



Q1 Results and Full Year 2020 Outlook

Ligand[®]

May 6, 2020
Nasdaq: LGND

Safe Harbor Statement

The following presentation contains forward-looking statements by Ligand that involve risks and uncertainties and reflect Ligand's judgment as of the date of this presentation. Words such as “plans,” “believes,” “expects,” “projects,” “could,” “anticipates,” and “will,” and similar expressions, are intended to identify forward-looking statements. These forward-looking statements include, without limitation, financial projections, expectations regarding research and development programs, potential uses of capital, the impacts that the COVID-19 pandemic will have on Ligand and its partners and timing expectations for preclinical studies and clinical trials by Ligand and its partners. Actual events or results may differ from Ligand's expectations due to risks and uncertainties inherent in Ligand's business, including Ligand has wide discretion on its use of capital and may choose not, or pursue acquisitions or internal develop programs; the risk that Ligand or its partners may not perform as expected, including any failure to develop or commercialize product as expected; additional disruptions to Ligand's or its partners' business as a result of the COVID-19 pandemic; the possibility that Ligand may not successfully implement its strategic growth plan or achieve its guidance for 2020 or thereafter and other risks and uncertainties described in its public filings with the Securities and Exchange Commission, available at www.sec.gov.

Information regarding partnered products and programs comes from information publicly released by our partners. 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, OmniAb and OmniChicken. 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 5, 15 and 19 and the corresponding GAAP figures is shown in the Q4'19 and Q1'20 press releases available at <https://investor.ligand.com/press-releases>.

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.



Business Highlights and COVID 19 Insights

John Higgins
Chief Executive Officer

Ligand: Innovation Driving Value

4

Our Business

Technologies

Portfolio

Financial Growth

Our Focus

Customer Service

Operational Excellence

Deploying Capital

Our Team

**Strong Company
Culture**

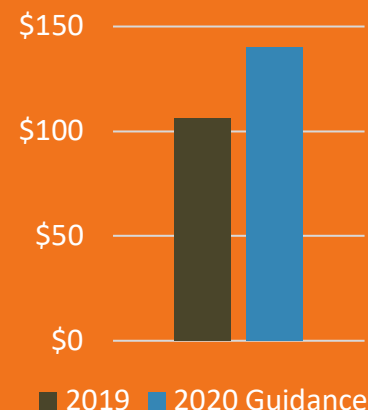
**Diverse and
Experienced Board of
Directors**

**Focused on ESG/
Corporate Governance**

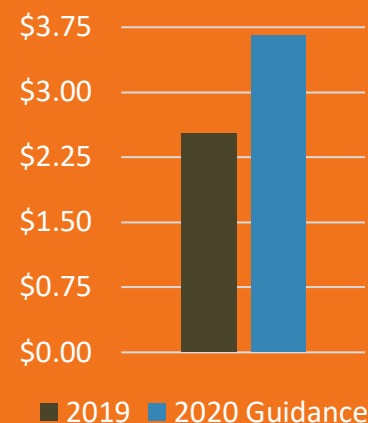
Recent Developments and COVID-19 Updates

- Solid Q1 financial performance, raised outlook for 2020
- Strong business development execution, multiple important new deals signed
- Icagen acquisition completed, team fully integrated into Ligand and contributing to partner programs
- Strong balance sheet, and growing operating cash flows to support investment in the business and acquisitions
- Covid-19 impacting some sources of revenue, but we remain confident in our prospects given the diversity of the business
- Supporting multiple partners advancing COVID-19 programs, including two antibody programs and Gilead for remdesivir

Revenue *



Adj. EPS *



* 2019 Figures exclude Q1 2019 Promacta contribution. Please see our Q419 and Q120 press releases for a reconciliation

- Uncertain times due to pandemic
- We surveyed all of our partners, and have done extensive analysis/forecasting
- Remain confident in our business, ability to serve partners, and ability to continue expanding portfolio
- Workforce to return based on local health guidance
- COVID-19 did not materially negatively impact Q1. While mix of revenue is different, we expect full year to be higher now than when we started the year
- Royalty revenue streams should normalize by year-end with increased patient access to care
- Expectation that delayed R&D projects will resume
- Focused on Captisol supply
- We continue to monitor the business environment and impacts on our business

2020 Outlook

Ligand's Current Partnered Portfolio

Diverse and High Quality

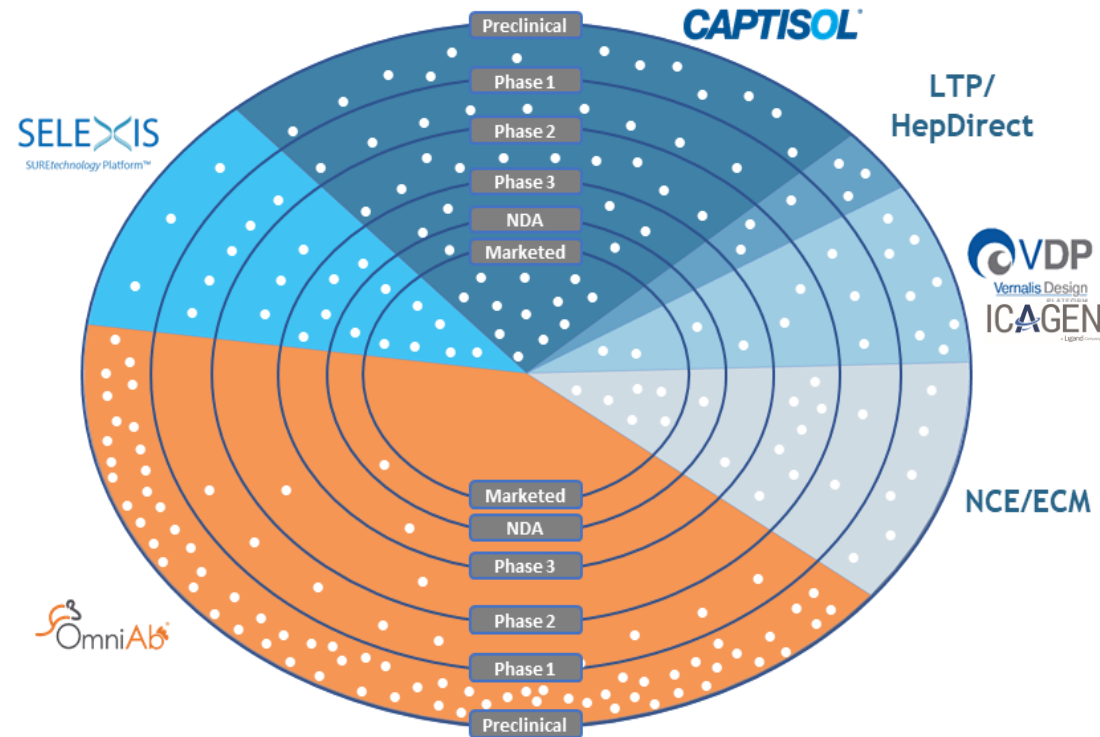
- Over **200** fully-funded partnered programs targeting diverse medical needs
- Over **125 different partners** representing all segments of the pharma industry
- **OmniAb** and **Captisol** technologies back two-thirds of the portfolio
- More than **40 clinical** and **regulatory** events expected this year
- Potential for more than **8 product approvals** over next 3 years

Partnered Pipeline – Bullseye Diagram

8

Over 200 programs with over 125 different partners

- Diagram shows distribution of partnered assets by underlying technology and stage of development
- OmniAb is largest, most valuable component of business
 - At acquisition, no OmniAb programs were clinical-stage
 - Today, a rapidly growing number are in and entering clinic
- VDP and Icagen segment is new from recent acquisitions



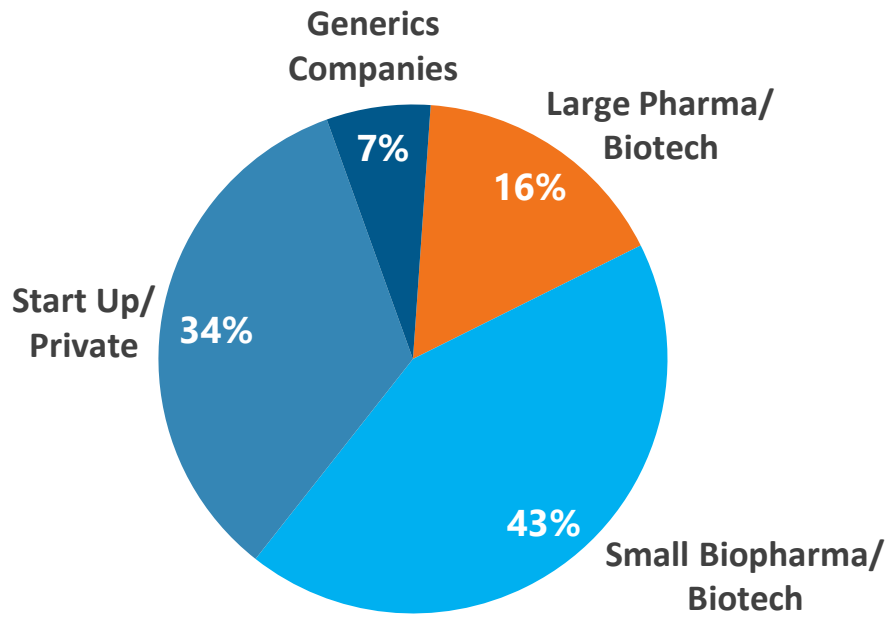
High-value antibody programs rapidly growing in number and continuing to progress to and through clinical trials

COVID-19 Pandemic: Partner Outreach

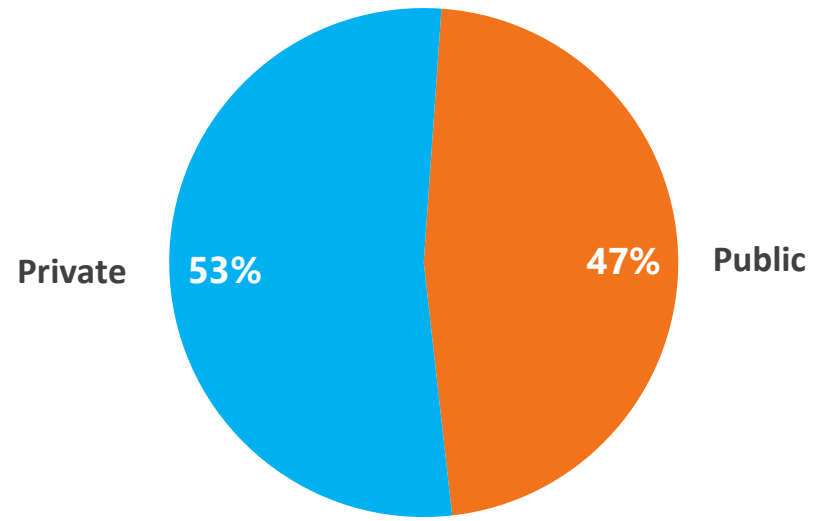
9

- Ligand has a unique position in the industry with pharma partnerships with over 125 companies funding over 200 programs
- Ligand reached out to 100% of our partners in recent weeks to obtain first-hand information about how the pandemic was influencing their business and our partnered programs

Partner Profile



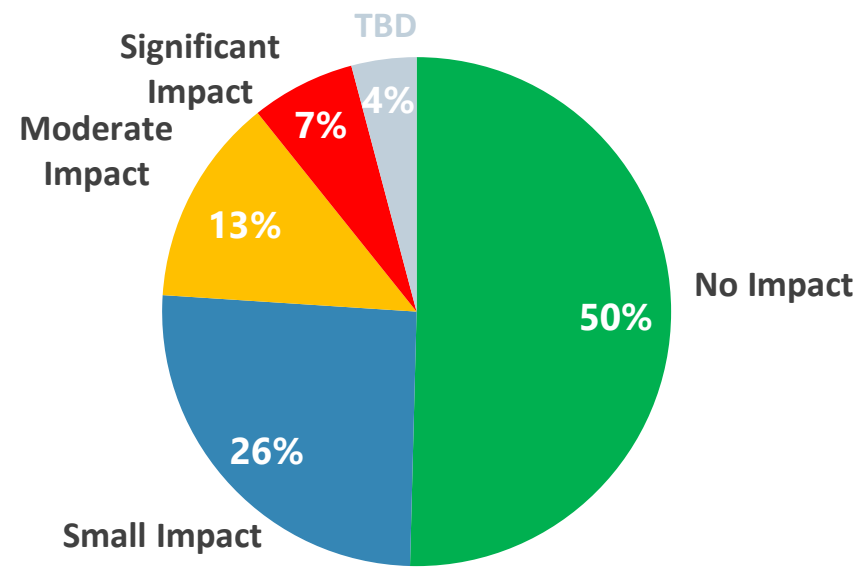
Ownership Structure



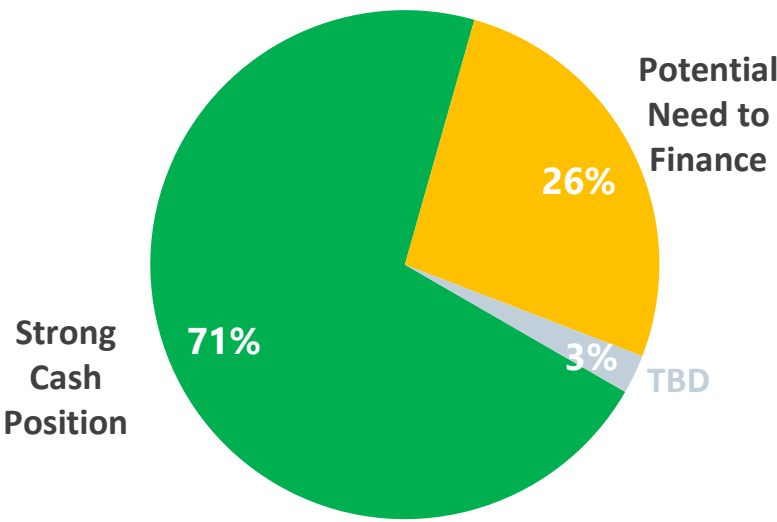
Impact on Partner Operations

Partners surveyed generally report limited impact on operations and capitalization

Employees and Operations Status



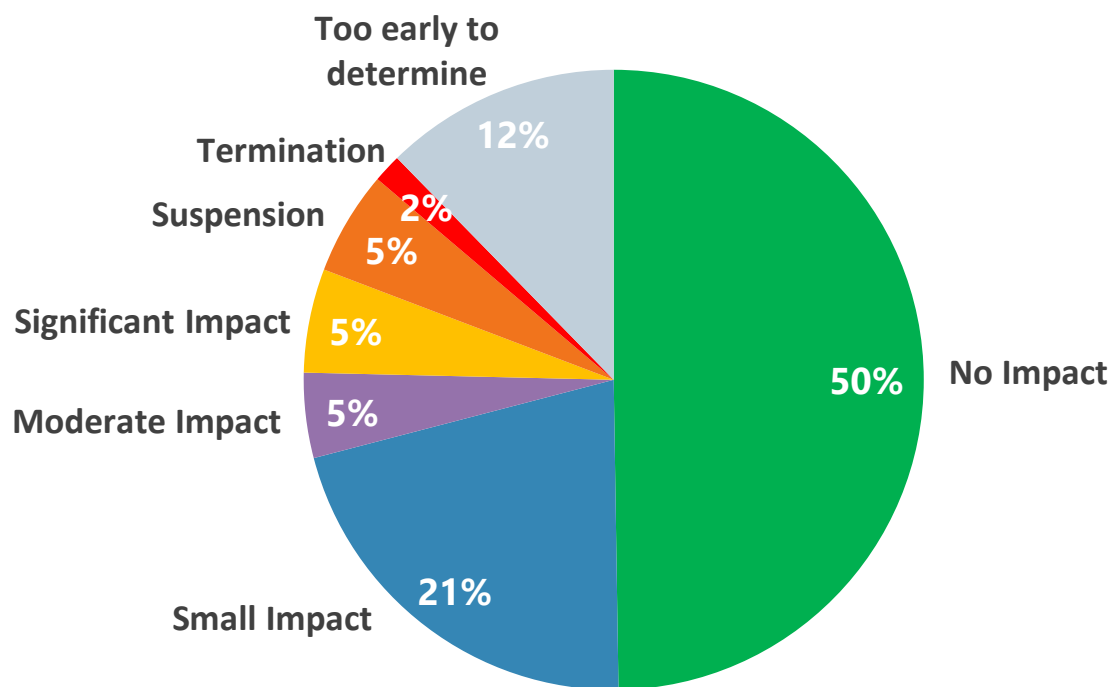
Capital Position



At least 3 partners with weak capital position applied for PPP loans under the CARES Act

COVID-19 Pandemic: Partner Outreach

- Currently, a majority of Ligand-related development programs reported as having no or only a small impact, small minority reporting more significant impacts or terminations
- Programs reporting significant impact were mostly related to new clinical trial starts, leading to delays



Captisol Support for Remdesivir

- We are focused on Captisol supply to support remdesivir
- Captisol has a strong heritage as an enabling technology of important, global medicines

Ligand's Independent Directors



John Kozarich, Ph.D. Chairman

Merck Former Research Executive
Former CEO, ActivX Biosciences
Alkermes, Chemistry Professor



Jason Aryeh

Life-Sciences Fund Manager
Industry Board member



Sarah Boyce

CEO, Avidity Biosciences
Past companies include: Akcea
Therapeutics, Ionis,
Forest Labs, Novartis



Todd Davis

Founder: RoyaltyRx Fund
Manager/board member, Biotech
Companies



Nancy Gray, Ph.D.

CEO, Gordon Research
Conferences
Executive at American
Chemical Society and
Researcher at Exxon



John LaMattina, Ph.D.

Former President and Head of
Global R&D, Pfizer, Inc.
Biotech Advisor and Board
Member



Sunil Patel

Public & Private Biotech Executive
Past companies include: Abgenix,
Gilead, BiPar and OncoMed
Protein/mAb Researcher



Stephen Sabba, MD

Institutional Investor
BioTech Research Analyst
Gastroenterologist



Financial Highlights

Matt Korenberg
Chief Financial Officer

Outstanding Q1 2020 Performance

15

Diversity of Revenue supports increased 2020 outlook

Strong Captisol Sales Drives Revenue Outperformance

**\$33.2 million in
revenue**

23% YoY Q1 royalty growth

\$0.89 adjusted EPS*

40% YoY Q1 EPS growth

\$17 million

Cash from operations

\$234 million

Convertible debt retired

\$31 million

Cash saved

\$739 million of cash

Capital deployment
focused on acquiring
technology platforms,
pipeline assets
and royalty rights

*Note: Please see reconciliation of Adjusted EPS to GAAP EPS in Q12020 press release available at <https://investor.ligand.com/press-releases>.

Q1 2020 Revenue: \$33.2 million

Outstanding Performance, Driven by Material Sales

Service Revenue

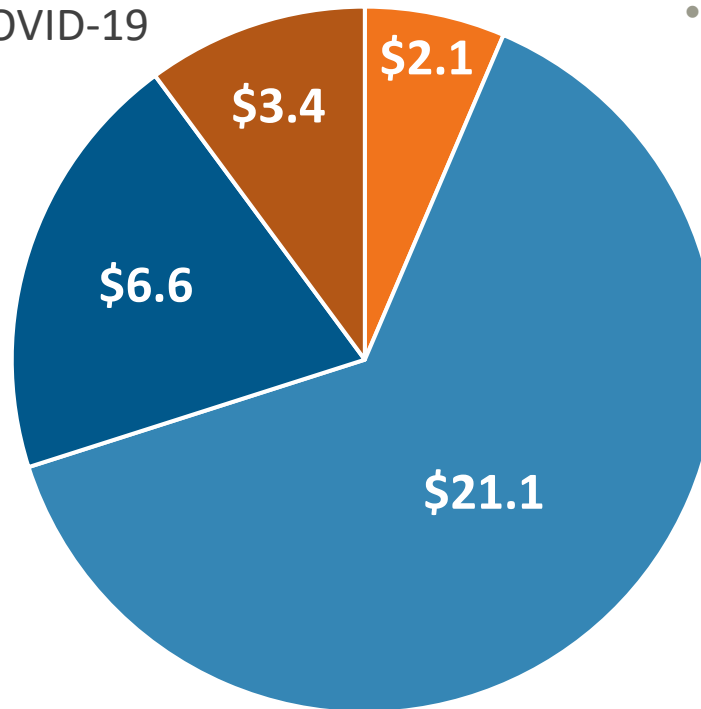
- Q1 performance in line with expectations
- Full year limited impact from COVID-19

Contract Revenue

- Timing of partner events leading to lower quarter
- COVID-19 impact leading to lower 2020 contract revenue outlook

Royalties

- Q1 performance solid with 23% YoY growth
- COVID-19 impact leading to lower 2020 royalty outlook

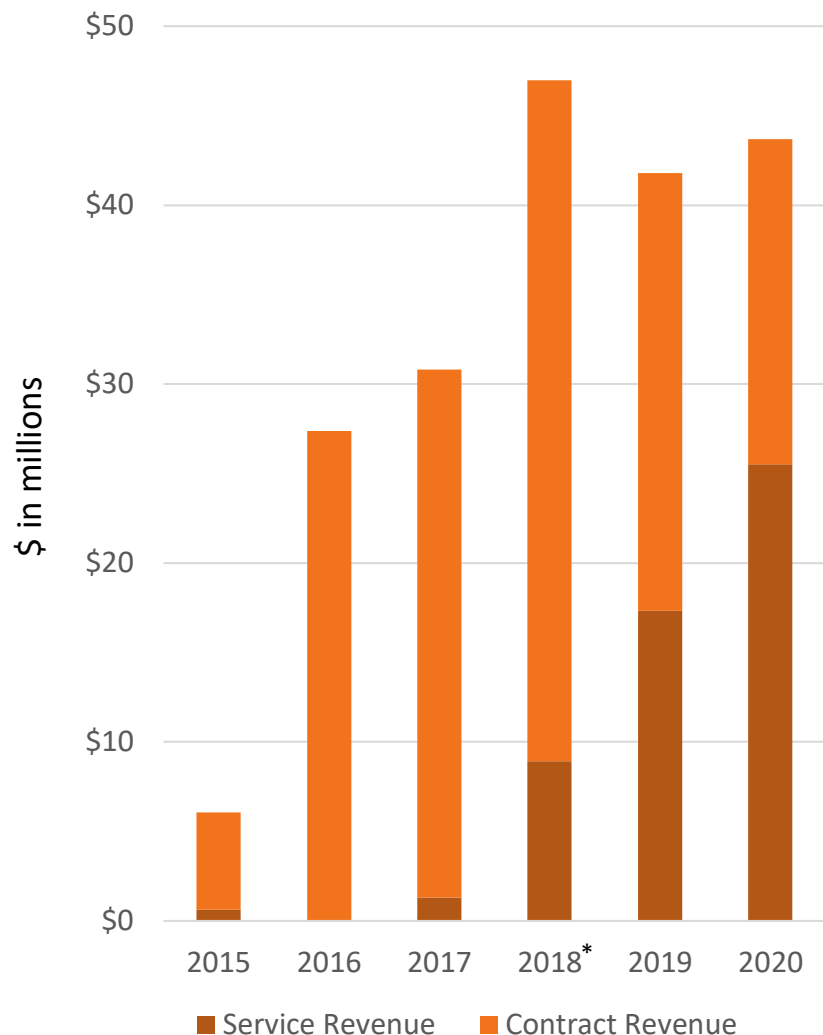


Captisol

- Significant first quarter revenue leading to increased view and guidance for 2020

Service Revenue

Breaking out Service from Other Contract Payments



* 2018 shown excluding \$47 million one-time payment from Wuxi

Contract Revenue

- Includes upfront payments, annual license fees, clinical and commercial milestones, commercial license fee revenue and other items
- Over \$3 billion of potential milestones across the 200+ partnered programs; not all will be realized but large portfolio creates growing annual stream of payments

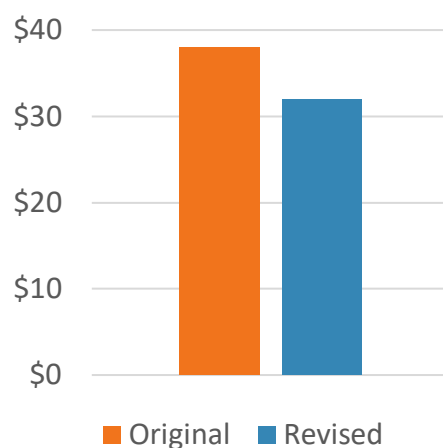
Service Revenue

- Includes majority of revenue associated with Vernalis, OmniChicken discovery, and new Icagen team
- Addition of Icagen provides catalyst for new line; substantial and recurring portion of the contract payment line

Increased 2020 Revenue Outlook:

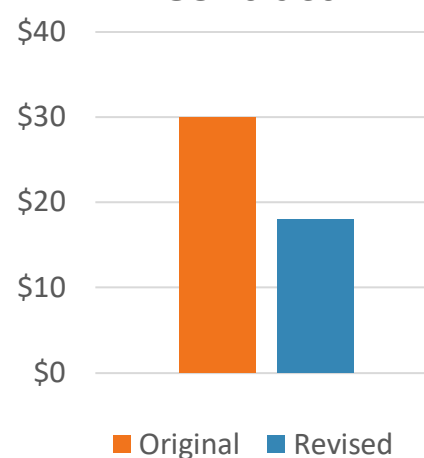
Increased Total Revenue, Accounting for COVID-19 Adjustments

Royalty



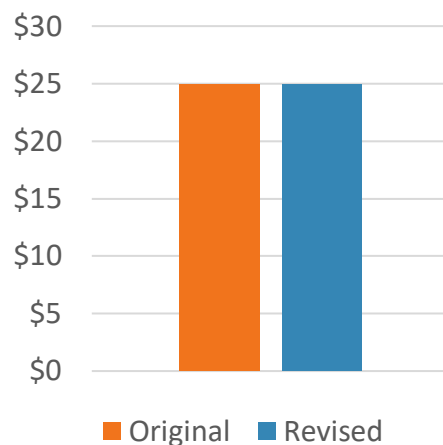
Lower expected patient visits and treatments, off about 15% but should recover in 2021

Contract



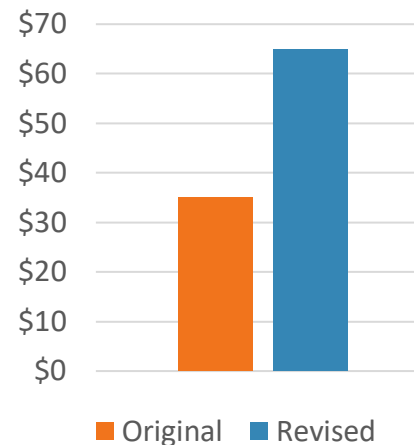
Lower expected milestones, due to trial delays and financial disruption; Down about 40% but most could be made up in 2021

Service



Steady revenue source. No change projected

Captisol Sales



Higher Captisol sales expected for 2020

Raising 2020 Financial Guidance

Strong Margins and Earnings Growth

Total Revenue

\$140
million

32% growth w/o Q119 Promacta

Gross Margin

85% - 90%

EBITDA margin ~50%

Cash Expenses

\$55 to \$58
million

Including Icagen pro forma

Adjusted EPS*

\$3.65

45% growth w/o Q119 Promacta

Note: EBITDA excludes non-cash stock-based comp.

*Please see reconciliation to GAAP in Q12020 press release available at <https://investor.ligand.com/press-releases>.

Continued Focus on Strategic M&A

Four Part Investment Strategy

- \$739 million in cash available today for M&A investments

Focused on Four Primary Investment Strategies

Technologies

Buying tools the industry needs, investing in them to generate new deals; a Ligand strength

Shots on Goal

Acquiring partnered programs to drive growth; acquiring unpartnered assets to be outlicensed

Revenue / Earnings

Cash-flow positive companies with Ligand-like business models; commercial stage royalty buys

Product Financings

Funding product development in exchange for royalties and milestones























Pipeline and Operating Highlights

Matt Foehr

President & Chief Operating Officer

Partnered Pipeline Snapshot (May 2020)

22

Partner	Program	Therapy Area	Technology	Preclinical	Phase 1	Phase 2	Phase 3	Marketed
	Kyprolis®	Oncology	Captisol					
	EVOMELA®	Oncology	Captisol					
Multiple	Multiple	Multiple	Multiple	Includes: ZULRESSO (Sage), MINNEBRO (Daiichi-Sankyo), NEXTERONE (Baxter), DUAVEE (Pfizer), Others				
	CS1001	Oncology	OmniAb					
	PTX-022	Dermatology	Proj. Finance					
	Sparsentan	Kidney Disease	NCE					
	Pevonedistat	Oncology	Captisol					
Multiple	Multiple	Multiple	Multiple	Pipeline includes >10 additional Phase 3 or Pivotal assets				
	Zimberelimab	Oncology	OmniAb	NMPA filed in China				
	Ensifentrine	Respiratory	VDP					
	Ganaxalone	CNS	Captisol					
	Pradefovir	Infection	HepDirect					
Multiple	Multiple	Multiple	Multiple	Pipeline includes >20 additional Phase 2 assets				
	VK2809	NASH	HepDirect					
	Cimlanod	Cardiovascular	Captisol					
	Lasofloxifene	Oncology	NCE					
	Parempanel	CNS	Captisol					
	Batoclimab	Autoimmune	OmniAb					
	Ciforadenant	Oncology	VDP					
	Zimberelimab	Oncology	OmniAb					
	Teclistamab	Oncology	OmniAb					
	APVO436	Oncology	OmniAb					
	AMG-330	Oncology	Captisol					
Multiple	Multiple	Multiple	Multiple	>25 additional Phase 1 assets				

Partnered pipeline also includes >100 preclinical programs

Information regarding partnered programs comes from information released by our partners and from clinicaltrials.gov

- Icagen has established deep biological expertise focused on ion channels and transporters, and has a strong track record in ion channel drug discovery from screening to lead optimization



Icagen's medicinal chemistry, *in silico* and computational chemistry (including AI) applications and x-ray fluorescence assays can integrate into/expand the drug-discovery work at Vernalis



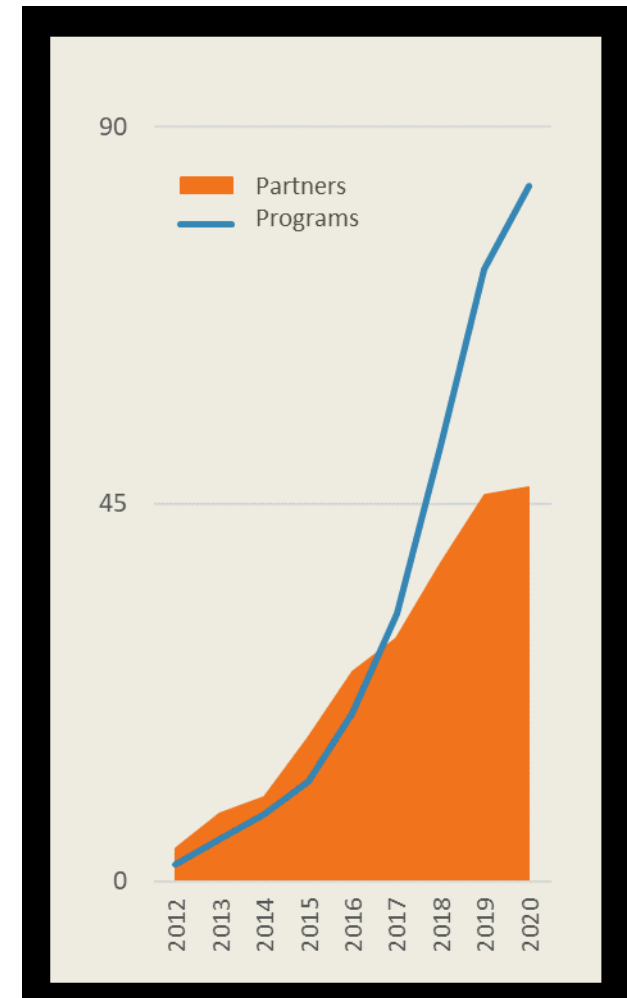
Icagen's novel reagent generation and assays can support novel OmniAb antibody discovery when targeting high-value ion channels and transporter targets

Ion channel targets are frequently a focus of current and prospective Vernalis and OmniAb partners

OmniAb Technology

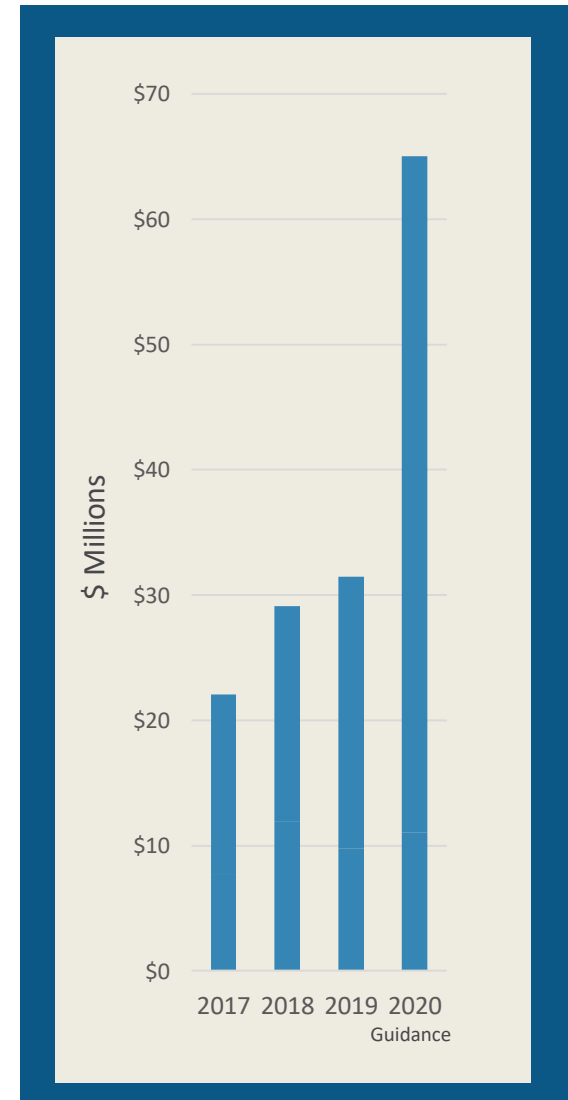
Partners and Programs

- Growing with continued deal flow and partner expansion of use
- Viewed as a **best-in-class** technology for antibody discovery
- Continued innovation and investment, with launch of new animals and acquisition of bolt-on technologies



Since acquisition, Ligand has nearly tripled the number of partners leveraging OmniAb, and the number of programs in development is accelerating

- Ligand continues to invest in expansion of Drug Master Files in U.S., Canada, Japan and China, and into manufacturing and distribution efficiencies
- Steady growth in recent years
- Significant growth projected in 2020



Captisol's Differentiation

Key Technology Features

Global Reach

Captisol-enabled drugs are marketed in >70 countries
– >40 partners have Captisol-enabled drugs in development

Intellectual Property

Substantial know-how; Patents extend until 2033

Drug Master Files

Type 4 and 5 DMFs in U.S. with >20,000 pages containing manufacturing, safety data (IV, inhaled, oral, etc.)
– Also have DMFs in Japan, China and Canada

Manufacturing, Quality & Scale

Manufacturing is conducted in two cGMP plants via a validated process, with distribution out of five facilities

- Our Captisol supply network is served by two GMP manufacturing plants and five distribution facilities around the globe, all of which are fully operational



- Continued focus on quality, global supply chain integrity and global distribution efficiency

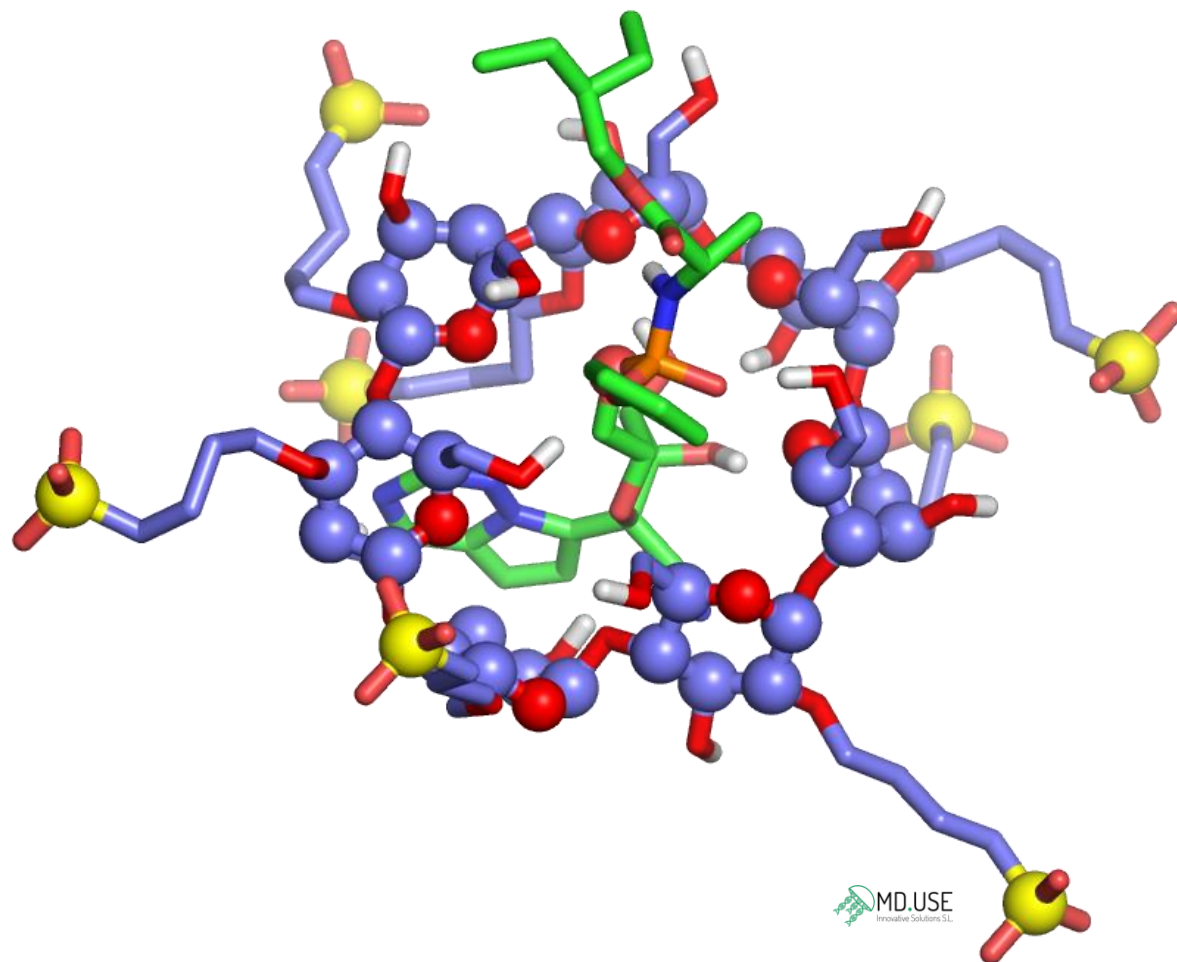
- Investing in capital equipment for further supply network and capacity expansion

- Captisol plays a critical role in the formulation of multiple approved products
- Large amount of Captisol is needed in formulations, and that increases importance of product quality and purity, especially for injectable drugs
- The Captisol-to-remdesivir weight ratios for the two formulations available via Emergency Use Authorization (EUA)* are:
 - 30:1 (Lyophilized powder)
 - 60:1 (Injection solution)

Formulation Ratios of Selected Captisol-enabled Commercial Products

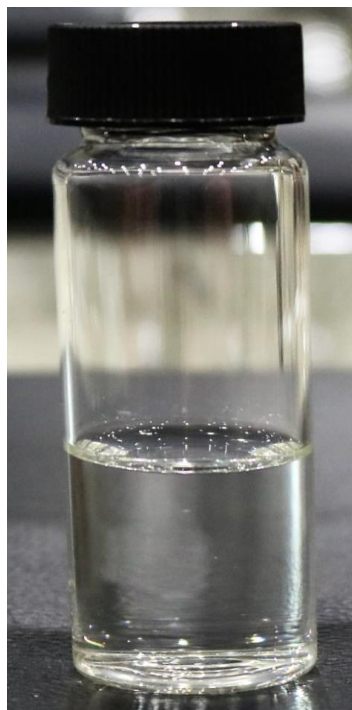
Drug / active (Approval Year)	Captisol to API* (weight : weight)
BAXDELA® / delafloxacin (2017)	8:1
NEXTERONE® / amiodarone (2010)	10:1
NOXAFIL® / posaconazole (2014)	22:1
KYPROLIS® / carfilzomib (2012)	50:1
ZULRESSO™ / brexanolone (2019)	50:1
EVOMELA® / melphalan (2016)	54:1

Molecule dynamics simulations with remdesivir



- Computer modeling further illustrates the role of Captisol
- Cloaks molecules and enhances solubility and stability
- Molecular dynamics simulations show insertion of remdesivir is stable in the Captisol cavity

Simple demonstration illustrates Captisol's ability to dissolve remdesivir



+ **CAPTISOL**®

- Remdesivir mixed in a Captisol to API ratio of 30:1
- Results in a solubilized, clear solution

Ligand's Footprint

31

Locations that support our major technology platforms



San Diego, California
Corporate Headquarters



Lawrence, Kansas
Captisol Research Center



RTP, North Carolina
Icagen



Emeryville, California
OmniAb Research Center



Cambridge, UK
VDP Research Center

- 145 employees, including 63 PhDs
- Decentralized business operations to efficiently serve our technology partners



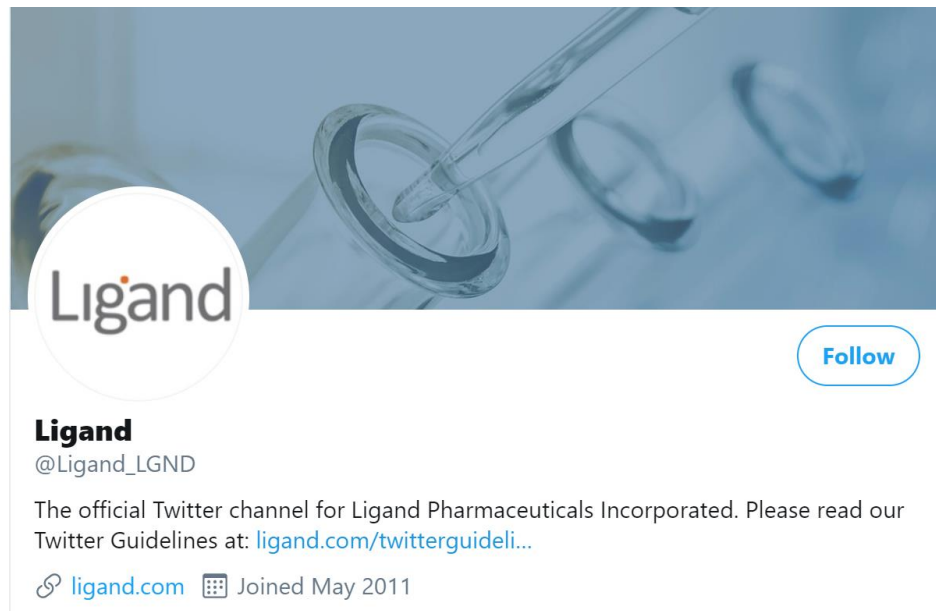
Q&A

Follow Ligand on Twitter



33

- Find us at @Ligand_LGND



A great source for latest events and partnered program updates