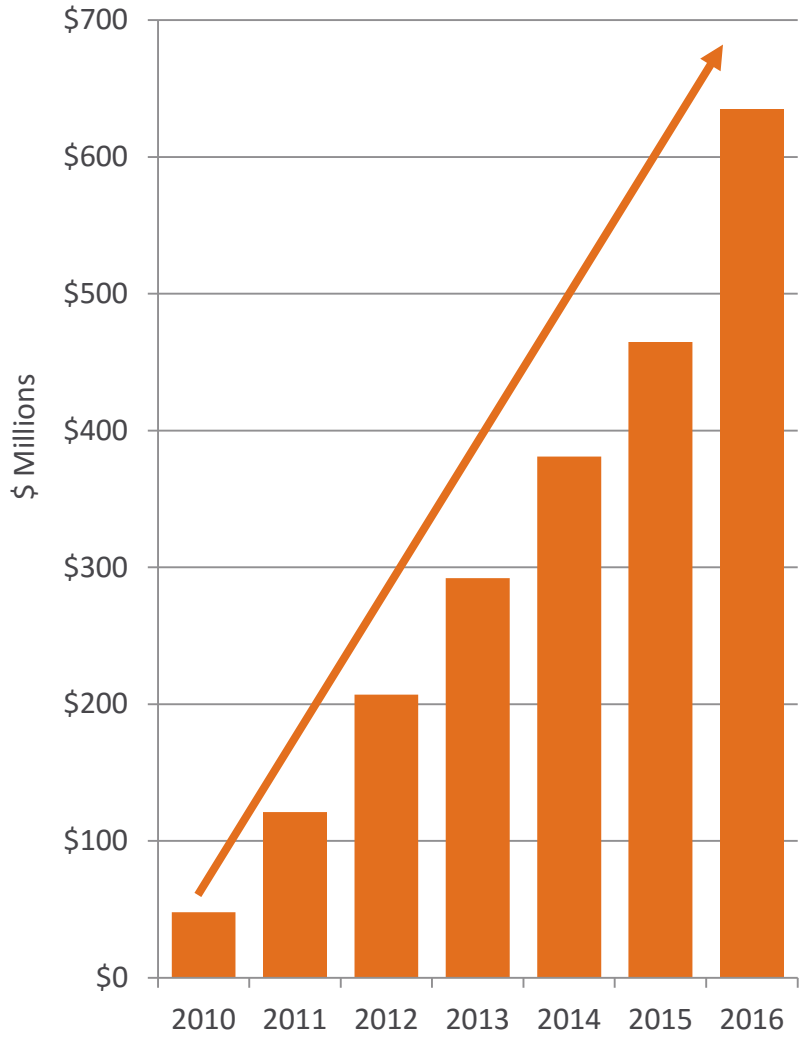
Promacta



- Oral medicine that boosts platelets
- Long patent protection; Orange Book patent expiration in 2027
- Blockbuster commercial potential (>$1B)
- Sales have increased over 12x in 6 years from ~$50M to over $600M
- With higher sales, Ligand earns higher royalty rates

Source: Novartis and GSK financial reports

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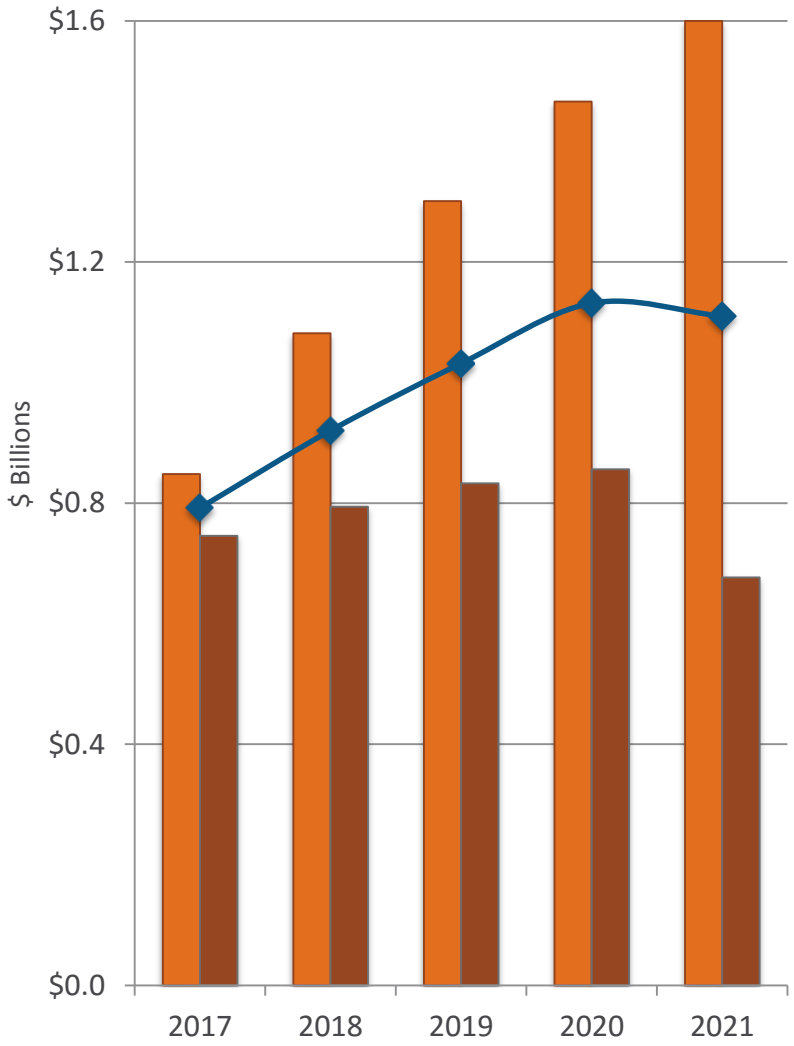
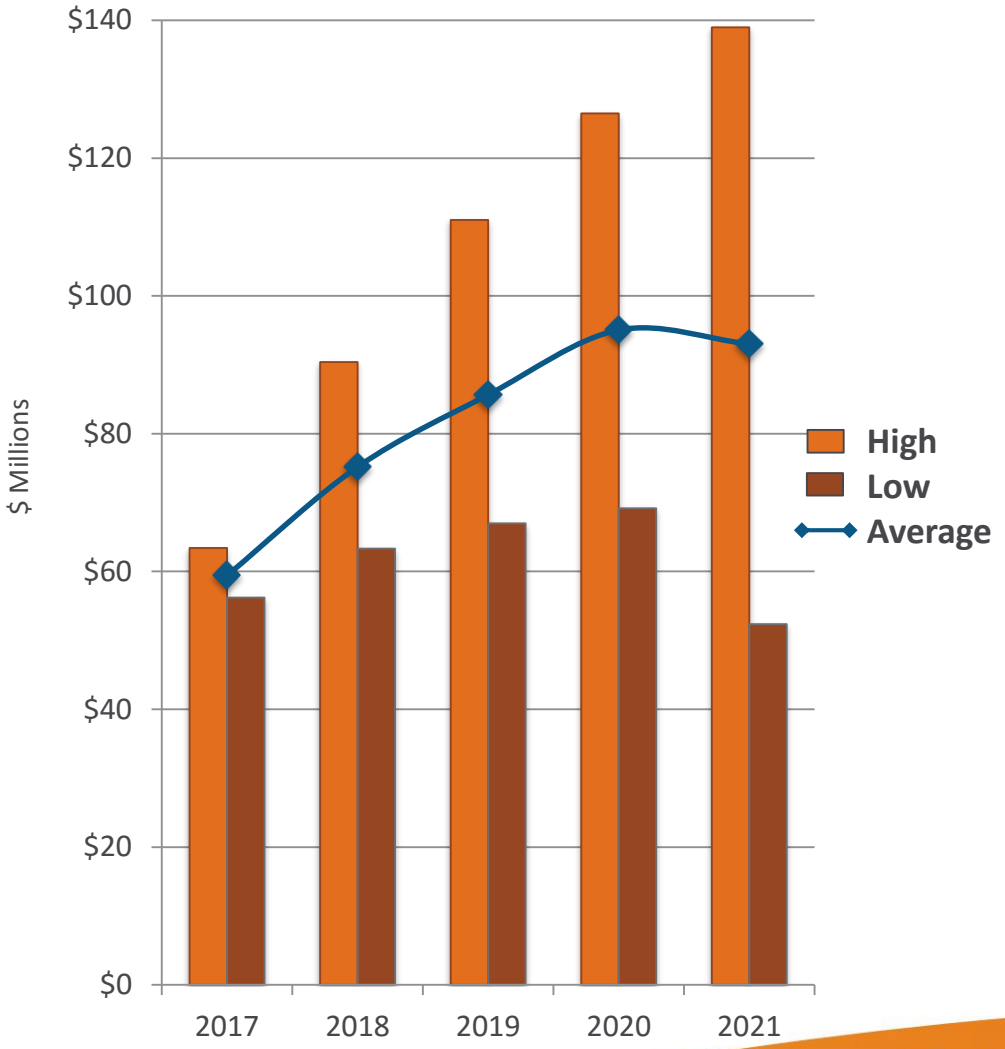
Promacta Projections: NOVN Sell-Side Analysts

These Revenue Projections …



…Yield these Royalty Projections



Source: Thomson Reuters Cortellis and analyst reports - 13 Novartis covering analysts as of 5/8/17
2017 royalties calculated on a one quarter lag

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Kyprolis: Status and Plans

- Viewed as best-in-class proteasome inhibitor for multiple myeloma (MM)
- Developed and marketed by Amgen
- Approved for relapsed or refractory MM in US, EU and Japan (Ono)
  - As single agent, or in combination with dexamethasone or Revlimid and dexamethasone
- Major investment by Amgen is focused on further expansion of the label
  - ***Relapsed/Refractory MM***: Phase 3 *in combination with Darzalex* to begin 2Q 2017
  - ***Once-Weekly Dosing***: Phase 3 *ARROW* study underway; results in 2019
  - ***Front-Line MM***: designing Phase 3 study *in combination with Revlimid and dexamethasone*

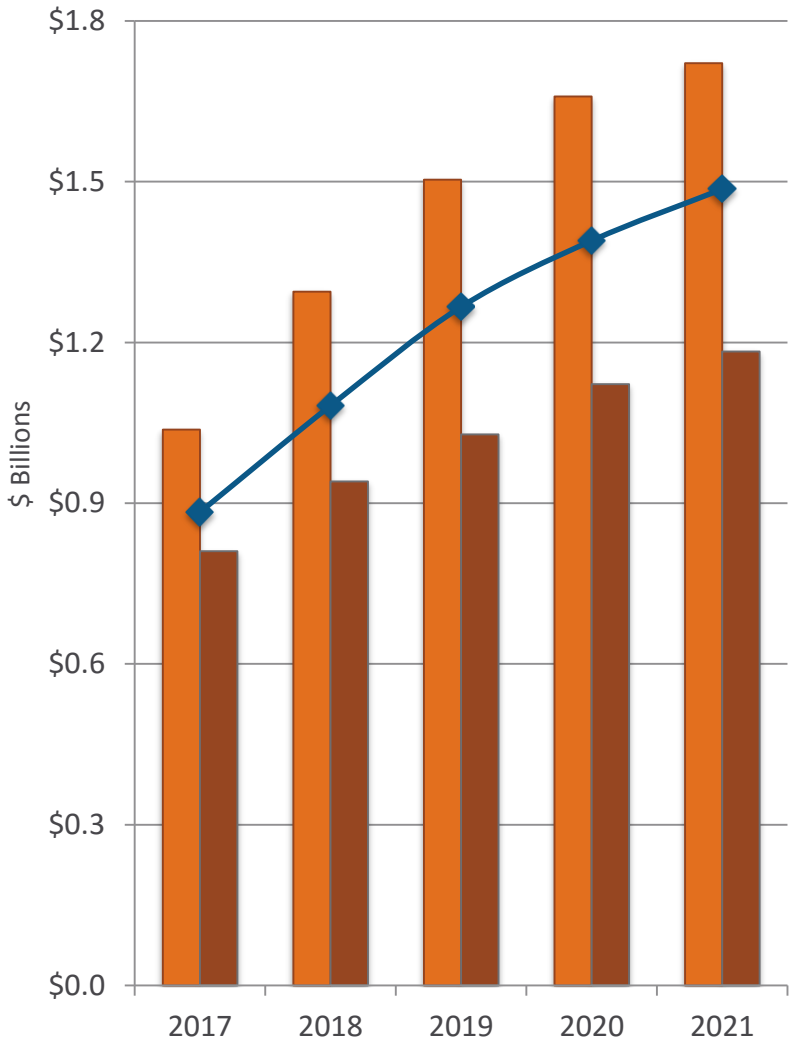
"We remain committed to the frontline setting, and are in the design phase of the Phase 3 study of KYPROLIS plus Revlimid and dexamethasone or KRd vs Velcade plus RD in newly diagnosed transplant eligible patients"

Sean Harper, M.D.
Executive Vice President R&D
Amgen Q4 earnings call, February 2, 2017

Source: clintrials.gov and Amgen Q4'16 earnings call, February 2, 2017

Kyprolis Projections: AMGN Sell-Side Analysts

These Revenue Projections …



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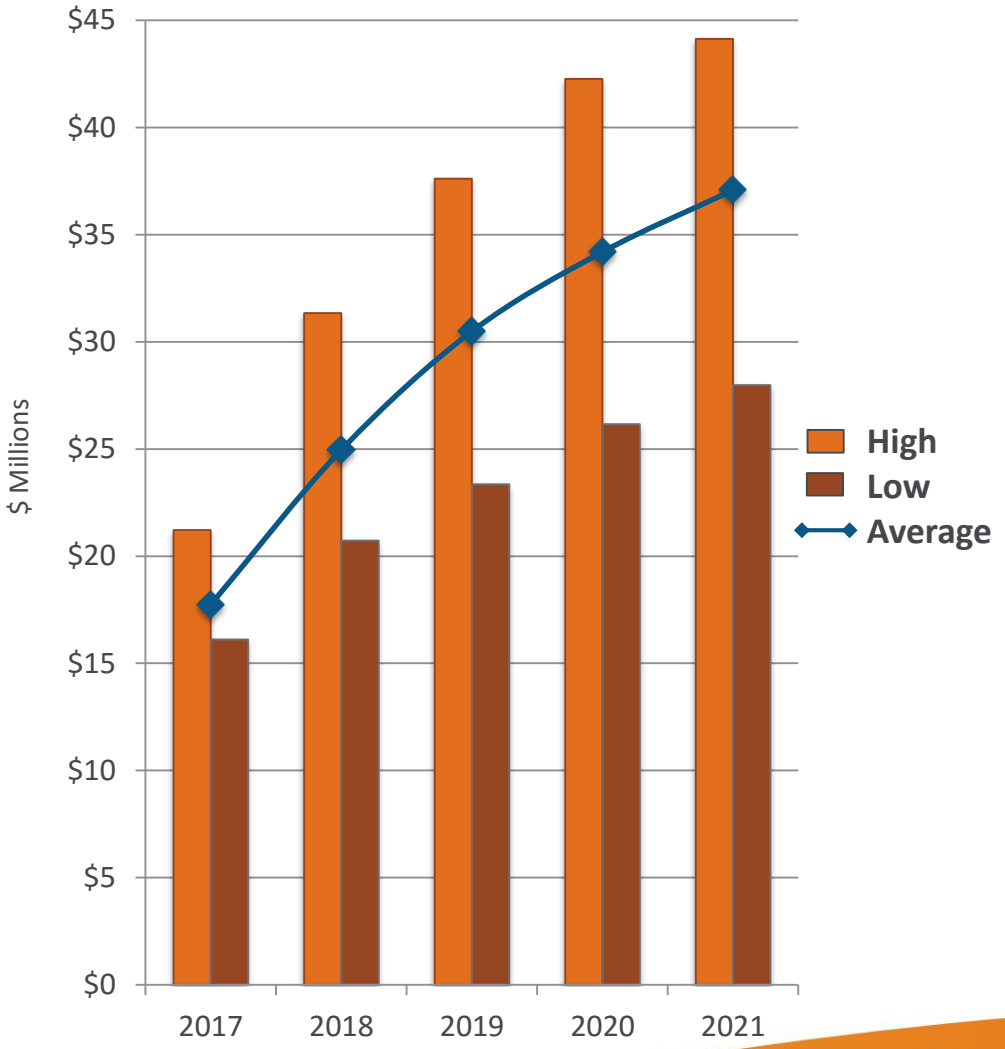

Source: Thomson Reuters Cortellis and analyst reports - 16 Amgen and Ono Pharmaceuticals covering analysts as of 5/8/17
2017 royalties calculated on a one quarter lag

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EVOMELA®

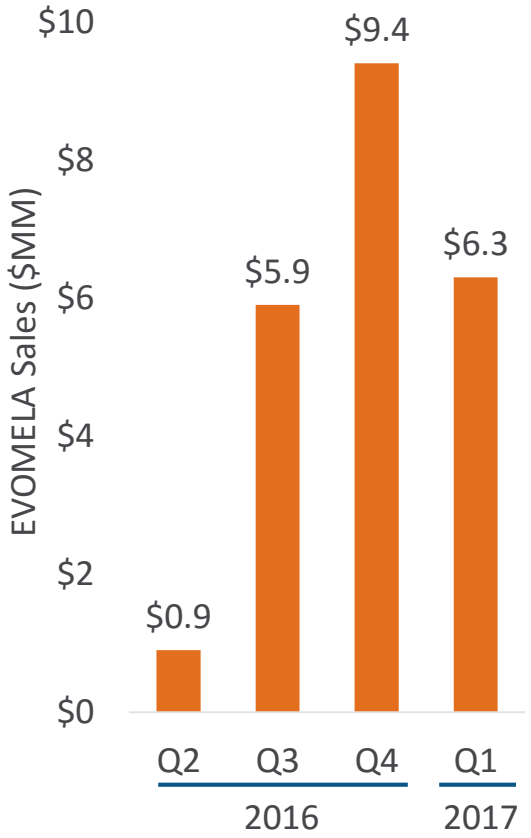
- Captisol-enabled formulation of chemotherapy drug used for stem cell transplant conditioning in multiple myeloma (MM) approved by FDA in March 2016
  - Stem cell transplant an important course of therapy in MM, increasing in total number as patients are living longer
- Captisol improves product stability, and enables the removal of propylene glycol, which is associated with renal and cardiac toxicities
- Product licensed to Spectrum Pharmaceuticals, which completed development and launched in 2016
  - 20% royalty on net sales to Ligand
- Fits seamlessly into Spectrum's established commercial infrastructure

EVOMELA: Launch Performance

- Initial adoption strong given label and clear benefits
- Product highlighted by Spectrum management:

*"… with EVOMELA we have achieved over 35% market share **within eight months of launch**."*
– Raj Shrotriya, Chairman/CEO

"We're thrilled with what we're seeing in the market with EVOMELA. And, commercially, I think it's a good signal to see the team perform in a highly-competitive market" ***– Thomas J. Riga, Chief Commercial Officer***



Reference: SPPI March 8, 2017 earnings call

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The Big Six: Major Pipeline Assets

Leading pipeline assets based on stage and/or potential value

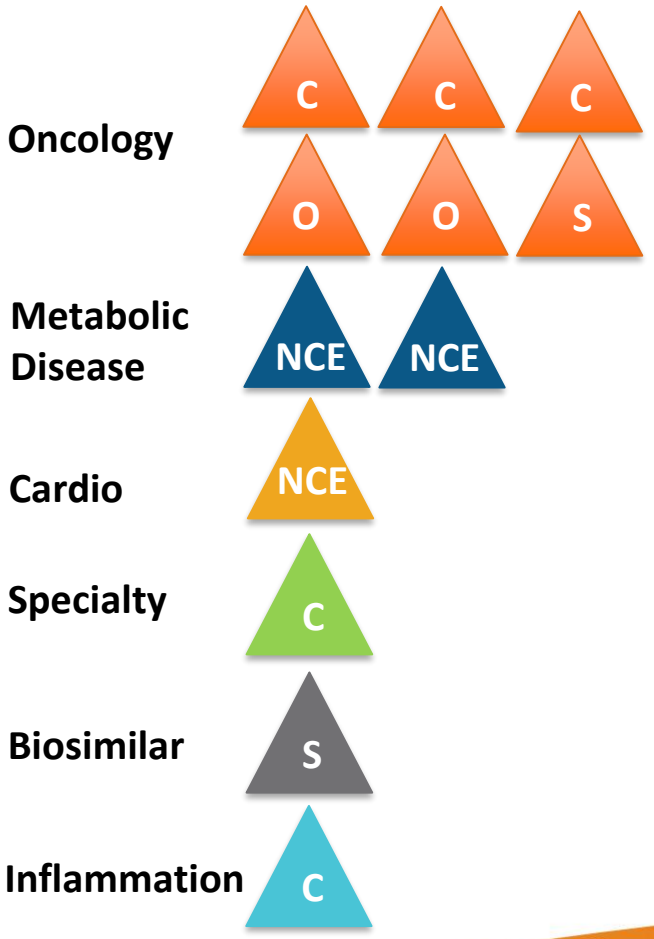
Partner	Program (Therapy Area)	Stage	Royalty Rate	Upcoming Events
Melinta Therapeutics	**BAXDELA (Infection)**	NDA	*2.5%*	**FDA Action on NDA expected in June**
Retrophin	**Sparsentan (FSGS - Kidney Disease)**	Phase 2/3	*9.0%*	**Phase 3 Initiation**
SAGE Therapeutics	**Brexanolone (Neurology)**	Phase 3	*3.0%*	**Phase 3 Data for SRSE and PPD**
Sermonix Pharmaceuticals LLC	**Lasofoxifene (Oncology/Women's Health)**	Phase 2/3	*6.0-10.0%*	**Clinical Entry**
Bristol-Myers Squibb	**BMS986231 (Cardiovascular Disease)**	Phase 2/3	*2.0-3.0%*	**Phase 2/3 Start**
Lilly	**Prexasertib (Oncology)**	Phase 2	*1.5-3.0%*	**Phase 2 data in various advanced cancers**

The Next 12: Composition

Assets emerging as next class with high revenue potential

- Twelve additional pipeline programs continue to expand the breadth and diversity of Ligand's growing portfolio
- Diverse partners and indications
- Diversity of underlying technology/IP
  - 5 Captisol-enabled programs **(C)**
  - 3 New Chemical Entity programs **(NCE)**
  - 2 Selexis program **(S)**
  - 2 OmniAb programs **(O)**
- All are well-resourced programs with highly-committed partners
  - Emerging data and progress
  - Ability to contribute meaningfully to Ligand's future growth

Composition of The Next 12



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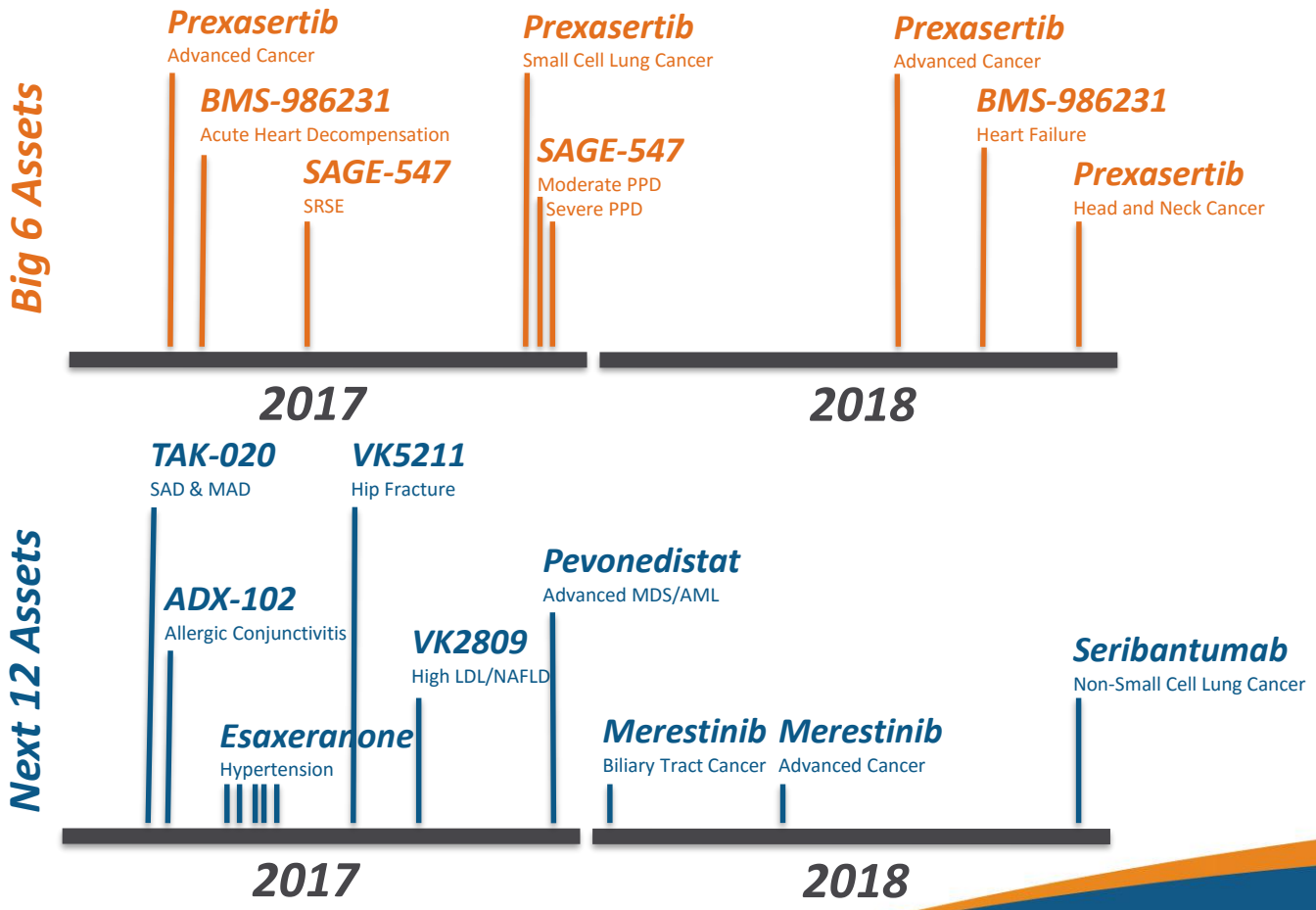
Big 6 and Next 12: Clinical Events

Clinicaltrials.gov NCT trial postings of primary completion dates

- **22 clinical read-outs in less than 24 months,** as listed on clinicaltrials.gov



Primary completion dates from clinicaltrials.gov

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OmniAb Antibody Platforms

- Ligand's acquisition of OMT provided 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

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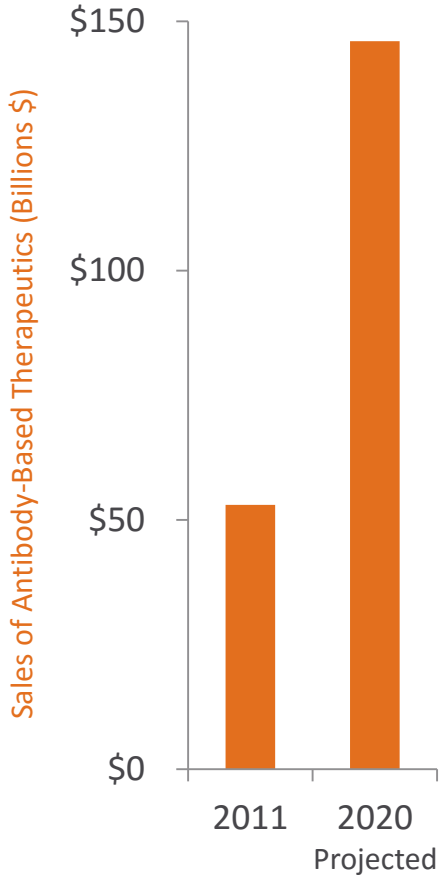
Antibodies: A Blockbuster Class

Growth in the antibody market

- Antibody treatments are the **fastest-growing segment** of the pharmaceutical industry
  - Compounded annual growth rate averaging 12-15% from 2011-2020
- Global sales of antibodies in 2020 estimated to approach $150 billion
- There is **large and growing demand** for tools to efficiently discover antibodies



BioPharm Insight, March 2016, Antibody Society November 2016

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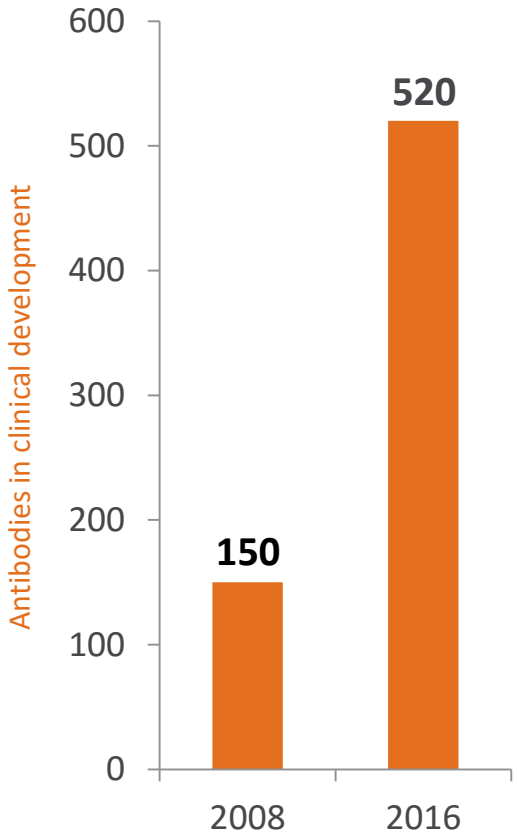
Antibodies in Clinical Development



- The number of antibodies in clinical development has **more than tripled** since 2008

Nelson et al., Nature Reviews, 2010
Reichert Biotechnology Consulting LLC, 2017

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OmniAb

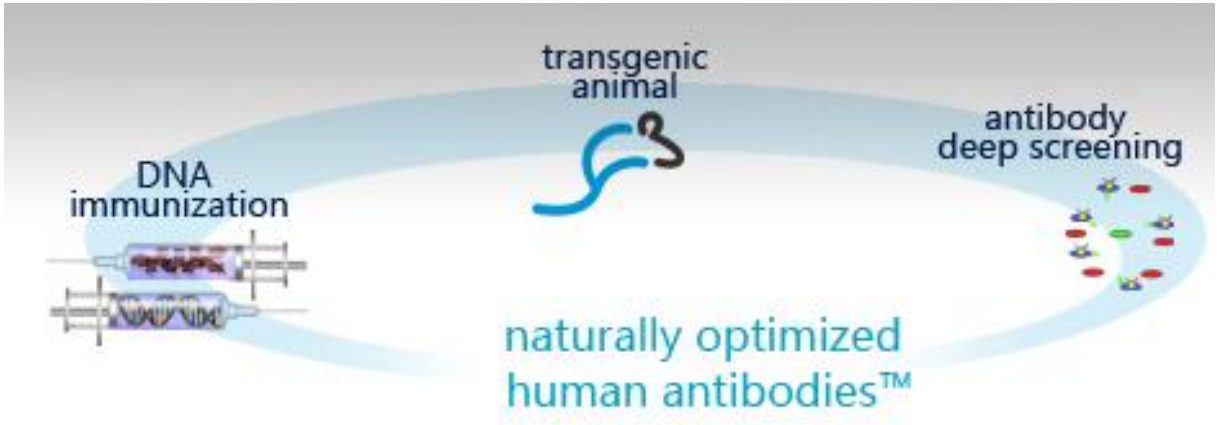
OmniAb users include industry leaders

Note: *Genetech is an OmniAb user with a fully-paid license to OmniAb platforms*

OmniAb

Broadening use

We estimate that over 300 antibody targets have been or are being pursued by OmniAb partners



Partners report that they have obtained the highest quality antibodies for the most difficult targets when using OmniAb

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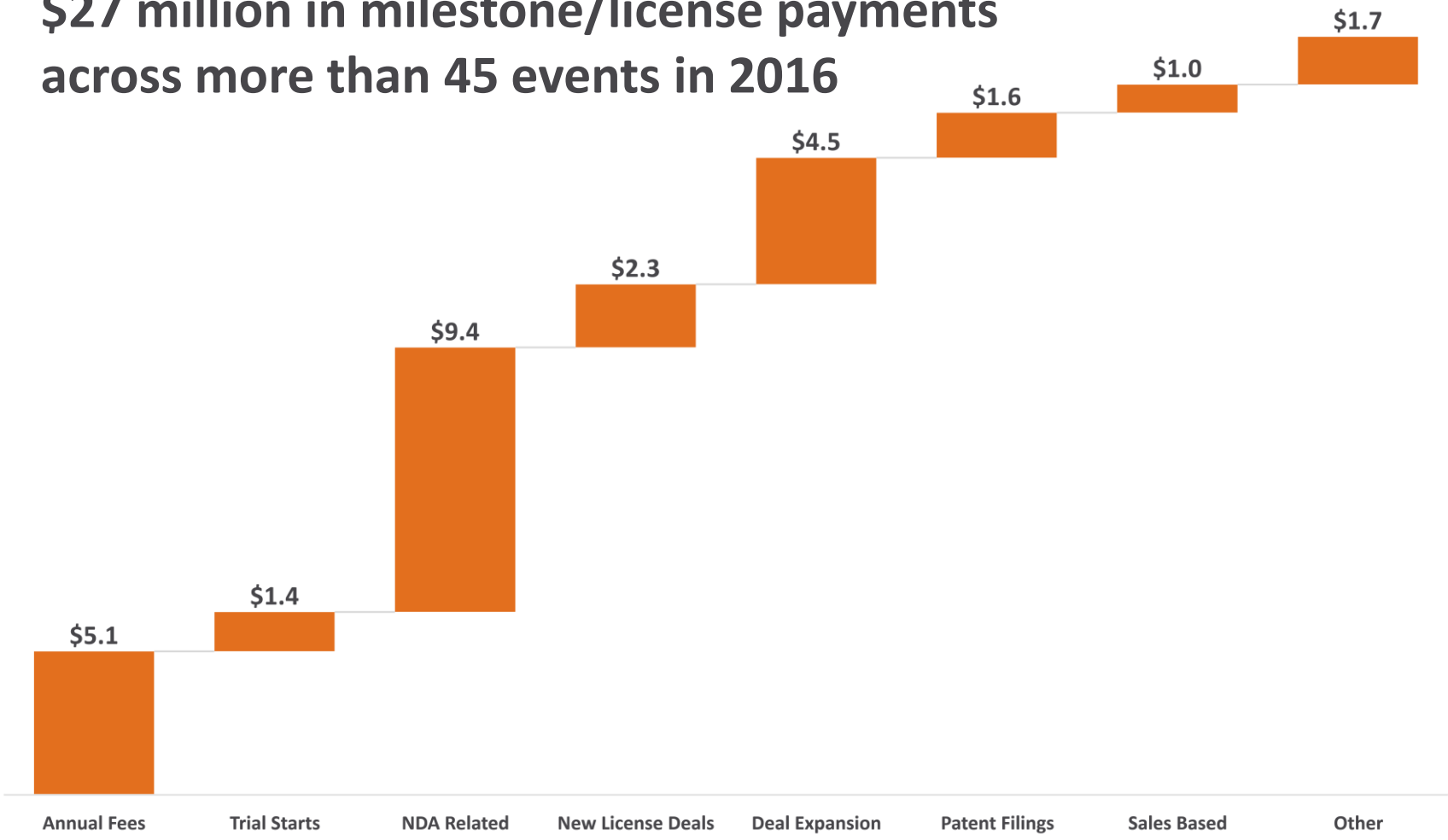
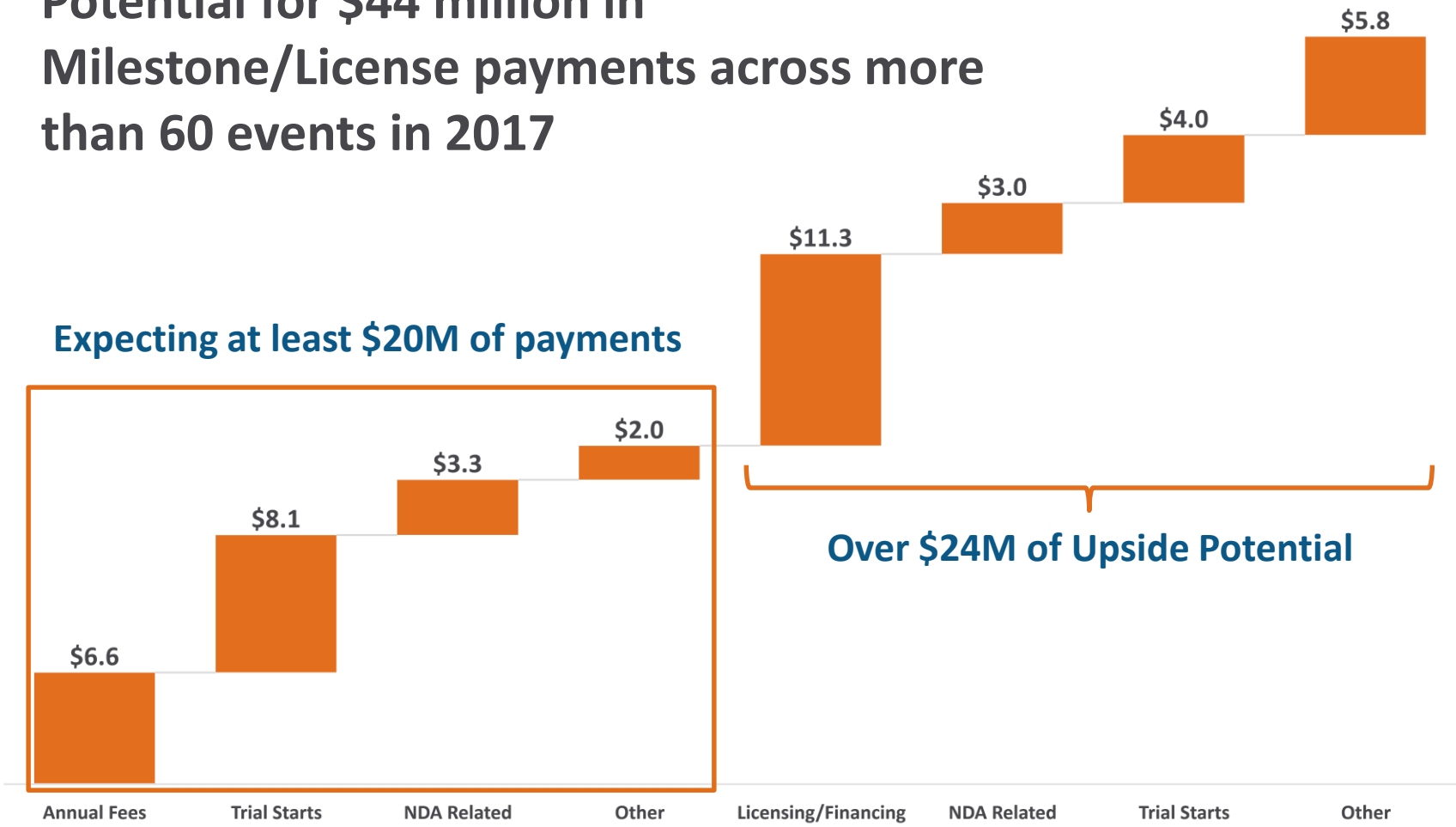
Summary of 2016 Milestone/License

$27 million in milestone/license payments across more than 45 events in 2016



Milestone/License Potential Major Impact

Potential for $44 million in Milestone/License payments across more than 60 events in 2017



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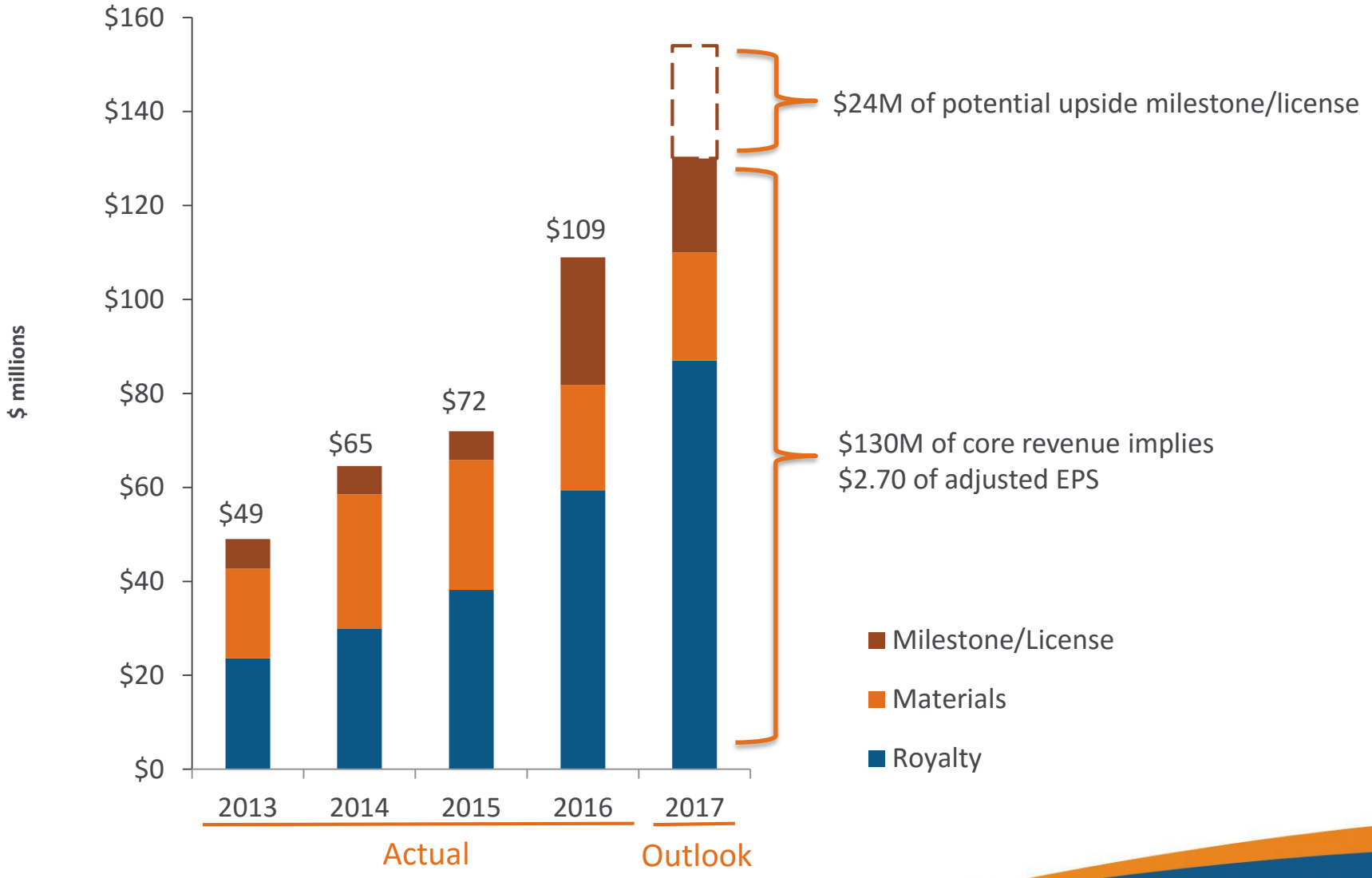
Summary Revenue Composition



Outlook to 2020

	Outlook to 2020
Revenue growth	• **Royalty** grows in line with consensus partner sell-side research • **Materials** grows in line with underlying demand, resulting in 5% to 10% CAGR • **Milestone/License** continues at core level of $20M to $30M each year, with potential upside
Corporate gross margins	• Mid 90% range
Cash operating expense	• Expected to be relatively flat, with only modest annual increases
Fully-diluted share count	• Projected additional 0.2M shares annually
Adjusted EPS tax rate	• Expected range of 36% to 39%
Cash tax rate	• Expected to remain <1% through 2020

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Upcoming Potential Partner/Licensee Events

Potential milestones for Ligand and partners in coming quarters

Company	***Program***	***Milestone***
Lundbeck	Carnexiv	US Launch
Melinta Therapeutics	BAXDELA	FDA approval
Novartis	Promacta	FDA Filing (1st line SAA)
Coherus Biosciences	CHS-0214	MAA Filing
Retrophin	Sparsentan	Phase 3 initiation
Sage Therapeutics	SAGE-547	Phase 3 completion (Super-Refractory Status Epilepticus)
Sage Therapeutics	SAGE-547	Phase 3 completion (Postpartum Depression)
Daiichi Sankyo	Esaxerenone/CS-3150	Phase 3 completion (Hypertension, in Japan)
Amgen	Kyprolis	Phase 3 start (RRMM in combo with DARZALEX®)
Amgen	Kyprolis	Phase 3 start (NDMM in combo with REVLIMID®/Dex)
Novartis	Promacta	Phase 2 completion (MDS, CLL, Aplastic Anemia)
Internal Program	GRA	Phase 2 completion (Type 2 Diabetes)

Upcoming Potential Partner/Licensee Events

Potential milestones for Ligand and partners in coming quarters

Company	***Program***	***Milestone***
VentiRx	VTX-2337	Phase 2 completion (Ovarian cancer; Head & Neck cancer)
Viking Therapeutics	VK5211	Phase 2 completion (Hip Fracture)
Viking Therapeutics	VK2809	Phase 2 completion (Hypercholesterolemia/NASH)
Aldeyra Therapeutics	ADX-102	Phase 2 completion (Allergic Conjunctivitis)
GSK	GSK2894512	Phase 2 completion (Atopic Dermatitis)
CURx Pharma	IV-Topiramate	Phase 2 start (Epilepsy)
Sermonix	Lasofoxifene	Phase 2 start (Breast Cancer)
Precision Biologics	NPC-1C	Phase 1/2 completion (Pancreatic cancer)
Bristol Meyers Squibb	CXL-1427/BMS-986231	Phase 1 completion (Acute Heart Decompensation)
Eli Lilly	Prexasertib	Phase 1 completion (Advanced Cancer)
Takeda	TAK-020	Phase 1 completion (Rheumatoid Arthritis)
GSK	GSK2816126	Phase 1 completion (DLBCL)
Aptevo Therapeutics	APVO436	*in vivo* proof of concept (AML)
Vireo Health	Cannabinoids	IND for Captisol-enabled Formulations

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