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 inherit 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, 19 and 21 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.
Ligand: Innovation Driving Value

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
Ligand’s Footprint
Locations that support our major technology platforms

San Diego, California
Corporate Headquarters

Emeryville, California
OmniAb Research Center

Lawrence, Kansas
Captisol Research Center

Cambridge, UK
VDP Research Center

RTP, North Carolina
Icagen

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

* 2019 Figures exclude Q1 2019 Promacta contribution. Please see our Q419 and Q120 press releases for a reconciliation
Partnered Pipeline – Bullseye Diagram

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
### Partnered Pipeline Snapshot (May 2020)

<table>
<thead>
<tr>
<th>Partner</th>
<th>Program</th>
<th>Therapy Area</th>
<th>Technology</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Marketed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMGEN</td>
<td>Kyprolis®</td>
<td>Oncology</td>
<td>Captisol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACROTECH BIOSciences</td>
<td>EVOMELA®</td>
<td>Oncology</td>
<td>Captisol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Includes: ZULRESSO (Sage), MINNEBRO (Daiichi-Sankyo), NEXTERONE (Baxter), DUAVEE (Pfizer), Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS1001</td>
<td>Oncology</td>
<td>OmniAb</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PTX-022</td>
<td>Dermatology</td>
<td>Proj. Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparsentan</td>
<td>Kidney Disease</td>
<td>NCE</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Pipeline includes &gt;10 additional Phase 3 or Pivotal assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Pipeline includes &gt;20 additional Phase 2 assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>&gt;25 additional Phase 1 assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Partnered pipeline also includes >100 preclinical programs

Information regarding partnered programs comes from information released by our partners and from clinicaltrials.gov
## Major Potential Pipeline Events

<table>
<thead>
<tr>
<th>Program</th>
<th>Partner</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remdesivir</td>
<td>Gilead</td>
<td>Moderate COVID-19</td>
<td></td>
</tr>
<tr>
<td>Zimberelimab</td>
<td>Gloria</td>
<td>Phase 2 data</td>
<td></td>
</tr>
<tr>
<td>AMG-330</td>
<td>Amgen</td>
<td>Phase 1 data</td>
<td></td>
</tr>
<tr>
<td>Teclistamab</td>
<td>Janssen</td>
<td>Phase 1 data</td>
<td></td>
</tr>
<tr>
<td>PTX-022</td>
<td>Palvella</td>
<td>Pivotal data</td>
<td></td>
</tr>
<tr>
<td>IMVT-1401</td>
<td>Immunovant</td>
<td>Phase 2 data</td>
<td></td>
</tr>
<tr>
<td>CS1001</td>
<td>C-Stone</td>
<td>China filing, Phase 2/3 data</td>
<td></td>
</tr>
<tr>
<td>Pevonidstat</td>
<td>Takeda</td>
<td>Phase 3 data</td>
<td></td>
</tr>
<tr>
<td>Lasofoxifene</td>
<td>Sermonix</td>
<td>Phase 2 data</td>
<td></td>
</tr>
<tr>
<td>Ensifentrine</td>
<td>Verona</td>
<td>Phase 3 start</td>
<td></td>
</tr>
<tr>
<td>Kyprolis</td>
<td>Amgen</td>
<td>sNDA &amp; China approval</td>
<td></td>
</tr>
<tr>
<td>Sparsentan</td>
<td>Retrophin</td>
<td>Phase 3 data</td>
<td></td>
</tr>
<tr>
<td>VK-2809</td>
<td>Viking</td>
<td>Phase 2b data</td>
<td></td>
</tr>
<tr>
<td>Zimberelimab</td>
<td>Gloria</td>
<td>Launch</td>
<td></td>
</tr>
</tbody>
</table>

**Most substantial calendar of events for a 12-month outlook in Ligand’s history**

Based on clinicaltrials.gov or partner disclosures
## ASCO 2020 Partner Presentations

<table>
<thead>
<tr>
<th>Partner</th>
<th>Program</th>
<th>Technology</th>
<th>Presentation</th>
</tr>
</thead>
</table>
| **AMGEN** | *Kyprolis* | Captisol | • **Poster:** Cross-study comparison of CANDOR and MMY1001 studies  
• **Late-Breaking:** Results of ENDURANCE Phase 3 trial in NDMM |
| **AMGEN** | *AMG-330* | Captisol | • **Oral:** Updated Results of Phase 1 Dose Escalation Study in R/R AML  
• **Poster:** Clinical PK and Exposure-Response Relationships |
| **Takeda** | *Pevonedistat* | Captisol | • **Oral:** Phase 2 study of pevonedistat + azacitidine in patients with HR-MDS, CMML or LB AML |
| **Janssen** | *Teclistamab* (JNJ-64007957) | OmniAb | • **Oral:** Phase I study of teclistamab (BCMA x CD3 bispecific antibody) in RRMM |
| **Genentech** | *Tiragolumab* | OmniAb | • **Oral:** Phase 2 study of tiragolumab (TIGIT antibody) plus atezolizumab in NSCLC |
| **Corvus Pharmaceuticals** | *Zimberelimab* (GLS-010) | OmniAb | • **Poster:** Phase 2 study in recurrent or metastatic cervical cancer  
• **Poster:** Phase 2 study in R/R classical Hodgkin lymphoma |
| **Corvus Pharmaceuticals** | *Ciforadenant* | VDP | • **Poster:** CD68+ tumor-associated myeloid cells as the target and predictor of response to adenosine blockade in RCC |

Source: ASCO Meeting Library and corporate press releases

*Tiragolumab was discovered by Genentech from OmniRat. Genentech purchased a royalty-free license from OMT Inc. prior to Ligand’s acquisition of the OmniAb technology.*
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
Two Major, Best-in-Class Technologies Driving Value For Shareholders

• Partners are continuing to invest heavily in programs and make clinical progress

• Ligand has received $114 million in payments related to OmniAb

• Royalties projected to come online for Ligand sooner than projected three years ago, due to quality of data and aggressive investment by our partners

• New deal flow remains strong, fueling expanded R&D investment and potential royalties on major new antibodies

• Enabling important medicines for cancer, CNS diseases and infection

• Since acquisition in 2011 for $35 million, Ligand has booked over $350 million in revenue related to Captisol

• 2019 was highest year of Captisol revenue to date, projected to increase in 2020
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
Captisol Technology

• 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
Captisol Manufacturing and Distribution

- 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 and Formulation Ratios

- 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

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

Captisol and Computer Modeling

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

The snapshot shown is cut from molecular dynamic simulations (50 to 100 ns) using the neutral remdesivir (4b structure from Siegel et al 2017 J. Med. Chem.) with a select substitution pattern representing of a species present in Captisol. The direction of insertion (trajectory) selected is with the two ethyl groups oriented to the primary face of Captisol. The preliminary results suggest that the complexes are stable for the simulated time studied. MD simulations were performed in explicit water using GROMACS 2020 and the GROMOS 54a7 forcefield.
Captisol and Solubility

Simple demonstration illustrates Captisol’s ability to dissolve remdesivir

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

Each vial contains 100 mg of remdesivir, without (left) or with (right) Captisol (3 g). Internal demonstration performed by WuXi AppTec following a procedure adapted from Example 1 in US 2019/0083525 A1 Larson; Pub. Date: Mar. 21, 2019.
# Outstanding Q1 2020 Performance

Diversity of Revenue supports increased 2020 outlook

<table>
<thead>
<tr>
<th>Strong Captisol Sales Drives Revenue Outperformance</th>
<th>$33.2 million in revenue</th>
<th>$0.89 adjusted EPS*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23% YoY Q1 royalty growth</td>
<td>40% YoY Q1 EPS growth</td>
</tr>
</tbody>
</table>

|                                                   | $234 million Convertible debt retired | $739 million of cash |
|                                                   | $31 million Cash saved                | Capital deployment focused on acquiring technology platforms, pipeline assets and royalty rights |

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
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.

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

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Shots on Goal</th>
<th>Revenue / Earnings</th>
<th>Product Financings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying tools the industry needs, investing in them to generate new deals; a Ligand strength</td>
<td>Acquiring partnered programs to drive growth; acquiring unpartnered assets to be outlicensed</td>
<td>Cash-flow positive companies with Ligand-like business models; commercial stage royalty buys</td>
<td>Funding product development in exchange for royalties and milestones</td>
</tr>
</tbody>
</table>
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A great source for latest events and partnered program updates