

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 10-Q**

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**Quarterly Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934**

**For the quarterly period ended March 31, 2020**

or

**Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

**For the Transition Period From \_\_\_\_\_ to \_\_\_\_\_ .**

**Commission File Number: 001-33093**



**LIGAND PHARMACEUTICALS INCORPORATED**

*(Exact name of registrant as specified in its charter)*

**Delaware**

*(State or other jurisdiction of  
incorporation or organization)*

**3911 Sorrento Valley Boulevard, Suite 110**

**San Diego**

**CA**

*(Address of principal executive offices)*

**77-0160744**

*(I.R.S. Employer  
Identification No.)*

**92121**

*(Zip Code)*

**(858) 550-7500**

*(Registrant's Telephone Number, Including Area Code)*

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:	Trading symbol:	Name of each exchange on which registered:
<b>Common Stock , par value \$0.001 per share</b>	<b>LGND</b>	<b>The Nasdaq Global Market</b>

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one)

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Large Accelerated Filer

Accelerated Filer

Non-Accelerated Filer

Smaller Reporting Company

Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of May 5, 2020, the registrant had 16,049,703 shares of common stock outstanding.

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**LIGAND PHARMACEUTICALS INCORPORATED**  
**QUARTERLY REPORT**

**FORM 10-Q**

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## GLOSSARY OF TERMS AND ABBREVIATIONS

Abbreviation	Definition
2019 Annual Report	Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 27, 2020
2019 Notes	\$245.0 million aggregate principal amount of convertible senior unsecured notes due 2019
2023 Notes	\$750.0 million aggregate principal amount of convertible senior unsecured notes due 2023
Ab Initio	Ab Initio Biotherapeutics, Inc.
Abvivo	Abvivo, LLC
Acrotech Biopharma	Acrotech Biopharma, LLC
Amgen	Amgen, Inc.
ANDA	Abbreviated New Drug Application
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Aziyo	Aziyo Med, LLC
CE	Captisol-enabled
CEO	Chief Executive Officer
cGMP	current Good Manufacturing Practices
Company	Ligand Pharmaceuticals Incorporated, including subsidiaries
COPD	Chronic obstructive pulmonary disease
CorMatrix	CorMatrix Cardiovascular, Inc.
CVR	Contingent value right
Crystal	Crystal Bioscience, Inc.
CStone Pharmaceuticals	CStone Pharmaceuticals (Suzhou) Co., Ltd.
CyDex	CyDex Pharmaceuticals, Inc.
Dianomi Therapeutics	Dianomi Therapeutics, Inc.
ESPP	Employee Stock Purchase Plan, as amended and restated
EUA	Emergency Use Authorization
FASB	Financial Accounting Standards Board
FDA	Food and Drug Administration
GAAP	Generally accepted accounting principles in the United States
Glucagon CVR	The contingent value right issued pursuant to the Glucagon CVR Agreement, dated January 10, 2010 by and between the Company, Meatabasis and the other parties named therein
Gilead	Gilead Sciences, Inc.
GPCR	G-protein coupled receptor
GRA	Glucagon receptor antagonist
Icagen	Icagen, Inc.
IPR&D	In-process Research and Development
Ligand	Ligand Pharmaceuticals Incorporated, including subsidiaries
Metabasis	Metabasis Therapeutics, Inc.
NDA	New Drug Application
Nucorion Pharmaceuticals	Nucorion Pharmaceuticals, Inc.
Opthea	Opthea Limited
OTTI	Other-than-temporary impairment
PFS	Progression-free Survival
Pfizer	Pfizer Inc.
Q1 2019	The Company's fiscal quarter ended March 31, 2019
Q1 2020	The Company's fiscal quarter ended March 31, 2020
Roivant	Roivant Sciences GmbH
Roivant License Agreement	License Agreement, dated March 5, 2018, between Ligand and Roivant
Retrophin	Retrophin, Inc.
SEC	Securities and Exchange Commission
Selexis	Selexis, SA
sNDA	Supplemental New Drug Application
Teva	Teva Pharmaceuticals USA, Inc., Teva Pharmaceutical Industries Ltd. and Actavis, LLC, collectively
Vernalis	Vernalis plc
Viking	Viking Therapeutics, Inc.

## PART I - FINANCIAL INFORMATION

### Item 1. Condensed Consolidated Financial Statements

#### LIGAND PHARMACEUTICALS INCORPORATED CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited, in thousands, except par value)

	March 31, 2020	December 31, 2019
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 117,527	\$ 71,543
Short-term investments	621,284	939,989
Investment in Viking	32,879	58,335
Accounts receivable, net	39,506	30,387
Inventory	7,320	7,296
Income taxes receivable	7,271	11,361
Other current assets	4,940	4,734
Total current assets	830,727	1,123,645
Deferred income taxes, net	26,358	25,608
Intangible assets, net	206,520	210,448
Goodwill	94,341	95,229
Commercial license and other economic rights, net	10,381	20,090
Property and equipment, net	6,690	7,185
Operating lease right-of-use assets	9,630	10,353
Other assets	1,270	2,357
Total assets	\$ 1,185,917	\$ 1,494,915
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 3,365	\$ 2,420
Accrued liabilities	11,848	9,836
Current contingent liabilities	871	2,607
Deferred revenue	4,354	2,139
Total current liabilities	20,438	17,002
2023 convertible senior notes, net	444,432	638,959
Long-term contingent liabilities	5,811	6,335
Deferred income taxes, net	21,769	32,937
Long-term operating lease liabilities	9,231	9,970
Other long-term liabilities	22,340	22,480
Total liabilities	524,021	727,683
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000 shares authorized; zero issued and outstanding at March 31, 2020 and December 31, 2019	—	—
Common stock, \$0.001 par value; 60,000 shares authorized; 16,050 and 16,823 shares issued and outstanding at March 31, 2020 and December 31, 2019, respectively	16	17
Additional paid-in capital	295,940	367,326
Accumulated other comprehensive loss	(4,867)	(216)
Retained earnings	370,807	400,105
Total stockholders' equity	661,896	767,232
Total liabilities and stockholders' equity	\$ 1,185,917	\$ 1,494,915

*See accompanying notes to unaudited condensed consolidated financial statements.*

**LIGAND PHARMACEUTICALS INCORPORATED**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(Unaudited)  
(in thousands, except per share amounts)

	Three months ended	
	March 31,	
	2020	2019
<b>Revenues:</b>		
Royalties	\$ 6,565	\$ 19,538
Captisol	21,109	8,959
Service revenue	3,357	3,883
Contract revenue	2,130	11,104
Total revenues	33,161	43,484
<b>Operating costs and expenses:</b>		
Cost of Captisol	4,683	3,858
Amortization of intangibles	3,535	3,503
Research and development	11,891	11,289
General and administrative	9,264	11,088
Total operating costs and expenses	29,373	29,738
Gain from sale of Promacta license	—	812,797
Income from operations	3,788	826,543
<b>Other income (expense):</b>		
Gain (loss) from Viking	(25,457)	17,293
Interest income	4,730	5,909
Interest expense	(8,548)	(8,906)
Other expense, net	(4,928)	1,874
Total other income (loss), net	(34,203)	16,170
Income (loss) before income taxes	(30,415)	842,713
Income tax benefit (expense)	6,284	(176,376)
<b>Net income (loss)</b>	<b>\$ (24,131)</b>	<b>\$ 666,337</b>
Basic net income (loss) per share	\$ (1.46)	\$ 32.59
Shares used in basic per share calculations	16,529	20,447
Diluted net income (loss) per share	\$ (1.46)	\$ 31.32
Shares used in diluted per share calculations	16,529	21,277

*See accompanying notes to unaudited condensed consolidated financial statements.*

**LIGAND PHARMACEUTICALS INCORPORATED**  
**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
**(Unaudited)**  
**(in thousands)**

	Three months ended	
	March 31,	
	2020	2019
Net income (loss):	\$ (24,131)	\$ 666,337
Unrealized net gain (loss) on available-for-sale securities, net of tax	(2,772)	230
Foreign currency translation	(1,879)	291
Comprehensive income (loss)	<u>\$ (28,782)</u>	<u>\$ 666,858</u>

*See accompanying notes to unaudited condensed consolidated financial statements.*

**LIGAND PHARMACEUTICALS INCORPORATED**  
**CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
(Unaudited)  
(in thousands)

	Common Stock		Additional paid in capital	Accumulated other comprehensive income (loss)	Retained earnings	Total stockholders' equity
	Shares	Amount				
Balance at January 1, 2020	16,823	\$ 17	\$ 367,326	\$ (216)	\$ 400,105	\$ 767,232
Issuance of common stock under employee stock compensation plans, net	105	—	(1,008)	—	—	(1,008)
Share-based compensation	—	—	5,653	—	—	5,653
Repurchase of common stock	(878)	(1)	(73,286)	—	—	(73,287)
Unrealized net loss on available-for-sale securities, net of deferred tax	—	—	—	(2,772)	—	(2,772)
Foreign currency translation adjustment	—	—	—	(1,879)	—	(1,879)
Reacquisition of equity due to 2023 debt extinguishment, net of tax	—	—	(2,745)	—	—	(2,745)
Cumulative-effect adjustment from adoption of ASU 2016-13, net of tax	—	—	—	—	(5,167)	(5,167)
Net loss	—	—	—	—	(24,131)	(24,131)
Balance at March 31, 2020	16,050	\$ 16	\$ 295,940	\$ (4,867)	\$ 370,807	\$ 661,896

	Common Stock		Additional paid in capital	Accumulated other comprehensive income (loss)	Retained earnings (Accumulated deficit)	Total stockholders' equity
	Shares	Amount				
Balance at January 1, 2019	20,765	\$ 21	\$ 791,114	\$ (1,024)	\$ (229,197)	\$ 560,914
Issuance of common stock under employee stock compensation plans, net	135	—	(991)	—	—	(991)
Share-based compensation	—	—	5,347	—	—	5,347
Repurchase of common stock	(1,236)	(1)	(151,584)	—	—	(151,585)
Unrealized net gain on available-for-sale securities, net of deferred tax	—	—	—	230	—	230
Foreign currency translation adjustment	—	—	—	291	—	291
Other tax adjustments	—	—	(569)	—	—	(569)
Net income	—	—	—	—	666,337	666,337
Balance at March 31, 2019	19,664	\$ 20	\$ 643,317	\$ (503)	\$ 437,140	\$ 1,079,974

*See accompanying notes to unaudited condensed consolidated financial statements.*



**LIGAND PHARMACEUTICALS INCORPORATED**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(Unaudited, in thousands)

	Three months ended	
	March 31,	
	2020	2019
<b>Cash flows from operating activities:</b>		
Net income (loss)	\$ (24,131)	\$ 666,337
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Gain from sale of Promacta license	—	(812,797)
Change in estimated fair value of contingent liabilities	(372)	1,403
Depreciation and amortization of intangible assets	3,422	3,841
Amortization of premium (discount) on investments, net	830	(1,818)
Amortization of debt discount and issuance fees	7,203	7,446
Amortization of commercial license and other economic rights	2,958	2,437
Gain on debt extinguishment	(659)	—
Share-based compensation	5,653	5,347
Deferred income taxes	(10,419)	62,263
Loss (gain) from investment in Viking	25,456	(17,293)
Other	5,668	(6,160)
Changes in operating assets and liabilities:		
Accounts receivable, net	(8,398)	29,235
Inventory	1,251	(2,823)
Accounts payable and accrued liabilities	2,114	(5,873)
Income tax receivable	4,081	113,997
Other	2,265	(284)
Net cash provided by operating activities	<u>16,922</u>	<u>45,258</u>
<b>Cash flows from investing activities:</b>		
Proceeds from sale of Promacta license	—	812,797
Purchase of short-term investments	(167,374)	(1,047,767)
Proceeds from sale of short-term investments	179,431	341
Proceeds from maturity of short-term investments	297,005	332,647
Other	(526)	(3,241)
Net cash provided by investing activities	<u>308,536</u>	<u>94,777</u>
<b>Cash flows from financing activities:</b>		
Repurchase of 2023 Notes	(203,210)	—
Net proceeds from stock option exercises and ESPP	421	1,904
Taxes paid related to net share settlement of equity awards	(1,429)	(2,895)
Share repurchase	(73,287)	(151,585)
Payments to CVR Holders	(1,800)	—
Net cash used in financing activities	<u>(279,305)</u>	<u>(152,576)</u>
Effect of exchange rate changes on cash	(169)	130
Net increase (decrease) in cash, cash equivalents and restricted cash	45,984	(12,411)
Cash, cash equivalents and restricted cash at beginning of period	72,273	119,780
Cash, cash equivalents and restricted cash at end of period	<u>\$ 118,257</u>	<u>\$ 107,369</u>
<b>Supplemental disclosure of cash flow information:</b>		
Interest paid	\$ 597	\$ 102
Taxes paid	\$ —	\$ 60
Restricted cash in other current assets	\$ 730	\$ 2,256
<b>Supplemental schedule of non-cash activity:</b>		
Accrued fixed asset purchases	\$ 63	\$ 301
Accrued inventory purchases	\$ 1,445	\$ 1,959
Unrealized gain (loss) on AFS investments	\$ (3,541)	\$ 294

*See accompanying notes to unaudited condensed consolidated financial statements.*

**LIGAND PHARMACEUTICALS INCORPORATED**  
**Notes to Condensed Consolidated Financial Statements**  
**(Unaudited)**

*Unless the context requires otherwise, references in this report to “Ligand,” “we,” “us,” the “Company,” and “our” refer to Ligand Pharmaceuticals Incorporated and its consolidated subsidiaries.*

**1. Basis of Presentation and Summary of Significant Accounting Policies**

***Basis of Presentation***

Our condensed consolidated financial statements include the financial statements of Ligand and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. We have included all adjustments, consisting only of normal recurring adjustments, which we considered necessary for a fair presentation of our financial results. These unaudited condensed consolidated financial statements and accompanying notes should be read together with the audited consolidated financial statements included in our 2019 Annual Report. Interim financial results are not necessarily indicative of the results that may be expected for the full year.

***Reclassifications***

Certain amounts in the prior period condensed consolidated financial statements have been reclassified to conform with the current period presentation. Specifically, effective the first quarter of 2020, we began to present service revenue and contract revenue separately, which were combined in license fees, milestones and other revenues in prior years. As a result, service revenue and contract revenue in the condensed consolidated statement of operations for first quarter 2019 have been reclassified to conform to the current period presentation.

***Significant Accounting Policies***

We have described our significant accounting policies in *Note 1, Basis of Presentation and Summary of Significant Accounting Policies* of Notes to Consolidated Financial Statements in our 2019 Annual Report.

***Use of Estimates***

The preparation of condensed consolidated financial statements in conformity with GAAP requires the use of estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and the accompanying notes. Actual results may differ from those estimates.

***Impact of COVID-19 Pandemic***

The current COVID-19 worldwide pandemic has presented substantial public health and economic challenges and is affecting our employees and partners, patients, communities and business operations, as well as the U.S. and global economy and financial markets. International and U.S. governmental authorities in impacted regions are taking actions in an effort to slow the spread of COVID-19, including issuing varying forms of “stay-at-home” orders, and restricting business functions outside of one’s home. In response, we have closed our executive offices with our administrative employees continuing their work remotely and limited the number of staff in our research and development laboratories and other facilities. The continued spread of the COVID-19 pandemic and the measures taken by the governments of countries have affected, and could continue to affect, our business and the business of our partners, including future disruptions to our supply chain and the manufacture or shipment of drug substance and finished drug product for Captisol, delays by us or our partners in the initiation or enrollment of patients in clinical trials, discontinuations by patients enrolled in clinical trials, difficulties launching or commercializing products and other related activities, which could delay ongoing clinical trials, increase development costs, reduce royalty revenues and have a material adverse effect on our business, financial condition and results of operations. Several of our partners have reported that their operations have been impacted including delays in research and development programs and deprioritizing clinical trials in favor of treating patients who have contracted the virus or to prevent the spread of the virus. This may lead to clinical trial protocol deviations or to discontinuation of treatment for patients who are currently enrolled in the clinical trials being conducted by us or our partners. In addition, certain of our partners have reported negative impacts on product sales which will impact our royalty revenues.

While some of our partners have reported delays or reduced sales due to COVID-19, some of our other partners are working to develop drugs to treat COVID-19. For example, we are supplying Captisol to partners, including Gilead Sciences for Veklury® (remdesivir), a first new treatment for COVID-19 available under an EUA and is also being evaluated in multiple ongoing clinical trials and, as a result, we have worked to increase our manufacturing of Captisol to meet this increased demand. We believe we have adequate supply of Captisol and do not expect any significant risk or disruption to our supply chain for the foreseeable future. In addition, certain of our OmniAb partners have initiated antibody discovery programs for the potential treatment of COVID-19, which may lead to future milestone or royalty revenues if these programs are successful.

The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, the businesses of our partners, our results of operations and our financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including new information that may emerge concerning COVID-19, the actions taken to contain it or treat its impact, including the timing and extent of governments reopening activities, and the economic impact on local, regional, national and international markets.

#### ***Accounting Standards Recently Adopted***

*Credit Losses* - In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326)*, which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses to estimate credit losses on certain types of financial instruments, including trade receivables and available for sale debt securities. This standard includes our financial instruments, such as accounts receivable, investments that are generally of high credit quality, and commercial license rights. Previously, when credit losses were measured under GAAP, an entity generally only considered past events and current conditions in measuring the incurred loss. The new guidance requires us to identify, analyze, document and support new methodologies for quantifying expected credit loss estimates for our financial instruments, using information such as historical experience and current economic conditions, plus the use of reasonable supportable forecast information. We adopted ASU 2016-13 on January 1, 2020, using a modified retrospective transition method, which requires a cumulative-effect adjustment, if any, to the opening balance sheet of retained earnings to be recognized on the date of adoption with prior periods not restated. The cumulative-effect adjustment, net of tax, recorded on January 1, 2020, is approximately \$5.2 million on our unaudited condensed consolidated balance sheet as of January 1, 2020. Results for periods after January 1, 2020 are presented under ASU 2016-13 while prior period amounts continue to be reported under previously applicable accounting standards. See additional disclosure on credit losses under “*Short-term Investments*”, “*Accounts Receivable and Allowance for Credit Losses*” and “*Commercial License and Other Economic Rights*” discussed below.

*Goodwill Impairment Testing* - In January 2017, the FASB issued ASU 2017-04, *Simplifying the Test for Goodwill Impairment*, which eliminates the requirement to perform a hypothetical purchase price allocation to measure goodwill impairment. Under the new standard the goodwill impairment test is performed by comparing the fair value of a reporting unit with its carrying amount, and recognizing an impairment charge for the amount by which the carrying amount of the reporting unit exceeds its fair value, although it cannot exceed the total amount of goodwill allocated to that reporting unit. We adopted this standard on January 1, 2020, and the adoption did not have a material impact on our condensed consolidated financial statements.

*Fair Value Measurement* - In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement: Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820)*, which modifies the disclosure requirements on fair value measurements. We adopted this standard on January 1, 2020, and the adoption did not have a material impact on our condensed consolidated financial statements.

*Collaborative Arrangements* - In November 2018, the FASB issued ASU 2018-18, *Collaborative Arrangements: Clarifying the Interaction between Topic 808 and Topic 606 (Topic 808)*. The new standard clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under Topic 606, *Revenue from Contracts with Customers*, when the counterparty is a customer for a good or service that is a distinct unit of account. The amendments also preclude entities from presenting consideration from transactions with a collaborator that is not a customer together with revenue recognized from contracts with customers. We adopted this standard on January 1, 2020, and the adoption did not have a material impact on our condensed consolidated financial statements.

*Income Taxes* - In December 2019, the FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes*. The standard is expected to reduce cost and complexity related to accounting for income taxes. The new guidance eliminates certain exceptions and clarifies and amends existing guidance to promote consistent application among reporting entities. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. Depending on the amendment, adoption may be applied on a retrospective, modified retrospective or prospective basis. We adopted this standard on a prospective basis on January 1, 2020, and the adoption did not have a material impact on our condensed consolidated financial statements.

#### ***Accounting Standards Not Yet Adopted***

We do not believe that any other recently issued, but not yet effective accounting pronouncements, if adopted, would have a material impact on our condensed consolidated financial statements or disclosures.

#### ***Revenue***

Our revenue is generated primarily from royalties on sales of products commercialized by our partners, Captisol material sales, service revenue, and contract revenue for license fees and development, regulatory and sales based milestone payments.

#### ***Royalties, Service Revenue, and Contract Revenue***

We receive royalty revenue on sales by our partners of products covered by patents that we own. We do not have future performance obligations under these license arrangements. We generally satisfy our obligation to grant intellectual property rights on the effective date of the contract. However, we apply the royalty recognition constraint required under the guidance for sales-based royalties which requires a sales-based royalty to be recorded no sooner than the underlying sale. Therefore, royalties on sales of products commercialized by our partners are recognized in the quarter the product is sold. Our partners generally report sales information to us on a one quarter lag. Thus, we estimate the expected royalty proceeds based on an analysis of historical experience and interim data provided by our partners including their publicly announced sales. Differences between actual and estimated royalty revenues are adjusted for in the period in which they become known, typically the following quarter.

We recognize service revenue for contracted R&D services performed for our customers over time. We measure our progress using an input method based on the effort we expend or costs we incur toward the satisfaction of our performance obligation. We estimate the amount of effort we expend, including the time we estimate it will take us to complete the activities, or costs we incur in a given period, relative to the estimated total effort or costs to satisfy the performance obligation. This results in a percentage that we multiply by the transaction price to determine the amount of revenue we recognize each period. This approach requires us to make estimates and use judgement. If our estimates or judgements change over the course of the collaboration, they may affect the timing and amount of revenue that we recognize in the current and future periods.

Our contract revenue includes license fees and future contingent milestone based payments. We include contingent milestone based payments in the estimated transaction price when there is a basis to reasonably estimate the amount of the payment. These estimates are based on historical experience, anticipated results and our best judgment at the time. If the contingent milestone based payment is sales-based, we apply the royalty recognition constraint and record revenue when the underlying sale has taken place. Significant judgments must be made in determining the transaction price for our sales of intellectual property. Because of the risk that products in development with our partners will not reach development based milestones or receive regulatory approval, we generally recognize any contingent payments that would be due to us upon or after the development milestone or regulatory approval.

#### ***Captisol Sales***

We recognize revenue when control of Captisol material is transferred to our customers in an amount that reflects the consideration we expect to receive from our customers in exchange for those products. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. We consider a performance obligation satisfied once we have transferred control of the product, meaning the customer has the ability to use and obtain the benefit of the Captisol material or intellectual property license right. We recognize revenue for satisfied performance obligations only when we determine there are no uncertainties regarding payment terms or transfer of control. Sales tax and other taxes we collect concurrent with revenue-producing

activities are excluded from revenue. We expense incremental costs of obtaining a contract when incurred if the expected amortization period of the asset that we would have recognized is one year or less or the amount is immaterial. We did not incur any incremental costs of obtaining a contract during the periods reported.

#### *Deferred Revenue*

Depending on the terms of the arrangement, we may also defer a portion of the consideration received because we have to satisfy a future obligation. We use an observable price to determine the stand-alone selling price for separate performance obligations or a cost plus margin approach when one is not available. We have elected to recognize the cost for freight and shipping when control over Captisol material has transferred to the customer as an expense in cost of Captisol.

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the condensed consolidated balance sheet. Except for royalty revenue and certain service revenue, we generally receive payment at the point we satisfy our obligation or soon after. Therefore, we do not generally carry a contract asset balance. Any fees billed in advance of being earned are recorded as deferred revenue. During the three months ended March 31, 2020 and 2019, the amount recognized as revenue that was previously deferred was \$0.4 million and \$1.3 million, respectively.

#### *Disaggregation of Revenue*

The following table represents disaggregation of royalties, Captisol, service revenue and contract revenue (in thousands):

	Three months ended	
	March 31,	
	2020	2019
Royalties		
Kyprolis	\$ 4,405	\$ 3,833
Evomela	1,576	911
Other	584	601
Promacta	—	14,193
	<u>\$ 6,565</u>	<u>\$ 19,538</u>
Captisol	\$ 21,109	\$ 8,959
Service Revenue	\$ 3,357	\$ 3,883
Contract Revenue		
License Fees	\$ 975	\$ 850
Milestone	334	10,254
Other	821	—
	<u>\$ 2,130</u>	<u>\$ 11,104</u>
Total	<u>\$ 33,161</u>	<u>\$ 43,484</u>

### Short-term Investments

Our investments consist of the following at March 31, 2020 and December 31, 2019 (in thousands):

	March 31, 2020				December 31, 2019			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
<b>Short-term investments</b>								
Bank deposits	\$ 284,855	\$ 157	\$ (1,398)	\$ 283,614	\$ 411,690	\$ 188	\$ (3)	\$ 411,875
Corporate bonds	62,191	21	(1,666)	60,546	63,818	161	—	63,979
Commercial paper	127,928	5	(273)	127,660	210,525	43	(16)	210,552
Corporate equity securities	4,506	430	(3,483)	1,453	4,506	416	(1,850)	3,072
Mutual fund	150,747	—	(2,794)	147,953	250,635	—	(249)	250,386
Warrants	—	58	—	58	—	125	—	125
	<u>\$ 630,227</u>	<u>\$ 671</u>	<u>\$ (9,614)</u>	<u>\$ 621,284</u>	<u>\$ 941,174</u>	<u>\$ 933</u>	<u>\$ (2,118)</u>	<u>\$ 939,989</u>

For available-for-sale debt securities with unrealized losses, the new credit losses standard (Topic 326) now requires allowances to be recorded instead of reducing the amortized cost of the investment. This standard limits the amount of credit losses to be recognized for available-for-sale debt securities to be the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The adoption of the new credit losses standard did not have a material impact on our available-for-sale debt securities during the three months ended March 31, 2020.

The following table summarizes our available-for-sale debt securities by contractual maturity (in thousands):

	March 31, 2020	
	Amortized Cost	Fair Value
Within one year	\$ 401,338	\$ 400,627
After one year through five years	73,636	71,193
After five years	—	—
Total	<u>\$ 474,974</u>	<u>\$ 471,820</u>

The following table summarizes our available-for-sale debt securities in an unrealized loss position (in thousands):

	Less than 12 months		12 months or greater		Total	
	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value
<b>March 31, 2020</b>						
Bank deposits	\$ (1,398)	\$ 214,597	\$ —	\$ —	\$ (1,398)	\$ 214,597
Corporate bonds	(1,666)	40,460	—	—	(1,666)	40,460
Commercial paper	(273)	110,666	—	—	(273)	110,666
Total	<u>\$ (3,337)</u>	<u>\$ 365,723</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (3,337)</u>	<u>\$ 365,723</u>
<b>December 31, 2019</b>						
Bank deposits	\$ (3)	\$ 58,584	\$ —	\$ —	\$ (3)	\$ 58,584
Commercial paper	(16)	79,363	—	—	(16)	79,363
Total	<u>\$ (19)</u>	<u>\$ 137,947</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ (19)</u>	<u>\$ 137,947</u>

Our investment policy is capital preservation and we only invested in U.S.-dollar denominated investments. We held a total of 0 positions which were in an unrealized loss position as of March 31, 2020. We believe that we will collect the principal and interest due on our debt securities that have an amortized cost in excess of fair value. The unrealized losses are largely due to changes in interest rates and not to unfavorable changes in the credit quality associated with these securities that impacted our assessment on collectability of principal and interest. We do not intend to sell these securities nor do we believe that we will be required to sell these securities before the recovery of the amortized cost basis. Accordingly, no credit losses were recognized for the three months ended March 31, 2020.

#### ***Accounts Receivable and Allowance for Credit Losses***

Our accounts receivable arise primarily from sales on credit to customers. We establish an allowance for credit losses to present the net amount of accounts receivable expected to be collected. The allowance is determined by using the loss-rate method, which requires an estimation of loss rates based upon historical loss experience adjusted for factors that are relevant to determining the expected collectability of accounts receivable. Some of these factors include macroeconomic conditions that correlate with historical loss experience, delinquency trends, aging behavior of receivables and credit and liquidity quality indicators for industry groups, customer classes or individual customers. During the three months ended March 31, 2020, we considered the current and expected future economic and market conditions surrounding novel coronavirus (COVID-19) pandemic and recorded an additional \$0.2 million of allowance for credit losses as of March 31, 2020.

#### ***Inventory***

Inventory, which consists of finished goods, is stated at the lower of cost or net realizable value. We determine cost using the first-in, first-out method or the specific identification method.

#### ***Goodwill and Other Identifiable Intangible Assets***

Goodwill and other identifiable intangible assets consist of the following (in thousands):

	<u>March 31,</u> <u>2020</u>	<u>December 31,</u> <u>2019</u>
Goodwill	\$ 94,341	\$ 95,229
Definite lived intangible assets		
Complete technology	242,813	242,813
Less: accumulated amortization <sup>(1)</sup>	(53,728)	(50,203)
Trade name	2,642	2,642
Less: accumulated amortization	(1,213)	(1,180)
Customer relationships	29,600	29,600
Less: accumulated amortization	(13,594)	(13,224)
Total goodwill and other identifiable intangible assets, net	<u>\$ 300,861</u>	<u>\$ 305,677</u>

*(1) accumulated amortization for complete technology includes immaterial amount of foreign currency translation adjustments for the complete technology acquired from the Vernalis acquisition.*

## Commercial License and Other Economic Rights

Commercial license and other economic rights consist of the following (in thousands):

	March 31, 2020	December 31, 2019
Aziyo and CorMatrix	\$ 17,696	\$ 17,696
Palvella	10,000	10,000
Selexis	8,602	8,602
Dianomi	2,000	2,000
	38,298	38,298
Less: accumulated amortization attributed to principal or research and development	(21,939)	(18,208)
Less: credit loss adjustments	(5,978)	—
Total commercial license and other economic rights, net	\$ 10,381	\$ 20,090

Commercial license and other economics rights represent a portfolio of future milestone and royalty payment rights acquired from Selexis in April 2013 and April 2015, CorMatrix in May 2016, Palvella in December 2018 and Dianomi in January 2019. Commercial license rights acquired are accounted for as financial assets and other economic rights are accounted for as funded research and developments as further discussed below.

In May 2017, we entered into a Royalty Agreement with Aziyo pursuant to which we will receive royalties from certain marketed products that Aziyo acquired from CorMatrix. We account for the Aziyo commercial license right as a financial asset, and in accordance with ASC 310, *Receivables*, we amortize the commercial license right using the effective interest method whereby we forecast expected cash flows over the term of the arrangement to arrive at an annualized effective interest. The annual effective interest associated with the forecasted cash flows from the Royalty Agreement with Aziyo as of March 31, 2020 is 23%. Revenue is calculated by multiplying the carrying value of the commercial license right by the effective interest.

In December 2018, we entered into a development funding and royalties agreement with Palvella. Pursuant to the agreement, we may receive up to \$0.0 million of milestone payments upon the achievement by Palvella of certain corporate, financing and regulatory milestones for PTX-022, a product candidate being developed to treat pachyonychia congenita. In addition to the milestone payments, Palvella will pay us tiered royalties from 5.0% to 9.8% based on any aggregate annual worldwide net sales of any PTX-022 products, subject to Palvella's right to reduce the royalty rates by making payments in certain circumstances. We paid Palvella an upfront payment of \$10.0 million, which Palvella is required to use to fund the development of PTX-022. We are not obligated to provide additional funding to Palvella for the development or commercialization of PTX-022. We determined the economic rights related to Palvella should be characterized as a funded research and development arrangement, thus we account for it in accordance with ASC 730-20, *Research and Development Arrangements*, and reduce our asset as the funds are expended by Palvella. As of March 31, 2020, the fund has been fully expended by Palvella and our cost basis for the asset has been reduced to zero, we will recognize milestones and royalties as revenue when earned.

We recorded a \$5.5 million pre-tax reserve for credit losses upon adoption of the new credit losses on January 1, 2020. We estimated the credit losses at the individual asset level by considering the performance against the programs, the company operating performance and the macroeconomic forecast. In addition, we have judgmentally applied credit loss risk factors to the future expected payments with consideration given to the timing of the payment. Given the higher inherent credit risk associated with longer term receivables, we applied a lower risk factor to the earlier years and progressively higher risk factors to the later years. During the three months ended March 31, 2020, we further considered the current and expected future economic and market conditions surrounding novel coronavirus (COVID-19) pandemic and recorded an additional \$0.5 million reserve for credit losses in other expense, net, in our condensed consolidated statement of operations for the three months ended March 31, 2020.

See further detail described in *Note 1, Basis of Presentation and Summary of Significant Accounting Policies* of Notes to Consolidated Financial Statements in our 2019 Annual Report.

## Viking

As of March 31, 2020 and December 31, 2019, we recorded our common stock of Viking at fair value of \$88.3 million and \$48.4 million, respectively, in "investment in Viking" in our consolidated balance sheets. We also have outstanding warrants to purchase 1.5 million shares of Viking's common stock at an exercise price of \$1.50 per share. We also recorded the warrants in



“investment in Viking” in our consolidated balance sheet at fair value of \$4.6 million and \$9.9 million at March 31, 2020 and December 31, 2019, respectively.

### *Accrued Liabilities*

Accrued liabilities consist of the following (in thousands):

	March 31, 2020	December 31, 2019
Compensation	\$ 2,321	\$ 1,986
Professional fees	690	1,135
Amounts owed to former licensees	383	381
Royalties owed to third parties	1,062	—
Return reserve	2,899	3,027
Current operating lease liabilities	1,483	1,242
Accrued interest	1,437	690
Other	1,573	1,375
Total accrued liabilities	<u>\$ 11,848</u>	<u>\$ 9,836</u>

### *Share-Based Compensation*

Share-based compensation expense for awards to employees and non-employee directors is recognized on a straight-line basis over the vesting period until the last tranche vests. The following table summarizes share-based compensation expense recorded as components of research and development expenses and general and administrative expenses for the periods indicated (in thousands):

	Three months ended March 31,	
	2020	2019
Share-based compensation expense as a component of:		
Research and development expenses	\$ 2,397	\$ 2,127
General and administrative expenses	3,256	3,220
	<u>\$ 5,653</u>	<u>\$ 5,347</u>

The fair-value for options that were awarded to employees and directors was estimated at the date of grant using the Black-Scholes option valuation model with the following weighted-average assumptions:

	Three months ended March 31,	
	2020	2019
Risk-free interest rate	1.4%	2.5%
Dividend yield	—	—
Expected volatility	47%	44%
Expected term	4.7	5.1

### *Net Income (loss) Per Share*

Basic net income (loss) per share is calculated by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted net income per share is computed based on the sum of the weighted average number of common shares and potentially dilutive common shares outstanding during the period.

All of the 0.6 million weighted average shares of outstanding equity awards as of March 31, 2020 were anti-dilutive due to the net loss for the three months ended March 31, 2020.

Potentially dilutive common shares consist of shares issuable under 2019 Notes and 2023 Notes, stock options and restricted stock. 2019 Notes and 2023 Notes have a dilutive impact when the average market price of our common stock exceeds the applicable conversion price of the respective notes. It is our intent and policy to settle conversions through combination settlement, which involves payment in cash equal to the principal portion and delivery of shares of common stock for the excess of the conversion value over the principal portion. In addition, after May 22, 2018, the 2019 Notes can only be settled in cash and therefore there has been no further impact on income per share of these notes since then. Potentially dilutive common shares from stock options and restricted stock are determined using the average share price for each period under the treasury stock method. In addition, the following amounts are assumed to be used to repurchase shares: proceeds from exercise of stock options and the average amount of unrecognized compensation expense for the awards. The 2019 Notes were paid off upon the maturity date in August 2019. See *Note 4 - Convertible Senior Notes* and *Note 6 - Stockholders' Equity*.

The following table presents the calculation of weighted average shares used to calculate basic and diluted earnings per share (in thousands):

	Three months ended	
	March 31,	
	2020	2019
Weighted average shares outstanding:	16,529	20,447
Dilutive potential common shares:		
Restricted stock	—	45
Stock options	—	785
Shares used to compute diluted income per share	16,529	21,277
Potentially dilutive shares excluded from calculation due to anti-dilutive effect	10,144	7,015

## 2. Fair Value Measurements

### *Assets and Liabilities Measured on a Recurring Basis*

The following table presents the hierarchy for our assets and liabilities measured at fair value (in thousands):

	March 31, 2020				December 31, 2019			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Short-term investments <sup>(1)</sup>	1,453	619,773	58	621,284	3,073	936,791	125	939,989
Investment in Viking common stock	28,258	—	—	28,258	48,425	—	—	48,425
Investment in Viking warrants <sup>(2)</sup>	4,621	—	—	4,621	9,910	—	—	9,910
Total assets	\$ 34,332	\$ 619,773	\$ 58	\$ 654,163	\$ 61,408	\$ 936,791	\$ 125	\$ 998,324
Liabilities:								
Crystal contingent liabilities <sup>(3)</sup>	\$ —	\$ —	\$ 859	\$ 859	\$ —	\$ —	\$ 2,659	\$ 2,659
CyDex contingent liabilities	—	—	413	413	—	—	348	348
Metabasis contingent liabilities <sup>(4)</sup>	—	5,410	—	5,410	—	5,935	—	5,935
Amounts owed to former licensor	77	—	—	77	75	—	—	75
Total liabilities	\$ 77	\$ 5,410	\$ 1,272	\$ 6,759	\$ 75	\$ 5,935	\$ 3,007	\$ 9,017

1. Short-term investments in marketable debt and equity securities are classified as available-for-sale securities based on management's intentions and are at level 2 of the fair value hierarchy, as these investment securities are valued based upon quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market. Short-term investments in mutual funds are valued at their net asset value (NAV) on the last day of the period. We have classified marketable securities with original maturities of greater than one year as short-term investments based upon our ability and intent to use any and all of those marketable securities to satisfy the liquidity needs of

our current operations. In addition, we have investment in warrants resulting from Seelos Therapeutics Inc. milestone payments that were settled in shares during the first quarter of 2019 and are at level 3 of the fair value hierarchy, based on black scholes value estimated by management on the last day of the period.

2. Investment in warrants, which we received as a result of Viking's partial repayment of the Viking note receivable and our purchase of Viking common stock and warrants in April 2016, are classified as level 1 as the fair value is determined using quoted market prices in active markets for the same securities. The change of the fair value is recorded in "Gain (loss) from Viking" in our condensed consolidated statement of operations.
3. The fair value of Crystal contingent liabilities was determined using a probability weighted income approach. Most of the contingent payments are based on development or regulatory milestones as defined in the merger agreement with Crystal. The fair value is subjective and is affected by changes in inputs to the valuation model including management's estimates regarding the timing and probability of achievement of certain developmental and regulatory milestones. Changes in these estimates may materially affect the fair value. During the three months ended March 31, 2020, we paid a \$1.8 million contingent liability on development milestones to former Crystal shareholders.
4. In connection with our acquisition of Metabasis in January 2010, we issued Metabasis stockholders four tradable CVRs, one CVR from each of four respective series of CVR, for each Metabasis share. The CVRs entitle Metabasis stockholders to cash payments as frequently as every six months as cash is received by us from proceeds from the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The liability for the CVRs is determined using quoted prices in a market that is not active for the underlying CVR. The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the agreements may be materially different than the carrying amount of the liability. Several of the Metabasis drug development programs have been outlicensed to Viking, including VK2809. VK2809 is a novel selective TR- $\beta$  agonist with potential in multiple indications, including hypercholesterolemia, dyslipidemia, NASH, and X-ALD. Under the terms of the agreement with Viking, we may be entitled to up to \$375 million of development, regulatory and commercial milestones and tiered royalties on potential future sales including a \$10 million payment upon initiation of a Phase 3 clinical trial.

### ***Assets Measured on a Non-Recurring Basis***

We apply fair value techniques on a non-recurring basis associated with valuing potential impairment losses related to our goodwill, indefinite-lived intangible assets and long-lived assets.

We evaluate goodwill and indefinite-lived intangible assets annually for impairment and whenever circumstances occur indicating that goodwill might be impaired. We determine the fair value of our reporting unit based on a combination of inputs, including the market capitalization of Ligand, as well as Level 3 inputs such as discounted cash flows, which are not observable from the market, directly or indirectly. We determine the fair value of our indefinite-lived intangible assets using the income approach based on Level 3 inputs.

There were no triggering events identified and no indication of impairment of our goodwill, indefinite-lived intangible assets, or long-lived assets during the three months ended March 31, 2020.

### **3. Business Combination**

On July 23, 2019, we acquired privately-held Ab Initio Biotherapeutics, Inc., an antigen-discovery company located in South San Francisco, California. The transaction was accounted for as a business combination. We applied the acquisition method of accounting. Accordingly, we recorded the tangible and intangible assets acquired and liabilities assumed at their estimated fair values as of the acquisition date. We did not incur any material acquisition related costs.

The purchase price of \$12.0 million included \$11.84 million cash consideration paid upon acquisition, net of cash acquired, and \$0.15 million cash holdback for potential indemnification claims. As the acquisition is not considered significant, pro forma information has not been provided. The results of Ab Initio have been included in our results of operations since the date of acquisition.

The preliminary allocation of the purchase price consisted of (1) \$0.03 million of fair value of tangible assets acquired, (2) \$(0.08) million of liabilities assumed, (3) \$7.4 million of acquired technologies, (4) \$(1.6) million of deferred tax liability in connection with the acquired intangibles, and (5) \$6.3 million of goodwill, none of which is deductible for tax purposes. The fair value of the core technology was based on the discounted cash flow method that estimated the present value of the potential royalties, milestones, and collaboration revenue streams derived from the licensing of the related technologies. These projected cash flows were discounted to present value using a discount rate of 12%. The fair value of the core technology is being amortized on a straight-line basis over the weighted average estimated useful life of the approximately 20 years.

The estimated fair values of assets acquired and liabilities assumed, including deferred tax assets and liabilities, and purchased intangibles are provisional. The accounting for these amounts falls within the measurement period and therefore we may adjust these provisional amounts to reflect new information obtained about facts and circumstances that existed as of the acquisition date.

#### 4. Convertible Senior Notes

##### 0.75% Convertible Senior Notes due 2023

In May 2018, we issued \$750.0 million aggregate principal amount of 0.75% convertible senior notes. The net proceeds from the offering, after deducting the initial purchasers' discount and offering expenses, were approximately \$733.1 million. The 2023 Notes will be convertible into cash, shares of common stock, or a combination of cash and shares of common stock, at our election, based on an initial conversion rate, subject to adjustment, of 4.0244 shares per \$1,000 principal amount of the 2023 Notes which represents an initial conversion price of approximately \$248.48 per share.

Holders of the 2023 Notes may convert the notes at any time prior to the close of business on the business day immediately preceding November 15, 2022, under any of the following circumstances:

- (1) during any fiscal quarter (and only during such fiscal quarter) commencing after September 30, 2018, if, for at least 20 trading days (whether or not consecutive) during the 30 consecutive trading day period ending on the last trading day of the immediately preceding fiscal quarter, the last reported sale price of our common stock on such trading day is greater than 130% of the conversion price on such trading day;
- (2) during the five business day period immediately following any 10 consecutive trading day period, in which the trading price per \$1,000 principal amount of notes was less than 98% of the product of the last reported sale price of our common stock on such trading day and the conversion rate on each such trading day; or
- (3) upon the occurrence of certain specified corporate events as specified in the indenture governing the notes.

The notes will have a dilutive effect to the extent the average market price per share of common stock for a given reporting period exceeds the conversion price of \$248.48. As of March 31, 2020, the "if-converted value" did not exceed the principal amount of the 2023 Notes. In connection with the issuance of the 2023 Notes, we incurred \$16.9 million of issuance costs, which primarily consisted of underwriting, legal and other professional fees. The portion of these costs allocated to the liability component totaling \$13.7 million is amortized to interest expense using the effective interest method over the five year expected life of the 2023 Notes. It is our intent and policy to settle conversions through combination settlement, which essentially involves payment in cash equal to the principal portion and delivery of shares of common stock for the excess of the conversion value over the principal portion.

In March 2020, we repurchased \$234.4 million in principal of the 2023 Notes for \$203.8 million in cash, including accrued interest of \$0.6 million. We accounted for the repurchase as a debt extinguishment, which resulted 1) a gain of \$0.7 million reflected in other expense, net, in our condensed consolidated statement of operations for the three months ended March 31, 2020; 2) a \$32.7 million reduction in debt discount, and 3) a \$2.7 million reduction to additional paid in capital, net of tax, related to the reacquisition of the equity component in our condensed consolidated balance sheet as of March 31, 2020. After the repurchases, approximately \$515.6 million in principal amount of the 2023 Notes remain outstanding.

##### *Convertible Bond Hedge and Warrant Transactions*

In conjunction with the 2023 Notes, in May 2018, we entered into convertible bond hedges and sold warrants covering 3,018,327 shares of its common stock to minimize the impact of potential dilution to our common stock and/or offset the cash payments we are required to make in excess of the principal amount upon conversion of the 2023 Notes. The convertible bond hedges have an exercise price of \$248.48 per share and are exercisable when and if the 2023 Notes are converted. We paid \$40.3 million for these convertible bond hedges. If upon conversion of the 2023 Notes, the price of our common stock is above the exercise price of the convertible bond hedges, the counterparties will deliver shares of common stock and/or cash with an aggregate value approximately equal to the difference between the price of common stock at the conversion date and the exercise price, multiplied by the number of shares of common stock related to the convertible bond hedge transaction being exercised. The convertible bond hedges and warrants described below are separate transactions entered into by us and are not part of the terms of the 2023 Notes. Holders of the 2023 Notes and warrants will not have any rights with respect to the convertible bond hedges.

Concurrently with the convertible bond hedge transactions, we entered into warrant transactions whereby we sold warrants covering approximately 3,018,327 shares of common stock with an exercise price of approximately \$315.38 per share, subject to certain adjustments. We received \$90.0 million for these warrants. The warrants have various expiration dates ranging from

August 15, 2023 to February 6, 2024. The warrants will have a dilutive effect to the extent the market price per share of common stock exceeds the applicable exercise price of the warrants, as measured under the terms of the warrant transactions. The common stock issuable upon exercise of the warrants will be in unregistered shares, and we do not have the obligation and do not intend to file any registration statement with the SEC registering the issuance of the shares under the warrants.

The following table summarizes information about the 2023 Notes (in thousands):

	March 31, 2020	December 31, 2019
Principal amount of 2023 Notes outstanding	\$ 515,560	\$ 750,000
Unamortized discount (including unamortized debt issuance cost)	(71,128)	(111,041)
Total long-term portion of notes payable	<u>\$ 444,432</u>	<u>\$ 638,959</u>
Carrying value of equity component of the 2023 Notes	\$ 64,966	\$ 101,422
Fair value of the 2023 Notes outstanding (Level 2)	\$ 425,662	\$ 647,280

## 5. Income Tax

Our effective tax rate may vary from the U.S. federal statutory tax rate due to the change in the mix of earnings in various state jurisdictions with different statutory rates, benefits related to tax credits, and the tax impact of non-deductible expenses, stock award activities and other permanent differences between income before income taxes and taxable income. The effective tax rate for the three months ended March 31, 2020 and 2019 was 20.7% and 20.9%, respectively. The variance from the U.S. federal statutory tax rate of 21% for the three months ended March 31, 2020 was primarily attributable to tax deductions related to stock award activities and foreign derived intangible income tax credits. The variance from the U.S. federal statutory tax rate of 21% for the three months ended March 31, 2019 was primarily attributable to tax deductions related to stock award activities which were recorded as discrete items.

## 6. Stockholders' Equity

We grant options and awards to employees and non-employee directors pursuant to a stockholder approved stock incentive plan, which is described in further detail in *Note 9, Stockholders' Equity*, of Notes to Consolidated Financial Statements in our 2019 Annual Report.

The following is a summary of our stock option and restricted stock activity and related information:

	Stock Options		Restricted Stock Awards	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2019	1,956,379	\$ 77.54	147,259	\$ 125.11
Granted	309,456	\$ 95.61	94,508	\$ 87.25
Options exercised/RSSUs vested	(81,301)	\$ 11.70	(43,904)	\$ 123.28
Forfeited	—	\$ —	—	\$ —
Balance as of March 31, 2020	<u>2,184,534</u>	<u>\$ 82.55</u>	<u>197,863</u>	<u>\$ 107.43</u>

As of March 31, 2020, outstanding options to purchase 1.4 million shares were exercisable with a weighted average exercise price per share of \$66.97.

### Employee Stock Purchase Plan

The price at which common stock is purchased under the Amended Employee Stock Purchase Plan, or ESPP, is equal to 85% of the fair market value of the common stock on the first or last day of the offering period, whichever is lower. As of March 31, 2020, 59,263 shares were available for future purchases under the ESPP.

### Share Repurchases

During the three months ended March 31, 2020, we repurchased \$73.3 million, of our common stock under our stock repurchase programs as discussed below.

In September 2018, our Board of Directors authorized us to repurchase up to \$200.0 million of our common stock from time to time over a period of up to three years. On January 23, 2019, our Board of Directors increased the share repurchase authorization by \$150.0 million. The available amount under the \$350.0 million repurchase program was fully utilized during the third quarter of 2019.

On September 11, 2019, our Board of Directors approved a stock repurchase program authorizing, but not obligating, the repurchase of up to \$00.0 million of our common stock from time to time over the next three years. We expect to acquire shares primarily through open-market transactions and have entered into a Rule 10b5-1 trading plan, and may enter into additional Rule 10b5-1 trading plans in the future, to facilitate open-market repurchases. The timing and amount of repurchase transactions will be determined by management based on our evaluation of market conditions, share price, legal requirements and other factors. Our prior \$350.0 million stock repurchase program mentioned above was terminated in connection with the approval of the new stock repurchase program. Authorization to repurchase \$253.5 million of our common stock remained available as of March 31, 2020.

## 7. Commitment and Contingencies: Legal Proceedings

We record an estimate of a loss when the loss is considered probable and estimable. Where a liability is probable and there is a range of estimated loss and no amount in the range is more likely than any other number in the range, we record the minimum estimated liability related to the claim in accordance with ASC 450, *Contingencies*. As additional information becomes available, we assess the potential liability related to our pending litigation and revise our estimates. Revisions in our estimates of potential liability could materially impact our results of operations.

In November 2017, CyDex, our wholly-owned subsidiary, received a Paragraph IV certification Notice Letter from Teva stating that Teva had submitted an ANDA to the FDA, seeking approval to manufacture, offer to sell, and sell a generic version of EVOMELA® prior to the expiration of any of U.S. Patent Nos. 8,410,077 (“the ‘077 patent”); 9,200,088 (“the ‘088 patent”), or 9,493,582 (“the ‘582 patent”), and alleging that these patents, each of which relates to Captisol®, are invalid, unenforceable, and/or will not be infringed by Teva’s ANDA product. On December 20, 2017, CyDex filed a complaint against Teva in the U.S. District Court for the District of Delaware, asserting that the filing of Teva’s ANDA constitutes infringement of each of the ‘077 patent, the ‘088 patent, and the ‘582 patent. On March 22, 2018, Teva filed an answer and counterclaims seeking declarations of non-infringement and invalidity as to each of the asserted patents and, on April 12, 2018, CyDex filed an answer to Teva’s counterclaims. On October 31, 2019, CyDex, Teva, and Acrotech Biopharma L.L.C. (the holder of the NDA for EVOMELA®) entered into a Confidential Settlement Agreement, settling this patent litigation. As a result of the settlement, Teva will be permitted to market a generic version of EVOMELA® in the United States on June 1, 2026 or earlier under certain circumstances. The terms of the settlement agreement are otherwise confidential.

On April 9, 2019, CyDex received a Paragraph IV certification Notice Letter from Alembic Global Holdings SA (“Alembic”) stating that Alembic had submitted an ANDA to the FDA, seeking approval to manufacture, offer to sell, and sell a generic version of EVOMELA® prior to the expiration of any of the ‘077 patent; the ‘088 patent, the ‘582 patent, or U.S. Patent No. 10,040,872 (“the ‘872 patent”), and alleging that these patents, each of which relates to Captisol®, are invalid, unenforceable, and/or would not be infringed by Alembic’s ANDA product. On May 23, 2019, CyDex filed a complaint against Alembic, Alembic Pharmaceuticals, Ltd., and Alembic Pharmaceuticals, Inc. in the U.S. District Court for the District of Delaware, asserting that the filing of Alembic’s ANDA constitutes infringement of each of the ‘088 patent and the ‘582 patent. On July 29, 2019, Alembic filed an answer and counterclaims seeking declarations of non-infringement and invalidity as to each of the asserted patents and, on August 19, 2019, CyDex filed an answer to Alembic’s counterclaims. On April 7, 2020, the Court ordered that the Scheduling Order be amended such that, *inter alia*, the fact discovery cut off was set for November 2, 2020, the close of expert discovery was set for March 22, 2021, and that May 17, 2021 would remain the first day of a five-to-six-day bench trial.

On September 16, 2019, CyDex received a Paragraph IV certification Notice Letter from Lupin Ltd. (“Lupin”) stating that Lupin had submitted an ANDA to the FDA, seeking approval to manufacture, offer to sell, and sell a generic version of EVOMELA® prior to the expiration of any of the ‘077 patent; the ‘088 patent, the ‘582 patent, or the ‘872 patent, and alleging that these patents, each of which relates to Captisol®, are invalid, unenforceable, and/or would not be infringed by Lupin’s ANDA product. CyDex filed a complaint on October 29, 2019, alleging patent infringement against Lupin. Lupin filed an answer on December 11, 2019 and counterclaimed for declaratory judgments of invalidity and non-infringement as to all four patents and CyDex filed its answer to Lupin’s counterclaims on January 2, 2020.

On October 31, 2019, we received three civil complaints filed in the US District Court for the Northern District of Ohio on behalf of several Indian tribes. The Northern District of Ohio is the Court that the Judicial Panel on Multi-District Litigation (“JPML”) has assigned several hundred civil cases which have been designated as a Multi-District Litigation (“MDL”) and captioned In Re: National Prescription Opiate Litigation. The allegations in these complaints focus on the activities of defendants other than the company and no individualized factual allegations have been advanced against us in any of the three complaints. We reject all claims raised in the complaints and intend to vigorously defend these matters.

## **8. Leases**

We lease certain office facilities and equipment primarily under various operating leases. Our leases have remaining contractual terms up to seven years, some of which include options to extend the leases for up to seven years. Our lease agreements do not contain any material residual value guarantees, material restrictive covenants, or material termination options. Our operating lease costs are primarily related to facility leases for administration offices and research and development facilities, and our finance leases are immaterial.

Lease assets and lease liabilities are recognized at the commencement of an arrangement where it is determined at inception that a lease exists. Lease assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments arising from the lease. These assets and liabilities are initially recognized based on the present value of lease payments over the lease term calculated using our incremental borrowing rate generally applicable to the location of the lease asset, unless the implicit rate is readily determinable. Lease assets also include any upfront lease payments made and lease incentives. Lease terms include options to extend or terminate the lease when it is reasonably certain that those options will be exercised. For leases with a term of 12 months or less, we elected to not recognize lease assets and lease liabilities and expense the leases over a straight-line basis for the term of those leases.

In addition to base rent, certain of our operating leases require variable payments, such as insurance and common area maintenance. These variable lease costs, other than those dependent upon an index or rate, are expensed when the obligation for those payments is incurred. Leases with an initial term of 12 months or less are not recorded on the balance sheet, and the expense for these short-term leases and for operating leases is recognized on a straight-line basis over the lease term.

The depreciable life of lease assets and leasehold improvements is limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise.

## **9. Subsequent Events**

### ***Icagen Acquisition***

On April 1, 2020, we acquired the core assets, including its partnered programs and ion channel technology from Icagen and certain of its affiliates for \$5.0 million in cash. Icagen will also be entitled to receive up to an additional \$25.0 million of cash payments based on certain revenue milestones.

### ***Bond Hedge Arrangement***

On April 6, 2020, in connection with the repurchases of \$234.4 million in principal of the 2023 Notes for \$203.8 million in cash, including accrued interest of \$0.6 million, during the quarter ended March 31, 2020, we entered into amendments (the “Amendments”) with Barclays Bank PLC, Deutsche Bank AG, London Branch, and Goldman Sachs & Co. LLC to the convertible note hedge transactions, dated May 17, 2018 and May 18, 2018 (collectively, the “Convertible Note Hedge Transactions”) we initially entered into in connection with the issuance of the 2023 Notes. The Amendments provide that the options under the Convertible Note Hedge Transactions corresponding to such repurchased 2023 Notes will remain outstanding notwithstanding such repurchase.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

***Caution:** This discussion and analysis may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed in Part II, Item 1A: "Risk Factors." This outlook represents our current judgment on the future direction of our business. These statements include those related to our Captisol-related revenues, our Kyprolis, and other product royalty revenues, product returns, and product development. Actual events or results may differ materially from our expectations. For example, there can be no assurance that our revenues or expenses will meet any expectations or follow any trend(s), that we will be able to retain our key employees or that we will be able to enter into any strategic partnerships or other transactions. We cannot assure you that we will receive expected Kyprolis, Captisol and other product revenues to support our ongoing business or that our internal or partnered pipeline products will progress in their development, gain marketing approval or achieve success in the market. In addition, ongoing or future arbitration, or litigation or disputes with third parties may have a material adverse effect on us. Such risks and uncertainties, and others, could cause actual results to differ materially from any future performance suggested. We undertake no obligation to make any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this quarterly report. This caution is made under the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act.*

Our trademarks, trade names and service marks referenced herein include Ligand. Each other trademark, trade name or service mark appearing in this quarterly report belongs to its owner.

References to "Ligand Pharmaceuticals Incorporated," "Ligand," the "Company," "we" or "our" include Ligand Pharmaceuticals Incorporated and our wholly owned subsidiaries.

### Overview

We are a revenue generating biopharmaceutical company focused on developing and acquiring technologies that help pharmaceutical companies discover and develop medicines. We employ research technologies such as antibody discovery technologies, structure-based drug design, formulation science and liver targeted pro-drug technologies to assist companies in their work toward securing prescription drug and biologic approvals. We currently have partnerships and license agreements with over 120 pharmaceutical and biotechnology companies. Over 200 different programs are in various stages of commercialization and development and fully funded by our collaboration partners and licensees. We have contributed novel research and technologies for approved medicines that treat cancer, osteoporosis, fungal infections and postpartum depression, among others. Our collaboration partners and licensees have programs currently in clinical development targeting cancer, seizure, diabetes, cardiovascular disease, muscle wasting, liver disease, and kidney disease, among others. We have over 1,200 issued patents worldwide.

We have assembled our large portfolio of fully-funded programs either by licensing our own proprietary drug development programs, licensing our platform technologies such as Captisol or OmniAb to partners for use with their proprietary programs, or acquiring existing partnered programs from other companies. Fully-funded programs, which we refer to as "shots on goal," are those for which our partners pay all of the development and commercialization costs. For our internal programs, we generally plan to advance drug candidates through early-stage drug development or clinical proof-of-concept and then seek partners to continue development and potential commercialization.

Our business model creates value for stockholders by providing a diversified portfolio of biotech and pharmaceutical product revenue streams that are supported by an efficient and low corporate cost structure. Our goal is to offer investors an opportunity to participate in the promise of the biotech industry in a profitable, diversified and lower-risk business than a typical biotech company. Our business model is based on doing what we do best: drug discovery, early-stage drug development, product reformulation and partnering. We partner with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) to ultimately generate our revenue. We believe that focusing on discovery and early-stage drug development while benefiting from our partners' development and commercialization expertise will reduce our internal expenses and allow us to have a larger number of drug candidates progress to later stages of drug development.

Our revenue consists of four primary elements: royalties from commercialized products, sale of Captisol material, service revenue for contracted R&D services performed for our customers over time, and contract revenue from license, milestone and other payments. In addition to discovering and developing our own proprietary drugs, we selectively pursue acquisitions to bring in new assets, pipelines, and technologies to aid in generating additional potential new revenue streams.



## Impact of COVID-19 Pandemic

The current COVID-19 worldwide pandemic has presented substantial public health and economic challenges and is affecting our employees and partners, patients, communities and business operations, as well as the U.S. and global economy and financial markets. International and U.S. governmental authorities in impacted regions are taking actions in an effort to slow the spread of COVID-19, including issuing varying forms of “stay-at-home” orders, and restricting business functions outside of one’s home. In response, we have closed our executive offices with our administrative employees continuing their work remotely and limited the number of staff in our research and development laboratories and other facilities. The continued spread of the COVID-19 pandemic and the measures taken by the governments of countries have affected, and could continue to affect, our business and the business of our partners, including future disruptions to our supply chain and the manufacture or shipment of drug substance and finished drug product for Captisol, delays by us or our partners in the initiation or enrollment of patients in clinical trials, discontinuations by patients enrolled in clinical trials, difficulties launching or commercializing products and other related activities, which could delay ongoing clinical trials, increase development costs, reduce royalty revenues and have a material adverse effect on our business, financial condition and results of operations. Several of our partners have reported that their operations have been impacted including delays in research and development programs and deprioritizing clinical trials in favor of treating patients who have contracted the virus or to prevent the spread of the virus. This may lead to clinical trial protocol deviations or to discontinuation of treatment for patients who are currently enrolled in the clinical trials being conducted by us or our partners. In addition, certain of our partners have reported negative impacts on product sales which will impact our royalty revenues.

While some of our partners have reported delays or reduced sales due to COVID-19, some of our other partners are working to develop drugs to treat COVID-19. For example, we are supplying Captisol to partners, including Gilead Sciences for Veklury® (remdesivir), a first new treatment for COVID-19 available under an EUA and is also being evaluated in multiple ongoing clinical trials and, as a result, we have worked to increase our manufacturing of Captisol to meet this increased demand. We believe we have adequate supply of Captisol and do not expect any significant risk or disruption to our supply chain for the foreseeable future. In addition, certain of our OmniAb partners have initiated antibody discovery programs for the potential treatment of COVID-19, which may lead to future milestone or royalty revenues if these programs are successful.

The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, the businesses of our partners, our results of operations and our financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including new information that may emerge concerning COVID-19, the actions taken to contain it or treat its impact, including the timing and extent of governments reopening activities, and the economic impact on local, regional, national and international markets. For additional information on the various risks posed by COVID-19 pandemic, please read *Item 1A. Risk Factors* included in this report.

## Portfolio Program Updates

### *Kyprolis® (carfilzomib), an Amgen Product Utilizing Captisol*

- Amgen reported first quarter of 2020 Kyprolis® sales of \$280 million.

### *OmniAb® Platform Updates*

- As of March 31, 2020, we had more than 80 OmniAb-related Shots on Goal in our partnered portfolio, representing over 40% of our pipeline.
- OmniAb partners have filed or been issued more than 30 U.S. and international patent applications or patents, claiming OmniAb-derived antibodies as the primary invention.
- The number of active or recently completed clinical trials that include an OmniAb-derived antibody reached 43, with new clinical trial starts in Q1 2020 that included:
  - two new Phase 1/1b trials;
  - three new Phase 2 trials; and
  - two new Phase 3 trials.
- Two COVID-19 antibody programs are being pursued by our partners. One is a multinational Big Pharma partner that has initiated a program using OmniChicke®, and the other is focused on antibodies derived from OmniRat®.
- Immunovant announced positive results from its Phase 2a proof-of-concept study of OmniAb-derived IMVT-1401 in thyroid eye disease. IMVT-1401 is a novel investigational anti-FcRn antibody delivered by subcutaneous injection. The results showed a 65% mean reduction in total IgG observed from baseline to end of treatment, with a

pharmacodynamic response nearly identical to modeled predictions for the dosing regimen tested in the trial. IMVT-1401 was generally well-tolerated.

- Janssen Pharmaceuticals initiated a Phase 1b trial of OmniAb-derived teclistamab (also known as JNJ-64007957) in combination with subcutaneous daratumumab in patients with multiple myeloma to identify a Phase 2 dose regimen and assess safety of the combination.
- Gloria Biosciences submitted an application for marketing approval in China for OmniAb-derived zimberelimab for the treatment of classical Hodgkin lymphoma, marking multiple OmniAb drug applications filed seeking approval.
- Arcus Biosciences and Taiho Pharmaceutical announced Taiho's exercise of its option for an exclusive license to zimberelimab (also known as AB122) for Japan and other Asian countries, excluding China.
- We entered into an OmniAb Platform agreement with Pandion Therapeutics, and Pandion subsequently closed an \$80 million financing and announced that proceeds will support the advancement of their pipeline of modular proteins and bi-functional antibodies for the treatment of autoimmune diseases.
- CStone Pharmaceuticals and Blueprint Medicines initiated a Phase 1b/2 clinical trial of fisogatinib in combination with OmniAb-derived CS1001 for patients with hepatocellular carcinoma. CStone also announced that the first patient was dosed in the global proof-of-concept study of OmniAb-derived CS1001 in combination with Bayer's regorafenib in patients with advanced solid tumors.
- Harbour BioMed raised \$75 million to fund the clinical development of an OmniAb-derived anti-FcRn antibody batoclimab, among other uses. Harbour also announced first patient dosing of Phase 1b/2a study of batoclimab for treating neuromyelitis optica spectrum disorder.
- OmniAb partner GenMab highlighted DuoBody-PD-L1x4-1BB (GEN1046) at the J.P. Morgan investor conference in January; the GEN1046 anti-PD-L1 is derived from OmniRat.

### ***Captisol® Business Update***

- Our Captisol is a patented ultra-high pure form of sulfobutylether beta-cyclodextrin (SBECD) that is built upon drug master files maintained in multiple countries and has an extensive safety record for use in intravenous, inhaled and subcutaneous formulations, among others. We are the sole supplier of Captisol globally.
- During the first quarter of 2020, we announced we are supplying Captisol to partners for remdesivir in clinical trials and for manufacturing scale-up as a treatment for COVID-19.
- On May 1, 2020, remdesivir was the first new treatment for COVID-19 to be issued an Emergency Use Authorization. Gilead announced that it intends to donate 1.5 million doses of remdesivir. Gilead has also stated that it is expanding manufacturing to increase product supply to over 1 million treatment courses by December 2020 ahead of potential increased demand.
- On April 29, 2020 Gilead announced topline results from the open-label, Phase 3 SIMPLE trial evaluating 5-day and 10-day dosing durations of the investigational antiviral remdesivir in hospitalized patients with severe manifestations of COVID-19 disease. The study demonstrated that patients receiving a 5-day treatment course of remdesivir achieved similar improvement in clinical status compared with those taking a 10-day treatment course. The study demonstrated the potential for some patients to be treated with a 5-day regimen, which could significantly expand the number of patients who could be treated with Gilead's current supply of remdesivir. The study results complement positive data from a placebo-controlled Phase 3 study of remdesivir conducted by the National Institute for Allergy and Infectious Diseases also reported on April 29, 2020, and may help to determine the optimal duration of treatment with remdesivir.
- On May 7, 2020, Gilead announced the approval of Veklury® (remdesivir) in Japan for patients with Severe COVID-19.
- Our Captisol network is served by manufacturing plants in two European countries and five distribution facilities around the globe, all of which remain fully operational. We have substantial capacity to supply Captisol manufactured according to cGMP and our focus is to ensure sufficient supply to meet all existing and future partner needs, and to supply Gilead. We are also evaluating plans with our supply partners to further increase capacity by bringing additional sites online, if needed.
- During the first quarter of 2020, we entered into Captisol clinical use agreements with Double-Crane Pharmaceuticals and OnKure Therapeutics.

### ***Vernalis Business Update***

- We recently entered into an exclusive worldwide license agreement with Neuritek Therapeutics to develop and commercialize V158866, a novel oral, selective fatty acid amide hydrolase inhibitor that was discovered using the Vernalis Design Platform. Neuritek plans to develop V158866 for post-traumatic stress disorder and other central nervous system diseases. Under the terms of the agreement, we will receive an upfront license fee and is eligible to

receive over \$240 million in milestones and tiered royalties on net sales six to eight percent. On March 31, 2020, Neuritek announced it had secured approximately \$27 million in a capital commitment from the GEM Global Yield LLC SCS.

- Third-party academic drug analyses suggest a potential role for heat shock protein 90 (Hsp90) inhibitors in treating COVID-19 infection. Based on these studies, we are evaluating potential collaborations or partnerships relating to intravenous luminespib (AUY-922) as a potential treatment for patients with COVID-19. Luminespib is a Phase 2-ready Hsp90 inhibitor, previously investigated in clinical trials for cancer.

#### **Additional Pipeline and Partner Developments**

- Retrophin announced that the first 190 patients have been enrolled in its pivotal Phase 3 DUPLEX Study evaluating the safety and efficacy of sparsentan in focal segmental glomerulosclerosis.
- Nucorion Pharmaceuticals initiated a Phase 1 clinical trial of NCO-48 Fumarate (NCO-1010), an oral prodrug of the nucleotide tenofovir utilizing our LTP Platform™ technology for the potential treatment of hepatitis B. The first-in-human, double-blind, placebo-controlled, randomized, ascending single oral dose study will evaluate the safety and tolerability of NCO-48 Fumarate in healthy subjects. Top-line results are expected in August 2020.
- Palvella Therapeutics announced the completion of enrollment in its seamless Phase 2/3 VALO Study of PTX-022 (QTORIN™ 3.9% rapamycin anhydrous gel) for the treatment of adults with pachyionchia congenita.
- Verona Pharma reported positive topline data in its 4-week Phase 2b COPD study with nebulized ensifentrine on top of tiotropium therapy, and also reported positive efficacy and safety data with a single dose of the pressurized metered-dose inhaler (pMDI) formulation of ensifentrine in a Phase 2 COPD study. Ensifentrine has demonstrated statistically significant and clinically meaningful improvements in lung function in Phase 2 studies in COPD patients when delivered via all three widely used inhaled formulations: nebulizer, dry powder inhaler and pMDI.
- Corvus Pharmaceuticals presented clinical data from its Phase 1b/2 trial of ciferadenant at the 2020 American Society of Clinical Oncology’s Genitourinary Cancers Symposium.
- We regained global rights to the novel glucagon receptor antagonist (formerly known as LGD-6972 and RVT-1502) from Metavant Sciences upon termination of the Roivant License Agreement.

#### **Business Development and Corporate Highlights**

- Following the close of the first quarter, we completed acquisition of the core assets of Icagen, Inc.’s North Carolina operations, including partnered programs, proprietary ion channel screening and assay platforms, x-ray fluorescence capabilities, custom screening technologies and novel unpartnered preclinical-stage molecules for \$15 million in cash.
- We announced the launch of our Environmental, Social and Corporate Responsibility Governance section of our corporate website. Please visit <https://investor.ligand.com/corporate-responsibility> for current disclosures.
- We repurchased \$234.4 million in principal of the 2023 Notes for \$203.8 million in cash, including accrued interest of \$0.6 million.

#### **Results of Operations**

##### **Revenue**

(Dollars in thousands)

	Q1 2020	Q1 2019	Change	% Change
Royalties	\$ 6,565	\$ 19,538	\$ (12,973)	(66) %
Captisol	21,109	8,959	12,150	136 %
Service revenue	3,357	3,883	(526)	(14) %
Contract revenue	2,130	11,104	(8,974)	(81) %
Total revenue	\$ 33,161	\$ 43,484	\$ (10,323)	(24) %

Royalty revenue is a function of our partners’ product sales and the applicable royalty rate. Kyprolis royalty rates are under a tiered royalty rate structure with the highest tier being 3.0%. Evomela has a fixed royalty rate of 20%. On March 6, 2019, we sold all of our rights, title and interest in and to the Promacta license to Royalty Pharma; therefore, the royalty revenue for Promacta only reflected the revenue prior to the sale. Subsequent to March 6, 2019, we no longer recognize revenue related to Promacta. Effective the first quarter of 2020, we began to present service revenue and contract revenue separately, which were combined in license fees, milestones and other revenues in prior years. Service revenue includes revenue generated from our Vernalis and OmniChicken businesses as we collaborate with partners on early stage discovery and development work. Contract revenue includes license fees and development, regulatory and sales based milestone payments.

The following tables represent royalty revenue by program:

(in millions)	Q1 2020 Estimated Partner Product Sales	Effective Royalty Rate	Q1 2020 Royalty Revenue	Q1 2019 Partner Product Sales	Effective Royalty Rate	Q1 2019 Royalty Revenue
Kyprolis	\$ 286.0	1.5 %	\$ 4.4	\$ 247.0	1.5 %	\$ 3.8
Evomela	7.9	20.0 %	1.6	4.5	20.0 %	0.9
Other	45.8	1.3 %	0.6	47.9	1.3 %	0.6
Promacta	N/A	N/A	N/A	225.1	6.3 %	14.2
<b>Total</b>	<b>\$ 339.7</b>		<b>\$ 6.6</b>	<b>\$ 524.5</b>		<b>\$ 19.5</b>

Total revenue decreased by \$10.3 million, or 24%, to \$33.2 million in Q1 2020 compared to \$43.5 million in Q1 2019 due to the sale of Promacta in the first quarter of 2019 and decreased contract revenue due to the disruption from COVID-19 as some partners delay starting clinical trials or pause patient enrollment in ongoing trials. The decreases were partially offset by an increase in Captisol material sales during the first quarter of 2020 due to an increased demand from Gilead Sciences for remdesivir as a first new treatment for COVID-19 available under an EUA and is also being evaluated in multiple ongoing clinical trials.

#### Operating Costs and Expenses

(Dollars in thousands)	Q1 2020	% of Revenue	Q1 2019	% of Revenue
Costs of Captisol	\$ 4,683		\$ 3,858	
Amortization of intangibles	3,535		3,503	
Research and development	11,891		11,289	
General and administrative	9,264		11,088	
<b>Total operating costs and expenses</b>	<b>\$ 29,373</b>	<b>89%</b>	<b>\$ 29,738</b>	<b>68%</b>

Total operating costs and expenses decreased by \$0.4 million or 1%. Cost of Captisol increased primarily due to higher Captisol sales during Q1 2020. General and administrative expenses decreased in Q1 2020 as compared to Q1 2019 primarily due to lower legal expenses.

#### Other Income (Expense)

(Dollars in thousands)	Q1 2020	Q1 2019	Change
Gain (loss) from Viking	\$ (25,457)	\$ 17,293	\$ (42,750)
Interest income	4,730	5,909	(1,179)
Interest expense	(8,548)	(8,906)	358
Other expense, net	(4,928)	1,874	(6,802)
<b>Total other income (expense), net</b>	<b>\$ (34,203)</b>	<b>\$ 16,170</b>	<b>\$ (50,373)</b>

The fluctuation in the gain (loss) from Viking common stock and warrants are driven by the changes in the fair value of the Viking common stock and warrants.

Interest income consists primarily of interest earned on our short-term investment investments. The decrease in Q1 2020 as compared to Q1 2019 was due to the decrease in our short-term investment balance resulting from the proceeds used in share repurchase and 2023 Notes repurchase during the first quarter of 2020.

Interest expense includes the 0.75% coupon cash interest expense in addition to the non-cash accretion of discount (including the amortization of debt issuance cost) on our 2023 Notes for the three months ended March 31, 2020. The slight decreases in Q1 2020 as compared to Q1 2019 were primarily due to lower average debt outstanding balance for the three months ended March 31, 2020 as compared to prior period. The 2019 Notes were paid off upon the maturity date in August 2019. See *Note 4 - Convertible Senior Notes and Note 6 - Stockholders' Equity*.

Other expense, net, for the three months ended March 31, 2020 increased as compared to the prior period. The increase was primarily due to a \$5.3 million unrealized and realized loss in equity investments, partially offset by a \$0.7 million gain on debt extinguishment during the three months ended March 31, 2020. See *Note 4 - Convertible Senior Notes*.

#### **Income Tax Benefit (Expense)**

(Dollars in thousands)	Q1 2020	Q1 2019	Change
Income (loss) before income taxes	\$ (30,415)	\$ 842,713	\$ (873,128)
Income tax benefit (expense)	6,284	(176,376)	182,660
Income (loss) from operations	<u>\$ (24,131)</u>	<u>\$ 666,337</u>	<u>\$ (690,468)</u>
Effective tax rate	20.7 %	20.9 %	

We compute our income tax provision by applying the estimated annual effective tax rate to income from operations and adding the effects of any discrete income tax items specific to the period. Our effective tax rate for the three months ended March 31, 2020 and 2019 was approximately 20.7% and 20.9%, respectively. The variances from the U.S. federal statutory tax rate of 21% for both periods were primarily attributable to tax deductions related to stock award activities.

#### **Liquidity and Capital Resources**

As of March 31, 2020, our cash, cash equivalents, and marketable securities totaled \$0.8 billion, which were decreased by \$298.2 million from the end of last year, due to factors described in the "Cash Flow Summary" below. Our primary source of liquidity, other than our holdings of cash, cash equivalents, and investments, has been cash flows from operations. Our ability to generate cash from operations provides us with the financial flexibility we need to meet operating, investing, and financing needs.

Historically, we have liquidated our short-term investments and/or issued debt and equity securities to finance our business needs as a supplement to cash provided by operating activities. Our short-term investments include U.S. government debt securities, investment-grade corporate debt securities, mutual funds and certificates of deposit. We have established guidelines relative to diversification and maturities of our investments in order to provide both safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. Additionally, we own certain securities which are classified as short-term investments that we received as a result of a milestone and an upfront license payment as well as 6.0 million shares of common stock in Viking.

In May 2018, we issued an aggregate principal amount of \$750.0 million of the 2023 Notes. In conjunction of the 2023 Notes offering, we used a portion of the proceeds from such issuance totaling \$49.7 million to repurchase 260,000 shares of our common stock. In March 2020, we repurchased \$234.4 million in principal of the 2023 Notes for \$203.8 million in cash, including accrued interest of \$0.6 million. After the repurchases, \$515.6 million in principal amount of the 2023 Notes remain outstanding. We may continue to use cash on hand to repurchase additional 2023 Notes through open-market transactions, including by entering into a Rule 10b5-1 trading plan to facilitate open-market repurchases, or otherwise, from time to time. The timing and amount of repurchase transactions will be determined by management based on the evaluation of market conditions, trading price of the 2023 Notes, legal requirements and other factors. The 2023 Notes were not convertible as of March 31, 2020. It is our intent and policy to settle conversions through combination settlement, which essentially involves payment in cash equal to the principal portion and delivery of shares of common stock for the excess of the conversion value over the principal portion. See *Note 4 - Convertible Senior Notes*.

In September 2018, our Board of Directors authorized us to repurchase up to \$200.0 million of our common stock from time to time over a period of up to three years. On January 23, 2019, our Board of Directors increased the share repurchase authorization by \$150.0 million. This \$350.0 million repurchase plan was fully utilized during the third quarter of 2019.

On September 11, 2019, our Board of Directors approved a stock repurchase program authorizing, but not obligating, the repurchase of up to \$500.0 million of our common stock from time to time over the next three years. We expect to acquire shares primarily through open-market transactions and have entered into a Rule 10b5-1 trading plan, and may enter into additional Rule 10b5-1 trading plans in the future, to facilitate open-market repurchases. The timing and amount of repurchase transactions will be determined by management based on our evaluation of market conditions, share price, legal requirements and other factors. Our prior \$350.0 million stock repurchase program mentioned above was terminated in connection with the approval of the new stock repurchase program. Authorization to repurchase \$253.5 million of our common stock remained available as of March 31, 2020.

We believe that our existing funds, cash generated from operations and existing sources of and access to financing are adequate to fund our need for working capital, capital expenditures, debt service requirements, continued advancement of research and development efforts, potential stock repurchases and other business initiatives we plan to strategically pursue, including acquisitions and strategic investments.

As of March 31, 2020, we had \$6.7 million in fair value of contingent consideration liabilities associated with prior acquisitions to be settled in future periods.

#### **Leases and Off-Balance Sheet Arrangements**

We lease our office facilities under operating lease arrangements with varying terms through September 2026. The agreements provide for increases in annual rents based on changes in the Consumer Price Index or fixed percentage increases of 3.0%. See further information in *Note 9, Leases*. We had no off-balance sheet arrangements at March 31, 2020 and December 31, 2019.

#### **Cash Flow Summary**

(Dollars in thousands)	Q1 2020	Q1 2019
Net cash provided by (used in):		
Operating activities	\$ 16,922	\$ 45,258
Investing activities	\$ 308,536	\$ 94,777
Financing activities	\$ (279,305)	\$ (152,576)

During the three months ended March 31, 2020, we repurchased \$234.4 million in principal of the 2023 Notes for \$203.8 million in cash, including accrued interest of \$0.6 million; and used \$73.3 million to repurchase our common stock. During the three months ended March 31, 2019, we generated \$827 million from the sale of Promacta and used \$151.6 million to repurchase our common stock.

#### **Critical Accounting Policies**

Certain of our policies require the application of management judgment in making estimates and assumptions that affect the amounts reported in our consolidated financial statements and the disclosures made in the accompanying notes. Those estimates and assumptions are based on historical experience and various other factors deemed applicable and reasonable under the circumstances. The use of judgment in determining such estimates and assumptions is by nature, subject to a degree of uncertainty. Accordingly, actual results could differ materially from the estimates made. There have been no material changes in our critical accounting policies and estimates other than the adoption of the Accounting Standards Updates described in Item 1. Condensed Consolidated Financial Statements - *Note 1, "Basis of Presentation and Summary of Significant Accounting Policies,"* related to allowance for credit losses, as compared to the critical accounting policies and estimates described in our 2019 Annual Report.

#### **Item 3. Quantitative and Qualitative Disclosures about Market Risk**

There were no substantial changes to our market risks in the three months ended March 31, 2020, when compared to the disclosures in Item 7A of our 2019 Annual Report.

#### **Item 4. Controls and Procedures**

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures as of March 31, 2020 were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

There were no changes in our internal control over financial reporting that occurred during the quarter ended March 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## **PART II. OTHER INFORMATION**

### **Item 1. Legal Proceedings**

For information that updates the disclosures set forth under Part I, Item 3, “Legal Proceedings” in our 2019 Annual Report, refer to *Note 7, Commitment and Contingencies: Legal Proceedings*, to the Condensed Consolidated Financial Statements contained in Part I, Item 1 of this report.

### **Item 1A. Risk Factors**

There have been no material changes to the risk factors included in “Item 1A. Risk Factors” in our 2019 Annual Report, other than as set forth below:

***Our business is subject to risks arising from epidemic diseases, such as the recent COVID-19 pandemic, which has impacted and could continue to impact our business.***

The current COVID-19 worldwide pandemic has presented substantial public health and economic challenges and is affecting our employees and partners, patients, communities and business operations, as well as the U.S. and global economy and financial markets. International and U.S. governmental authorities in impacted regions are taking actions in an effort to slow the spread of COVID-19, including issuing varying forms of “stay-at-home” orders, and restricting business functions outside of one’s home. In response, we have closed our executive offices with our administrative employees continuing their work remotely and limited the number of staff in our research and development laboratories and other facilities.

Many of our partners have reported that their operations have been impacted including delays in research and development programs and deprioritizing clinical trials in favor of treating patients who have contracted the virus or to prevent the spread of the virus. This may lead to clinical trial protocol deviations or to discontinuation of treatment for patients who are currently enrolled in the clinical trials being conducted by us or our partners. In addition, certain of our partners have reported negative impacts on product sales which will impact our royalty revenues. As the COVID-19 pandemic continues to spread around the globe, we may experience disruptions that could severely impact our business, drug manufacturing and supply chain, nonclinical activities and clinical trials and our partners’ business may be impacted in similar ways, including due to:

- delays or difficulties in enrolling patients in clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting or supporting clinical site investigators and clinical site staff;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as clinical trial sites and hospital staff supporting the conduct of clinical trials;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others or interruption of clinical trial subject visits and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- interruption of, or delays in receiving, supplies of Captisol or other product or product candidates from contract manufacturing organizations due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems, which may result in cancellations of Captisol orders or refunds if we fail to deliver Captisol timely;
- delays in clinical sites receiving the supplies and materials needed to conduct clinical trials and interruption in global shipping that may affect the transport of clinical trial materials;
- interruptions in nonclinical studies due to restricted or limited operations at laboratory facility or those of outsourced service providers;
- limitations on employee resources that would otherwise be focused on the conduct of nonclinical studies or clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- delays in receiving approval from local regulatory authorities to initiate planned clinical trials;

- changes in local regulations as part of a response to COVID-19 which may require us to change the ways in which clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees;
- refusal of the FDA to accept data from clinical trials in affected geographies outside the United States;
- interruption or delays to discovery and development pipelines; and
- difficulties launching or commercializing products, including due to reduced access to doctors as a result of social distancing protocols.

In addition, if COVID-19 infects our genetically modified animals which form the basis of our OmniAb platform, or if our employees who maintain and care for these animals, we and our partners may be unable to produce antibodies for development. Further, the spread of COVID-19 has had and may continue to severely impact the trading price of shares of our common stock and could further severely impact our ability to raise additional capital on a timely basis or at all.

The COVID-19 pandemic continues to rapidly evolve. The extent to which the COVID-19 may impact our business, including our drug manufacturing and supply chain, nonclinical activities, clinical trials and financial condition, including due to impacts on our partners' businesses, will depend on future developments, which are highly uncertain and cannot be predicted with confidence, the duration of the pandemic, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the disease.

To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in this section and in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2019.

## Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

During the three months ended March 31, 2020, we have repurchased 878,525 shares, in amount of \$73.3 million, of our common stock under our stock repurchase programs approved by our board of directors. See detail in *Note 6, Stockholders' Equity*, to the Condensed Consolidated Financial Statements contained in Part I, Item 1 of this report.

The following tables present information regarding repurchases by us of common stock during the three months ended March 31, 2020 under the stock repurchase programs.

### ISSUER PURCHASES OF EQUITY SECURITIES

#### *Stock Repurchase Program*

	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares that May Yet Be Purchased Under the Program (in thousands)
January 1 - January 31, 2020	249,325	\$ 90.29	249,325	\$ 304,275
February 1 - February 29, 2020	156,202	\$ 91.15	156,202	\$ 290,037
March 1 - March 31, 2020	472,998	\$ 77.25	472,998	\$ 253,499
Total	878,525		878,525	

## Item 3. Defaults Upon Senior Securities

None.

## Item 4. Mine Safety Disclosures

Not applicable.

## Item 5. Other Information



On May 5, 2020, we received a notice of termination from Roivant terminating the Roivant License Agreement, pursuant to which we granted to Roivant a license to patents and know-how related to the GRA program initially developed by us. The termination will be effective 90 days following such notice. Roivant determined not to pursue the GRA program based on FDA requests for additional non-clinical studies.

Upon effectiveness of the termination, all licenses granted to Roivant under the Roivant License Agreement will terminate. In addition, upon our request, Roivant is obligated to enter into good faith negotiations regarding the grant to us of an exclusive, royalty-bearing, worldwide license of any discovery, invention, contribution, method, finding or improvement, whether or not patentable, and all intellectual property therein, as a result of any modification, improvement or enhancement to the licensed products Roivant may have made during its development of the GRA program.

As a result of the termination of the Roivant License Agreement, no further payments are possible under the CVR issued pursuant to the Glucagon CVR Agreement, dated as of January 27, 2010, pursuant to which each holder of a Glucagon CVR was entitled to receive a pro rata portion of a percentage of the net proceeds of any license or sale of Metabasis' GRA program in diabetes. As a result, the Glucagon CVR Agreement terminated pursuant to its terms as a result of the termination of the Roivant License Agreement.

**Item 6. Exhibits**

<u>Exhibit Number</u>	<u>Description</u>
<a href="#">2.1</a>	Asset Purchase Agreement, dated February 11, 2020, (as amended on April 1, 2020), by and among the Registrant, Icagen Inc., Icagen Corp., XRPro Sciences, Inc. and Caldera Discovery, Inc.*
<a href="#">10.1</a>	Call Option Amendment Agreed, dated April 6, 2020, between the Registrant and Barclays Bank PLC*
<a href="#">10.2</a>	Call Option Amendment Agreed, dated April 6, 2020, between the Registrant and Deutsche Bank AG, London Branch*
<a href="#">10.3</a>	Call Option Amendment Agreed, dated April 6, 2020, between the Registrant and Goldman Sachs & Co. LLC*
<a href="#">31.1</a>	Certification by Principal Executive Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
<a href="#">31.2</a>	Certification by Principal Financial Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
<a href="#">32.1</a>	Certifications by Principal Executive Officer and Principal Financial Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.*
101	The following financial information from our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, formatted in iXBRL (inline eXTensible Business Reporting Language): (i) Consolidated Condensed Balance Sheets, (ii) Consolidated Condensed Statements of Operations, (iii) Consolidated Condensed Statement of Comprehensive Income, (iv) Consolidated Condensed Statements of Stockholders' Equity, (v) Consolidated Condensed Statements of Cash Flows, and (vi) the Notes to Consolidated Condensed Financial Statements.*
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, formatted in Inline XBRL and contained in Exhibit 101.

\* Filed herewith.

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: May 8, 2020

By: /s/ Matthew Korenberg  
Matthew Korenberg  
Executive Vice President, Finance and Chief Financial Officer  
Duly Authorized Officer and Principal Financial Officer

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**Asset Purchase Agreement**

**by and between**

**ICAGEN, INC.**

**CERTAIN SUBSIDIARIES OF ICAGEN INC.**

**and**

**ADJACENT ACQUISITION CO., LLC**

**FEBRUARY 11, 2020**

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**Exhibits\***

- Exhibit A – Earnout Computation Specifics
- Exhibit B – Form of Bill of Sale
- Exhibit C – Form of Assignment and Assumption Agreement
- Exhibit D – Form of IP Assignment Agreement
- Exhibit E – Form of Transition Services Agreement
- Exhibit F – Form of Escrow Agreement

\*Confidential portions of the Exhibits were redacted pursuant to Item 601(b)(2) of Regulation S-K and the Registrant agrees to furnish supplementally to the Securities and Exchange Commission a copy of any redacted information or omitted schedule and/or exhibit upon request.

## ASSET PURCHASE AGREEMENT

This ASSET PURCHASE AGREEMENT (this “Agreement”), dated as of February 11, 2020, is made and entered into by and between Icagen, Inc. (“Parent”), a Delaware corporation, Icagen Corp., a Nevada corporation, XRPro Sciences, Inc., a Delaware corporation, and Caldera Discovery, Inc., a Delaware corporation, (each, a “Subsidiary”, and the Subsidiaries, together with Parent, collectively referred to as “Seller”), and Adjacent Acquisition Co., LLC a Delaware limited liability company (“Buyer”).

### RECITALS

WHEREAS, Seller is engaged in the business of drug discovery and providing services as a contract research organization, primarily using its ion channel platform, including its X-ray fluorescence technology referred to as XRpro, operated from Seller’s Durham, North Carolina location (the “Business”);

WHEREAS, Seller desires to sell to Buyer, and Buyer desires to purchase from Seller, all of Seller’s right, title and interest in and to the Transferred Assets (as hereinafter defined), and Buyer desires to assume from Seller, all of the Assumed Liabilities (as hereinafter defined), all upon the terms and subject to the conditions set forth herein; and

WHEREAS, the boards of directors of Parent and each Subsidiary have recommended this Agreement for adoption and approval by their respective stockholders;

WHEREAS, on or prior to the date hereof, Buyer has entered into voting and support agreements with certain stockholders of Parent; and

WHEREAS, each of Seller and Buyer desire to make certain representations, warranties, covenants and agreements in connection with the transactions contemplated by this Agreement.

### AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and the representations, warranties, covenants and agreements set forth herein, Seller and Buyer, intending to be legally bound, hereby agree as follows:

#### ARTICLE 1. DEFINITIONS

Section 1.1. Certain Definitions. As used in this Agreement, the following terms have the following meanings:

“Accounting Firm” means BDO LLP or a similar firm of national reputation.

“Acquisition Proposal” means any inquiry, proposal, or offer from any Person (other than Buyer or any of its Affiliates) relating to the direct or indirect disposition, whether by sale, lease, exclusive license, merger or otherwise, of (a) all or more than 20% of the capital stock, warrants or other ownership interests in Seller (or any individual entity forming Seller), (b) all or any portion of the Business or the

Transferred Assets, or (c) 20% or more of the book value of the assets of Seller taken as a whole, in each case of clauses (b) and (c), other than the disposition of assets in the Ordinary Course of Business.

“Affiliate” means, with respect to any Person, any other Person that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the first-mentioned Person. For purposes of this definition, “control” (including the terms “controls,” “controlled by” and “under common control with”), when used with respect to any specified Person, means the power to direct or cause the direction of the management and policies of such Person, directly or indirectly, whether through ownership of voting securities, by contract or otherwise. For the avoidance of doubt, Perceptive Credit Holdings II, LP (and its Affiliates) (“Perceptive”) shall not be deemed to be an Affiliate of the Seller.

“Ancillary Agreements” means the Bill of Sale, the Assignment and Assumption Agreement, the IP Assignment Agreement, the Escrow Agreement, the Transition Services Agreement and the Employment Offer Letters.

“Available Cash” means all cash and cash equivalents held by Seller with respect to the Business (including marketable securities and short-term investments), in each case measured at the Closing and determined in accordance with GAAP.

“Base Consideration” means \$15,000,000.

“Books and Records” means all records, documents, lists, notes and files, including executed originals (or copies of executed originals when executed originals are not available) of all Tax Returns, Contracts, purchase orders, sales orders, price lists, lists of accounts, customers, suppliers, employees, contractors, consultants and other personnel, laboratory reports, shipping records, all product, business and marketing plans, service manuals, sales and product brochures and catalogs and other sales literature and materials, and historical sales data and all books, ledgers, files, financial statements and other financial and accounting records (and related work papers and correspondence from accountants), minute books, data bases, computer files, programs and retrieved programs, access rights for off premises software, environmental studies and plans and business records, whether in hard copy, electronic form or otherwise.

“Business Consultant” means each individual retained by Seller or any Affiliate of Seller as an independent contractor or consultant to the Business.

“Business Data” means all data and personal information accessed, processed, collected, stored or disseminated by Seller in connection with any of the Business and/or the Transferred Assets, including any Personally Identifiable Information.

“Business Day” means any day other than Saturday, Sunday or any other day on which banks in Los Angeles, California are required or permitted to be closed.

“Business Employee” means each individual employed by Seller or any Affiliate of Seller who devotes substantially all of his or her time to the Business.

“Buyer Indemnitees” means Buyer and its Affiliates and its and their respective Representatives, successors and assigns.



“Change of Control Payments” means any amounts (including severance, termination, “golden parachute,” Tax gross-up, transaction bonus or other similar payments) which become payable as a result of, based upon or in connection with the consummation of the transactions contemplated by this Agreement (either alone or in connection with any other event, whether contingent or otherwise) and which are owing to any current or former employees, officers, directors, consultants, independent contractors or equity holders of Seller pursuant to employment agreements, Contracts or other arrangements, including Seller’s share of Taxes payable with respect to all such amounts.

“Closing Consideration” means the Base Consideration *minus* the amount of any Estimated Working Capital Decrease (or *plus* the amount of any Estimated Working Capital Increase).

“Closing Net Working Capital” means the Net Working Capital as of the Closing.

“Code” means the Internal Revenue Code of 1986, as amended.

“Confidentiality Agreement” means the confidentiality agreement dated [●], 2019 between Seller and Ligand Pharmaceuticals Incorporated.

“Consent” means any approval, consent, ratification, permission, waiver, Order, Permit or authorization.

“Contract” means any written or oral contract, lease, license, deed, mortgage, indenture, sales order, accepted purchase order, note or other legally binding agreement, instrument, arrangement, promise, obligation, understanding, undertaking or commitment, whether express or implied.

“Current Assets” means all current assets of the Business, determined in accordance with GAAP; provided, however, that “Current Assets” shall not include Available Cash.

“Current Liabilities” means all current liabilities of the Business, determined in accordance with GAAP; provided, however, that “Current Liabilities” shall not include any amounts included within Indebtedness, Change of Control Payments, Hired Employee Obligations or Transaction Expenses.

“Damages” includes any loss, damage, injury, Liability, claim, demand, settlement, judgment, award, fine, penalty, Tax, fee (including reasonable attorneys’ fees), charge, cost (including costs of investigation) or expense of any nature.

“Domain Name Registrar” means any entity that manages, registers or performs similar or related functions related to the use, reservation or ownership of domain names.

“Earnout” means the agreement of Buyer to pay future consideration of up to \$25,000,000 upon fulfillment of certain conditions, computed as set forth in Exhibit A attached hereto.

“Effect” has the meaning set forth within the definition of Material Adverse Effect.

“Employee Plan” means each: (a) “employee benefit plan,” as defined in Section 3(3) of ERISA; and (b) all other pension, retirement, supplemental retirement, deferred compensation, excess benefit, profit sharing, bonus, incentive, stock purchase, stock ownership, stock option, stock appreciation right, phantom equity or other equity-based compensation, employment, severance, salary continuation, termination, change-of-control, health, life, disability, group insurance, vacation, holiday and fringe benefit plan, program, contract, or arrangement maintained, contributed to, or required to be contributed

to, by Seller, any Affiliate of Seller or any ERISA Affiliate thereof for the benefit of any current or former employee, director, officer or independent contractor of Seller or any Affiliate of Seller or under which Seller, any Affiliate of Seller or any ERISA Affiliate thereof has any Liability.

“Estimated Working Capital Decrease” means the amount, if any, by which the Target Net Working Capital exceeds the Estimated Closing Net Working Capital.

“Estimated Working Capital Increase” means the amount, if any, by which the Estimated Closing Net Working Capital exceeds the Target Net Working Capital.

“Environment” means the indoor and outdoor environment and all media, including ambient air, surface water, groundwater, land surface or subsurface strata, and natural resources.

“Environmental Law” means any Law or other legal requirement pertaining to pollution, protection of health, safety or the Environment or exposure of Persons to Hazardous Materials, including the Clean Air Act, as amended, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, the Federal Water Pollution Control Act, as amended, the Resource Conservation and Recovery Act of 1976, as amended, the Safe Drinking Water Act, as amended, the Toxic Substances Control Act, as amended, the Oil Pollution Act of 1990, the Superfund Amendments and Reauthorization Act of 1986, as amended, the Hazardous Materials Transportation Act, as amended, the Emergency Planning and Community Right to Know Act, as amended, the Safe Drinking Water Act, as amended, the Occupational Safety and Health Act, as amended, and any foreign, state or local Laws analogous to any of the foregoing, as amended, together with all judicial interpretations thereof.

“Environmental Liabilities” means: (a) any fines, penalties or Liabilities arising out of or related to any violations of, or non-compliance with, Environmental Laws or Environmental Permits applicable to the Business or any Transferred Asset, including any costs associated with correcting any such violations or non-compliance, in each case first arising or occurring, whether known or unknown, at or prior to the Closing; (b) any fines, penalties or Liabilities attributable to violations of, or non-compliance with, Environmental Laws or Environmental Permits that occur or arise after the Closing, to the extent that such fines, penalties or Liabilities, or any portion thereof, are attributed to the period prior to the Closing; (c) Liabilities relating to, or resulting or arising from, the off-site transportation, storage, treatment, recycling of Hazardous Materials generated by, or on behalf of Seller in connection with the Business or any Transferred Asset prior to the Closing, including claims related to loss of life, injury to persons or property or remediation; and (d) any Liability or costs arising from or related to any Environmental Release, threatened Environmental Release, or exposure of any Person to any Hazardous Material, in each case first arising or occurring, whether known or unknown, at or prior to the Closing at any location attributable or related to the Business or the Transferred Assets.

“Environmental Permit” means any Permit required, issued, held or obtained pursuant to any Environmental Law or pertaining to any Hazardous Material.

“Environmental Release” means any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, migrating, dumping, or disposing of Hazardous Materials into the Environment, including the abandonment or discarding of any containers.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended.

“ERISA Affiliate” means any corporation or trade or business (whether or not incorporated) which is treated with Seller or an Affiliate of Seller as a single employer within the meaning of Section 414 of the Code.

“Escrow Account” means the escrow account to be established by the Escrow Agent pursuant to the Escrow Agreement.

“Escrow Agent” means Citibank N.A.

“Escrow Amount” means an amount in cash equal to \$1,250,000 to be deposited at the Closing in the Escrow Account with the Escrow Agent pursuant to the terms and conditions of the Escrow Agreement, including any interest accrued or income otherwise earned thereon.

“GAAP” means generally accepted accounting principles in the United States as in effect from time to time and applied consistently throughout the periods involved.

“Governmental Entity” means any federal, provincial, state, municipal, local or foreign court or tribunal, administrative or regulatory body, agency or commission, or any other governmental authority or instrumentality.

“Hazardous Material” means any substance, material, chemical, odor, heat, sound, vibration, radiation, or waste, or any combination of any of them that is regulated or defined by, or with respect to which Liability or standards of conduct are imposed under, any Environmental Law, including any material, substance or waste which is defined as a “hazardous waste,” “hazardous material,” “hazardous substance,” “extremely hazardous waste,” “restricted hazardous waste,” “contaminant,” “pollutant,” “toxic waste,” or “toxic substance” under any provision of applicable Environmental Law, and including petroleum, petroleum products and byproducts, asbestos, presumed asbestos-containing-material or asbestos-containing-material, toxic molds, mycotoxins, urea formaldehyde, radioactive materials and polychlorinated biphenyls.

“HIPAA” means the Health Insurance Portability and Accountability Act of 1996, as amended.

“Hired Employee” means any Business Employee that becomes an employee of Buyer or an Affiliate of Buyer as of the Closing Date.

“Hired Employee Obligations” means all Liabilities with respect to the Hired Employees’ unpaid wages, cash or equity incentive compensation, accrued paid time off, accrued payroll, accrued unpaid commissions, accrued bonuses, accrued sick leave or vacation, accrued bereavement time, accrued floating holidays or other similar accrued paid time off, business expense reimbursements, and related Taxes accrued in the Ordinary Course of Business; provided, however, that “Hired Employee Obligations” shall not include Change of Control Payments.

“Indebtedness” of any Person means, as of any time and without duplication, the following obligations (whether or not then due and payable): (a) all obligations (including the principal amount thereof or, if applicable, the accreted amount thereof and the amount of accrued and unpaid interest thereon) for the repayment of money borrowed, whether owing to banks, financial institutions, on equipment leases or otherwise; (b) all obligations (including the principal amount thereof or, if applicable, the accreted amount thereof and the amount of accrued and unpaid interest thereon) evidenced by notes, bonds, debentures or similar instruments (whether or not convertible); (c) all obligations to pay the deferred purchase price of assets, property or services (including purchase price adjustments, “holdback”

or similar payments, including the deferred purchase price owed to Pfizer, and the maximum amount of any potential earn-out payments), other than current trade accounts payable incurred in the Ordinary Course of Business; (d) all obligations to pay rent or other payment amounts under a lease which is required to be classified as a capital lease or a liability on the face of a balance sheet prepared in accordance with GAAP or conditional sales Contract or similar title retention instrument; (e) all negative balances in bank accounts and all overdrafts; (f) all obligations under any interest rate swap agreement, forward rate agreement, interest rate cap or collar agreement, or other financial agreement or arrangement entered into for the purpose of limiting or managing interest rate risks; (g) all obligations relative to the maximum amount of any letter of credit or letter of guaranty (whether drawn or undrawn), bankers' acceptance or similar instrument issued or created for the account of such Person; (h) all obligations secured by any Lien (other than Permitted Liens); (i) all guaranties, sureties, assumptions and other contingent obligations in respect of, or to purchase or to otherwise acquire, Indebtedness or indebtedness of others; (j) all obligations in respect of prepayment premiums, penalties, breakage costs, "make whole amounts," costs, expenses and other payment obligations that would arise if all Indebtedness referred to in the foregoing clauses (a) through (i) was prepaid (or, in the case of any interest rate swap agreement, forward rate agreement, interest rate cap or collar agreement, or other financial agreement or arrangement entered into for the purpose of limiting or managing interest rate risks, unwound and settled) in full at such time; and (k) to the extent any item of Indebtedness referred to in the foregoing clauses (a) through (i) cannot be repaid at such time (e.g., as a result of an irrevocable advance notice requirement), all interest on and other accretion of such Indebtedness that occurs between such time and the earliest time that repayment may occur (e.g., if notice were delivered at such time).

"Indemnitees" means the Buyer Indemnitees or the Seller Indemnitees, as applicable.

"Intellectual Property Rights" shall mean any or all of the following and all rights in, arising out of, or associated therewith: (i) all United States and foreign patents and utility models and applications therefor and all reissues, divisionals, reexaminations, renewals, extensions, provisionals, supplementary protection certificates, continuations and continuations in-part thereof, and equivalent or similar registered rights anywhere in the world ("Patents"); (ii) all trade secrets and other rights in know-how and confidential or proprietary information, inventions and discoveries, including without limitation invention disclosures; (iii) all copyrights, works of authorship, copyright registrations and applications therefor and all other rights corresponding thereto throughout the world ("Copyrights"); (iv) all rights in Uniform Resource Locators, World Wide Web addresses and domain names and applications and registrations therefor; (v) all trade names, logos, common law trademarks and service marks, trademark and service mark registrations and applications therefor and all goodwill associated therewith throughout the world ("Trademarks"); and (vi) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world, including, without limitation, moral rights.

"IRS" means the United States Internal Revenue Service.

"Knowledge of Seller" or "Seller's Knowledge" or any other similar knowledge qualification, means the actual knowledge, after reasonable inquiry and investigation, of any officer or director of Seller.

"Law" means any law (including common law), statute, code, ordinance, rule, regulation, Order or charge of any Governmental Entity.

"Liabilities" means all direct or indirect debts, obligations, duties, commitments, responsibilities and liabilities (whether absolute, accrued, contingent, fixed or otherwise, or whether due or to become

due or whether known or unknown, asserted or unasserted, disputed or undisputed, joint or several, choate or inchoate, liquidated or unliquidated, secured or unsecured, vested or unvested, executory, determined, determinable or otherwise) of every kind and description, whenever or however arising (including, whether arising out of contract or tort, based on negligence or strict liability) and whether or not required to be disclosed on a balance sheet prepared in accordance with GAAP or in the notes thereto.

“Licensed Intellectual Property” means all Intellectual Property licensed to Seller that is used or held for use in connection with any of the Business and/or the Transferred Asset.

“Lien” means any lien, pledge, mortgage, deed of trust, encumbrance, claim or security interest, hypothecation, deposit, equitable interest, option, charge, judgment, attachment, right of way, encroachment, easement, servitude, restriction on transfer, restriction on voting, preferential arrangement or preemptive right, right of first refusal or negotiation or restriction of any kind.

“Material Adverse Effect” means any change, effect, event, occurrence, development, matter, state of facts, series of events, or circumstance (any such item, an “Effect”) that, individually or in the aggregate with all other Effects that occurred prior to the date of determination of the occurrence of an Effect, has, or would reasonably be expected to have or result in: (a) a material adverse effect on (x) the assets (including intangible assets and rights), properties, liabilities, business, condition (financial or otherwise), operations, results of operations of Seller or (y) the Business, the Transferred Assets or the Assumed Liabilities, taken as a whole, or (b) a material adverse effect on Seller’s ability to perform any of its obligations under this Agreement or to consummate any of the transactions contemplated by this Agreement; provided, however, that, none of the following shall be deemed, either alone or in combination, to constitute, and none of the following shall be taken into account in determining whether there has been, or could reasonably be expected to be, a Material Adverse Effect: (i) any Effect arising out of or relating to (1) United States or global (or any region thereof) (A) economic, credit, financial, banking or securities market conditions, including prevailing interest rates or currency rates or (B) regulatory or political conditions, or (2) acts of terrorism or sabotage, the outbreak, escalation or worsening of hostilities (whether or not pursuant to the declaration of a national emergency or war), man-made disasters, natural disasters (including hurricanes) or acts of god; (ii) any Effect arising out of or relating to factors, conditions, trends or other circumstances generally affecting any of the industries or markets in which the Business operates; and (iii) any Effect arising out of or relating to any change in Law, GAAP, regulatory accounting requirements or interpretations thereof that apply to the Business (including the proposal or adoption of any new Law, or any change in the interpretation or enforcement of any existing Law), except, in the case of clauses (i), (ii) and (iii), to the extent that such Effect has a disproportionate adverse effect on the Business, the Transferred Assets or the Assumed Liabilities, each, taken as a whole, as compared to the adverse impact such Effect has on other Persons operating in the industries or markets in which the Business is operated, in which case such disproportionate adverse effect may be taken into account in determining whether there has been, or could reasonably be expected to be, a Material Adverse Effect.

“Net Working Capital” means an amount (which may be a negative or positive number) in U.S. dollars equal to (a) the Current Assets *minus* (b) the Current Liabilities.

“Order” means any order, writ, injunction, stipulation, judgment, ruling, assessment, arbitration award, plan or decree.

“Ordinary Course of Business” means the ordinary course of business of Seller with respect to the Business and the Transferred Assets, consistent with past custom and practice (including as to nature, frequency and amount).

“Permits” means all authorizations, licenses, variances, exemptions, orders, permits and approvals granted by or obtained from any Governmental Entity.

“Permitted Liens” means: (a) Liens of carriers, warehousemen, mechanics, materialmen, and similar Liens arising or incurred in the Ordinary Course of Business and related to amounts that are not yet delinquent, provided an adequate reserve, determined in accordance with GAAP, has been established therefor on the Financial Statements; (b) Liens for Taxes or other governmental charges not yet delinquent or the amount or validity of which is being contested in good faith through appropriate proceedings, provided an adequate reserve, determined in accordance with GAAP, has been established therefor on the Financial Statements; (c) pledges or deposits made in the Ordinary Course of Business to secure obligations under workers’ compensation, unemployment insurance, social security or similar programs mandated by applicable legislation; (d) with respect to real property only, zoning restrictions, building codes and other land use Laws regulating the use or occupancy of property which are not material in amount or do not, individually or in the aggregate, materially detract from the value of or materially impair the existing use of the property affected by such Law (to the extent there are no violations of the same); (e) minor liens that have arisen in the Ordinary Course of Business and do not materially detract from the value of the Transferred Assets; (f) statutory liens to secure obligations to landlords under leases and landlord liens for demising costs; and (g) purchase money equipment liens that are not securing Assumed Liabilities.

“Person” shall be construed as broadly as possible and shall include an individual or natural person, a partnership, a corporation, an association, a joint stock company, a limited liability company, a trust, a joint venture, an unincorporated organization, any other business entity and any Governmental Entity.

“Personal Property Lease” means any Contract for Tangible Personal Property leased, subleased, licensed or otherwise conveyed to or by Seller.

“Personally Identifiable Information” means any specific and unique information relating to an identified or identifiable natural person (such as name, postal address, email address, telephone number, date of birth, Social Security number (or its equivalent), driver’s license number, account number, credit or debit card number or identification number).

“Proceeding” means any action, charge, claim, complaint, demand, grievance, arbitration, audit, assessment, hearing, investigation, inquiry, legal proceeding, administrative enforcement proceeding, litigation, suit or other proceeding (whether civil, criminal, administrative, judicial or investigative, whether formal or informal, whether public or private) commenced or brought by any Person, or conducted or heard by or before, or otherwise involving, any court or other Governmental Entity or any arbitrator or arbitration panel.

“Proxy Statement” shall mean the proxy statement filed by Seller with the SEC relating to any required approval by Parent’s stockholders of this Agreement and the transactions contemplated hereby.

“Public Official” means: (a) any director, officer, employee or representative of any regional, federal, state, provincial, county or municipal government or government department, agency, or other division; (b) any director, officer, employee or representative of any commercial enterprise that is owned

or controlled by a government, including any state-owned or controlled company or organization; (c) any officer, employee or representative of any public international organization, such as the United Nations or the World Bank; (d) any person acting in an official capacity for any government or government entity, enterprise, or organization identified above; and (e) any political party, party official or candidate for political office.

“Repaid Indebtedness” means: (a) the Indebtedness of the Business identified in the Payoff Letters (including Indebtedness to Perceptive) and (b) all other Indebtedness of the Business that is designated as “Repaid Indebtedness” by Seller and Buyer at least five (5) Business Days prior to the Closing Date.

“Representatives” means, when used with respect to any Person, such Person’s officers, directors, managers, employees, agents, potential financing sources, advisors and other representatives (including any investment banker, financial advisor, attorney or accountant retained by or on behalf of such Person or any of the foregoing).

“Required Consents” means the Consents listed on Schedule 1.1 hereto.

“SEC” means the Securities and Exchange Commission.

“Seller Board” or “Parent Board” means the board of directors of Parent.

“Seller Indemnitees” means Seller and its Affiliates and its and their respective equity holders, Representatives, successors and assigns.

“Seller IT Systems” means all computer systems, programs, networks, hardware, software, software engines, database, operating systems, websites, website content and links and equipment used to process, store, maintain and operate data, information and functions owned, used or provided by Seller in the operation of the Business and/or the Transferred Assets.

“Specified Representations” means the representations and warranties set forth in Sections 3.1 (Organization and Qualification), 3.2 (Authority), 3.6 (Assets; Employees), 3.9 (Compliance with Laws); 3.11 (Taxes), 3.12 (Intellectual Property), 3.13 (Brokers), 3.18 (Employee Benefit Plans), 4.1 (Organization and Qualification), 4.2 (Authority), and 4.4 (Brokers) of this Agreement.

“Superior Proposal” means a bona fide written Acquisition Proposal made by a Person other than Buyer, which is on terms which the Parent Board in good faith concludes (following consultation with its financial advisors and outside counsel), taking into account, among other things, all legal, financial, regulatory and other aspects of the proposal and the identity and nature of the Person making the proposal, (i) would, if consummated, result in a transaction that is more favorable to Parent or Parent’s stockholders (in their capacities as stockholders), from a financial point of view, than the transactions contemplated by this Agreement (as the same may be proposed to be amended by Buyer pursuant to Section 5.5(e)), (ii) is reasonably likely to be completed, (iii) for which the Person making the proposal has sufficient financial resources available to it, and (iv) is not subject to any significant condition or contingency, such as obtaining third party financing, that is not also contained in this Agreement.

“Superior Proposal Notice” is defined in Section 5.5(d).

“Tangible Personal Property” means all machinery, fixtures, equipment, tools, spare parts, furniture, office equipment, hardware, supplies, materials, vehicles and other items of tangible personal

property of any kind (other than Inventory) owned, leased, used or held for use by Seller in connection with any of the Business and/or the Transferred Assets.

“Target Net Working Capital” means \$0.00.

“Taxes” means: (a) any and all taxes, charges, fees, assessments, levies, unclaimed property and escheat obligations or other assessments, including all net income, gross income, gross receipts, premium, sales, use, ad valorem, goods and services, net receipts, harmonized sales, value added, transfer, documentary, franchise, profits, license, withholding, payroll, employment, excise, estimated, severance, stamp, occupation, property or other taxes, of any kind whatsoever, whether computed on a separate or consolidated, unitary or combined basis, or in any other manner; (b) any interest, fine, assessment, penalty (including penalties for failure to file in accordance with applicable information reporting requirements), or addition to the amounts set forth in clause (a) assessed or levied by any authority, whether federal, state, local, domestic or foreign (whether disputed or not); and (c) any liability in respect of any of the items described in clauses (a) and (b) payable under a tax sharing, allocation, indemnity or similar agreement or by reason of successor, transferee, or other liability, by contract, operation of law, or Treasury Regulation Section 1.1502-6(a) (or any predecessor or successor thereto or any analogous or similar provision of state, local or foreign Law).

“Taxing Authority” means, with respect to any Tax, the Governmental Entity or political subdivision thereof that imposes such Tax, and the agency (if any) charged with the collection of such Tax for such entity or subdivision, including any Governmental Entity that imposes, or is charged with collecting, social security or similar charges or premiums.

“Tax Return” means any report, return, information return, form, declaration or other document or information filed or required to be supplied to any authority in connection with Taxes (including any attachment thereto or amendment thereof).

“Territory” means worldwide.

“Third Party” shall mean any Person other than Buyer or Seller or their Affiliates.

“Transaction Expenses” means all fees, costs, expenses and other similar obligations of, or amounts incurred or payable by or on behalf of Seller that have not been paid in full prior to the Closing, in each case in connection with the preparation, negotiation, execution or performance of this Agreement, the Ancillary Agreements or the consummation of the transactions contemplated hereby or thereby, including the following: (a) the fees and disbursements of, or other similar amounts charged by, counsel retained by Seller; (b) the fees and expenses of, or other similar amounts charged by, any accountants, agents, financial advisors, consultants and experts retained by Seller; and (c) the other out-of-pocket expenses, if any, of Seller.

“WARN Act” means the Worker Adjustment and Retraining Notification Act of 1988, as amended, or any similar state or local plant closing or mass layoff Law.

“Working Capital Decrease” means the amount, if any, by which the Estimated Closing Net Working Capital exceeds the Closing Net Working Capital.

“Working Capital Increase” means the amount, if any, by which the Closing Net Working Capital exceeds the Estimated Closing Net Working Capital.



Section 1.2. Certain Other Definitions. The following terms are defined in the respective Sections of this Agreement indicated:

Affiliate Agreements .....	Section 3.19
Agreed Amount .....	Section 8.7(b)
Agreement.....	Preamble
Assignment and Assumption Agreement .....	Section 2.7(a)(iii)
Assumed Contracts.....	Section 2.1(a)
Assumed Liabilities.....	Section 2.3
Basket Amount.....	Section 8.4(a)(i)
Bill of Sale.....	Section 2.7(a)(ii)
Business.....	Recitals
Business Confidential Information.....	Section 6.6(a)
Buyer.....	Preamble
Buyer Material Adverse Effect.....	Section 4.1
Change in Recommendation.....	Section 5.5(f)
Claim Dispute Period.....	Section 8.7(b)
Claimed Amount.....	Section 8.7(a)
Closing.....	Section 2.6
Closing Date.....	Section 2.6
Competing Confidentiality Agreement.....	Section 5.5(d)(i)
Contested Amount.....	Section 8.7(b)
Continuing Affiliate Agreements.....	Section 5.7
De Minimis Claim Amount.....	Section 8.4(a)
Disclosure Schedule.....	Article 3
Dispute Notice.....	Section 2.9(c)(i)
Dispute Period.....	Section 2.9(c)(i)
Employment Offer Letters.....	Section 2.7(a)(viii)
Escrow Agreement.....	Section 2.10(a)
Escrow Balance.....	Section 8.10(a)
Estimated Closing Net Working Capital.....	Section 2.9(a)
Estimated Working Capital Statement.....	Section 2.9(a)
Excluded Assets.....	Section 2.2
Excluded Liabilities.....	Section 2.4
FDA.....	Section 3.9(a)
Final Actual Net Working Capital.....	Section 2.9(c)(ii)
Final Price Allocation.....	Section 2.11(b)
Financial Statements.....	Section 3.4(a)
Former Superior Proposal.....	Section 5.5(e)
General Survival Date.....	Section 8.1(a)
Guarantor.....	Section 11.15
Indemnitor.....	Section 8.6(a)
Insurance Policies.....	Section 3.20(a)
Interim Balance Sheet.....	Section 3.4(a)
Interim Period.....	Section 5.1(a)
Inventory.....	Section 2.1(b)
IP Assignment Agreement.....	Section 2.7(a)(iv)
Leased Real Property.....	Section 3.15(b)
Material Contract.....	Section 3.14(a)

Material Customers.....	Section 3.21(a)
Material Suppliers.....	Section 3.21(b)
Notice of Claim.....	Section 8.7(a)
Obligations.....	Section 11.15
Outside Date.....	Section 10.1(b)
Payoff Amounts.....	Section 2.8(b)(i)
Payoff Letters.....	Section 2.7(a)(vi)
Pending Claim Amount.....	Section 8.10(a)
Potential Acquiror.....	Section 5.5(d)
Price Allocation.....	Section 2.11(a)
Price Allocation Statement.....	Section 2.11(b)
Purchase Price.....	Section 2.8(a)
Real Property Lease.....	Section 3.15(b)
Released Claims.....	Section 6.2(a)
Released Parties.....	Section 6.2(a)
Releasing Parties.....	Section 6.2(a)
Releasing Party.....	Section 6.2(a)
Response Notice.....	Section 8.7(b)
Restricted Period.....	Section 6.5(a)
Rollover Vacation.....	Section 5.6
Seller.....	Preamble
Seller Board Recommendation.....	Section 5.2(c)
Seller Stockholder Approval.....	Section 5.2(e)
Seller's Stockholders' Meeting.....	Section 5.2(d)
Shortfall.....	Section 6.7(a)
Stipulated Amount.....	Section 8.7(e)
Superior Proposal Notice.....	Section 5.5(d)
Third Party Claim.....	Section 8.6(a)
Transfer Taxes.....	Section 9.1
Transferred Assets.....	Section 2.1
Transferred Intellectual Property Rights.....	Section 2.1(i)
Transition Services Agreement.....	Section 2.7(a)(x)
Unresolved Escrow Claim.....	Section 8.10(a)
Working Capital Statement.....	Section 2.9(b)

**ARTICLE 2. TRANSFER OF ASSETS**

Section 2.1. Transfer of Assets by Seller. Upon the terms and subject to the conditions of this Agreement and in reliance upon the representations, warranties and agreements herein set forth, at the Closing, Buyer shall purchase from Seller, and Seller shall sell, assign, transfer, convey and deliver to Buyer, free and clear of all Liens other than Permitted Liens, all of Seller's right, title and interest in, to and under all of the properties, rights and assets of every kind and nature, whether real, personal or mixed, tangible or intangible, wherever located, whether now owned, leased, used or held for use or hereafter owned, leased, used or held for use (other than the Excluded Assets), which are located at the Durham, North Carolina location of the Seller, (collectively, the "Transferred Assets"), including the following:

(a) except for this Agreement, the Ancillary Agreements and the Contracts listed on Section 2.1(a) of the Disclosure Schedule, all Contracts to which Seller is a party related to the Business or the Transferred Assets (collectively, the “Assumed Contracts”);

(b) all inventory and supplies of the Business, including work in process, raw materials, packaging, and all other materials and supplies to be used or consumed by the Business in the Durham facility (collectively, “Inventory”);

(c) all Tangible Personal Property, including the equipment listed on Section 2.1(c) of the Disclosure Schedule;

(d) Leased Real Property in Durham;

(e) originals, or where originals are not available copies, of all Books and Records related to the Business and/or the Transferred Assets;

(f) all claims, causes of action, rights of recovery, rights of recoupment and rights of set-off of any kind (including rights under and pursuant to all warranties, representations and guarantees made by suppliers of products, materials or equipment, or components thereof) of Seller related to the Business and/or the Transferred Assets, including those listed on Section 2.1(f) of the Disclosure Schedule, but excluding any claims, causes of action, rights of recovery, rights of recoupment and rights of set-off related solely to any one or more (i) Excluded Assets or (ii) Excluded Liabilities;

(g) all rights to any Proceedings of any nature available to or being pursued by Seller to the extent related to the Business, the Transferred Assets or the Assumed Liabilities, whether arising by way of counterclaim or otherwise, excluding any Proceedings related solely to any one or more (i) Excluded Assets or (ii) Excluded Liabilities;

(h) all of the intangible rights and property of Seller related to the Business and/or the Transferred Assets, including: (i) all owned Intellectual Property Rights, (ii) cell lines and plasmid repositories of the Business, and (iii) all goodwill of or pertaining to the Business and/or the Transferred Assets, but not including Excluded Assets (collectively, the “Transferred Intellectual Property Rights”);

(i) the name “Icagen” and related Trademarks;

(j) all telephone numbers, websites, URLs and e-mail addresses owned, licensed or otherwise used by Seller in connection with, or otherwise relating to, any of the Business and/or the Transferred Assets;

(k) all claims under insurance policies covering the Business or the Transferred Assets and all proceeds from claims under such insurance policies;

(l) all deposits, prepaid expenses, advance payments and charges paid by Seller or its Affiliates prior to the Closing Date in respect of the Business or the Transferred Assets, including those listed on Section 2.1(l) of the Disclosure Schedule; and

(m) to the extent transferable, all Permits, including Environmental Permits, required for the lawful conduct of the Business as currently conducted or for the ownership and use of the Transferred Assets, and all pending applications therefor or renewals thereof.

Section 2.2 Excluded Assets. Notwithstanding anything herein to the contrary, Seller will retain and will not transfer, convey, assign or deliver to Buyer, and Buyer will not acquire any right, title or interest in or to any one or more of the following (collectively, the “Excluded Assets”):

- (a) Available Cash and accounts receivable;
- (b) The assets of Icagen-T located in Tucson, Arizona, as more fully described in Section 2.2(b) of the Disclosure Schedule;
- (c) the equity of Icagen-T owned by Seller;
- (d) all Contracts that are not Assumed Contracts;
- (e) Seller’s corporate seal, organizational and governing documents, minute books, stock transfer books, and other documents relating solely to the organization, maintenance and existence of Seller as a corporation;
- (f) Seller’s Tax identification numbers and Tax Returns;
- (g) any rights (including indemnification) and claims and recoveries under any Proceeding of Seller against third parties, solely to the extent relating to any one or more (i) Excluded Assets or (ii) Excluded Liabilities;
- (h) copies of any personnel records and other business records with respect to the Business that Seller is required by Law to retain in its possession (with copies of any such records being provided to Buyer at Closing);
- (i) the consideration to be received by Seller, and Seller’s other rights, under this Agreement and the Ancillary Agreements;
- (j) all Employee Plans and assets attributable thereto; and
- (k) those assets listed on Section 2.2(k) of the Disclosure Schedule.

Section 2.3. Assumption of Liabilities. Upon the terms and subject to the conditions of this Agreement and in reliance upon the representations, warranties and agreements herein set forth, Buyer agrees to assume as of the Closing, and to thereafter perform and discharge only the following Liabilities of Seller (collectively, the “Assumed Liabilities”):

- (a) all Liabilities arising after the Closing under the Assumed Contracts; provided, however, that Assumed Liabilities shall not include any Liabilities arising out of any breach, default, misconduct, negligence, failure to comply with any material applicable Law, or other form of non-compliance by Seller under an Assumed Contract at or prior to the Closing; and
- (b) all Liabilities included in the calculation of Final Actual Net Working Capital;
- (c) other Liabilities detailed on Section 2.3(c) of the Seller Disclosure Schedule; and;
- (d) Rollover Vacation as described in Section 5.6 below.

Section 2.4. Excluded Liabilities. Notwithstanding the provisions of Section 2.3, Buyer does not agree to assume, perform or discharge, indemnify Seller against, or otherwise have any responsibility for, any Liabilities of Seller other than the Assumed Liabilities, whether arising prior to, on or after the Closing (which such Liabilities shall be collectively referred to herein as the “Excluded Liabilities”). Without limiting the generality of the foregoing, Excluded Liabilities shall include:

- (a) except for the Assumed Liabilities, any Liabilities relating to the Business or the Transferred Assets incurred or occurring at or prior to the Closing, whether currently in existence or arising hereafter;
- (b) except for the Assumed Liabilities, any Liabilities of Seller or any businesses or assets of any Affiliate of Seller;
- (c) any Liability relating to or arising out of any Excluded Asset, such as the Liabilities of Icagen-T;
- (d) other than Liabilities expressly assumed pursuant to Section 2.3(c), any Liabilities related to, based upon, or in connection with any current or former officers, directors, employees, consultants or independent contractors of Seller or any Affiliate of Seller, including: (i) Liabilities with respect to any such Person’s unpaid wages, cash or equity incentive compensation, paid time off, payroll, unpaid commissions, bonuses, sick leave or vacation, bereavement time, floating holidays or other similar paid time off, severance, retention, expense reimbursements, unemployment insurance benefits and related penalties, premiums, and interest arising from any actual or alleged labor and employment claims or wage and hour violations (such as the nonpayment or untimely payment of any accrued wages or compensation) and Taxes; (ii) Hired Employee Obligations; (iii) Change of Control Payments; and (iv) Liabilities arising under the WARN Act, ERISA, Employee Plans or applicable Law;
- (e) any Liability relating to, based upon or arising under or in connection with any Employee Plan;
- (f) any Environmental Liabilities incurred prior to Closing;
- (g) any Liabilities in respect of any pending or threatened Proceeding arising out of, relating to or otherwise in respect of the operation of the Business or the Transferred Assets to the extent such Proceeding relates to such operation at or prior to the Closing;
- (h) any Liabilities arising out of, in connection with or relating to any violations by Seller or any of its Affiliates of, or the failure by Seller or any of its Affiliates to comply with, any Law;
- (i) any Indebtedness of Seller and/or the Business other than Assumed Liabilities, with the overdue amounts payable to Nanion treated as Indebtedness by agreement of the parties;
- (j) except to the extent arising under a Real Property Lease after the Closing, any Liability with respect to real property, whether owned, leased or otherwise;
- (k) any Liability for: (i) Taxes of Seller or any Affiliate of Seller; (ii) Taxes with respect to the Business or the Transferred Assets attributable to the period prior to Closing; or (iii) Transfer Taxes;
- (l) except to the extent arising under an Assumed Contract after the Closing, any Liability, whether currently in existence or arising hereafter, owed by Seller to any of its Affiliates;

(m) the obligation to pay additional premiums as a result of underpayment of premiums for insurance policies included in the Transferred Assets, to the extent attributable to any time period ending on or prior to the Closing Date;

(n) any Transaction Expenses;

(o) any Liabilities to indemnify, reimburse or advance amounts to any present or former officer, director, employee or agent of Seller (including with respect to any breach of fiduciary obligations); and

(p) any Liability in respect of any matter set forth on Section 2.4(p) of the Disclosure Schedule.

**Section 2.5. Assignment of Contracts and Rights.**

(a) Nothing in this Agreement shall be construed as an attempt to assign, and Buyer shall not assume any Liabilities with respect to, any Contract or Permit constituting a Transferred Asset, or any other Transferred Asset, that by Law is nonassignable, or that by its terms is nonassignable without the Consent of the other party or parties thereto to the extent such party or parties assert in writing that such assignment is a breach of such Contract or Permit, or as to which all the remedies for the enforcement thereof enjoyed by Seller would not, as a matter of law, pass to Buyer as an incident of the assignments provided for by this Agreement. With respect to any Contract, Permit or other Transferred Asset of the type described in the preceding sentence, and any claim, right or benefit arising thereunder or resulting therefrom, promptly after the date of this Agreement, to the extent required by the terms of the Contract, Permit or other Transferred Asset, Seller shall, at its sole cost and expense, obtain the written Consent of the other parties to any such Contract, Permit or other Transferred Asset for the assignment thereof to Buyer in form and substance satisfactory to Buyer.

(b) If such Consent is not obtained with respect to any such Contract, Permit or other Transferred Asset prior to the Closing, in addition to any other remedy available to Buyer at law or in equity, at Seller's expense, Seller shall, from and after the Closing take all actions and do or cause to be done all such things as shall in the reasonable judgment of Buyer or its counsel be necessary: (i) to ensure that the claims, rights and benefits with respect to such Contract, Permit or other Transferred Asset are preserved for Buyer or for the benefit of Buyer (including by entering into a subcontracting or subleasing arrangement with Buyer, if permitted); and (ii) to facilitate receipt of, and promptly pay to, Buyer all monies received by Seller under any such Contract, Permit or other Transferred Asset or any claim, right or benefit arising thereunder not transferred to Buyer pursuant to this Section 2.5.

**Section 2.6. Closing.** The closing of the transactions contemplated by this Agreement (the "Closing") shall take place at the offices of Stradling Yocca Carlson & Rauth, P.C., 4365 Executive Drive, Suite 1500, San Diego, California 92121, at 10:00 a.m., Pacific Time, on the date of this Agreement or, if conditions to Closing are not yet fulfilled, on the Business Day following the satisfaction or, to the extent permitted hereby, waiver of the conditions set forth in Article 7 of this Agreement (other than those conditions that, by their nature, are to be satisfied at the Closing, but subject to the satisfaction or waiver of such conditions), or on such other date or at such other time and place as Buyer and Seller may mutually agree in writing. The date on which the Closing actually occurs is referenced herein as the "Closing Date". At the Closing, documents and signature pages may be exchanged remotely via facsimile or other electronic exchange (with originals to be delivered to the other party as soon as reasonably practicable after the Closing and requested by such other party). The effective time of the Closing is 12:01 A.M. Eastern Time on the Closing Date.

**Section 2.7. Closing Deliveries.** At the Closing:

(a) Conditions to Buyer's Obligation. Buyer's obligation hereunder to purchase and pay for the Transferred Assets is subject to the satisfaction, on or before the Closing Date, of the following conditions, any of which may be waived, in whole or in part, by Buyer in its sole discretion, and Seller shall use its reasonable best efforts to cause such conditions to be fulfilled, which include Seller shall have delivered, or cause to be delivered, to Buyer or any other Person designated by Buyer (unless the delivery is waived in writing by Buyer), the following documents, in each case duly executed or otherwise in proper form, and the other items listed below:

i. [reserved];

ii. Bill of Sale. A bill of sale in substantially the form attached hereto as Exhibit B (the "Bill of Sale"), duly executed by Seller;

iii. Assignment and Assumption Agreement. An assignment and assumption agreement in substantially the form attached hereto as Exhibit C (the "Assignment and Assumption Agreement"), duly executed by Seller;

iv. IP Assignment Agreement. An intellectual property assignment agreement in substantially the form attached hereto as Exhibit D (the "IP Assignment Agreement"), duly executed by Parent and each Subsidiary owning Transferred Assets that are Patents, Trademarks and registered Copyrights or Domain Names;

v. Officer's Certificate. A certificate signed by an officer of Seller, dated the Closing Date, certifying: (x) Seller's organizational and governing documents; (y) resolutions of the Seller Board approving this Agreement, the Ancillary Agreements to which Seller is a party and the transactions contemplated hereby and thereby; and (z) resolutions of the equity holders of Parent approving this Agreement and the transactions contemplated hereby;

vi. Payoff Letters. Payoff letters, in form and substance satisfactory to Buyer, evidencing the discharge or payment in full of the Repaid Indebtedness and including a release of Buyer, and an agreement to provide for the benefit of Buyer the same confidentiality restrictions that exist between the holder of such Repaid Indebtedness and Seller (the "Payoff Letters"), in each case duly executed by each holder of such Repaid Indebtedness, with an agreement to provide termination statements on Form UCC-3, or other appropriate releases following any payoff thereof, which when filed will release and satisfy any and all Liens relating to such Repaid Indebtedness, together with proper authority to file such termination statements or other releases at and following the Closing;

vii. Employment Offer Letters. Employment offer letters with each of the individuals listed on Section 2.7(a)(vii) of the Disclosure Schedule, in the form provided by Buyer, duly executed by the applicable individual party thereto (the "Employment Offer Letters")<sup>1</sup>;

viii. Required Consents. The Required Consents, duly executed and in full force and effect; and each Required Consent given by a contractual counterparty must also include an express and irrevocable waiver (for the express benefit of Guarantor, Buyer and their Affiliates) to the effect that all covenants (if any) of any agreement between Parent or Seller (or an Affiliate of Parent or Seller) and such counterparty which are stated to apply not just to the Parent/Seller-side party but also to Affiliates and/or Subsidiaries of such Parent/Seller-side party shall, after the Closing, have no applicability to or binding effect upon Guarantor, Buyer or any Affiliate of Guarantor or Buyer (except for the Parent/Seller-side party, to the extent it is or becomes an Affiliate or Subsidiary of Guarantor or Buyer);

ix. FIRPTA Certificate. An affidavit prepared in accordance with Treasury Regulations Sections 1.1445-2 and dated as of the Closing Date attesting that Parent and each Subsidiary is not a foreign person, provided, however, that that if Buyer does not receive a properly executed affidavit, as described above, from Seller then Buyer shall be permitted to withhold from any payments to be made pursuant to this Agreement to Seller any required withholding tax under Section 1445 of the Code as determined by Buyer, and any such amounts withheld shall be treated for all purposes of this Agreement as having been paid to Seller;

x. Transition Services Agreement. A transition services agreement in substantially the form attached hereto as Exhibit E (the "Transition Services Agreement"), duly executed by Seller;

xi. Escrow Agreement. The Escrow Agreement, duly executed by Seller and the Escrow Agent; and

xii. Other Documents. All other instruments, agreements, certificates and documents required to be delivered by Seller at or prior to the Closing pursuant to this Agreement and such other certificates of authority and similar instruments as Buyer may have reasonably requested at least three (3) Business Days prior to the Closing Date in order to give effect to the transactions contemplated by this Agreement.

(b) Buyer shall pay, or cause to be paid, the Closing Consideration as provided in Section 2.8 and shall deliver, or cause to be delivered, to Seller or any other Person designated by Seller (unless the delivery is waived in writing by Seller), the following documents, in each case duly executed or otherwise in proper form, and the other items listed below:

i. [reserved];

ii. Assignment and Assumption Agreement. The Assignment and Assumption Agreement, duly executed by Buyer;

iii. IP Assignment Agreement. The IP Assignment Agreement, duly executed by Buyer;

iv. Good Standing Certificate. A good standing certificate with respect to Buyer issued by the Secretary of State of the State of Delaware, dated as of a date no more than three (3) Business Days prior to the Closing Date;

v. Transition Services Agreement. The Transition Services Agreement, duly executed by Buyer;

vi. Escrow Agreement. The Escrow Agreement, duly executed by Buyer; and

vii. Other Documents. All other instruments, agreements, certificates and documents required to be delivered by Buyer at or prior to the Closing pursuant to this Agreement and such other certificates of authority and similar instruments as Seller may have reasonably requested at least three (3) Business Days prior to the Closing Date in order to give effect to the transactions contemplated by this Agreement.

Section 2.8. Purchase Price.



(a) The aggregate consideration for the Transferred Assets and the non-competition obligations set forth in Section 6.5 shall consist of: (i) an amount in cash equal to the Base Consideration, subject to adjustment pursuant to Section 2.9 below and payable in accordance with Section 2.8(b) below; (ii) the Earnout; and (iii) the assumption by Buyer of the Assumed Liabilities (collectively, the “Purchase Price”).

(b) At the Closing:

i. Buyer shall pay, or cause to be paid, the Closing Consideration, *minus* the sum of (A) the Escrow Amount, and (B) the amount of any funds required to be paid pursuant to the Payoff Letters (the “Payoff Amounts”), to Seller by wire transfer of immediately available funds to an account or accounts designated by Seller in the Estimated Working Capital Statement;

ii. Buyer shall pay, or cause to be paid, the Escrow Amount to the Escrow Agent, by wire transfer of immediately available funds to the Escrow Account designated by the Escrow Agent pursuant to the Escrow Agreement;

iii. Buyer shall pay, or cause to be paid, the Payoff Amounts to the payees specified in the Payoff Letters, by wire transfer of immediately available funds to the account or accounts designated by such payees therein; and

iv. Buyer shall assume the Assumed Liabilities.

(c) Buyer shall be permitted to deduct and withhold or cause to be deducted and withheld from any amounts payable pursuant to this Agreement all amounts required to be deducted and withheld under applicable Law. Any amounts so deducted and withheld shall be treated for all purposes of this Agreement as paid to Seller.

#### Section 2.9. Working Capital Adjustment.

(a) Estimated Working Capital Adjustment. At least five (5) Business Days prior to the Closing Date, Seller shall deliver to Buyer a statement (the “Estimated Working Capital Statement”), reasonably acceptable to Buyer, setting forth a good faith calculation, together with reasonably detailed supporting documentation, of (i) the estimated Closing Net Working Capital (the “Estimated Closing Net Working Capital”) and the components thereof, (ii) the Estimated Working Capital Increase or the Estimated Working Capital Decrease, as the case may be, and (iii) the resulting calculation of the Closing Consideration. The Estimated Working Capital Statement and the calculations thereunder shall be prepared and calculated by Seller in good faith and be reasonably acceptable to Buyer.

(b) Working Capital Statement. Within the one hundred twenty (120) day period after the Closing Date (or such reasonable extension thereof as approved by Seller, such approval not to be unreasonably withheld, conditioned or delayed), Buyer shall deliver, or cause to be delivered, to Seller a statement (the “Working Capital Statement”) setting forth Buyer's objections, if any, to the calculations set forth in the Estimated Working Capital Statement, together with reasonably detailed supporting documentation to substantiate any such objections, including the calculations of: (i) the Closing Net Working Capital and (ii) the Working Capital Increase or the Working Capital Decrease, as the case may be. The Working Capital Statement and the calculations thereunder shall be prepared and calculated by Buyer in good faith.

(c) Disputes.

(i) If Seller disputes any of Buyer's objections to the Estimated Working Capital Statement as set forth in the Working Capital Statement and the amount of the dispute exceeds \$100,000, then, within fifteen (15) days after the delivery to Seller of the Working Capital Statement (the "Dispute Period"), Seller shall deliver to Buyer a written notice (a "Dispute Notice") describing in reasonable detail Seller's dispute of any of Buyer's objections to the Estimated Working Capital Statement set forth in such Working Capital Statement. If Seller does not deliver a Dispute Notice to Buyer during the Dispute Period, then Buyer's objections set forth in the Working Capital Statement shall be binding and conclusive on the parties hereto.

(ii) If Seller delivers a Dispute Notice, and if Seller and Buyer are unable to resolve the objections set forth in the Working Capital Statement within ten (10) Business Days after such Dispute Notice is delivered to Buyer, the dispute shall be finally settled by the Accounting Firm. Within ten (10) days after the Accounting Firm is appointed, Buyer shall forward a copy of the Working Capital Statement to the Accounting Firm, and Seller shall forward a copy of the Dispute Notice to the Accounting Firm, together with, in each case, all relevant supporting documentation. Each party shall execute any reasonable engagement letter requested by the Accounting Firm. The Accounting Firm's role shall be limited to resolving such objections and determining the correct calculations to be used on only the disputed portions of the Working Capital Statement, and the Accounting Firm shall not make any other determination, including any determination as to whether any other items on the Working Capital Statement are correct or whether the Target Net Working Capital is correct. The Accounting Firm shall not assign a value to any item greater than the greatest value for such item claimed by Seller or Buyer or less than the smallest value for such item claimed by Seller or Buyer and shall be limited to the selection of either Seller's or Buyer's position on a disputed item (or a position in between the positions of Seller or Buyer) based solely on presentations and supporting material provided by the parties and not pursuant to any independent review. In resolving such objections, the Accounting Firm shall apply the provisions of this Agreement concerning determination of the amounts set forth in the Working Capital Statement. Seller and Buyer shall instruct the Accounting Firm to deliver to Seller and Buyer a written determination (such determination to include a work sheet setting forth all material calculations used in arriving at such determination and to be based solely on information provided to the Accounting Firm by Seller and Buyer) of the disputed items submitted to the Accounting Firm within thirty (30) calendar days of receipt of such disputed items. The determination by the Accounting Firm of the disputed amounts and the Working Capital Increase or Working Capital Decrease shall be conclusive and binding on the parties hereto, absent manifest error or fraud or willful misconduct as determined by a non-appealable and binding decision by a court of law having jurisdiction over the parties. Each party (as defined below) in any such proceeding shall pay a proportion of the total costs and fees related to such determination by the Accounting Firm, including the costs for the Accounting Firm's services, based on the extent to which it is the non-prevailing party in any Dispute. For example, if the difference between Buyer's and Seller's position as finally submitted to the Accounting Firm for a determination is \$50,000, and Buyer is awarded \$10,000, then Buyer shall pay 80% of such costs. The parties agree that the procedure set forth in this Section 2.9 for resolving disputes with respect to the Closing Net Working Capital shall be the sole and exclusive remedy for resolving such disputes; provided, however, that the parties agree that judgment may be entered upon the determination of the Accounting Firm in any court having jurisdiction over the party against which such determination is to be enforced. The Closing Net Working Capital, as finally determined pursuant to this Section 2.9(c), shall be referred to herein as the "Final Actual Net Working Capital". The same mechanism, including the dates of a Dispute Notice, and the selection of an Accounting Firm if needed, shall apply to any dispute regarding payments calculated under Exhibit A.

(d) Payment of Working Capital Adjustment. If there is a Working Capital Increase, as finally determined in accordance with this Section 2.9, Buyer shall pay the Working Capital Increase to Seller. If

there is a Working Capital Decrease, as finally determined in accordance with this Section 2.9, then Seller shall pay to Buyer the Working Capital Decrease.

(e) Timing of Payments. Any payment required to be made pursuant to Section 2.9(d) shall be made within five (5) Business Days of the determination of the Final Actual Net Working Capital pursuant to the provisions of this Section 2.9 by wire transfer of immediately available funds to such account or accounts as may be designated in writing by Seller or Buyer, as applicable, at least two (2) Business Days prior to such payment date.

(f) Tax Treatment. Each of Seller and Buyer shall treat any payment that Buyer or Seller receives pursuant to this Section 2.9 as an adjustment to the Purchase Price for Tax purposes.

#### Section 2.10. Escrow Arrangements.

(a) At the Closing, Seller and Buyer shall enter into an Escrow Agreement with the Escrow Agent in substantially the form attached hereto as Exhibit F (the "Escrow Agreement"), pursuant to which, among other things, Buyer shall deposit an amount in cash equal to the Escrow Amount in the Escrow Account in order to provide Buyer with a source of funds for satisfaction of any amounts owing from Seller to any Buyer Indemnitee resulting from Damages required to be indemnified by Seller under Article 8.

(b) Distributions from the Escrow Account to Seller or Buyer, as applicable, shall be made as provided in this Agreement and the Escrow Agreement.

#### Section 2.11. Purchase Price Allocation.

(a) The parties hereto shall allocate the Base Consideration (*plus* the portion of the Assumed Liabilities and other relevant items which are treated as purchase price for federal income tax purposes) among the assets transferred by Seller pursuant to this Agreement in accordance with the applicable provisions of Section 1060 of the Code and the Treasury Regulations promulgated thereunder (the "Price Allocation").

(b) Within ninety (90) days after the Closing, Buyer shall provide Seller with a statement ("Price Allocation Statement") containing Buyer's proposed Price Allocation. If Seller does not notify Buyer of an objection to Buyer's proposed Price Allocation as unreasonable within twenty (20) days after delivery thereof, Buyer's proposed Price Allocation shall be deemed the "Final Price Allocation". If within twenty (20) days after the delivery of the Price Allocation Statement, Seller notifies Buyer in writing that Seller objects to Buyer's proposed Price Allocation contained in the Price Allocation Statement as unreasonable, Buyer and Seller shall use commercially reasonable efforts to resolve such dispute within twenty (20) days of Seller's written notification, and the Price Allocation agreed to by Buyer and Seller shall be deemed the Final Price Allocation. In the event that Buyer and Seller are unable to resolve such dispute within that twenty (20) day period, the dispute shall be referred for final determination to the Accounting Firm or, if such firm is not available, such other accounting firm selected by the mutual agreement of Buyer and Seller. The fees and disbursements of such third party shall be borne by the parties hereto in proportion to the amounts by which their proposals differ from the final determination of such third party. The Final Price Allocation shall be adjusted, as appropriate, to reflect any payments made pursuant to this Agreement after the Closing Date. Each of Buyer and Seller shall timely file an IRS Form 8594 reflecting the Price Allocation for the taxable year that includes the Closing Date and make any timely filing required by applicable state or local Laws. Neither Buyer nor Seller shall take any position or permit any of its Affiliates to take any position inconsistent with the Final Price Allocation in the preparation of financial statements, the filing of any Tax Returns or in the course of any audit by any Taxing Authority, Tax review or Tax proceeding relating to any Tax Returns. Any Working Capital Increase or Working Capital Decrease pursuant to Section 2.9 shall be allocated in a manner consistent with the Final Price Allocation.

### ARTICLE 3. REPRESENTATIONS AND WARRANTIES OF SELLER

Except as set forth in the disclosure schedule delivered by Seller to Buyer simultaneously with the execution and delivery of this Agreement (the “Disclosure Schedule”), Seller hereby represents and warrants to Buyer as of the date of this Agreement and as of the Closing Date as follows:

Section 3.1. Organization and Qualification. Parent is a Delaware corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware. Each Subsidiary is duly incorporated, validly existing and in good standing under the Laws of the state of its incorporation. Parent and each Subsidiary has the requisite corporate power and authority to own, operate or lease all of the properties and assets that it purports to own, operate or lease and to carry on the Business as it is now being conducted and as currently proposed to be conducted. Parent and each Subsidiary is duly licensed or qualified to do business and is in good standing (with respect to jurisdictions that recognize such concept) in each jurisdiction in which the nature of the Business or the character or location of the Transferred Assets makes such licensing or qualification necessary. Section 3.1 of the Disclosure Schedule accurately sets forth each jurisdiction where Seller is qualified, licensed or admitted to do business.

#### Section 3.2. Authority.

(a) Parent and each Subsidiary has all necessary power and authority to execute and deliver this Agreement and the Ancillary Agreements to which Parent and any Subsidiary is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party, the performance by Seller of its obligations hereunder and thereunder, and the consummation by Seller of the transactions contemplated hereby and thereby, have been duly and validly authorized by all necessary corporate action on the part of Seller, and no other or further action or proceeding on the part of Seller, other than the approval of Parent’s Stockholders, is necessary to authorize the execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party, the performance by Seller of its obligations hereunder and thereunder, and the consummation by Seller of the transactions contemplated hereby or thereby. This Agreement and the Ancillary Agreements to which Seller is a party have been duly executed and delivered by Seller and, assuming the due and valid authorization, execution and delivery of this Agreement and such Ancillary Agreements by each other party thereto, constitute a valid and binding obligation of Seller, enforceable against Seller in accordance with their terms, except that such enforceability: (i) may be limited by bankruptcy, insolvency, moratorium or other similar Laws of general application affecting or relating to the enforcement of creditors’ rights generally; and (ii) is subject to general principles of equity.

(b) At a meeting duly called and held, the Seller Board has, by the unanimous vote of the Seller Board, adopted resolutions approving this Agreement, the Ancillary Agreements to which Parent or any Subsidiary is a party and all of the transactions contemplated hereby and thereby, which resolutions are in full force and effect and have not been subsequently amended, altered, rescinded, revoked or modified in any respect.

(c) The stockholder of each Subsidiary has duly approved the sale of assets contemplated by this Agreement.

#### Section 3.3 Consents and Approvals; No Violations.

(a) Except for the Consents, filings, declarations, registrations and notices set forth in Section 3.3(a) of the Disclosure Schedule, no Consent of, or filing, declaration or registration with, or notice to any Governmental Entity or any other Person, which has not been received or made, is required to be obtained or

made by Seller for the execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party or the consummation by Seller of the transactions contemplated hereby or thereby.

(b) The execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party, the performance by Seller of its obligations hereunder and thereunder, and the consummation by Seller of the transactions contemplated hereby and thereby do not and will not: (i) conflict with or violate any provision of Parent or any Subsidiary's organizational or governing documents; or (ii) assuming that the Consents listed on Section 3.3(a) of the Disclosure Schedule have been received or made, as the case may be, prior to the Closing: (x) conflict with or result in a violation or breach of any Law applicable to Seller, the Business or any of the Transferred Assets; (y) conflict with, result in a violation or breach of, result in the loss of any material benefit under, constitute a default (or an event which, with notice or lapse of time, or both, would constitute a default) under, result in the termination, modification or cancellation of or a right of termination, modification or cancellation under, or accelerate the performance required under, any Contract or Permit to which Seller is a party, by which Seller or the Business is bound, or to which any of the Transferred Assets is subject; or (z) result in the creation of any Lien upon any of the Transferred Assets.

#### Section 3.4. Financial Information.

a. Delivery of Financial Statements. Seller has delivered to Buyer true, correct and complete copies of the following financial statements, including any related notes and schedules thereto (collectively, the "Financial Statements"): (i) the audited balance sheet of the Business as of December 31, 2016, December 31, 2017 and December 31, 2018, and the related unaudited statements of operations and cash flows for the years then ended; and (ii) the unaudited balance sheet of the Business as of September 30, 2019 (the "Interim Balance Sheet"), and the related unaudited statements of operations and cash flows, in each case, for the three and nine months ended September 30, 2019.

b. Fair Presentation. The Financial Statements have been based upon the information contained in Seller's Books and Records, and have been prepared in accordance with GAAP applied on a consistent basis throughout the period involved (except as indicated in the notes to financial and except that unaudited financial statements may not contain footnotes and are subject to normal and recurring yearend adjustments). Each of the balance sheets included in the Financial Statements is true, correct and complete and fairly presents in all material respects the financial position of the Business as of the respective dates thereof, and each of the statements of operations and cash flows or equivalent statements contained in the Financial Statements (including any related notes and schedules thereto) is true, correct and complete and fairly presents the results of operations of the Business for the periods specified in such statement, in each case in accordance with GAAP. Seller maintains a standard system of accounting for the Business established and administered in accordance with GAAP. With respect to Parent, the financial statements included in any annual or quarterly reports filed with the SEC were true, complete and correct at the time filed.

c. Financial Statement Preparation. The Business possesses, and will have access, following the Closing, to the information necessary to prepare balance sheets and statements of operations and cash flows (including footnotes and other disclosures related thereto) for the Business that conform to the requirements of GAAP. The statements of operations included in the Financial Statements do not contain any material items of special or non-recurring income or other income not earned in the ordinary course of the Business except as expressly specified therein. The statements of operations and cash flows included in the Financial Statements do not reflect the operations of any entity or business other than the Business other than Icagen-T. Seller has not engaged in any transaction with respect to the Business, maintained any bank account for the Business or used any of its funds in the conduct of the Business

except for transactions, bank accounts and funds which have been and are reflected in its normally maintained books and records.

d. Indebtedness. Section 3.4(d) of the Disclosure Schedule sets forth a complete and correct list of all Indebtedness of the Business, or by which the Business has become subject to a Lien, as of the date of this Agreement, identifying the creditor (including name and address), the type of instrument under which such Indebtedness is owed and the amount of such Indebtedness as of the open of business on the date of this Agreement. No Indebtedness of the Business contains any restriction upon the prepayment of any such Indebtedness except as set forth on Schedule 3.4(d). With respect to each item of Indebtedness of the Business, Seller is not in default and no payments are past due except as set forth on Schedule 3.4(d). Seller has not received any notice of a default, alleged failure to perform or any offset or counterclaim with respect to any item of Indebtedness of the Business that has not been fully remedied and withdrawn except as set forth on Schedule 3.4(d). The consummation of the transactions contemplated by this Agreement will not cause a default, breach or an acceleration, automatic or otherwise, of any conditions, covenants or any other terms of any item of Indebtedness of the Business.

e. Solvency. After giving effect to the transactions contemplated hereby, Parent on a consolidated basis, including Icagen-T, will be solvent.

Section 3.5. Absence of Undisclosed Liabilities. Except as set forth on Schedule 3.5, Seller does not have any Liabilities with respect to the Business or the Transferred Assets except for: (a) Liabilities adequately reflected or reserved against in the Interim Balance Sheet; (b) Current Liabilities that have been incurred in the Ordinary Course of Business since the date of the Interim Balance Sheet and that are included in the calculation of Net Working Capital; (c) Liabilities under this Agreement and the Ancillary Agreements; and (d) Excluded Liabilities.

Section 3.6. Assets; Employees.

a. Disregarding the effect of Section 2.5, the Transferred Assets, together with the services to be expressly provided under the Transition Services Agreement: (i) constitute all of the rights, properties and assets, tangible and intangible, of any nature whatsoever, necessary to operate the Business as currently conducted and as the Business has been conducted since January 1, 2018; and (ii) include all of the operating assets of the Business and of Seller with respect to the Business.

b. Seller has good, valid and marketable title to, or a valid leasehold interest in, all of the Transferred Assets, free and clear of all Liens (other than Permitted Liens) and except as set forth on Schedule 3.6.

c. All of the Transferred Assets are in good operating condition and repair, subject to normal wear and maintenance, are usable in the Ordinary Course of Business and conform to applicable Laws and all Permits issued to Seller by any Governmental Entity relating to their construction, use and operation. No Person other than Seller owns any equipment or other tangible or intangible assets or properties situated on the premises of the Business or necessary to operate the Business in a manner, and at levels of activity and productivity, consistent with the manner and levels at which such the Business has been conducted since January 1, 2018, except for items leased pursuant to Material Contracts.

d. Section 3.6(d) of the Disclosure Schedule sets forth a list of all Business Employees and Business Consultants and, with respect to each, sets forth the following information: (i) name; (ii) title or position; (iii) the entity or entities by which such individual is employed; (iv) hire date;

(v) current annual or hourly base compensation rate; (vi) commission, bonus, incentive compensation, or other similar compensation paid for calendar year 2019; (vii) all accruals or commitments (whether oral or written) to pay commissions, bonuses, incentive compensation, or other similar compensation for the current year; (viii) accrued but unused vacation or paid time off; (ix) active or inactive status and, if applicable, the reason for inactive status; (x) accrued but unused sick days; (xi) full-time or part-time status; (xii) exempt or non-exempt status; (xiii) employment location; and (xiv) any union affiliation. The Business Employees and Business Consultants comprise all of the personnel that is necessary for the management and operation of the Business as currently conducted and planned to be conducted and as it has been conducted since January 1, 2018.

Section 3.7. Absence of Certain Changes or Events. Since June 30, 2019 and except as set forth on Schedule 3.7: (a) Seller has conducted the Business in the Ordinary Course of Business (including the collection of receivables, the payment of payables and the making of capital expenditures); (b) there have not occurred any events, series of events, occurrences or conditions, and there has not been any lack of occurrences, facts, conditions, changes, developments or effects, in each case that individually or in the aggregate, have had or could reasonably be expected to have or result in a Material Adverse Effect; and (c) Seller has not taken or authorized any action which, if taken or authorized on or after the date of this Agreement, would require the consent of Buyer pursuant to Section 5.1.

Section 3.8. Litigation.

a. There is no Proceeding pending or, to the Knowledge of Seller, threatened against or by Seller: (i) relating to or affecting the Business, the Transferred Assets or the Assumed Liabilities; or (ii) that challenges or seeks to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement. No event has occurred, and to the Knowledge of the Seller no circumstance exists, in each case that is reasonably likely to result in the commencement of any such Proceeding.

b. There is: (i) no outstanding Order of, or settlement agreement with or subject to, any Governmental Entity; and (ii) no unsatisfied judgment, penalty or award, in each case against, relating to or affecting the Business.

Section 3.9. Compliance with Laws. Except as set forth on Schedule 3.9, Seller is in compliance with all material Laws applicable to the Business, the Business Employees or the Transferred Assets, and no Proceeding has been filed or commenced and is continuing against Seller, and Seller has not received any notice or other communication (in writing or otherwise), alleging that Seller is not in compliance with any such Law. No event has occurred, and no circumstance exists, in each case that (with or without notice or lapse of time), would reasonably be expected to constitute or result in a material violation by Seller of, or a material failure on the part of Seller to comply with, any Law applicable to the Business or the Transferred Assets. In furtherance of the foregoing:

In furtherance of, and not in limitation of, the foregoing:

a. Seller and its Affiliates, if applicable, have conducted all clinical activities related to the Business in accordance with good clinical practices and good laboratory practices and in material compliance with Law. To the Knowledge of Seller, Seller and its Affiliates have employed Persons with appropriate education, knowledge and experience to conduct and to oversee the conduct of the research and activities intended to be filed for Seller's own behalf or by Seller's customers with the U.S. Food and Drug Administration ("FDA").

b. Neither Seller nor any of the Employees that conducted any activities intended to be filed with the FDA has been disqualified, debarred or voluntarily excluded by the FDA or any other Governmental Entity for any purpose, or has been charged with or convicted under United States federal law for conduct relating to the development or approval, or otherwise relating to the regulation, of any drug product under the Generic Drug Enforcement Act of 1992 or any other Regulation, or directly or indirectly has made an untrue statement of a material fact to any Governmental Entity (whether in any submission to such Governmental Entity or otherwise), or failed to disclose a material fact required to be disclosed to any Governmental Entity. None of Seller nor any Employee has received any notice to such effect.

c. Seller has prepared, maintained and retained all documentation that is required to be maintained or reported pursuant to and in material compliance with good laboratory and clinical practices and under Law and all such information is true, complete and correct in all material respects and what it purports to be.

d. Seller has not misappropriated any invention, trade secret or confidential information of any other Person in a manner that could reasonably be asserted to have violated any Law.

Section 3.10. Compliance with Permits. (a) Seller holds all material Permits required for the lawful conduct of the Business as currently conducted or for the ownership or use of the Transferred Assets; (b) such Permits are valid, unimpaired and in full force and effect; (c) Seller is not in default under or in material violation of any such Permit; and (d) no Proceeding that seeks the revocation, cancellation, suspension, limitation, termination or nonrenewal of any such Permit is pending before any Governmental Entity or, to the Knowledge of Seller, threatened. Seller has timely applied for any renewals of such Permits required by applicable Law or otherwise necessary for the continued use of the Transferred Assets or the operation of the Business.

Section 3.11. Taxes.

a. All Tax Returns required to be filed by Seller in respect of the Business or the Transferred Assets have been duly filed on a timely basis or within valid and appropriate extensions of time, and all such Tax Returns were when filed, and continue to be, correct and complete in all material respects. Except as set forth on Schedule 3.11, all Taxes (whether or not shown on any Tax Return) owed by Seller relating to the Business or the Transferred Assets have been timely paid. There are no Liens with respect to Taxes imposed on the Business or any of the Transferred Assets.

b. Except as set forth on Schedule 3.11, Seller has complied with all material Laws applicable to the Business and the Transferred Assets relating to the payment and withholding of Taxes, and has duly and timely withheld and paid over to the appropriate Taxing Authority all amounts required to be so withheld and paid under all such Laws. Seller has not waived or requested to waive any statute of limitations in respect of Taxes associated with the Business or the Transferred Assets which waiver is currently in effect.

c. There is no Proceeding pending or threatened against Seller in respect of the Business or the Transferred Assets by any Taxing Authority, including for the assessment or collection of Taxes. No deficiencies for any Taxes have been proposed, asserted, threatened or assessed against Seller in respect of the Business or the Transferred Assets by any Taxing Authority that have not been paid, resolved or settled, and Seller has not agreed to any requests for waivers of the time to assess or collect any such Taxes. No Taxing Authority with which Seller does not file a particular Tax Return or to which Seller does not pay Taxes, in each case in respect of the Business or the Transferred Assets, has claimed



that Seller is or may be subject to taxation by that Taxing Authority. No issue has been raised by a Taxing Authority in any prior examination of Seller relating to the Business or the Transferred Assets which, by application of the same or similar principles, could reasonably be expected to result in a material proposed deficiency for any subsequent taxable period.

d. Section 3.11(d) of the Disclosure Schedule lists: (i) all jurisdictions in which Seller pays Taxes and/or has a duty to file Tax Returns, in each case in respect of the Business or the Transferred Assets; and (ii) all types of Tax Returns filed by or on behalf of Seller that relate in whole or in part to the Business or the Transferred Assets.

e. Seller has collected all sales, use, value-added, and similar Taxes in respect of the Business or the Transferred Assets required to be collected, and has remitted, or will remit, on a timely basis such amounts to the appropriate Taxing Authority. Seller has properly requested, received and retained all necessary exemption certificates and other documentation supporting any claimed exemption or waiver of Taxes in respect of the Business or the Transferred Assets on sales or similar transactions as to which it would otherwise have been obligated to collect or withhold such Taxes.

f. None of the Transferred Assets or Assumed Liabilities is a debt obligation that: (i) was issued with "original issue discount" as that term is defined in Section 1273(a) of the Code in excess of \$50,000; (ii) is a "registration-required obligation" as defined in Section 163(f)(2) of the Code; (iii) is an "applicable high yield discount obligation" as defined in Section 163(i)(1) of the Code; or (iv) is a "disqualified debt instrument" as defined in Section 163(1)(2) of the Code.

#### Section 3.12. Intellectual Property.

a. Section 3.12 of the Disclosure Schedule sets forth a complete list of the Intellectual Property Rights that are held for use in the Business. For each listed item, Section 3.12 of the Disclosure Schedule sets forth the (i) legal owner, (ii) the jurisdiction where issued, registered, legally sanctioned, filed or the equivalent, and (iii) the particulars of any registrations or issuances including, without limitation, all relevant dates, application numbers and the status thereof; and (in the case of items both licensed-out and used or held for use in the Business), (iv) the jurisdiction(s) and field of use, if applicable, where licensed for use and (v) the license agreement, listed by date and earliest expiry, with respect to each such item; and (in the case of items licensed-in), (vi) each license or other Contract by which Seller has obtained rights thereunder and (vii) the identity of the licensor, the type of rights licensed, and the Intellectual Property Rights licensed-in.

b. To the Knowledge of Seller, the Transferred Intellectual Property Rights include all Intellectual Property Rights necessary or material to the present conduct of the Business.

c. All Transferred Intellectual Property Rights are owned by or licensed to Seller free and clear of all Liens (other than the Permitted Liens or pursuant to Repaid Indebtedness and except as set forth on Schedule 3.12). Seller has not granted ownership to any Person, or permitted any Person to retain, any ownership rights, or joint ownership of, and Seller will not retain any ownership or other rights in Transferred Intellectual Property Rights, except the U.S. government, when required to do so by Federal Law. Subject to the above, following the Closing, all Transferred Intellectual Property Rights will be fully transferable, alienable or licensable by Buyer without restriction and without payment of any kind to any Third Party. No Transferred Intellectual Property Rights are jointly owned by Seller, on the one hand, with any Third Party, on the other hand. Seller does not own or control any Intellectual

Property Rights pertaining to the Business that are not included in the Transferred Intellectual Property Rights.

d. Seller has secured valid written assignments from all of Seller's current and former Business Employees who contributed to the creation or development of any of the Transferred Intellectual Property Rights of the rights to such contributions that Seller does not already own by operation of law. Seller has taken commercially reasonable measures necessary to protect its trade secrets and the trade secrets of any Third Party provided to Seller.

e. All issued Patents within the Transferred Intellectual Property Rights are valid, enforceable, subsisting, and, to the Knowledge of Seller, have not expired, been cancelled, or abandoned.

f. All issuance, renewal, maintenance and other material payments that are or have become due with respect to the Transferred Intellectual Property have been timely paid by or on behalf of Seller. All documents, certificates and other materials in connection with the Transferred Intellectual Property have, for the purposes of maintaining such Transferred Intellectual Property Rights, been filed in a timely manner with each appropriate Governmental Entity. The Seller has properly filed, prosecuted and maintained all Patents included in the Transferred Intellectual Property Rights. Section 3.12(f) of the Disclosure Schedule sets forth all actions that must be taken by Seller within 120 days of the Signature Date, including the payment of any registration, maintenance or renewal fees, or the filing of any documents, applications or certificates for the purposes of maintaining, perfecting, preserving or renewing any Seller registered intellectual property.

g. All material items of Transferred Intellectual Property Rights were (i) invented, developed, written and created by Business Employees acting within the scope of their employment/work-made-for-hire consultancy or (ii) acquired or licensed by Seller from Third Parties who have validly and irrevocably assigned such item to Seller, or granted Seller a license to use such item of a sufficient scope to cover Seller's use or prior use thereof in the Business, which license is fully assignable to Buyer hereunder.

h. To the Knowledge of Seller, the conduct of the Business by Seller before Closing did not, and will not when conducted by Buyer in substantially the same manner following the Closing, infringe or misappropriate any valid Intellectual Property Rights of any Person, or constitute unfair competition or trade practices under the laws of any jurisdiction, and Seller has not received written notice from any Person claiming that such conduct by Seller infringes or misappropriates any Intellectual Property Rights of any Person or constitutes unfair competition or trade practices under the laws of any jurisdiction.

i. All current and former Business Employees of Seller have executed and delivered to the Seller agreements regarding the protection of proprietary information and the assignment to the Seller of any Intellectual Property Rights arising from services performed for the Seller by such persons, true and correct copies of which have been made available to the Purchaser. To the Knowledge of Seller, no current and former Business Employee of Seller is in violation of any term of any such agreement or of any patent disclosure agreement or employment contract or any other Contract relating to the relationship of any such Business Employee with Seller. Each current and former Business Employee of Seller has entered into a valid and binding written agreement with Seller sufficient to vest title in Seller of all Intellectual Property Rights created by such Business Employee in the scope of his or her services or employment for Seller.

j. Seller has published internal policies and taken other reasonable steps to protect and preserve the confidentiality of all of Seller's trade secrets and other proprietary and confidential information related to the Business, and all disclosure of such information to, and use by, any Third Party (other than (i) competent regulators, accountants and counsel, in each instance acting in their professional capacities, or (ii) pursuant to an applicable Governmental Order) has been pursuant to the terms of a written confidentiality agreement between such Third Party and Seller.

k. Except as pursuant to collaboration or license agreements, Seller has not transferred ownership of, nor granted any license of or right to use, or authorized the retention of any rights to use or joint ownership of, any Transferred Intellectual Property Rights, to any other Person.

l. No claim or action has been asserted against Seller by, and Seller has not received written notice from any Third Party alleging that any conduct of the Business infringes or misappropriates the Intellectual Property Rights of any Third Party, violates the rights of any Person (including any right to privacy or publicity) or constitutes unfair competition or trade practices under the laws of any jurisdiction.

m. Seller does not believe that any Third Party is or has, and Seller has not notified any Third Party that it may be or is misappropriating, infringing, diluting or violating any Transferred Intellectual Property Rights. Seller has not brought any Proceeding before any court, Governmental Entity or arbitral tribunal against any Third Party with respect to any Transferred Intellectual Property Rights.

n. No Transferred Intellectual Property Rights are subject to any proceeding or outstanding decree, order, judgment or settlement agreement or stipulation against Seller nor to Seller's Knowledge against any Third Parties from whom Seller acquired or licensed Transferred Intellectual Property Rights that restricts in any material way the use, transfer or licensing of such Transferred Intellectual Property Rights by Seller or may affect the validity, use or enforceability of such Transferred Intellectual Property Rights.

o. Section 3.12(o) of the Disclosure Schedule contains a complete and accurate list and summary of all royalties, fees, commissions and other amounts payable by Seller to any other Person (other than sales commissions paid to Seller's employees according to Seller's standard commissions plan) upon or for the use of any owned Intellectual Property Rights.

p. To the Knowledge of Seller, no trademark or trade name owned, used or applied for by Seller that is also owned Intellectual Property Rights conflicts or interferes with any trademark or trade name owned, used or applied for by any other Person. For all trademarks that are also owned Intellectual Property Rights, Seller has taken reasonable steps to police the use of such trademarks necessary to maintain the validity and enforceability of such trademarks. No interference, opposition, reissue, reexamination or other Proceeding is or has been pending or, to Seller's Knowledge, threatened, in which the ownership, scope, validity or enforceability of any owned Intellectual Property Rights is being, has been, or could reasonably be expected to be contested or challenged.

q. None of the execution, delivery or performance of this Agreement or any Ancillary Agreement will, with or without notice or lapse of time, result in, or give any other Person the right or option to cause or declare: (i) a loss of, or Lien on, any owned Intellectual Property Rights; (ii) the release, disclosure or delivery of any owned Intellectual Property Rights by or to any escrow agent or

other Person; or (iii) the grant, assignment or transfer to any other Person of any license or other right or interest under, to or in any of the owned Intellectual Property Rights.

r. Seller owns or has a valid right to access and use all Seller IT Systems. The consummation of the transactions contemplated by this Agreement will not impair or interrupt in any material respect: (i) Buyer's access to and use of, or its right to access and use, the Seller IT Systems or any third party databases or third party data used in connection with the Business as currently conducted; and (ii) to the extent applicable, access to and use of the Seller IT Systems by customers of the Business. Seller has taken all steps in accordance with industry standards to secure the Seller IT Systems from unauthorized access or use by any Person and to ensure the continued, uninterrupted and error-free operation of the Seller IT Systems. There (x) have been no unauthorized intrusions or breaches of security with respect to any Seller IT System; (y) has not been any material malfunction of any Seller IT System that has not been remedied or replaced in all respects; and (z) has been no material unplanned downtime or service interruption with respect to any Seller IT System.

s. The operation of the Business as currently conducted and the use or handling of Business Data in connection therewith does not violate any applicable Laws. Seller has not received any notice or other communication (in writing or otherwise) that the operation of the Business is or may be in violation of any data privacy or data security related Laws. Seller has not distributed or displayed any Business Data in breach of any Contract. At all times, in connection with the conduct of the Business and the ownership and use of the Transferred Assets: (i) Seller has posted privacy policies governing Seller's use and collection of personal information in a manner easily viewable by those who either have personal information handled by Seller or use Seller's services, and (ii) all of Seller's privacy policies completely and accurately described Seller's use, collection, display and distribution of any personal information. The operation of the Business is and at all times has been consistent with and compliant with the then current version of Seller's privacy policy posted by Seller. In connection with the operation of the Business, Seller has not entered into any Contract to provide Personally Identifiable Information to any Person. Seller has taken all steps in accordance with normal industry practices to secure its websites and web-based services used or offered in connection with the conduct of the Business and all Business Data from unauthorized access or use by any Person. A copy of all internally or externally prepared reports or audits that describe or evaluate Seller's information security procedures taken in connection with the operation of the Business has been provided to Buyer. None of Business Data or Seller's websites or web-based services used or offered in connection with the conduct of the Business have been the target of any successful or attempted unauthorized access, denial-of-service assault or other attack by hackers. Seller has not provided copies of or access to Business Data to any Person who has not entered into a Contract with Seller to use, receive or view Business Data, copies of all such Contracts have been provided to Buyer, and no party who is a party to any such Contract is in breach of any such Contract. The Business is not subject to HIPAA or other Laws related to personally identifiable medical information and to the extent the Business is party to a Contract that is a business association agreement for purposes of HIPAA, Seller is in compliance therewith.

Section 3.13. Brokers. No broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of Seller or any of its Affiliates or any of their respective officers or directors.

Section 3.14. Material Contracts; No Defaults.

(a) Section 3.14(a) of the Disclosure Schedule contains an accurate and complete list of each of the following types of Contracts (x) by which any of the Transferred Assets are bound or affected or (y) to

which Seller is a party or by which it is bound in connection with the Business or the Transferred Assets (each a “ Material Contract”):

i.any Contract (A) pursuant to which Seller received aggregate payments in excess of \$50,000 during the fiscal year ended December 31, 2019 or (B) that Seller reasonably anticipates will, in accordance with its terms, involve aggregate payments to Seller in excess of \$50,000 within the twelve (12) month period from and after the date of this Agreement;

ii.any Contract (A) pursuant to which Seller made aggregate payments in excess of \$50,000 during the fiscal year ended December 31, 2019 or (B) that Seller reasonably anticipates will, in accordance with its terms, involve aggregate payments by Seller in excess of \$50,000 within the twelve (12) month period from and after the date of this Agreement;

iii.any Contract with any Material Customer or Material Supplier;

iv.any Contract relating to Indebtedness;

v.any Contract (A) for the sale of any of the Transferred Assets or (B) granting to any Person an option, right of first refusal, right of first offer or similar preferential right to purchase any of the Transferred Assets;

vi.any Contract that requires Seller to purchase or sell a stated portion of the requirements or outputs of the Business or that contains “take or pay” provisions;

vii.any Contract limiting, restricting or prohibiting Seller from: (A) conducting any business activities; (B) engaging in any line of business anywhere in the United States or elsewhere in the world; or (C) conducting any business activities with any Person other than Contracts that limit the right to use intellectual property developed as part of the services performed, including work product

viii.any Contract that provides for “most favored nations” terms or establishes an exclusive or priority sale or purchase obligation with respect to any product, service or geographic location;

ix.any Contract containing non-solicitation provisions restricting Seller’s ability to hire or retain any employees, customers, vendors, suppliers or other service providers;

x.any (A) joint venture, strategic alliance, partnership, licensing, franchise, manufacturer, development, distribution, sales agent or supply agreement or (B) other Contract that involves a sharing of revenues, profits, losses, costs or Liabilities by Seller with any other Person;

xi.any Contract providing for capital expenditures or leasehold improvements in excess of \$25,000 individually, or in excess of \$100,000 in the aggregate;

xii.any Contract relating to (A) the acquisition (by merger, consolidation, purchase of stock or assets, or otherwise) by Seller of any Person, a material portion of the assets of any Person, or any business, division or product line or (B) the divestiture or disposition by Seller of a material portion of its properties or assets, or any of its equity interests, in each case of clauses (A) and (B) pursuant to which any of the parties has any remaining obligations or Liabilities;

xiii.any Contract under which Seller has made, or that obligates Seller to make, a loan or capital contribution to, or investment in, any Person other than advances to employees in the Ordinary Course of Business;

xiv.any Contract with any Business Employee or Business Consultant;

xv.any Contract providing for (A) Change of Control Payments or (B) the creation, acceleration or vesting of any right or interest for the benefit of any current or former Business Employee or Business Consultant which becomes payable as a result of or in connection with the consummation of the Transactions;

xvi.any (A) collective bargaining agreement or (B) Contract with any union, labor organization, works council or other employee representative of a group of employees;

xvii.any Personal Property Lease;

xviii.any Real Property Lease;

xix.any inbound IP Contract (other than with respect to commercially available, off the shelf software or click to accept subscription services for software);

xx.any outbound IP license or Contract;

xxi.any Contract with any Governmental Entity;

xxii.any power of attorney or similar grant of agency executed by Seller;

xxiii.any Contract that was otherwise not entered into in the Ordinary Course of Business or that is otherwise material to the Transferred Assets or the operation of the Business; and

xxiv.any Contract which commits Seller to enter into any of the foregoing.

(b) With respect to each Material Contract: (i) such Material Contract is in full force and effect, constitutes a legal, valid and binding obligation of Seller and, to the Knowledge of Seller, each other party thereto, and is enforceable against each of them in accordance with its terms; (ii) neither Seller nor, to the Knowledge of Seller, any other party to such Material Contract is in material breach of or default under such Material Contract; (iii) no event has occurred, and no circumstance exists, in each case that (with or without notice or lapse of time or both) would constitute a breach of or default under, would cause or permit the termination or cancellation of, would cause any loss of benefit under, or would give rise to any right to accelerate the maturity or performance of any obligation under, such Material Contract if it would result in a Material Adverse Effect; (iv) except as set forth in Schedule 3.14(b), Seller has not provided to or received from any counterparty thereto any notice regarding any actual or alleged breach of or default under (or of any condition which with the passage of time or the giving of notice or both would cause a breach of or default under) such Material Contract; and (v) except as set forth in Schedule 3.14(b), Seller has not provided to or received from any counterparty thereto any notice announcing, contemplating or threatening to, and Seller is not otherwise aware of any intention by any counterparty thereto to: (A) terminate (other than Material Contracts that are expiring pursuant to their terms) or not renew such Material Contract, (B) seek the renegotiation of such Material Contract in any material respect, or (C) substitute performance under such Material Contract in any material respect. Seller has delivered or made available to Buyer true, correct and complete copies of all written Material Contracts (including all amendments thereto), and written descriptions of all material terms of all oral Material Contracts.

Section 3.15. Real Property.

a. Seller does not own and has never owned any interest in any real property in connection with the conduct of the Business.

b. Section 3.16(b) of the Disclosure Schedule contains a complete and accurate list of: (i) all real property leased, subleased, licensed or otherwise used, operated or occupied by Seller (whether as tenant, subtenant or pursuant to other occupancy arrangements) and used in or necessary for the conduct of the Business (collectively, including the buildings, improvements and fixtures located thereon, the "Leased Real Property"), including the street address of each Leased Real Property; and (ii) each Contract pursuant to which Seller holds any Leased Real Property as landlord, sublandlord, tenant, subtenant, occupant or otherwise (each, a "Real Property Lease"), including all currently effective amendments and modifications thereto.

c. Seller holds a valid leasehold or subleasehold interest in (or a valid right to use and occupy), and enjoys peaceful and undisturbed possession of, each Leased Real Property, in each case free and clear of all Liens other than Permitted Liens.

d. Except as set forth on Schedule 3.15(d), all rent (including base rent and additional rent) payable under each Real Property Lease has been paid to date. No security deposit or portion thereof deposited with respect to any Real Property Lease has been applied in respect of a breach or default under such Real Property Lease which has not been redeposited in full.

e. Seller has not assigned, subleased, mortgaged, deeded in trust or otherwise transferred or encumbered any Real Property Lease or Leased Real Property or any interest therein.

f. Each Leased Real Property is adequately served by proper utilities and other building services necessary for its current use, and all of the buildings and structures located at the Leased Real Property are structurally sound with no material defects and are in good operating condition.

g. No condemnation, eminent domain or taking proceeding is pending or, to the Knowledge of Seller, threatened that affects any Leased Real Property. None of the Leased Real Property or any portion thereof is located in a flood hazard area (as defined by the Federal Emergency Management Agency).

Section 3.16. Environmental Matters.

a. There is no Proceeding pending or, to the Knowledge of Seller, threatened against Seller, the Business or any of the Transferred Assets, and Seller has no Liability, under or pursuant to any Environmental Law applicable to the Business or the Transferred Assets.

b. Seller: (i) has been at all times and is in compliance in all material respects with all Environmental Laws applicable to the Business or the Transferred Assets; (ii) holds all Environmental Permits as are required for the conduct of the Business as currently conducted; and (iii) is in compliance with such Environmental Permits. Section 3.16(b) of the Disclosure Schedule contains an accurate and complete list of all Environmental Permits held by Seller or to which Seller is a party or by which it is bound, in each case in connection with the Business or the Transferred Assets, or to which any of the Transferred Assets are subject, including in the list (A) the name(s) of the permittee(s); (B) the effective and renewal date(s); (C) the subject matter; (D) the permit number or other identification code; (E) the issuing agency; and (F) any other relevant identifying information.

Section 3.17. Labor Matters.

a. Seller is not, and has not been, party to or bound by a collective bargaining agreement or agreement with any labor union or other employee representative of a group of employees relating to the Business, and no Business Employee is or has been represented by any labor organization with respect to their employment by Seller or any Affiliate of Seller. To the Knowledge of the Seller, there are no current labor union organizing activities in progress with respect to any Business Employees. There are and have been no actual or, to the Knowledge of Seller, threatened labor disputes, strikes, lockouts or work stoppages against or affecting the Business Employees.

b. There is no: (i) unfair labor practice charge; (ii) grievance; (iii) arbitration; (iv) charge; (v) lawsuit; (vi) investigation; or (vii) complaint against Seller pending or, to the Knowledge of Seller, threatened before a Governmental Entity, in each case with respect to any of the Business Employees. All Business Employees are authorized to work in the United States, and a Form I-9 has been completed properly and retained with respect to each Business Employee.

c. Seller is in compliance with all, and has at all times been in compliance with all, and Seller has not received any notice or other communication (in writing or otherwise) of any claim filed with or by any Governmental Entity alleging that Seller has violated any, Laws or applicable contractual arrangements pertaining to employment and employment practices to the extent they relate to the Business Employees, Business Consultants or contingent workers, including all Laws relating to wages, hours, compensation, meal and rest breaks, wage statements, fringe benefits, termination of employment, employment policies or practices, immigration, terms and conditions of employment, child labor, labor or employee relations, classification of employees, affirmative action, equal employment opportunity and fair employment practices, disability rights or benefits, workers' compensation, unemployment compensation and insurance, health insurance continuation, whistle-blowing, harassment, discrimination, retaliation or employee safety or health and, to the Knowledge of Seller, no such claim is threatened.

d. Seller has properly classified all Business Employees and Business Consultants as employees, independent contractors or leased employees and as exempt or non-exempt for all purposes and has made all appropriate filings in connection with services provided by, and compensation paid to, such Business Employees and Business Consultants.

e. All compensation, including wages, commissions and bonuses, payable to all Business Employees and Business Consultants for services performed on or prior to the date of this Agreement have been paid in full, and there are no outstanding agreements, understandings or commitments of Seller with respect to any compensation, commissions or bonuses.

Section 3.18. Employee Benefit Plans.

a. Set forth on Section 3.18 of the Disclosure Schedule is a true and complete list of each Employee Plan. As applicable with respect to each Employee Plan, Seller has delivered or caused to be delivered to Buyer true and complete copies of each Employee Plan, including all amendments thereto, and in the case of an unwritten Employee Plan, a written description thereof.

b. No Employee Plan is, and none of Seller, any Affiliate of Seller, or any ERISA Affiliate thereof sponsors, maintains, contributes to, or has sponsored, maintained, contributed to or incurred any liability (that has not been satisfied in full) to: (i) a multiemployer plan (within the meaning of Section 3(37) or 4001(a)(3) of ERISA); (ii) a plan subject to Part 3, Subtitle B of Title I of ERISA, Section 412 of the Code or Title IV of ERISA, (iii) a "multiple employer plan" (as defined in Section



4063 or 4064 of ERISA); or (iv) a plan that provides benefits, including death or medical benefits, beyond termination of service or retirement other than (A) coverage mandated by Law or (B) death or retirement benefits under an Employee Plan qualified under Section 401(a) of the Code.

c. No Transferred Asset is subject to any Lien under the Code or ERISA, and neither Seller nor any ERISA Affiliate has incurred any liability which could subject Buyer or any Transferred Asset to liability under Sections 4062, 4063 or 4064 of ERISA.

d. All Employee Plans (and related trusts and insurance contracts) comply in form and in operation in all material respects with the applicable requirements of ERISA, the Code, the Family and Medical Leave Act and other applicable Laws and comply in operation in all material respects with their respective terms and conditions, except for such instances of noncompliance in form or operation that would not result in any Liability to Buyer. With respect to all Employee Plans, all premiums, contributions and other Liabilities, whether or not due, for prior plan years and the current plan year for the period ending on the Closing Date have been paid or accrued on Seller's Books and Records to the extent required by, and in accordance with, GAAP, except as would not result in any Liability to Buyer. No statement, either written or oral, has been made by Seller to any Person with regard to any Employee Plan that was not in accordance with the terms and conditions of such Employee Plan and that would have a material adverse economic consequence to Buyer.

e. Each Employee Plan that is subject to Section 409A of the Code has been maintained, in form and operation in compliance with Section 409A of the Code. Seller does not have any obligation to gross up, indemnify or otherwise reimburse any Person for any Taxes (or potential Taxes) imposed (or potentially imposed) pursuant to Section 409A of the Code.

f. Neither Seller nor any ERISA Affiliate is a party to any Contract covering any Business Employee or Business Consultant that, individually or collectively, could give rise to (or already has resulted in) the payment of any amount or provision of any benefit (including accelerated vesting) that could constitute an "excess parachute payment" within the meaning of Section 280G of the Code or subject to an excise tax under Section 4999 of the Code. Seller does not have any obligation to gross up, indemnify or otherwise reimburse any person for any Taxes (or potential Taxes) imposed (or potentially imposed) pursuant to Section 4999 of the Code.

Section 3.19. Affiliate Transactions. Except as set forth on Section 3.19 of the Disclosure Schedule (collectively, the "Affiliate Agreements"), no Affiliate of Seller, no current or former member, stockholder, officer, director, manager or employee of Seller or any Affiliate of Seller, and no immediate family member of any of the foregoing: (a) is a party to any Contract or ongoing transaction or business relationship with, or has any claim or right against, Seller relating to any of the Business, the Transferred Assets or the Assumed Liabilities; (b) has any ownership interest in any of the Transferred Assets; (c) provides material services to the Business (other than employment by Seller); or (d) has borrowed money from or loaned money to Seller in connection with the Business that is currently outstanding.

Section 3.20. Insurance.

a. Section 3.20(a) of the Disclosure Schedule sets forth a complete and accurate list of all policies or binders of fire, liability, product liability, umbrella liability, real and personal property, workers' compensation, vehicular, fiduciary liability and other forms of insurance maintained by or on behalf of Seller and relating to the Business, the Business Employees, the Transferred Assets or the Assumed Liabilities (collectively, the "Insurance Policies"), setting forth, in respect of each such

Insurance Policy: (i) the policy number; (ii) the insurer, (iii) policy limits and deductibles; (iv) the dates of premiums or payments due thereunder; and (v) the expiration date.

b. The Insurance Policies are of the type and in the amounts customarily carried by Persons conducting a business similar to the Business and meet all contractual and statutory requirements to which Seller is subject with respect to Business and the Transferred Assets.

c. With respect to each Insurance Policy: (i) such Insurance Policy is in full force and effect and enforceable in accordance with its terms; (ii) Seller and, to the Knowledge of Seller, each other party to such Insurance Policy are in compliance with the terms and provisions of such Insurance Policy in all material respects; (iii) all premiums for such Insurance Policy have been paid in full; and (iv) no limits of liability or coverage for such Insurance Policy have been exhausted or depleted by more than fifty percent (50%).

d. Neither Seller nor, to the Knowledge of Seller, any other Person has received any notice or other communication (in writing or otherwise) regarding any actual or possible cancellation or termination of, premium increase with respect to, or alteration of coverage under, any such Insurance Policy.

e. Section 3.20(e) of the Disclosure Schedule sets forth: (i) a list of all pending claims (including any workers' compensation claim) under any Insurance Policy; and (ii) the claims history for Seller to the extent involving claims in excess of \$10,000. All claims, incidents, wrongful acts or occurrences for which Seller reasonably expects to obtain coverage under any Insurance Policy have been reported to the applicable underwriter in accordance with the requirements of the applicable Insurance Policy. There is no claim pending under any Insurance Policy as to which coverage has been questioned, denied or disputed or in respect of which there is an outstanding reservation of rights.

#### Section 3.21. Customers and Suppliers.

a. Section 3.21(a) of the Disclosure Schedule identifies, with respect to the Business, the revenues received from each of the customers (based on revenues or potential revenues) of the Business that accounted for ten percent (10%) or greater of Seller's revenues during year ended December 31, 2019 (collectively, the "Material Customers"). Except as set forth on Schedule 3.21(a), Seller has not received any notice or other communication (in writing or otherwise) indicating that any Material Customer: (A) intends or expects to cease dealing with Seller with respect to the Business; (B) will otherwise reduce the volume of business transacted with Seller with respect to the Business below historical levels; (C) is dissatisfied in any material respect with any product or service of the Business or with its business relationship with Seller with respect to the Business; or (D) otherwise intends to change other material terms of its business relationship with Seller with respect to the Business.

b. Section 3.21(b) of the Disclosure Schedule identifies, with respect to the Business, the ten (10) suppliers (excluding accounting or legal services) that accounted for the largest dollar volume of purchases during year ended December 31, 2019 (collectively, the "Material Suppliers"). Except as set forth on Schedule 3.21(b), Seller has not received any notice or other communication (in writing or otherwise) indicating that any Material Supplier: (A) intends or expects to cease supplying goods or services to the Business; (B) will otherwise reduce the volume of business transacted with Seller with respect to the Business below historical levels; (C) intends to discontinue the relevant portion of its business; or (D) otherwise intends to terminate or materially modify its relationship with the Business.

#### Section 3.22. Unlawful Payments.

a. Neither Seller nor any Affiliate, director, officer or employee of Seller, nor, to the Knowledge of Seller, any agent, representative, sales intermediary or other third party acting on behalf of Seller, in any way relating to the Business: (i) has taken any action in violation of any applicable anticorruption Law, including the U.S. Foreign Corrupt Practices Act (15 U.S.C. § 78 dd-1 et seq.); or (ii) has corruptly, offered, paid, given, promised to pay or give or authorized the payment or gift of anything of value, directly or indirectly through third parties, to any Public Official or other Person, for purposes of: (A) influencing any act or decision of any Public Official or other Person in his, her or its official capacity; (B) inducing such Public Official or other Person to do or omit to do any act in violation of his, her or its lawful duty; (C) securing any improper advantage; or (D) inducing such Public Official or other person or entity to use his, her or its influence with a government, Governmental Entity, commercial enterprise owned or controlled by any government (including state owned or controlled facilities), or any other Person in order to assist the Business, or any Person related in any way to the Business, in obtaining or retaining business or directing any business to any Person.

b. There are no pending or, to the Knowledge of Seller, threatened claims against Seller, in respect of the Business, with respect to violations of any applicable anticorruption Law, including the U.S. Foreign Corrupt Practices Act (15 U.S.C. § 78 dd-1 et seq.).

Section 3.23. Anti-Takeover Laws. Prior to the date of this Agreement, Parent has taken all actions necessary to exempt under or make not subject to (a) the provisions of Section 203 of the DGCL, (b) any other state takeover law or state law, or (c) provisions of Parent's Certificate of Incorporation that purports to limit or restrict business combinations or the ability to acquire or vote shares: (i) the execution and delivery of this Agreement to be executed concurrently herewith and (ii) the transactions contemplated hereby. Except as disclosed in Section 3.23 of Seller's Disclosure Schedule, Parent does not have any stockholder or shareholder rights agreement or any similar type of anti-takeover agreement.

Section 3.24. Information Supplied. The Proxy Statement will not, at the time the Proxy Statement is mailed to Parent's stockholders or, at the time of Parent's Stockholders' Meeting, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not misleading. The Proxy Statement will comply as to form in all material respects with all applicable Legal Requirements, including the Exchange Act and the rules and regulations thereunder. No representation or warranty is made by Parent with respect to statements made or incorporated by reference therein based on information supplied by Buyer specifically for inclusion or incorporation by reference therein.

Section 3.25. Disclosure. Seller has disclosed to Buyer all facts material to the relationship of Seller with the customers and suppliers of the Business and the operations, prospects, results of operations, cash flows and condition (financial or otherwise) of the Business. No representation or warranty or other statement made by Seller in this Agreement, the Disclosure Schedule, Seller's filings with the SEC or any certificate or other document delivered hereunder contains any untrue statement of a material fact or omits any material fact necessary to make the statements contained herein or therein not misleading.

#### **ARTICLE 4. REPRESENTATIONS AND WARRANTIES OF BUYER**

Buyer hereby represents and warrants to Seller as of the date of this Agreement and as of the Closing Date as follows:

Section 4.1. Organization and Qualification. Buyer is a limited liability company duly formed, validly existing and in good standing under the Laws of the State of Delaware and has the requisite limited liability company power and authority to own, operate or lease all of the properties and assets that it purports to own, operate or lease and to carry on its business as it is now being conducted. Buyer is duly licensed or qualified to do business and is in good standing (with respect to jurisdictions that recognize such concept) in each jurisdiction in which the nature of the business conducted by it or the character or location of the properties and assets owned, operated or leased by it makes such licensing or qualification necessary, except where the failure to be so licensed or qualified or in good standing would not reasonably be expected to have, when aggregated with all other such failures, a material adverse effect on Buyer's ability to perform its obligations under this Agreement or prevent the consummation of the transactions contemplated hereby (a "Buyer Material Adverse Effect").

Section 4.2. Authority. Buyer has all necessary power and authority to execute and deliver this Agreement and the Ancillary Agreements to which it is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which it is a party, the performance by Buyer of its obligations hereunder and thereunder, and the consummation by Buyer of the transactions contemplated hereby and thereby, have been duly and validly authorized by all necessary action on the part of Buyer, and no other or further action or proceeding on the part of Buyer (or its equity holders) is necessary to authorize the execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which it is a party, the performance by Buyer of its obligations hereunder and thereunder, and the consummation by Buyer of the transactions contemplated hereby and thereby. This Agreement and the Ancillary Agreements to which Buyer is a party have been duly executed and delivered by Buyer and, assuming the due and valid authorization, execution and delivery of this Agreement and such Ancillary Agreements by each other party thereto, constitute a valid and binding obligation of Buyer, enforceable against it in accordance with their terms, except that such enforceability: (a) may be limited by bankruptcy, insolvency, moratorium or other similar Laws affecting or relating to the enforcement of creditors' rights generally; and (b) is subject to general principles of equity.

Section 4.3. Consents and Approvals; No Violations.

a. No Consent of, or filing, declaration or registration with, or notice to any Governmental Entity, which has not been received or made, is required to be obtained or made by Buyer for the execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which Buyer is a party or the consummation by Buyer of the transactions contemplated hereby or thereby, other than such Consents, filings, declarations, registrations or notices that, if not obtained or made, would not reasonably be expected to have, individually or in the aggregate, a Buyer Material Adverse Effect.

b. The execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which Buyer is a party, the performance by Buyer of its obligations hereunder and thereunder, and the consummation by Buyer of the transactions contemplated hereby and thereby, do not and will not: (i) conflict with or violate any provision of the organizational or governing documents of Buyer; (ii) conflict with or result in a violation or breach of any Law applicable to Buyer or any of its properties or assets; (iii) conflict with, result in a violation or breach of, result in the loss of any material benefit under, constitute a default (or an event which, with notice or lapse of time, or both, would constitute a default) under, result in the termination, modification or cancellation of or a right of termination, modification or cancellation under, or accelerate the performance required under, any Contract to which Buyer is a party, or by which Buyer or any of its properties or assets is bound; or (iv) result in the creation of any Lien upon any of the properties or assets of Buyer, except, in the case of clauses (ii), (iii) and (iv) above, for such conflicts, violations, breaches, losses of benefits, defaults,

events, terminations, rights of termination or cancellation, accelerations or Lien creations as would not reasonably be expected to have, individually or in the aggregate, a Buyer Material Adverse Effect.

Section 4.4. Litigation. There is no Proceeding pending or, to the Knowledge of Buyer, threatened against or by Buyer that challenges or seeks to prevent, enjoin or otherwise delay the transactions contemplated by this Agreement. No event has occurred, and to the Knowledge of the Buyer no circumstance exists, in each case that is reasonably likely to result in the commencement of any such Proceeding.

Section 4.5. Disclosure. No representation or warranty or other statement made by Buyer in this Agreement, the Disclosure Schedule or any certificate or other document delivered hereunder contains any untrue statement of a material fact or omits any material fact necessary to make the statements contained herein or therein not misleading.

Section 4.6. Brokers. None of Buyer nor any of its Affiliates, nor any of its officers or directors on behalf of Buyer or any of its Affiliates, has employed any financial advisor, broker or finder in a manner that would result in any liability for Seller for any broker's fees, commissions or finder's fees in connection with any of the transactions contemplated by this Agreement if the Closing does not occur.

Section 4.7. Funding. Buyer has, or shall have at the Closing, sufficient cash, available lines of credit or other sources of immediately available funds to permit Buyer to make payment of all amounts required to be paid by it hereunder at the Closing and to pay all Assumed Liabilities.

## **ARTICLE 5. PRE-CLOSING COVENANTS**

### Section 5.1. Conduct of Business.

(a) During the period from the date of this Agreement to the earlier of the Closing and the date this Agreement is terminated in accordance with Article 10 (the "Interim Period"), except: (A) as set forth in Section 5.1(a) of the Disclosure Schedule; (B) as expressly required by this Agreement; or (C) with the prior written consent of Buyer, Seller shall:

- i. carry on the Business in the Ordinary Course of Business;
- ii. maintain and preserve intact the Business, Seller's current organization, and the operations and franchises of the Business;
- iii. except as set forth on Schedule 5.1, not take action to terminate the services of the present Business Employees and Business Consultants;
- iv. not take action to terminate the rights, franchises and goodwill of the customers, suppliers, lenders, regulators and others having relationships with the Business;
- v. except as set forth on Schedule 5.1, pay or otherwise satisfy in the Ordinary Course of Business (but in any event when due) all of its Liabilities and Taxes; and
- vi. maintain the Transferred Assets in substantially the same condition as they are on the date of this Agreement, subject to ordinary wear and tear.

(b) Without limiting the generality of Section 5.1(a), during the Interim Period, except: (A) as set forth in Section 5.1(b) of the Disclosure Schedule; (B) as expressly required by this Agreement; or (C) with the prior written consent of Buyer, Seller (meaning, Parent and each Subsidiary) shall not:

i. amend its organizational or governing documents in any manner which would reasonably be expected to adversely affect the transactions contemplated hereby other than to increase shares designated as Series C Preferred Stock;

ii. commence or terminate, or make any material change in, any line of business included in the Business;

iii. sell, lease, license, transfer, abandon, encumber, incur, or suffer to exist any Lien (other than Permitted Lien, subordinated debt holder liens and Perceptive lien), or fail to maintain, or otherwise dispose of, any Transferred Assets, other than the sale of Inventory in the Ordinary Course of Business or obsolete equipment not needed in the Business;

iv. incur any Liability that would be an Assumed Liability (other than Liabilities incurred in the Ordinary Course of Business);

v. mortgage, pledge or subject to any Lien any portion of the Transferred Assets other than the Perceptive lien, the subordinated debt holder liens and Permitted Liens ;

vi. acquire, by purchase of all or substantially all of the assets, purchase of stock, merger, consolidation or otherwise, any business that would constitute Transferred Assets;

vii. make any capital expenditures or commitments therefor with respect to the Business, except in the Ordinary Course of Business;

viii. make any loan, advance or capital contribution to, or investment in, any Person in connection with the Business, other than advancement of expenses to Business Employees in the Ordinary Course of Business;

ix. (A) create or incur, or offer, place or arrange, any Indebtedness with respect to the Business or the Transferred Assets other than in the Ordinary Course of Business or for payment of expenses incurred in the Ordinary Course of Business; (B) cancel, release or assign any Indebtedness owed to Seller with respect to the Business or the Transferred Assets; or (C) assume, guarantee or endorse, or otherwise become responsible for, the indebtedness of any other Person in connection with the Business or the Transferred Assets;

x. except as required by applicable Law or the terms of any Employee Plan in effect as of the date hereof: (A) increase the compensation payable or to become payable to, or change any of the benefits provided or to be provided to, any Business Employee or Business Consultant; (B) grant, commit to pay or increase the rate or terms of any retention, severance, change of control or termination pay to any Business Employee or Business Consultant; (C) amend or accelerate the payment, right to payment, or vesting of any compensation or benefits of any Business Employee or Business Consultant; (D) terminate, renew, modify or amend any existing, or adopt, establish or enter into any new, Employee Plan or employment policy relating to vacation pay, sick pay, disability coverage or severance pay, in each case with, for or in respect of any Business Employee or Business Consultant; or (E) hire any Person to be an officer or an employee of the Business with a designation of "Vice President" or above;

xi.implement or announce any plant closing, material reduction in labor force or mass lay-off with respect to the Business;

xii.engage in any merger, consolidation, reorganization, recapitalization, complete or partial liquidation, dissolution or similar transaction or file a petition in bankruptcy under any provision of federal or state bankruptcy Law or consent to the filing of any bankruptcy petition against it under any similar Law;

xiii.(A) sell, abandon, permit to lapse, fail to maintain, dispose of, license or transfer to any person any right to, or permit the imposition of any Lien on, any Owned Intellectual Property (other than non-exclusive licenses granted in the Ordinary Course of Business); (B) make any change to any Owned Intellectual Property, except handling any deadlines in the Ordinary Course of Business; or (C) enter into any Contract with respect to Owned Intellectual Property;

xiv.except as required by GAAP or applicable Law, in each case with respect to the Business, the Transferred Assets or the Assumed Liabilities: (A) make or change any Tax election; (B) change any annual Tax accounting period; (C) adopt or change any method of Tax accounting; (D) file any amended Tax Return (or similar report filed by Seller); (E) enter into any Tax closing agreement; (F) settle or compromise any Tax claim or assessment; (G) surrender any right to claim a Tax refund, offset or other reduction in liability; or (H) consent to any extension or waiver of the limitations period applicable to any Tax claim or assessment;

xv.except as required by GAAP, make any change in its accounting methodologies, practices, estimation techniques, assumptions, principles, policies or procedures in connection with the Business;

xvi.except in the Ordinary Course of Business: (A) modify the cash management activities of the Business (including the extension of trade credit, the timing of, invoicing and collection of Accounts Receivable and the accrual and payment of payables and other current Liabilities); or (B) modify the manner in which the Books and Records related to the Business are maintained;

xvii.commence, pay, discharge, settle, release, waive or compromise any pending or threatened Proceeding relating to or affecting the Business, the Transferred Assets or the Assumed Liabilities;

xviii.(A) except in the Ordinary Course of Business, enter into any Contract that, if in effect on the date hereof, would constitute a Material Contract; (B) amend, modify, assign, convey, encumber, cancel or terminate any Assumed Contract (other than terminations or expirations at the end of the stated term after the date hereof); (C) assign or otherwise transfer any rights or claims with respect to, or waive any term of or default under, or any Liability owing to Seller under, any Assumed Contract; or (D) take any action or fail to act, when such action or failure to act will cause a termination of or material breach of or default under any Assumed Contract;

xix.enter into any Contract which contains a provision that would require the Consent of, or a payment to, the other party or parties thereto in connection with the transactions contemplated by this Agreement;

xx.amend, terminate or fail to renew any of the Insurance Policies; or

xxi. enter into any Contract, or otherwise agree or commit, to take, or authorize, recommend or propose, in writing or otherwise, any of the actions prohibited by this Section 5.1(b).

Section 5.2. Reasonable Best Efforts; Notices and Consents; Proxy Statement.

a. General. Upon the terms and subject to the conditions set forth in this Agreement, except as otherwise provided in this Agreement, and without limiting the obligations of Seller and Buyer under Section 5.2(c), Seller and Buyer agree to cooperate with each other and to use (and to cause its Representatives to use) reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper or advisable to consummate and make effective the transactions contemplated by this Agreement as promptly as practicable after the date of this Agreement.

b. Notices and Consents. Seller shall promptly prepare and file all necessary documentation, to effect all necessary applications, notices, petitions, filings and other documents, and to obtain, as promptly as practicable after the date of this Agreement, all Consents of Governmental Entities and other Persons necessary or advisable in connection with the consummation of the transactions contemplated by this Agreement, including the Required Consents.

c. Seller shall, as promptly as practicable following the date hereof, prepare and file with the SEC the Proxy Statement. Seller, acting through the Seller Board shall include in the Proxy Statement, the recommendation of the Seller Board that the stockholders of Seller approve the sale of the Transferred Assets in the Transaction (the "Seller Board Recommendation"). Subject to Section 5.5(d), the Seller Board shall not change or withdraw such recommendation without the prior written consent of Buyer. No filing of, or amendment or supplement to, or correspondence to the SEC will be made by Seller without providing Buyer with an opportunity to review and comment thereon. Seller will advise Buyer, promptly after it receives notice thereof, of any request by the SEC for the amendment of the Proxy Statement or comments thereon and responses thereto or requests by the SEC for additional information. If at any time prior to Seller's Stockholders' Meeting any information relating to Seller or Buyer, or any of their respective Affiliates, officers or directors, should be discovered by Seller or Buyer which should be set forth in an amendment or supplement to the Proxy Statement, so that it would not include any misstatement of a material fact or omit to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, the party which discovers such information shall promptly notify the other parties hereto and an appropriate amendment or supplement describing such information shall be promptly filed with the SEC and, to the extent required by law, disseminated to the stockholders of Seller.

d. Seller shall, as promptly as practicable following the execution of this Agreement, duly call, give notice of and after the requisite notice period, convene and hold a meeting of its stockholders for the purpose of approving the sale of the Transferred Assets in the Transaction (the "Seller's Stockholders' Meeting"). Subject to Section 5.5(d), Seller shall (i) use its best efforts to solicit from stockholders of Seller proxies in favor of adoption of this Agreement and approval of the sale of the Transferred Assets for the Seller's Stockholders' Meeting and (ii) recommend to its stockholders the approval of the sale of the Transferred Assets in the Transaction, and not modify or withdraw such recommendation.

e. Buyer will furnish to Seller such data and information relating to it as Seller may reasonably request for the purpose of including such data and information in the Proxy Statement and any amendments or supplements thereto used by Seller to obtain the stockholder approval of holders of at



least a majority of the voting securities of the sale of the Transferred Assets (the “Seller Stockholder Approval”).

Section 5.3. Access to Information.

a. During the Interim Period, Seller shall: (i) afford Buyer and its Representatives full and free access, during normal business hours and upon reasonable notice, to the personnel, offices, properties (including the Leased Real Property), assets, Books and Records, Contracts and other documents and data of or related to the Business or the Transferred Assets; (ii) furnish Buyer and its Representatives with such financial, operating and other data and information related to the Business as Buyer or any of its Representatives may reasonably request; and (iii) instruct their respective Representatives to cooperate with Buyer in its investigation of the Business; provided, however, that such access shall not unreasonably interfere with the ongoing business or operations of the Business.

b. Notwithstanding anything to the contrary set forth in Section 5.3(a), during the Interim Period, Buyer and its Representatives that sign the Seller’s standard confidentiality agreement may at any time enter during normal business hours into and upon all or any portion of the properties of the Business (including the Leased Real Property) in order to investigate and assess, as Buyer deems necessary or appropriate in its sole and absolute discretion, the environmental condition of such properties or any business conducted thereat. Such investigation may include, but need not be limited to, the performance of soil and surface or ground water sampling, monitoring, borings, or testing and any other tests, investigations, audits, assessments, studies, inspections or other procedures relating to environmental conditions. Seller shall: (i) cooperate with Buyer and its Representatives in conducting such investigation; (ii) allow Buyer and its Representatives full access to the properties related to the Business (including the Leased Real Property), together with full permission to conduct such investigation; and (iii) provide to Buyer and its Representatives all plans, soil or surface or ground water tests or reports, any environmental investigation results, reports or assessments previously or contemporaneously conducted or prepared by or on behalf of, or in possession of or reasonably available to, Seller or any of its Representatives, and all other information relating to environmental matters in respect of the properties related to the Business.

c. Any information provided to or obtained by Buyer or its Representatives pursuant to Section 5.3(a) or Section 5.3(b) shall be subject to the terms of, and the restrictions contained in, the Confidentiality Agreement.

Section 5.4. Notice of Certain Events.

a. During the Interim Period, Seller shall promptly notify Buyer in writing of: (i) any fact, circumstance, event or action the existence, occurrence or taking of which has had, or could reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect; (ii) any breach of any representation, warranty, covenant or agreement of Seller contained in this Agreement which, if not cured, could reasonably be expected to cause any of the conditions to Closing set forth in Article 7 not to be satisfied; (iii) any notice or other communication from any Person alleging that the consent of such Person is or may be required in connection with the transactions contemplated by this Agreement; (iv) any notice or other communication from any Governmental Entity in connection with the transactions contemplated by this Agreement; or (v) any Proceeding commenced or, to the Knowledge of Seller, threatened against, relating to, involving or otherwise affecting the Business, the Transferred Assets or the Assumed Liabilities that, if pending on the date of this Agreement, would have been

required to have been disclosed pursuant to Section 3.9 of this Agreement or that relates to the consummation of the transactions contemplated by this Agreement.

b. In no event shall the delivery of any notice by Seller pursuant to this Section 5.4: (i) limit or otherwise affect the rights, obligations, representations, warranties, covenants or agreements of Buyer or the conditions to the obligations of Buyer and Seller under this Agreement; or (ii) be deemed to amend or supplement the Disclosure Schedule or constitute an exception to any representation, warranty, covenant or agreement.

Section 5.5. Exclusive Dealing.

a. During the Interim Period, Seller shall not take, and shall not authorize, encourage, permit or instruct any of its Representatives to take, directly or indirectly, any action to: (a) solicit, initiate or knowingly encourage the making, submission or announcement of any Acquisition Proposal from any Person (other than Buyer or its Representatives); (b) knowingly encourage, initiate, participate in or engage in any discussions, negotiations or other communications regarding an Acquisition Proposal; (c) execute, enter into or become bound by any letter of intent or other Contract with any Person (other than Buyer or its Representatives) relating to or in connection with an Acquisition Proposal; (d) provide any non-public information to any Person (other than Buyer or its Representatives) in response to an Acquisition Proposal; or (e) entertain or accept any Acquisition Proposal from, cooperate in any way with, or facilitate or encourage any effort or attempt by any Person (other than Buyer or its Representatives) relating to an Acquisition Proposal. Seller shall, and shall instruct its Representatives to, immediately cease and cause to be terminated all existing discussions, conversations, negotiations and other communications with any Person conducted heretofore with respect to any Acquisition Proposal. Within two (2) Business Days following the date hereof, Seller shall, or shall cause its Representatives to, instruct any such Person to return or destroy all nonpublic information provided to such Person in connection with such Person's consideration of any Acquisition Proposal in accordance with the confidentiality agreements entered into between Seller and any such Person.

b. Subject to Section 5.5(d) and Section 5.5(f) neither the Seller Board, nor any committee thereof, shall withdraw, modify or qualify (or propose to withdraw, modify or qualify) the recommendation in favor of the sale of the Transferred Assets to Buyer in any manner adverse to Buyer, or take any action or make any statement in connection with the Seller's Stockholder Meeting inconsistent with such recommendation.

c. Seller shall promptly (and in any event within twenty-four (24) hours of receipt thereof) notify Buyer orally and in writing of any Acquisition Proposal that is received by Seller during the Interim Period, which notice shall include: (i) the identity of the Person making or submitting such indication of interest, inquiry, proposal, offer or request, and the terms and conditions thereof; and (ii) an accurate and complete copy of all written materials provided in connection with such Acquisition Proposal.

d. Notwithstanding the provisions of Section 5.5(a) or 5.5(b), prior to the receipt of Seller Stockholder Approval, Seller may, in response to an unsolicited, bona fide written Acquisition Proposal from a Person (the "Potential Acquiror") which (i) the Seller Board determines in good faith, after consultation with its financial advisor and its outside legal counsel, constitutes a Superior Proposal (and continues to constitute a Superior Proposal after taking into account any modifications proposed by Buyer during any seven (7) Business Day period referenced below), or (ii) proposes greater value to Seller in financial terms and the Seller Board in good faith concludes that such Acquisition Proposal

could reasonably be expected to result in a Superior Proposal, take the following actions (but only if and to the extent that the Seller Board concludes in good faith, following consultation with its outside legal counsel, that such actions are necessary in order to comply with its fiduciary obligations under applicable Law); provided, that Seller has first given Buyer written notice (including a copy of such Acquisition Proposal) that states that Seller has received such Acquisition Proposal and otherwise includes the information required by Section 5.5(c) (the “Superior Proposal Notice”):

i. furnish nonpublic information to the Potential Acquiror and may enter into discussion or negotiate with the Potential Acquiror; provided, that, (A) contemporaneously with furnishing any such nonpublic information to the Potential Acquiror, Seller gives Buyer written notice of its intention to furnish nonpublic information and (2) Seller receives from the Potential Acquiror an executed confidentiality agreement (in each case, the “Competing Confidentiality Agreement”) containing customary limitations on the use and disclosure of all nonpublic written and oral information furnished to the Potential Acquiror on its behalf, the material terms of which are no less favorable to the other party than the terms contained in the Confidentiality Agreement and (B) contemporaneously with furnishing any such nonpublic information to the Potential Acquiror, Seller furnishes such nonpublic information to Buyer (to the extent such nonpublic information has not previously been provided to Buyer); and

ii. engage in negotiations with the Potential Acquiror with respect to the Acquisition Proposal.

e. For a period of not less than seven (7) Business Days after Buyer's receipt of each Superior Proposal Notice, Seller shall, if requested by Buyer, negotiate in good faith with Buyer to amend this Agreement so that the Acquisition Proposal that constituted a Superior Proposal no longer constitutes a Superior Proposal (a “Former Superior Proposal”); provided that in the event the Acquisition Proposal as originally received by Seller indicates that the indicated transaction value is subject to the Potential Acquiror's review of nonpublic information to be provided by Seller as contemplated by Section 5.5(d)(1), such seven (7) Business Day negotiation period with Buyer shall not commence until the Potential Acquiror has provided a definitive proposed purchase price following its review of such nonpublic information. Upon such amendment of this Agreement, the terms and conditions of this Section 5.5 shall again apply to any inquiry or proposal made by any Person who withdraws a Superior Proposal or who made a Former Superior Proposal (after withdrawal or after such time as their proposal is a Former Superior Proposal).

f. In response to the receipt of a Superior Proposal that has not been withdrawn and continues to constitute a Superior Proposal after Seller's compliance with Sections 5.5(c), (d) and (e), the Seller Board may withhold or withdraw the Seller Board Recommendation and, in the case of a Superior Proposal that is a tender or exchange offer made directly to Parent's stockholders, may recommend that its stockholders accept the tender or exchange offer (any of the foregoing actions, whether by the board of directors of Seller or a committee thereof, a “Change of Recommendation”), if both of the following conditions are met:

i. the Seller Stockholder Approval shall not have been obtained; and

ii. the Seller Board has concluded in good faith, following consultation with its outside legal counsel, that, in light of such Superior Proposal, that such action is necessary in order to comply with its fiduciary obligations under applicable Law.

g. Nothing contained in this Agreement shall prohibit Seller from taking and disclosing to its stockholders a position contemplated by Rule 14d-9 or Rule 14e-2 promulgated under the Securities Exchange Act of 1934, as amended.

Section 5.6. Employees. Buyer agrees to make offers of employment to the Business Employees. Buyer's offer shall provide each Business Employee an election to receive cash from Buyer upon termination of employment with Seller in an amount equal to value of the Business Employee's accrued but unused paid time off or to transfer of up to 80 hours of paid time off to use as an employee of Buyer ("Rollover Vacation"). Business Employees will be offered the opportunity to transfer 401(k) balances to Buyer's plan by distribution and rollover. Any Subsidiary that will no longer have employees upon completion of the transactions contemplated hereby that intends to adopt resolutions to cease participation in Seller's ongoing 401(k) plan shall first provide notice of its intent to Buyer so that notices may be circulated to the Business Employees in a manner consistent with Law and the terms of Seller's plans.

Section 5.7. Termination of Affiliate Agreements. At or prior to the Closing, Seller shall terminate all Affiliate Agreements, other than (a) agreements with respect to the issuance of Series C Preferred Stock (b) any Affiliate Agreement the continuation of which Buyer has requested; and (c) any Affiliate Agreement which Buyer has approved in writing to not be so terminated (collectively, the "Continuing Affiliate Agreements").

## **ARTICLE 6. POST-CLOSING COVENANTS**

### Section 6.1. Further Assurances; Additional Agreements.

a. From time to time after the Closing, as and when requested by any party hereto, the other party hereto shall execute and deliver, or cause to be executed and delivered, all such documents and instruments and shall take, or cause to be taken, all such further or other actions, and shall provide, or cause to be provided, all such further or other cooperation, in each case as the requesting party may reasonably deem necessary or desirable to evidence and effectuate the transactions contemplated by this Agreement, including, as required, to transfer or obtain Permits or provide regulatory notices. Without limiting the generality of the foregoing, Seller agrees, from time to time after the Closing, at Buyer's request, to execute, acknowledge, and deliver to Buyer such other instruments of conveyance and transfer, and take such other actions and execute and deliver such other documents, certifications, and further assurances, as Buyer may reasonably require in order to vest more effectively in Buyer, or to put Buyer more fully in possession of, the Transferred Assets. Each party shall bear its own costs and expenses incurred in complying with this Section 6.1(a).

b. After the Closing, Seller shall promptly transfer or deliver to Buyer cash, checks (which shall be properly endorsed) or other property that Seller may receive in respect of any deposit, prepaid expense, bill for services or other item that constitutes part of the Transferred Assets or relates to the Assumed Liabilities. After the Closing, Buyer shall promptly transfer or deliver to Seller cash, checks (which shall be properly endorsed) or other property that Buyer may receive in respect of any deposit, prepaid expense, bill for services or other item that constitutes part of the Excluded Assets or relates to the Excluded Liabilities. The removal of Excluded Assets, if any, by Seller from its facilities and other real property to be occupied by Buyer shall be done in such manner as to avoid any damage to the facilities and other properties to be occupied by Buyer and any disruption of the business operations to be conducted by Buyer after the Closing Date. Any damage to the Transferred Assets or to the facilities resulting from such removal shall be promptly paid by Seller. Seller shall promptly reimburse Buyer for

all costs and expenses, if any, incurred by Buyer in connection with any Excluded Assets not removed by Seller.

c. After the Closing, Seller will reasonably cooperate with Buyer in its efforts to continue and maintain for the benefit of Buyer those business relationships of Seller existing prior to the Closing and relating to the business to be operated by Buyer after the Closing, including relationships with lessors, employees, regulatory authorities, licensors, customers, suppliers and others, and Seller will work in good faith to attempt to satisfy the Excluded Liabilities in a manner that is not detrimental in any material way to any of such relationships, but in no event shall Seller be obligated to pay amounts not legally due and owing to such parties. Seller will refer to Buyer all inquiries relating to such business.

#### Section 6.2. General Release.

a. Notwithstanding anything contained herein to the contrary, effective as of the Closing, in consideration of the mutual agreements contained herein, including the Purchase Price to be received by Seller, Seller, on behalf of itself and each of its past, present and future Affiliates, firms, corporations, limited liability companies, partnerships, trusts, associations, organizations, Representatives, investors, stockholders, members, partners, trustees, principals, consultants, contractors, family members, heirs, executors, administrators, predecessors, successors and assigns (each, a “Releasing Party” and, collectively, the “Releasing Parties”), hereby absolutely, unconditionally and irrevocably releases, acquits and forever discharges Buyer, its former, present and future Affiliates, parent and subsidiary companies, joint ventures, predecessors, successors and assigns, and their respective former, present and future Representatives, investors, stockholders, members, partners, insurers and indemnitees (collectively, the “Released Parties”) and the Business and the Transferred Assets of and from any and all manner of action or inaction, cause or causes of action, Proceedings, Liens, Contracts, promises, Liabilities, Damages (whether for compensatory, special, incidental or punitive Damages, equitable relief or otherwise), losses, fees, costs or expenses, of any kind or nature whatsoever, past, present or future, at law, in equity or otherwise (including with respect to conduct which is negligent, grossly negligent, willful, intentional, with or without malice, or a breach of any duty, Law or rule), whether known or unknown, whether fixed or contingent, whether concealed or hidden, whether disclosed or undisclosed, whether liquidated or unliquidated, whether foreseeable or unforeseeable, whether anticipated or unanticipated, whether suspected or unsuspected, which such Releasing Parties, or any of them, ever have had or ever in the future may have against the Released Parties, or any of them, the Business or the Transferred Assets for, upon or by reason of any act, event, omission, matter or cause arising from or related to the Business, in each case arising at any time at or prior to the Closing (the “Released Claims”); provided, however, that the foregoing release shall not release, impair or diminish, and the term “Released Claims” shall not include, in any respect any rights of Seller under this Agreement or any Ancillary Agreement.

b. Without limiting the generality of Section 6.2(a), with respect to the Released Claims, Seller, on behalf of itself and each Releasing Party, hereby expressly waives all rights under any Law or common law principle in any applicable jurisdiction prohibiting or restricting the waiver of unknown claims. Notwithstanding any such Law or common law principle in any applicable jurisdiction, and for the purpose of implementing a full and complete release and discharge of the Released Parties, Seller, on behalf of itself and each Releasing Party, expressly acknowledges that the foregoing release is intended to include in its effect all claims which Seller or any Releasing Party does not know or suspect to exist in his, her or its favor against any of the Released Parties (including unknown and contingent claims), and that the foregoing release expressly contemplates the extinguishment of all such claims (except to the extent expressly set forth herein).

c. Seller, on behalf of itself and each Releasing Party, acknowledges that it may hereafter discover facts in addition to or different from those which it now knows or believes to be true with respect to the subject matter of the Released Claims, but Seller, on behalf of itself and each Releasing Party, intends to and, by operation of this Agreement shall have, fully, finally and forever settled and released any and all Released Claims without regard to the subsequent discovery of existence of such different or additional facts.

d. Seller, on behalf of itself and each Releasing Party, represents, warrants, covenants and agrees that such Releasing Party has not and will not assign or transfer any Released Claim or possible Released Claim against any Released Party. Seller, on behalf of itself and each Releasing Party, agrees to indemnify and hold the Released Parties harmless from any Liabilities, Damages, costs, expenses and attorneys' fees arising as a result of any such assignment or transfer.

e. Seller, on behalf of itself and each Releasing Party, covenants and agrees not to, and agrees to cause its Affiliates not to, whether in his, her or its own capacity, as successor, by reason of assignment or otherwise, assert, commence, institute or join in, or assist or encourage any third party in asserting, commencing, instituting or joining in, any Proceeding of any kind whatsoever, in law or equity, in each case against the Released Parties, or any of them, with respect to any Released Claims. Seller acknowledges that the foregoing release was separately bargained for and is a key element of this Agreement.

Section 6.3. Use of Names. From and after the Closing Date, Parent and the relevant Subsidiaries shall not, and shall cause its Affiliates not to, use any words or terms (in any combination) that are identical or confusingly similar to, or a colorable imitation or dilutive of "Icagen" and the other words and terms set forth in Section 6.3 of the Disclosure Schedule in connection with Seller's or its Affiliates' offering, marketing or selling of any products or services. The Proxy Statement shall request any necessary approval to amend the certificate of incorporation to effect the change in Parent's name. The Transition Services Agreement shall provide for Seller's use of materials containing the Icagen name for a limited period of time following Closing, and any necessary email forwarding.

Section 6.4. Payment of Liabilities. From and after the Closing, Seller shall: (a) pay or otherwise satisfy in the Ordinary Course of Business (but in any event when due) all of its material Liabilities and Taxes; and (b) make payment and/or adequate provision for the payment and/or establish adequate reserves for the payment, in full, of all of the material and known Excluded Liabilities, it being understood that this Section 6.4 shall not be construed to cover any of the Assumed Liabilities.

Section 6.5. Non-Competition; Non-Solicitation; Non-Disparagement.

a. For a period commencing on the Closing Date and ending on (i) with respect to the officers and directors of Seller, the one year anniversary of the Closing Date and (ii) with respect to of Seller and the Subsidiaries, (x) the five (5) year anniversary of the Closing Date or (y), if any Revenue Payments have been made under the Earnout before such five (5) year anniversary, then ending on December 31, 2027 (in each case, as applicable, the "Restricted Period"), Seller (or such officers and directors, as applicable) shall not, and shall not permit any of its Affiliates (including Icagen-T) to, directly or indirectly: (i) engage in, or assist others in engaging (whether through employment, consultation, advisory services, representation on a board of directors or other similar governing body or by any financial or other investment) in the Business in the Territory; (ii) have an interest in any Person that engages directly or indirectly in the Business in the Territory in any capacity, including as a partner, stockholder, member, employee, principal, agent, trustee or consultant; or (iii) cause, induce or encourage

any actual or prospective client, customer, supplier, licensee, licensor or distributor of the Business (including any existing or former client, customer, supplier, licensee, licensor or distributor of Seller and any Person that becomes a client, customer, supplier, licensee, licensor or distributor of the Business after the Closing), or any other Person who has a material business relationship with the Business, to terminate or modify any such actual or prospective relationship. Notwithstanding the foregoing, Seller may own, directly or indirectly, solely as an investment, securities of any Person traded on any national securities exchange if Seller is not a controlling Person of, or a member of a group which controls, such Person and does not, directly or indirectly, own five percent (5%) or more of any class of securities of such Person, and conduct the business currently operated by Icagen-T, Inc.

b. During the Restricted Period, Seller shall not, and shall not permit any of its Affiliates to, directly or indirectly, solicit (except pursuant to a general solicitation which is not directed specifically to any Hired Employee) or hire any Hired Employee, or encourage any Hired Employee to leave such employment or hire any Hired Employee who has left such employment; provided, however, that nothing in this Section 6.5(b) shall prevent Seller or any Affiliate of Seller from hiring any employee whose employment has been terminated by Buyer without cause or who responds to a general employment advertisement placed by Seller or an Affiliate.

c. During the Restricted Period, Seller shall not, and shall not permit any of its Affiliates to, directly or indirectly, solicit or entice, or attempt to solicit or entice, any clients, customers, suppliers, vendors, licensees, licensors or distributors of the Business or potential clients, customers, suppliers, vendors, licensees, licensors or distributors of the Business for purposes of diverting their business or services from the Business.

d. Seller agrees that it will not make or publish, verbally or in writing, any statements concerning the Business, Buyer or any of its Affiliates or any of their respective Representatives which statements are or reasonably may be construed as being injurious or inimical to the best interests of the Business, Buyer or any of its Affiliates or any of their respective Representatives, including statements alleging that the Business, Buyer or any of its Affiliates or any of their respective Representatives have acted improperly, illegally or unethically or have engaged in business practices which are improper, illegal or unethical; provided, however, that such restrictions shall not apply to any confidential communications with any Governmental Entity (including communications made in the course of any governmental investigation). Buyer agrees that it will not make or publish, verbally or in writing, any statements concerning Seller or any of its Affiliates or any of their respective Representatives which statements are or reasonably may be construed as being injurious or inimical to the best interests of Seller or any of its Affiliates or any of their respective Representatives, including statements alleging that the Seller or any of its Affiliates or any of their respective Representatives have acted improperly, illegally or unethically or have engaged in business practices which are improper, illegal or unethical; provided, however, that such restrictions shall not apply to any confidential communications with any Governmental Entity (including communications made in the course of any governmental investigation).

e. If Seller or Buyer breaches, or threatens to commit a breach of, any of the provisions of this Section 6.5, the non-breaching Party shall have the following rights and remedies not subject to any limitations under Article 8, each of which rights and remedies shall be independent of the others and severally enforceable, and each of which is in addition to, and not in lieu of, any other rights and remedies available to the non-breaching Party under law or in equity:

i. the right and remedy to have such provision specifically enforced by any court having jurisdiction, it being acknowledged and agreed that any such breach or threatened breach may

cause irreparable injury to the non-breaching Party and that money damages may not provide an adequate remedy to the non-breaching Party; and

ii. the right and remedy to recover from the breaching Party all monetary damages suffered by the non-breaching Party, as the case may be, as the result of any acts or omissions constituting a breach of this Section 6.5.

f. Seller acknowledges that the restrictions contained in this Section 6.5 (i) are reasonable and necessary to protect the legitimate interests of Buyer and the goodwill, customer relationships, and Intellectual Property Rights purchased by Buyer and (ii) constitute a material inducement to Buyer to enter into this Agreement and consummate the transactions contemplated hereby. In the event that any covenant contained in this Section 6.5 should ever be adjudicated to exceed the time, geographic, product or service, or other limitations permitted by applicable Law in any jurisdiction, then any court is expressly empowered to reform such covenant, and such covenant shall be deemed reformed, in such jurisdiction to the maximum time, geographic, product or service, or other limitations permitted by applicable Law. The covenants contained in this Section 6.5 and each provision hereof are severable and distinct covenants and provisions. The invalidity or unenforceability of any such covenant or provision as written shall not invalidate or render unenforceable the remaining covenants or provisions hereof, and any such invalidity or unenforceability in any jurisdiction shall not invalidate or render unenforceable such covenant or provision in any other jurisdiction.

Section 6.6. Post-Closing Confidentiality.

a. From and after the Closing, Seller shall, and shall cause its Affiliates, including Icagen-T, to, and shall instruct its and their respective Representatives to, hold in confidence any and all confidential, proprietary and non-public information and materials, whether in written, verbal, graphic or other form, concerning Buyer, its Affiliates, the Business or the Transferred Assets (collectively, “Business Confidential Information”), except that Seller shall not have any obligation under this Section 6.6 with respect to any Business Confidential Information that (i) after the date of this Agreement becomes generally available to the public other than through a breach by Seller, any of its Affiliates or any of its or their respective Representatives of their respective obligations under this Section 6.6, or (ii) is provided to Seller or any of its Affiliates by a third party that was not known to the receiving party to be bound by any duty of confidentiality to Buyer.

b. From and after the Closing, Seller shall not, and shall cause its Affiliates not to, and shall instruct its and their respective Representatives not to, use any Business Confidential Information except as permitted by Section 6.6(a) above or as expressly authorized in writing by Buyer. Seller shall, and shall cause its Affiliates to, and shall instruct its and their respective Representatives to, take the same degree of care to protect the Business Confidential Information that such Person uses to protect its own trade secrets and confidential information of a similar nature, which shall be no less than a reasonable degree of care.

c. Notwithstanding the foregoing, Seller shall not be in breach of this Section 6.6 as a result of any disclosure of Business Confidential Information that is required by applicable Law or that is required by any Governmental Entity or under any subpoena, civil investigative demand or other similar process by a court of competent jurisdiction having jurisdiction over Seller; provided, however, that Seller shall, if legally permitted, give advance notice of such compelled disclosure to Buyer, and shall cooperate with Buyer in connection with any efforts to prevent or limit the scope of such disclosure; and



provided further, that Seller shall disclose only that portion of such Business Confidential Information which Seller is advised by its counsel is legally required to be disclosed.

d. Seller agrees to accept responsibility for any breach of this Section 6.6 by any of its Affiliates or any of its or its Affiliates' respective Representatives.

e. From and after the Closing, Buyer shall, and shall cause its Affiliates to, and shall instruct its and their respective Representatives to, hold in confidence any and all confidential, proprietary and non-public information and materials, whether in written, verbal, graphic or other form, concerning Seller other than the Business and the Transferred Assets, its Affiliates, its debt obligations (collectively, "Seller Confidential Information"), except that Buyer shall not have any obligation under this Section 6.6 with respect to any Seller Confidential Information that (i) after the date of this Agreement becomes generally available to the public other than through a breach by Buyer, any of its Affiliates or any of its or their respective Representatives of their respective obligations under this Section 6.6 or (ii) is provided to Buyer or any of its Affiliates by a third party that was not known to the receiving party to be bound by any duty of confidentiality to Seller.

f. From and after the Closing, Buyer shall not, and shall cause its Affiliates not to, and shall instruct its and their respective Representatives not to, use any Seller Confidential Information except as permitted by Section 6.6(e) above or as expressly authorized in writing by Seller. Buyer shall, and shall cause its Affiliates to, and shall instruct its and their respective Representatives to, take the same degree of care to protect the Seller Confidential Information that such Person uses to protect its own trade secrets and confidential information of a similar nature, which shall be no less than a reasonable degree of care.

g. Notwithstanding the foregoing, Buyer shall not be in breach of this Section 6.6 as a result of any disclosure of Seller Confidential Information that is required by applicable Law or that is required by any Governmental Entity or under any subpoena, civil investigative demand or other similar process by a court of competent jurisdiction having jurisdiction over Buyer; provided, however, that Buyer shall, if legally permitted, give advance notice of such compelled disclosure to Seller, and shall cooperate with Seller in connection with any efforts to prevent or limit the scope of such disclosure; and provided further, that Buyer shall disclose only that portion of such Seller Confidential Information which Buyer is advised by its counsel is legally required to be disclosed.

h. Buyer agrees to accept responsibility for any breach of this Section 6.6 by any of its Affiliates or any of its or its Affiliates' respective Representatives.

Section 6.7. Tucson Office Equipment. In the event an employee of Parent or Icagen-T accepts an offer from Buyer to relocate to North Carolina, any mobile device or computer used by such employee in the performance of the employee's job and that is property of Parent or Icagen-T shall be treated as an additional Transferred Asset and may be used by Buyer.

## **ARTICLE 7. CONDITIONS TO CLOSING**

Section 7.1. Conditions to Obligations of Buyer. The obligations of Buyer to consummate the transactions contemplated by this Agreement shall be subject to the satisfaction, at or prior to the Closing, of each of the following conditions, any or all of which may be waived, in whole or in part, by Buyer:

a. Representations and Warranties. Each of the representations and warranties made by Seller in Sections 3.1 (Organization and Qualification), 3.2 (Authority), 3.6 (Assets; Employees), and 3.13 (Brokers), and each of the representations and warranties made by Seller in Article 3 of this Agreement that are qualified by materiality (including by a Material Adverse Effect qualifier) shall be true and correct in all respects, and each of the other representations and warranties made by Seller in Article 3 of this Agreement shall be true and correct in all material respects, in each case at and as of the date of this Agreement and at and as of the Closing as though such representation or warranty was made at and as of such time, except for those representations and warranties that address matters as of a particular date (in which case such representations and warranties shall be true and correct in the manner set forth in this Section 7.1(a) as of such particular date).

b. Performance of Covenants. Seller shall have duly performed and complied in all material respects with all covenants, obligations and agreements required by this Agreement to be performed or complied with by Seller at or prior to the Closing.

c. No Material Adverse Effect. Since the date of this Agreement, there shall not have occurred any Material Adverse Effect.

d. Certificate. Buyer shall have received a certificate signed by Seller, dated the Closing Date, to the effect that the conditions set forth in Sections 7.1(a), (b), (c) and (d) have been satisfied.

e. Liens. All Liens on the Transferred Assets, other than those associated with Repaid Indebtedness and Permitted Liens, shall have been released.

f. Absence of Illegality; No Proceedings.

i. No Law shall have been issued, enacted or promulgated by any Governmental Entity of competent jurisdiction and remain in effect that makes consummation of the transactions contemplated by this Agreement illegal or otherwise precludes, restrains, enjoins or prohibits the consummation of the transactions contemplated by this Agreement.

ii. No Proceeding shall have been filed in any court of competent jurisdiction seeking to restrain, materially delay or prohibit the consummation of any of the transactions contemplated by this Agreement nor shall any such Proceeding have been overtly threatened by any Governmental Entity.

g. Employees. At least ninety percent (90%) of the Business Employees (but in any event each of the persons listed on Schedule 7.1(g)) who shall have received offers of post-Closing employment by Buyer or an Affiliate of Buyer, (i) shall have accepted offers of employment with Buyer or such Affiliate of Buyer, as the case may be, to commence following the Closing and shall have continued to be employed by Seller until the Closing; and (ii) shall not have (x) rescinded their acceptance of such offers, (y) given any notice or other indication that they are not willing or otherwise do not intend to be employed by Buyer or such Affiliate of Buyer, as the case may be, following the Closing, or (z) refused or given any indication that they are not willing or otherwise do not intend to execute and deliver to Buyer or such Affiliate of Buyer, as the case may be, Buyer's standard forms of confidentiality agreement and/or invention assignment agreement and associated schedules and statements without amendment or modification thereto in any substantive respect.

h. Closing Deliveries. Seller shall have made, or stand ready at the Closing to make, the deliveries required to be made by Seller pursuant to Section 2.7(a).

Section 7.2. Conditions to Obligation of Seller. The obligations of Seller to consummate the transactions contemplated by this Agreement shall be subject to the satisfaction, at or prior to the Closing, of each of the following conditions, any or all of which may be waived, in whole or in part, by Seller:

a. Representations and Warranties. Each of the representations and warranties made by Buyer in Sections 4.1 (Organization and Qualification), 4.2 (Authority), and 4.4 (Brokers), of this Agreement and each of the representations and warranties made by Buyer in Article 4 of this Agreement that are qualified by materiality shall be true and correct in all respects, and each of the other representations and warranties made by Buyer in Article 4 of this Agreement shall be true and correct in all material respects, in each case at and as of the date of this Agreement and at and as of the Closing as though such representation or warranty was made at and as of such time, except for those representations and warranties that address matters as of a particular date (in which case such representations and warranties shall be true and correct in the manner set forth in this Section 7.2(a) as of such particular date).

b. Performance of Covenants. Buyer shall have duly performed and complied in all material respects with all covenants, obligations and agreements required by this Agreement to be performed or complied with by Buyer at or prior to the Closing.

c. Certificate. Seller shall have received a certificate signed by an executive officer of Buyer, dated the Closing Date, to the effect that the conditions set forth in Sections 7.2(a) and (b) have been satisfied.

d. Absence of Illegality; No Proceedings.

i. No Law shall have been issued, enacted or promulgated by any Governmental Entity of competent jurisdiction and remain in effect that makes consummation of the transactions contemplated by this Agreement illegal or otherwise precludes, restrains, enjoins or prohibits consummation of the transactions contemplated by this Agreement.

ii. No Proceeding shall have been filed in any court of competent jurisdiction seeking to restrain, materially delay or prohibit the consummation of any of the transactions contemplated by this Agreement nor shall any such Proceeding have been overtly threatened by any Governmental Entity.

e. Closing Deliveries. Buyer shall have made, or stand ready at the Closing to make, the deliveries required to be made by Buyer pursuant to Section 2.7(b).

## **ARTICLE 8. SURVIVAL AND INDEMNIFICATION**

Section 8.1. Survival of Representations and Covenants.

a. General Survival. Subject to Section 8.1(b) and Section 8.1(d), the representations and warranties made by Seller and Buyer in this Agreement shall survive the Closing until the date that is twelve (12) months from the Closing Date (the "General Survival Date"); provided, however, that if, at any time on or prior to the General Survival Date, any Buyer Indemnitee or Seller

Indemnitee delivers to the applicable Indemnitor a written notice alleging the existence of an inaccuracy in or a breach of, or a potential inaccuracy in or a potential breach of, any such representation or warranty and asserting facts reasonably expected to establish a claim for recovery under Section 8.2 or Section 8.3, as the case may be, based on such alleged inaccuracy or breach or potential inaccuracy or breach, then the relevant representation and warranty and claim for recovery shall survive the General Survival Date until such time as such claim is fully and finally resolved.

b. Specified Representations. Notwithstanding anything to the contrary contained in Section 8.1(a), the Specified Representations shall survive the Closing for the period in which Seller may receive payments under the Earnout, i.e. until December 31, 2027.

c. Survival of Covenants. All covenants and agreements of the parties hereto contained herein shall survive the Closing until fully performed or complied with.

d. Intentional Misrepresentation; Fraud. The limitations set forth in Section 8.1(a) or (b) shall not apply in the event of any intentional misrepresentation or fraud, each shall survive the Closing indefinitely.

Section 8.2. Indemnification by Seller. From and after the Closing (but subject to Section 8.1 and Section 8.4), Seller (namely, Parent and each Subsidiary) shall hold harmless and indemnify each of the Buyer Indemnitees from and against, and shall compensate and reimburse each of the Buyer Indemnitees for, any Damages which are directly or indirectly suffered or incurred at any time by any of the Buyer Indemnitees or to which any of the Buyer Indemnitees may otherwise directly or indirectly become subject at any time (regardless of whether or not such Damages relate to any Third Party Claim) and which arise directly or indirectly from or as a result of, or are directly or indirectly connected with:

a. any inaccuracy in or breach of any representation or warranty made by Seller in this Agreement, in any Ancillary Agreement or in any other agreement, document, certificate or instrument entered into or delivered by or on behalf of Seller under or pursuant to this Agreement or in connection with the transactions contemplated hereby;

b. any breach or non-fulfillment of any covenant or other obligation of or to be performed by Seller in this Agreement, in any Ancillary Agreement, or any other agreement, document, certificate or instrument entered into or delivered by or on behalf of Seller under or pursuant to this Agreement or in connection with the transactions contemplated hereby;

c. any Excluded Liability;

d. any Excluded Asset and Seller's ownership, use and operation of the Excluded Assets after Closing;

e. the conduct of the Business by Seller and/or any of its Affiliates, including the ownership or use of the Transferred Assets, in each case prior to the Closing; and

f. any matter referred to in Section 8.2(f) of the Disclosure Schedule.

Section 8.3. Indemnification by Buyer. From and after the Closing (but subject to Section 8.1 and Section 8.4), Buyer shall hold harmless and indemnify each of the Seller Indemnitees from and against, and shall compensate and reimburse each of the Seller Indemnitees for, any Damages which are directly or indirectly suffered or incurred at any time by any of the Seller Indemnitees or to which any of the Seller Indemnitees may

otherwise directly or indirectly become subject at any time (regardless of whether or not such Damages relate to any Third Party Claim) and which arise directly or indirectly from or as a result of, or are directly or indirectly connected with:

a. any inaccuracy in or breach of any representation or warranty made by Buyer in this Agreement, in any Ancillary Agreement or in any other agreement, document, certificate or instrument entered into or delivered by or on behalf of Buyer under or pursuant to this Agreement or in connection with the transactions contemplated hereby;

b. any breach or non-fulfillment of any covenant or other obligation of or to be performed by Buyer in this Agreement, in any Ancillary Agreement, or any other agreement, document, certificate or instrument entered into or delivered by or on behalf of Buyer under or pursuant to this Agreement or in connection with the transactions contemplated hereby; and

c. the conduct of the Business by Buyer and/or any of its Affiliates, including the ownership or use of the Transferred Assets, in each case after the Closing.

Section 8.4. Limitations.

a. Basket.

i. Seller shall not be required to make any indemnification payment pursuant to Section 8.2(a): (A) if the Damages associated with any individual claim, or series of related claims, are less than \$15,000 (the “De Minimis Claim Amount”), it being understood that any such individual claims for amounts less than the De Minimis Claim Amount shall be taken into account in determining whether the Basket Amount has been exceeded and thereafter; and (B) until such time as the total amount of all Damages that have been directly or indirectly suffered or incurred by any one or more of the Buyer Indemnitees, or to which any one or more of the Buyer Indemnitees has or have otherwise directly or indirectly become subject, exceeds \$150,000 plus 1% of the payments made under the terms of Exhibit A (the sum, the “Basket Amount”) in the aggregate. Once the total amount of such Damages exceeds the Basket Amount, then the Buyer Indemnitees shall be entitled to be indemnified and held harmless against and compensated and reimbursed for the entire amount of such Damages, and not merely the portion of such Damages exceeding the Basket Amount.

ii. Buyer shall not be required to make any indemnification payment pursuant to Section 8.3(a): (A) if the Damages associated with any individual claim, or series of related claims, are less than the De Minimis Claim Amount it being understood that any such individual claims for amounts less than the De Minimis Claim Amount shall be taken into account in determining whether the Basket Amount has been exceeded and thereafter; and (B) until such time as the total amount of all Damages that have been directly or indirectly suffered or incurred by any one or more of the Seller Indemnitees, or to which any one or more of the Seller Indemnitees has or have otherwise directly or indirectly become subject, exceeds the Basket Amount in the aggregate. Once the total amount of such Damages exceeds the Basket Amount, then the Seller Indemnitees shall be entitled to be indemnified and held harmless against and compensated and reimbursed for the entire amount of such Damages, and not merely the portion of such Damages exceeding the Basket Amount.

iii. The limitations set forth in Section 8.4(a)(i) and Section 8.4(a)(ii) shall not apply (and shall not limit the indemnification or other obligations of Seller or Buyer, as the case may be): (A) in the event of intentional misrepresentation or fraud; or (B) to material inaccuracies in or breaches of any of the Specified Representations.

b. Liability Cap for Breaches of Representations and Warranties. Recourse by (i) the Buyer Indemnitees under Section 8.2(a) and (ii) the Seller Indemnitees under Section 8.3(a) shall, in each case, be limited to an aggregate amount equal to the Escrow Amount; provided, however, that the limitations set forth in this Section 8.4(b) shall not apply (and shall not limit the indemnification or other obligations of Seller or Buyer, as the case may be): (A) in the event of intentional misrepresentation or fraud; or (B) to material inaccuracies in or breaches of any of the Specified Representations.

c. Overall Liability Cap. Except in the event of intentional misrepresentation or fraud: (i) in no event will the total cumulative amount of Damages for which Seller may be liable to the Buyer Indemnitees, or for which Buyer may be liable to Seller Indemnitees, under this Article 8 exceed the greater of (A) the Base Consideration and (B) the amount paid under the terms of Exhibit A.

d. Qualifications. For purposes of Section 8.2, with respect to each representation, warranty, covenant or agreement contained in this Agreement that is subject to a “materiality,” “material,” “Material Adverse Effect,” “in all material respects” or similar qualification (but not including knowledge, Seller’s Knowledge or Knowledge of Seller), any such qualification shall be disregarded for purposes of determining whether a breach of or inaccuracy in such representation, warranty, covenant or agreement has occurred and for purposes of calculating the amount of any Damages that is subject to indemnification hereunder.

e. Representations Not Limited. Seller agrees that the Buyer Indemnitees’ rights to indemnification, compensation and reimbursement contained in this Article 8 relating to the representations, warranties, covenants and obligations of Seller are part of the basis of the bargain contemplated by this Agreement; and such representations, warranties, covenants and obligations, and the rights and remedies that may be exercised by the Buyer Indemnitees with respect thereto, shall not be waived, limited or otherwise affected by or as a result of (and the Buyer Indemnitees shall be deemed to have relied upon such representations, warranties, covenants or obligations notwithstanding) any knowledge on the part of any of the Buyer Indemnitees or any of their Representatives, regardless of whether obtained through any investigation by any Buyer Indemnitee or any Representative of any Buyer Indemnitee or through disclosure by Seller or any other Person (other than by specific inclusion in the Disclosure Schedule), and regardless of whether such knowledge was obtained before or after the execution and delivery of this Agreement.

f. Insurance. The amount of any Damages subject to indemnification under Section 8.2 and Section 8.3 shall be calculated net of any insurance proceeds actually recovered by the applicable Indemnitee for such Damages, net of all reasonable and documented costs of recovery (including any increased insurance premiums directly attributable to any such insurance recovery). Each Indemnitee shall use, and shall cause its Affiliates to use, commercially reasonable efforts (which the parties agree does not require any party to commence any litigation or other Proceedings) to seek recovery under all insurance policies covering such Damages to the same extent as it would if such Damages were not subject to indemnification hereunder. In the event that an insurance recovery is made by an Indemnitee with respect to any Damages for which such Indemnitee has been indemnified hereunder and such insurance recovery would result in duplicative recovery by such Indemnitee, then a refund equal to the aggregate amount of the insurance recovery shall be made promptly by such Indemnitee to the applicable Indemnitor, net of all reasonable and documented costs of recovery.

Section 8.5. No Contribution. Seller waives, and Seller acknowledges and agrees that Seller shall not have and shall not exercise or assert (or attempt to exercise or assert), any right of contribution, right of indemnity or advancement of expenses or other right or remedy against Buyer in connection with any indemnification

obligation or any other Liability to which Seller may become subject under or in connection with this Agreement, any Ancillary Agreement or any other agreement, document, certificate or instrument entered into or delivered by or on behalf of Seller under or pursuant to this Agreement or in connection with the transactions contemplated hereby. Effective as of the Closing, Seller expressly waives and releases any and all rights of subrogation, contribution, advancement, indemnification or other claim against Buyer.

Section 8.6. Defense of Third Party Claims.

a. In the event of the assertion or commencement by any Person, other than a party hereto, of any claim or Proceeding (whether against Buyer, Seller or any other Person) with respect to which Seller or Buyer, as the case may be (each, an “Indemnitor”), may become obligated to hold harmless, indemnify, compensate or reimburse any Indemnitee pursuant to Section 8.2 or Section 8.3, as the case may be (a “Third Party Claim”), the Indemnitor shall have the right, at its election, to proceed with the defense of such Third Party Claim on its own with counsel reasonably satisfactory to the Indemnitee unless: (A) the Response Notice fails to specify that the Indemnitor desires to assume control of the defense of such Third Party Claim and does not acknowledge the Indemnitor’s obligation to indemnify the Indemnitee in respect of such Third Party Claim; (B) the Third Party Claim is in respect of any matter involving criminal liability or asserts fraud of an Indemnitee; (C) the Third Party Claims seeks Damages in excess of one hundred fifty percent (150%) of the amount for which the Indemnitor may be liable under this Agreement; (D) the Indemnitor fails to provide reasonable assurance to the Indemnitee of its financial capacity to defend such Third Party Claim and provide indemnification with respect to such Third Party Claim; (E) the Indemnitee is also a party to such Third Party Claim and the Indemnitee has been advised in writing by outside counsel that there are one or more legal defenses available to the Indemnitee that are different from or in addition to those available to the Indemnitor; (F) the Indemnitor has failed or is failing to reasonably prosecute or defend such Third Party Claim; (G) such Third Party Claim involves any Governmental Entity as a party thereto; or (H) the Third Party Claim seeks as the primary cause of action the imposition of an equitable or injunctive remedy against the Indemnitee or any of its Affiliates (other than equitable relief that is ancillary to claim for monetary damages). If the Indemnitor so proceeds with the defense of any such Third Party Claim:

i. subject to the other provisions of this Article 8, all reasonable expenses relating to the defense of such Third Party Claim shall be borne and paid exclusively by the Indemnitor;

ii. the Indemnitee shall make available to the Indemnitor any documents and materials in his, her or its and in his, her or its Affiliates’ possession or control that may be necessary to the defense of such Third Party Claim; provided, however, that any confidential or privileged materials shall not be disclosed by the Indemnitee other than as needed for such defense, and the Indemnitor agrees to enter into a commercially reasonable confidentiality and non-use agreement with the Indemnitee with respect to such information;

iii. the Indemnitee may retain separate co-counsel at its sole cost and expense and participate in the defense of such Third Party Claim; provided, however, that the Indemnitee will be entitled to participate in any such defense with separate co-counsel at the expense of the Indemnitor if: (x) so requested by the Indemnitor to participate or (y) based on the advice of counsel to the Indemnitee, a conflict or potential conflict between the Indemnitee and the Indemnitor exists that would make such separate representation advisable; provided further, however, that the Indemnitor shall not be required to pay for more than one (1) such counsel (plus any appropriate local counsel) for all Indemnitees in connection with such Third Party Claim; and

iv. the Indemnitor may not settle, adjust or compromise such Third Party Claim without the consent of the Indemnitee (it being understood that if the Indemnitor requests that the Indemnitee consent to a settlement, adjustment or compromise, the Indemnitee shall not unreasonably withhold or delay such consent); provided, however, that no such consent shall be required if: (x) there is no finding or admission of any violation of Law or suggestion of any wrongdoing on behalf of the Indemnitee; (y) each Indemnitee that is a party to such Third Party Claim is fully and unconditionally released from liability with respect to such claim, without prejudice; and (z) as a result of such settlement, adjustment or compromise, no injunctive or other equitable relief will be imposed against the Indemnitee.

b. If the Indemnitor does not elect or is not entitled to proceed with the defense of any such Third Party Claim, the Indemnitee shall proceed with the defense of such Third Party Claim with counsel reasonably satisfactory to the Indemnitor; provided, however, that the Indemnitee may not settle, adjust or compromise any such Third Party Claim without the prior written consent of the Indemnitor (which consent may not be unreasonably withheld or delayed). An Indemnitee shall give the applicable Indemnitor prompt notice of the commencement of any such Third Party Claim against the Indemnitee; provided, however, that any failure on the part of the Indemnitee to so notify the Indemnitor shall not limit any of the obligations of the Indemnitor under this Article 8 (except to the extent such failure materially prejudices the defense of such Third Party Claim).

#### Section 8.7. Indemnification Claim Procedure.

a. If any Indemnitee has or claims in good faith to have incurred or suffered, or believes in good faith that it may incur or suffer, Damages for which it is or may be entitled to be held harmless, indemnified, compensated or reimbursed under this Article 8 or for which it is or may be entitled to a monetary remedy (such as in the case of a claim based on fraud or intentional misrepresentation), such Indemnitee may deliver a notice of claim (a "Notice of Claim") to the applicable Indemnitor (and, in the case the Notice of Claim is delivered by a Buyer Indemnitee, to the Escrow Agent, to the extent funds remain in the Escrow Account). Each Notice of Claim shall: (i) state that such Indemnitee believes in good faith that such Indemnitee is or may be entitled to indemnification, compensation or reimbursement under this Article 8 or is or may otherwise be entitled to a monetary remedy; (ii) contain a brief description of the facts and circumstances supporting the Indemnitee's claim; and (iii) contain a good faith, non-binding, preliminary estimate of the aggregate amount of the actual and potential Damages that the Indemnitee believes have arisen and may arise as a result of such facts and circumstances (the aggregate amount of such estimate, as it may be modified by such Indemnitee in good faith from time to time, being referred to as the "Claimed Amount").

b. During the twenty (20)-day period commencing upon delivery by an Indemnitee to the applicable Indemnitor of a Notice of Claim (the "Claim Dispute Period"), the applicable Indemnitor may deliver to the Indemnitee who delivered the Notice of Claim (and, in the case the Notice of Claim was delivered by a Buyer Indemnitee, to the Escrow Agent, to the extent funds remain in the Escrow Account) a written response (the "Response Notice") in which the Indemnitor: (i) agrees that the full Claimed Amount is owed to the Indemnitee; (ii) agrees that part, but not all, of the Claimed Amount (such agreed portion, the "Agreed Amount") is owed to the Indemnitee; or (iii) indicates that no part of the Claimed Amount is owed to the Indemnitee. If the Notice of Claim relates to a Third Party Claim, the Response Notice shall also specify whether or not the Indemnitor desires to assume control of the defense of such Third Party Claim. If the Response Notice is delivered in accordance with clause (ii) or (iii) of the preceding sentence, the Response Notice shall also contain a brief description of the facts and circumstances supporting the Indemnitor's claim that only a portion or no part of the Claimed Amount is owed to the Indemnitee, as the case may be. Any part of the Claimed Amount that is not agreed to be



owed to the Indemnitee pursuant to the Response Notice (or the entire Claimed Amount, if the Indemnitor asserts in the Response Notice that no part of the Claimed Amount is owed to the Indemnitee) is referred to in this Agreement as the “Contested Amount” (it being understood that the Contested Amount shall be modified from time to time to reflect any good faith modifications by the Indemnitee to the Claimed Amount). If no Response Notice is delivered prior to the expiration of the Claim Dispute Period, then the Indemnitor shall be conclusively deemed to have agreed that the full Claimed Amount is owed to the Indemnitee.

c. If: (i) the Indemnitor delivers a Response Notice agreeing that the full Claimed Amount is owed to the Indemnitee; or (ii) the Indemnitor does not deliver a Response Notice during the Claim Dispute Period, then, within three (3) Business Days following the receipt of such Response Notice by the Indemnitee (or, in the case the Notice of Claim was delivered by a Buyer Indemnitee, by the Escrow Agent) or within three (3) Business Days after the expiration of the Claim Dispute Period, as the case may be, the Indemnitor shall pay to the applicable Indemnitee an amount in cash equal to the full Claimed Amount (or, in the case the Notice of Claim was delivered by a Buyer Indemnitee and funds remain in the Escrow Account, the Escrow Agent shall release to the applicable Buyer Indemnitee from the Escrow Account an amount in cash equal to the full Claimed Amount (or such lesser amount as may remain in the Escrow Account)); provided, however, that, in the case the Notice of Claim was delivered by a Buyer Indemnitee and to the extent the funds in the Escrow Account are insufficient to cover the Claimed Amount, Seller shall promptly pay to the applicable Buyer Indemnitee the amount by which the Claimed Amount exceeds the remaining funds in the Escrow Account.

d. If the Indemnitor delivers a Response Notice during the Claim Dispute Period agreeing that less than the full Claimed Amount is owed to the Indemnitee, then within three (3) Business Days following the receipt of such Response Notice, the Indemnitor shall pay to the applicable Indemnitee an amount in cash equal to the Agreed Amount (or, in the case the Notice of Claim was delivered by a Buyer Indemnitee and funds remain in the Escrow Account, the Escrow Agent shall release to the applicable Buyer Indemnitee from the Escrow Account an amount in cash equal to the Agreed Amount (or such lesser amount as may remain in the Escrow Account)); provided, however, that, in the case the Notice of Claim was delivered by a Buyer Indemnitee and to the extent the funds in the Escrow Account are insufficient to cover the Agreed Amount, Seller shall promptly pay to the applicable Buyer Indemnitee the amount by which the Agreed Amount exceeds the remaining funds in the Escrow Account.

(a) If the Indemnitor delivers a Response Notice during the Claim Dispute Period indicating that there is a Contested Amount, the Indemnitor and the Indemnitee shall attempt in good faith to resolve the dispute related to the Contested Amount. If the Indemnitee and the Indemnitor resolve such dispute, a settlement agreement stipulating the amount owed to the Indemnitee (the “Stipulated Amount”) shall be signed by the Indemnitee and the Indemnitor. Within three (3) Business Days following the execution of such settlement agreement (or such shorter period of time as may be set forth in the settlement agreement), the Indemnitor shall pay to the applicable Indemnitee an amount in cash equal to the Stipulated Amount (or, in the case the Notice of Claim was delivered by a Buyer Indemnitee and funds remain in the Escrow Account, Seller and Buyer shall deliver joint written instructions to the Escrow Agent instructing the Escrow Agent to release to the applicable Buyer Indemnitee from the Escrow Account an amount in cash equal to the Stipulated Amount (or such lesser amount as may remain in the Escrow Account)); provided, however, that, in the case the Notice of Claim was delivered by a Buyer Indemnitee and to the extent the funds in the Escrow Account are insufficient to cover the Stipulated Amount, Seller shall promptly pay to the applicable Buyer Indemnitee the amount by which the Stipulated Amount exceeds the remaining funds in the Escrow Account.

(b) In the event that there is a dispute relating to any Notice of Claim or any Contested Amount (whether it is a matter between any Indemnitee, on the one hand, and the applicable Indemnitor, on the other hand, or it is a matter that is subject to a Third Party Claim brought against any Indemnitee), that remains unresolved after application of the terms of this Section 8.6, such dispute shall be settled in accordance with Section 11.8.

Section 8.8. Setoff. In addition to Section 8.6 and any rights of setoff or other similar rights that Buyer or any of the other Buyer Indemnitees may have at common law or otherwise, Buyer shall have the right to withhold and deduct from any sum that is or may be owed to Seller hereunder: (a) any amount that is payable by Seller to Buyer under Section 2.9(d) but has not yet been paid; (b) any amount that is otherwise payable by Seller to any Buyer Indemnitee under this Article 8 but has not yet been paid; and (c) any amount with respect to which there is a dispute as to whether such amount is payable by Seller to Buyer or any Buyer Indemnitee under this Agreement upon final determination of such dispute that payment is to be made by Seller by a court from which no appeal can be made.

Section 8.9. Exercise of Remedies Other Than by Buyer or Seller.

a. No Buyer Indemnitee (other than Buyer or any successor thereto or assign thereof) shall be permitted to assert any indemnification claim or exercise any other remedy under this Agreement unless Buyer or any successor thereto or assign thereof, as the case may be, shall have consented to the assertion of such indemnification claim or the exercise of such other remedy.

b. No Seller Indemnitee (other than Seller or any successor thereto or assign thereof) shall be permitted to assert any indemnification claim or exercise any other remedy under this Agreement unless Seller or any successor thereto or assign thereof, as the case may be, shall have consented to the assertion of such indemnification claim or the exercise of such other remedy.

Section 8.10. Escrow Release.

a. If the funds remaining in the Escrow Account, including any interest accrued or income otherwise earned thereon (the “Escrow Balance”), as of the (1) date that is ninety (90) days after the Closing Date (the “Initial Escrow Release Date”) exceed the aggregate dollar amount, as of the Initial Escrow Release Date, of Claimed Amounts and Contested Amounts associated with all indemnification claims contained in any Notice of Claim delivered by a Buyer Indemnitee that have not been finally resolved and paid prior to the Initial Escrow Release Date in accordance with Section 8.6 (each, an “Unresolved Escrow Claim” and the aggregate dollar amount of such Claimed Amounts and Contested Amounts as of the Initial Escrow Release Date being referred to as the “Initial Pending Claim Amount”), then Buyer and Seller shall, within three (3) Business Days following the Initial Escrow Release Date, deliver joint written instructions to the Escrow Agent instructing the Escrow Agent to release from the Escrow Account to Seller the lesser of (i) Five Hundred Thousand Dollars (\$500,000) and an amount equal to the Escrow Balance *minus* the Initial Pending Claim Amount and (2) General Survival Date exceed the aggregate dollar amount, as of the General Survival Date, of Claimed Amounts and Contested Amounts associated with all indemnification claims contained in any Notice of Claim delivered by a Buyer Indemnitee that have not been finally resolved and paid prior to the General Survival Date in accordance with Section 8.6 (each, an “Unresolved Escrow Claim” and the aggregate dollar amount of such Claimed Amounts and Contested Amounts as of the General Survival Date being referred to as the “Pending Claim Amount”), then Buyer and Seller shall, within three (3) Business Days following the General Survival Date, deliver joint written instructions to the Escrow Agent instructing the Escrow

Agent to release from the Escrow Account an amount equal to the Escrow Balance *minus* the Pending Claim Amount to Seller.

b. Following the General Survival Date, if an Unresolved Escrow Claim is finally resolved by a court from which no appeal can be taken, Buyer and Seller shall, within three (3) Business Days after the final resolution of such Unresolved Escrow Claim, deliver joint written instructions to the Escrow Agent instructing the Escrow Agent to release from the Escrow Account: (i) to the applicable Buyer Indemnitee an amount determined in accordance with Section 8.6, and (ii) to Seller an amount equal to the amount (if any) by which the amount of funds remaining in the Escrow Account, including any interest accrued or income otherwise earned thereon, as of the date of resolution of such Unresolved Escrow Claim exceeds the aggregate amount of the remaining Pending Claim Amount.

Section 8.11. Exclusive Remedy. Except: (a) for equitable relief, to which any party hereto may be entitled pursuant to this Agreement; (b) for Damages resulting from or arising out of fraud or intentional misrepresentation; and (c) as otherwise expressly provided in this Agreement, after the Closing the indemnification provided in this Article 8 shall be the sole and exclusive remedy of the parties for monetary damages for any breach of any representation, warranty or covenant contained in this Agreement.

#### **ARTICLE 9. TAX MATTERS**

Section 9.1. Transfer Taxes. Seller shall pay all transfer, documentary, value added sales, use, stamp, registration and other such Taxes and all conveyance fees, recording charges, and other fees and charges (including any penalties and interest) resulting from the transactions contemplated by this Agreement (collectively, the "Transfer Taxes"). Seller shall file, at Seller's expense, any required Transfer Tax filings, provided that Buyer shall join in any such filing if required by applicable Law. Each of Buyer and Seller shall also provide the other with any exemption certificate or its equivalent to support any reasonable exemption from sales taxes claimed in respect of the Transferred Assets.

Section 9.2. Cooperation. Buyer and Seller shall reasonably cooperate, and shall cause their respective Affiliates, and their Affiliates' respective officers, employees, agents, auditors and representatives reasonably to cooperate, in preparing and filing all returns, reports and forms relating to Taxes, including maintaining and making available to each other all records necessary in connection with Taxes and in resolving all disputes and audits with respect to all taxable periods relating to Taxes. Each of Buyer and Seller recognize that the other may need access, from time to time, after the Closing Date, to certain accounting and Tax records and information held by it, to the extent such records and information pertain to events occurring prior to the Closing Date; therefore, Buyer and Seller each agree: (a) to properly retain and maintain such records until such time as Buyer and Seller agree in writing that such retention and maintenance is no longer necessary; and (b) to allow the other party and its respective agents, auditors and representatives, at times and dates mutually acceptable to the parties hereto, to inspect, review and make copies of such records as such party or its agents, auditors or representatives may deem necessary or appropriate from time to time, such activities to be conducted during normal business hours and at the expense of the requesting party.

#### **ARTICLE 10. TERMINATION**

Section 10.1. Termination. This Agreement may be terminated and the transactions contemplated by this Agreement may be abandoned at any time prior to the Closing:

- a. by the mutual written consent of Buyer and Seller;

b. by Seller, by written notice from Seller to Buyer, if the Closing shall not have occurred on or before April 10, 2020 (the “Outside Date”); provided, however, that the right to terminate this Agreement under this Section 10.1(b) shall not be available to Seller if the failure of Seller to fulfill any of its obligations under this Agreement shall have been the principal cause of, or shall have resulted in, the failure of the Closing to occur on or prior to such date and such failure to act constitutes a breach of the Agreement provided, however that in the event that the SEC has not permitted the filing of a Definitive Proxy Statement by March 11, 2020 then at the option of Buyer given by notice to Seller on the business day following such date, this Agreement shall terminate or the Outside Date shall be extended to May 11, 2020;

c. by Buyer, by written notice from Buyer to Seller, (i) if the Closing shall not have occurred on or before the Outside Date; provided, however, that the right to terminate this Agreement under this Section 10.1(c) shall not be available to Buyer if the failure of Buyer to fulfill any of its obligations under this Agreement shall have been the principal cause of, or shall have resulted in, the failure of the Closing to occur on or prior to such date and such failure to act constitutes a breach of the Agreement or (ii) in the event that the SEC has not permitted the filing of a Definitive Proxy Statement by March 11, 2020;

d. by Seller, by written notice from Seller to Buyer, if: (i) there exists a breach of or inaccuracy in any representation or warranty made by Buyer in this Agreement such that the condition set forth in Section 7.2(a) is not capable of being satisfied; or (ii) Buyer shall have breached any of the covenants or agreements contained in this Agreement to be complied with by it such that the condition set forth in Section 7.2(b) is not capable of being satisfied and, in the case of clauses (i) and (ii), such breach is incapable of being cured or, if capable of being cured, is not cured by Buyer prior to the earlier of: (x) twenty (20) days after receipt of written notice thereof from Seller or (y) the Outside Date;

e. by Buyer, by written notice from Buyer to Seller, if: (i) there exists a breach of or inaccuracy in any representation or warranty made by Seller in this Agreement such that the condition set forth in Section 7.1(a) is not capable of being satisfied; or (ii) Seller shall have breached any of the covenants or agreements contained in this Agreement to be complied with by it such that the condition set forth in Section 7.1(b) is not capable of being satisfied and, in the case of clauses (i) and (ii), such breach is incapable of being cured or, if capable of being cured, is not cured by Seller prior to the earlier of: (x) twenty (20) days after receipt of written notice thereof from Buyer or (y) the Outside Date;

f. by Buyer, by written notice from Buyer to Seller, if, after the date of this Agreement, there shall have occurred a Material Adverse Effect;

g. by Buyer, by written notice from Buyer to Seller, or Seller, by written notice from Seller to Buyer, if: (i) any Governmental Entity shall have issued an Order or taken any other action permanently restraining, enjoining or otherwise prohibiting the transactions contemplated by this Agreement and such Order or other action shall have become final and non-appealable; or (ii) any Governmental Entity shall have enacted, issued or promulgated any Law which has the effect of making consummation of the transactions contemplated by this Agreement illegal or otherwise prohibits the consummation of the transactions contemplated by this Agreement; or

h. by either Buyer or Seller, if at the Seller's Stockholder Meeting (including any adjournment or postponement), the requisite stockholder approval shall not have been obtained (provided, that the right to terminate this Agreement under this Section 10.1(h) shall not be available to any party

seeking termination who at the time is in breach of or has failed to fulfill any of its obligations under this Agreement); or

- i. by Seller, if Seller Board determines to accept a Superior Proposal.

Section 10.2. Effect of Termination.

a. If this Agreement is terminated pursuant to Section 10.1, other than under Section 10.1(h) or Section 10.1(i), this Agreement shall forthwith become null and void and have no further effect, and there shall be no Liability or obligation on the part of Buyer, Seller, any of their respective Affiliates, or any of their respective officers, directors, equityholders, managers or partners, and all rights and obligations of the parties hereunder shall cease; provided, however, that notwithstanding the foregoing: (a) the provisions of (i) the Confidentiality Agreement and (ii) this Section 10.2 and Article 11 (except for Section 11.5) shall survive the termination of this Agreement and shall continue in full force and effect in accordance with their terms; and (b) nothing herein shall relieve any party hereto from liability for Damages incurred or suffered by the other party hereto as a result of any knowing and willful breach by such party of any of its covenants or other agreements set forth in this Agreement prior to the time of such termination.

b. If this Agreement is terminated pursuant to Section 10.1(h), and there is not then an Acquisition Proposal that has been publicly disclosed, in order to compensate Buyer for the effort and expense incurred in pursuing a Transaction and to induce Buyer to enter into this Agreement, Seller agrees to pay Buyer \$500,000 and, effective upon receipt of such payment, Seller shall be released from any claim for breach of this Agreement related to the failure to obtain stockholder approval.

c. If this Agreement is terminated pursuant to Section 10.1(i), or, if an Acquisition Proposal has been publicly disclosed, this Agreement is terminated pursuant to Section 10.1(h), in order to compensate Buyer for the effort and expense incurred in pursuing a Transaction and to induce Buyer to enter into this Agreement, Seller agrees to pay Buyer \$1,000,000 and, effective upon receipt of such payment, Seller shall be released from any claim for breach of this Agreement related to Seller's acceptance of the Superior Proposal to the extent it was unsolicited under the terms of Section 5.5 hereof. The Parties agree that payment of the \$1,000,000 shall, in the circumstances in which it is owed in accordance with the terms of this Agreement, provided it has been validly terminated under Section 10.1(h) or (i), constitute the sole and exclusive remedy of the Buyer following the termination of this Agreement, it being understood that in no event shall Seller be required to pay the amounts payable pursuant to this Section 10.2 on more than one occasion and following payment of the fee (x) Seller shall have no further liability to Buyer in connection with or arising out of this Agreement or the termination thereof, any breach of this Agreement by Seller giving rise to such termination, or the failure of the contemplated transactions to be consummated, (y) neither Buyer nor any of its Affiliates shall be entitled to bring or maintain any other claim, action or proceeding against Seller or seek to obtain any recovery, judgment or damages of any kind against Seller (or any partner, member, stockholder, director, officer, employee, Subsidiary, Affiliate, agent or other Representative of such Parties) in connection with or arising out of this Agreement or the termination thereof, any breach by any such Parties giving rise to such termination or the failure of the contemplated transactions to be consummated and (z) the Buyer shall be precluded from any other remedy against Seller and their respective Affiliates, at law or in equity or otherwise, in connection with or arising out of this Agreement or the termination thereof, any breach by such Party giving rise to such termination or the failure of the contemplated transactions to be consummated.

## ARTICLE 11. MISCELLANEOUS

### Section 11.1. Publicity.

a. None of the parties will make, issue or release (and none of the parties will cause or permit any of its Representatives, to make, issue or release) any public or industry announcement, statement or acknowledgment with respect to this Agreement, any Ancillary Agreement or any of the transactions contemplated hereby or thereby, the Purchase Price or any other material terms of this Agreement or any of the transactions contemplated hereby, except by mutual consent of Buyer and Seller and except as required by any Law (it being understood that prior to making any such announcement, statement or acknowledgment as required by any Law, Buyer and Seller will consult with each other with respect to the content thereof).

b. Seller shall, and shall cause its Affiliates to, and shall instruct its and their respective Representatives to, hold in confidence the existence of this Agreement, the Ancillary Agreements, and the terms hereof and thereof, and each such Person shall not disclose any such information to any other Person; provided, however, that such Person may disclose any such information: (i) that after the date of this Agreement becomes generally available to the public other than through a breach by Seller, any of its Affiliates or any of its or their respective Representatives of their respective obligations under this Section 11.1(b); (ii) to its tax, accounting or legal Representatives who have a need to know such information and are informed of the confidential nature of such information; (iii) as required by applicable Law, by any Governmental Entity or under any subpoena, civil investigative demand or other similar process by a court of competent jurisdiction having jurisdiction over such Person; or (iv) with Buyer's prior written consent.

Section 11.2. Amendment and Waiver. Any provision in this Agreement to the contrary notwithstanding, changes in or additions to this Agreement may be made only by a written instrument signed by the parties hereto, and compliance with any covenant or provision set forth herein may be omitted or waived only by a written instrument signed by the party against whom enforcement of such omission or waiver is sought. Any waiver or consent may be given subject to satisfaction of conditions stated therein and any waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. No failure or delay on the part of any party in exercising any right, power or remedy hereunder shall operate as a waiver thereof; nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder.

Section 11.3. Entire Agreement; Third Party Beneficiaries. This Agreement (including the Disclosure Schedule and the other documents and instruments referred to herein) and the Ancillary Agreements: (a) constitute the entire agreement between the parties hereto with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, both written and oral, between the parties hereto with respect to the subject matter hereof and thereof; provided, however, that the Confidentiality Agreement is not superseded and is expressly understood and agreed to apply to all parties hereto as well as all parties thereto and is further expressly understood and agreed to apply for all purposes of this Agreement as well as for evaluation and consideration of this Agreement; and (b) except as expressly provided herein, are not intended to confer upon any Person other than the parties hereto and their respective successors and permitted assigns any rights, benefits or remedies whatsoever. In the event of any inconsistency between the statements in the body of this Agreement and those in the Disclosure Schedule and the other documents and instruments referred to herein (other than an exception expressly set forth as such in the Disclosure Schedule with respect to a representation or warranty), the statements in the body of this Agreement will control.

Section 11.4. Assignment; Binding Effect; No Third-Party Rights. Neither this Agreement nor any of the rights, interests or obligations hereunder may be assigned by any party hereto, in whole or in part (whether by operation of law or otherwise), without the prior written consent of the other party hereto; provided, however, that without such prior written consent: (a) Buyer may assign its rights and/or delegate its obligations under this Agreement or any Ancillary Agreement (in whole but not in part) to any Affiliate of Buyer; and (b) any or all of the rights and interests and/or obligations of Buyer under this Agreement or any Ancillary Agreement: (i) may be assigned and/or delegated to any purchaser of all or substantially all of the assets of Buyer related to the Transferred Assets (whereupon, subject to compliance with Section 2.4 of Exhibit A hereto, Buyer shall cease to have any further liabilities or obligations hereunder and thereunder); and (ii) may be assigned as a matter of law to the surviving entity in any merger, consolidation, share exchange or reorganization involving Buyer or any of its Affiliates. Subject to the preceding sentence, this Agreement shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and permitted assigns. Any purported assignment in violation of the provisions of this Agreement shall be null and void ab initio.

Section 11.5. Specific Performance and Other Remedies. The parties hereto agree that if any of the provisions of this Agreement were not to be performed as required by their specific terms or were to be otherwise breached, irreparable damage will occur to the other party, no adequate remedy at law would exist and damages would be difficult to determine. Accordingly, the parties hereto acknowledge that the parties hereto shall be entitled to an injunction or injunctions to prevent breaches or threatened breaches of this Agreement by the other party or to specific performance of the terms hereof, without posting any bond and without proving that monetary damages would be inadequate, in addition to any other remedy at law or equity. Neither party shall oppose, argue, contend or otherwise be permitted to raise as a defense that an adequate remedy at law exists or that specific performance or equitable or injunctive relief is inappropriate or unavailable with respect to any breach of this Agreement.

Section 11.6. Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void, unenforceable or against its regulatory policy, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall nevertheless remain in full force and effect and shall in no way be affected, impaired or invalidated. Upon such determination that any term, provision, covenant or restriction is invalid, illegal, void, unenforceable or against regulatory policy, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties hereto as closely as possible in an acceptable manner in order that the transactions contemplated by this Agreement are consummated as originally contemplated to the greatest extent possible.

Section 11.7. Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed to have been duly given and effective: (a) on the date of transmission, if such notice or communication is sent via facsimile or electronic mail and receipt is confirmed, at the facsimile number or email address specified in this Section 11.7, prior to 5:00 p.m., Pacific Time, on a Business Day; (b) on the first Business Day after the date of transmission, if such notice or communication is sent via facsimile or electronic mail and receipt is confirmed, at the facsimile number or email address specified in this Section 11.7 (i) at or after 5:00 p.m., Pacific Time, on a Business Day or (ii) on a day that is not a Business Day; (c) when received, if sent by nationally recognized overnight courier service; or (d) upon actual receipt by the party to whom such notice is required or permitted to be given. The address for such notices and communications (unless changed by the applicable party by like notice) shall be as follows:

(A) if to Seller, to:

Icagen-T Inc.  
2090 E. Innovation Park Drive

Oro Valley, AZ 85755  
Attention: Richie Cunningham

Email: rcunningham@icagen.com

With a copy to:

Leslie Marlow  
Gracin & Marlow, LLP  
The Chrysler Building  
405 Lexington Avenue, 26th Floor  
New York, New York 10174

Email: lmarlow@gracinmarlow.com

(B) if to Buyer, to:

Ligand Pharmaceuticals Incorporated  
3911 Sorrento Valley Blvd., Suite 110 San Diego, CA 92121 Attn: Chief Financial Officer

[By intention, no facsimile number is provided] Email: mkorenberg@ligand.com

With a copy to:

Ligand Pharmaceuticals Incorporated  
3911 Sorrento Valley Blvd., Suite 110 San Diego, CA 92121 Attn: General Counsel [By intention, no facsimile number is provided]

Email: cberkman@ligand.com

Section 11.8. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware (without regard to its conflicts of law doctrines).

Section 11.9. Submission to Jurisdiction. Each party hereto, for itself and its successors and assigns, irrevocably agrees that any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated hereby shall be brought and determined in the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the United States District Court for the District of Delaware or, to the extent that neither of the foregoing courts has jurisdiction, the Superior Court of the State of Delaware; (and each such party shall not bring any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated hereby in any court other than the aforesaid courts), and each party hereto, for itself and its successors and assigns and in respect to its property, hereby irrevocably submits with regard to any such Proceeding, generally and unconditionally, to the exclusive jurisdiction of the aforesaid courts. Each party, for itself and its successors and assigns, hereby irrevocably waives, and agrees not to assert, by way of motion, as a defense, counterclaim or otherwise, in any such Proceeding: (a) any claim that it is not personally subject to the



jurisdiction of the above-named courts for any reason other than the failure to lawfully serve process; (b) that it or its property is exempt or immune from jurisdiction of such court or from any legal process commenced in such courts (whether through service of notice, attachment prior to judgment, attachment in aid of execution of judgment, execution of judgment or otherwise); and (c) that (i) such Proceeding in any such court is brought in an inconvenient forum; (ii) the venue of such Proceeding is improper; and (iii) this Agreement, any of the transactions contemplated hereby or the subject matter hereof or thereof, may not be enforced in or by such courts.

Section 11.10. Construction. The parties hereto have jointly participated in the negotiation and drafting of this Agreement. In the event of an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties hereto and no presumptions or burdens of proof shall arise favoring any party hereto by virtue of the authorship of any of the provisions of this Agreement. Each defined term used in this Agreement has a comparable meaning when used in its plural or singular form. Each gender-specific term used herein has a comparable meaning whether used in a masculine, feminine or gender-neutral form. As used in this Agreement, the word “including” and its derivatives means “without limitation” and its derivatives, the word “or” is not exclusive and the words “herein,” “hereof,” “hereby,” “hereto” and “hereunder” refer to this Agreement as a whole. References to Sections or Articles are to the Sections and Articles of this Agreement, unless otherwise specified. As used in this Agreement, the term “commercially reasonable efforts” shall not include any obligation of Buyer to expend money (other than nominal amounts), commence or participate in any judicial or administrative action, proceeding or investigation or grant any material accommodation (financial or otherwise) to any Person. No investigation or knowledge of Buyer in any way affects the representations, warranties, covenants and obligations of the Seller in this Agreement or the rights and remedies that may be exercised by the Buyer Indemnitees with respect thereto. The section headings contained in this Agreement are inserted for convenience of reference only and shall not affect in any way the meaning or interpretation of this Agreement. Reference in this Agreement to any legal term for any Law, action, remedy, method of judicial proceeding, legal document, legal status, court, official or any other legal concept or thing shall in respect of any jurisdiction other than the United States be deemed to include that legal concept or thing in that other jurisdiction which most nearly approximates that United States legal term (in addition to any other analogous legal concept or term specified). Any capitalized terms used in any schedule (including the Disclosure Schedule) or exhibit attached hereto and not otherwise defined therein shall have the meanings set forth in this Agreement (or, in the absence of any ascribed meaning, the meaning customarily ascribed to any such term in Seller’s industry or in general commercial usage). Where any provision in this Agreement refers to action to be taken by any Person, or which such Person is prohibited from taking, such provision shall be applicable whether the action in question is taken directly or indirectly by such Person. All references to dollars (or the symbol “\$”) contained herein shall be deemed to refer to United States dollars. Time is of the essence in the performance of the parties’ respective obligations under this Agreement. Any item disclosed in any particular section or subsection of the Disclosure Schedule shall be deemed to be disclosed in any other section or subsection of the Disclosure Schedule if the relevance of such item to the other section or subsection is readily apparent on the face of such disclosure.

Section 11.11. “Seller” Joint and Several. The representations, warranties, covenants and agreements of Parent and each Subsidiary, the entities defined as the singular “Seller”, are given, made or entered into, as applicable, jointly and severally.

Section 11.12. Expenses. Each of the parties hereto will bear all legal, accounting, and other fees and expenses incurred by it or on its behalf in connection with the transactions contemplated by this Agreement, whether or not such transactions are consummated.

Section 11.13. Counterparts. This Agreement may be executed in any number of counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed an original, but all of which shall be considered one and the same agreement, and shall become effective when each party has received counterparts signed by each of the other parties, it being understood and agreed that delivery of a signed counterpart signature page to this Agreement by facsimile transmission, by electronic mail in portable document format (".pdf") form, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document shall constitute valid and sufficient delivery thereof.

Section 11.14. Waiver of Jury Trial. EACH PARTY HERETO ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES AND, THEREFORE, EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OF THE TRANSACTIONS. EACH PARTY HERETO CERTIFIES AND ACKNOWLEDGES THAT: (I) NO REPRESENTATIVE OF THE OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT SEEK TO ENFORCE THE FOREGOING WAIVER IN THE EVENT OF ANY SUCH PROCEEDING; (II) SUCH PARTY HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER; (III) SUCH PARTY MAKES THIS WAIVER VOLUNTARILY; AND (IV) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 11.14.

Section 11.15. Buyer's Parent Guaranty. Ligand Pharmaceuticals Incorporated ("Guarantor") agrees with Seller as follows:

a. The Guarantor hereby unconditionally and irrevocably guarantees to each Selling Stockholder the payment and performance when due of all covenants, obligations and liabilities of Buyer arising under this Agreement at or after the Closing (collectively, the "Obligations"). Seller will have recourse against the Guarantor for payment of the Obligations at any time after the Obligations, or any part thereof, have not been paid in full when due or performed when required by this Agreement, as if the Obligations were directly those of the Guarantor.

b. The Obligations shall survive any termination of this Agreement and cannot be transferred or assigned by the Guarantor. The Guarantor acknowledges and agrees that the Obligations are continuing, absolute and unconditional and, without limiting the generality of the foregoing, shall not be released, discharged, diminished, limited or otherwise affected by (and the Guarantor hereby consents to or waives, as applicable, to the fullest extent permitted by applicable Law):

i.any change in the existence, structure, constitution, name, objects, powers, organization, share capital, constituent documents, business, shareholders, directors or management of the Buyer or the Guarantor;

ii.any amalgamation, merger or consolidation of either the Buyer or the Guarantor into or with any other Person, or any sale, lease or transfer of all or any of the assets of either the Buyer or the Guarantor to any other Person;

iii.any lack or limitation of power, incapacity or disability on the part of either Buyer or Guarantor or any of their respective directors, officers, shareholders, employees or agents, or any other irregularity, defect or informality, or any fraud, on the part of any of either Buyer or Guarantor

or any of their respective directors, officers, shareholders, employees or agents with respect to any or all of the Obligations;

iv.the insolvency, bankruptcy, reorganization, winding-up or financial condition of either Buyer or Guarantor at any time;

v.any defense based upon or arising out of any bankruptcy, insolvency, reorganization, moratorium, arrangement, liquidation, dissolution or other proceeding commenced by either Buyer or Guarantor or any other Person;

vi.any loss or impairment of any right of either Buyer or Guarantor to subrogation, reimbursement or contribution; or

vii.any other act or omission of any kind by either Buyer or Guarantor, whether similar or dissimilar to the foregoing, which would, but for the provisions of this Section 11.15 constitute a legal or equitable discharge, limitation or reduction of the Guarantor's obligations under this guarantee (other than performance in full of the Obligations).

*[Signature Page Follows]*

IN WITNESS WHEREOF, Seller and Buyer have caused this Agreement to be executed on the date first set forth above.

**ICAGEN, INC.:**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**ICAGEN CORP:**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**XR PRO SCIENCES, INC.:**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**CALDERA DISCOVERY, INC.:**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**By: /s/ Richard Cunningham**  
**Name: Richard Cunningham**  
**Title: Chief Executive Officer**

**ADJACENT ACQUISITION CO., LLC:**

**By: /s/ Charles Berkman**  
**Name: Charles Berkman**  
**Title: Manager**

**By: /s/ Charles Berkman**  
**Name: Charles Berkman**  
**Title: Manager**

Solely for purposes of Section 11.15:

**LIGAND PHARMACEUTICALS INCORPORATED**

**By: /s/ Charles Berkman**  
**Name: Charles Berkman**  
**Title: SVP, GC & Secretary**

**LIGAND PHARMACEUTICALS INCORPORATED**

**By: /s/ Charles Berkman**  
**Name: Charles Berkman**  
**Title: SVP, GC & Secretary**

## AMENDMENT NO. 1 TO ASSET PURCHASE AGREEMENT

This Amendment No. 1 (this “Amendment”), dated April 1, 2020, to that certain Asset Purchase Agreement (the “Asset Purchase Agreement”), originally dated as of February 11, 2020, by and between Icagen, Inc. (“Parent”), a Delaware corporation, Icagen Corp., a Nevada corporation, XRPro Sciences, Inc., a Delaware corporation, and Caldera Discovery, Inc., a Delaware corporation, (each, a “Subsidiary”, and the Subsidiaries, together with Parent, collectively referred to as “Seller”), and Adjacent Acquisition Co., LLC a Delaware limited liability company (“Buyer”). The Parent, the Subsidiaries, and the Buyer are collectively referred to herein as the “Parties”. Capitalized terms not defined herein have the meanings set forth in the Asset Purchase Agreement.

### RECITALS

WHEREAS, the Parties desire to amend the Asset Purchase Agreement as set forth below.

### AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties agree to amend the Asset Purchase Agreement as follows:

1. Schedule 3.6(d) of the Disclosure Schedule is hereby deleted in its entirety and replaced with the Amended and Restated Schedule 3.6(d) attached hereto, for the purpose of including certain employees and consultants that are providing services at the Seller’s Tucson location.
2. A new Section 2.1(n) is hereby added as follows:

“(n) to the extent an employee of Parent or Icagen-T accepts an offer from Buyer, any mobile device or computer used by such employee of Parent or Icagen-T in the performance of the employee’s job and that is property of Parent or Icagen-T and not otherwise listed on Schedule 5.8.”
3. A new Section 5.8 is hereby added as follows:

“Separation and Transfer of IT Assets. The parties agree to the terms set forth on Schedule 5.8 hereto.”
4. Exhibit E (Transition Services Agreement) is replaced with the form of Transition Services Agreement attached hereto.
5. With respect to the Assignment and Assumption of Parent’s agreement with Cystic Fibrosis Foundation (“CFF”), and the portion of the Earnout payments to be made directly to CFF thereunder, Buyer shall, if it believes payments may be due to CFF, provide Parent with a draft of the report to be made under Section 1.2 of Exhibit A at least 5 days prior to the due date under Exhibit A, and Parent shall within such 5 day period inform Buyer of Parent’s calculation of the amount due to CFF . Parent shall then hold Buyer harmless from any claim that Parent’s calculation resulted in an underpayment to CFF.

Except as expressly provided in this Amendment, the Asset Purchase Agreement remains unchanged, and the Asset Purchase Agreement as modified hereby remains in full force and effect. To the extent of any inconsistency between the provisions of this Amendment and the provisions of the Asset Purchase Agreement, the terms of this

Amendment shall govern. This Amendment shall be governed by and construed in accordance with the Asset Purchase Agreement.

*[signature page follows]*

IN WITNESS WHEREOF, the parties have executed this Amendment No. 1 to Asset Purchase Agreement effective as of the date set forth above.

**BUYER:**

**ADJACENT ACQUISITION CO., LLC:**

By: /s/ Charles Berkman  
Name: Charles Berkman  
Title: Manager

**SELLER:**

**ICAGEN, INC.:**

**ICAGEN CORP:**

**XR PRO SCIENCES, INC.:**

**CALDERA DISCOVERY, INC.:**

[Signature Page to Asset Purchase Agreement]

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AMENDED AND RESTATED  
SCHEDULE 3.6(D)

Confidential portions of this Schedule were redacted pursuant to Item 601(b)(2) of Regulation S-K and the Registrant agrees to furnish supplementally to the Securities and Exchange Commission a copy of any redacted information or omitted schedule and/or exhibit upon request.

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Schedule 5.8

No Icagen-T Assets other than computers and mobile devices are transferable.

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EXHIBIT E  
TRANSITION SERVICES AGREEMENT

See Attached.

**CALL OPTION AMENDMENT AGREEMENT**  
**dated as of April 6, 2020**

**Between LIGAND PHARMACEUTICALS INCORPORATED and BARCLAYS BANK PLC**

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THIS CALL OPTION AMENDMENT AGREEMENT (this “**Agreement**”) with respect to the Call Option Confirmations (as defined below) is made as of April 6, 2020 between Ligand Pharmaceuticals Incorporated (“**Company**”) and Barclays Bank PLC (“**Dealer**”).

WHEREAS, Company issued \$650,000,000 principal amount of 0.75% Convertible Senior Notes due 2023 (the “**Convertible Notes**”) pursuant to an Indenture dated as of May 22, 2018 between Company and Wilmington Trust, National Association as trustee;

WHEREAS, in connection with the pricing of the Convertible Notes, Company and Dealer entered into a Base Call Option Transaction (the “**Base Call Option Transaction**”) pursuant to an ISDA confirmation dated as of May 17, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 650,000 call options (as amended, modified, terminated or unwound from time to time, the “**Base Call Option Confirmation**”), with an Applicable Percentage of 40% applicable to Dealer;

WHEREAS, in connection with the exercise of the over-allotment option by the initial purchasers of the Convertible Notes, Company and Dealer entered into an Additional Call Option Transaction (the “**Additional Call Option Transaction**”) and, together with the Base Call Option Transaction, the “**Call Option Transactions**”) pursuant to an ISDA confirmation dated as of May 18, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 100,000 call options (as amended, modified, terminated or unwound from time to time, the “**Additional Call Option Confirmation**”) and, together with the Base Call Option Confirmation, the “**Call Option Confirmations**”), with an Applicable Percentage of 40% applicable to Dealer; and

WHEREAS, in connection with a repurchase by Company of \$234,440,000 aggregate principal amount of Convertible Notes (the “**March 2020 Repurchase**”), the Company has requested and the Dealer has agreed to make certain amendments to the Call Option Confirmations for the Options relating to such repurchased Convertible Notes to remain outstanding until a later exercise, notwithstanding the repurchase of the corresponding Convertible Notes;

NOW, THEREFORE, in consideration of their mutual covenants herein contained, the parties hereto, intending to be legally bound, hereby mutually covenant and agree as follows:

1. Defined Terms. Any capitalized term not otherwise defined herein shall have the meaning set forth for such term in the Call Option Confirmations.
  2. Amendment. Each of the Call Option Confirmations shall be amended by:
    - (i) adding the sentence “Notwithstanding anything to the contrary herein, the March 2020 Repurchase shall not constitute a Repayment Event” to the end of Section 8(a)(iii);
    - (ii) replacing the caption “Automatic Exercise” and the corresponding text with the caption “Automatic Exercise during Final Conversion Period” and the corresponding text “Applicable and means that (unless Counterparty notifies Dealer in writing prior to 5:00 p.m., New York City time, on the Expiration Date that it does not wish Automatic Exercise to occur) all Options then outstanding as of 5:00 p.m., New York City time, on the Expiration Date will be deemed to be automatically exercised (such Options, the “**Automatic Conversion Options**”) as if (x) a number of Convertible Securities (in denominations of USD1,000 principal amount) equal to such number of then-outstanding Options were converted with a “Conversion Date” (as defined in the Indenture) occurring during the Final Conversion Period, (y) the Convertible Security Settlement Method applied to such Convertible Securities and (z) the “Observation Period” (as such term is defined in the Indenture) were the 60 consecutive “VWAP Trading Days” (as defined in the Indenture) beginning on, and including, the 61st “Scheduled Trading Day” (as defined in the Indenture) immediately preceding the Maturity Date (as defined in the Indenture); provided that, no such automatic exercise pursuant to this paragraph will occur if the “Daily VWAP” (as defined in the Indenture) for each “VWAP Trading Day” (as defined in the Indenture) during such period is less than or equal to the Strike Price”;
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(iii) amending the text opposite the caption “Notice of Exercise” by adding “but subject to “Automatic Exercise during Final Conversion Period” above” following the words “Equity Definitions” in the first line thereof;

(iv) amending the text opposite the caption “Delivery Obligation” by adding the words *provided*, that, for the avoidance of doubt, such cap shall not apply to the Delivery Obligation related to any Automatic Conversion Options”;

(v) amending the text opposite the caption “Notice of Delivery Obligation” by adding the words *provided further*, that, for the avoidance of doubt, Counterparty shall not be required to deliver such notice in respect of any Automatic Conversion Options”;

(vi) adding “; *provided*, that, for the avoidance of doubt, such cap shall not apply to the exercise of any Automatic Conversion Options” to the end of the final sentence of Section 8(a)(ii).

3. Representations and Warranties of Company. Company represents and warrants to Dealer on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with;

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law));

(e) it is not in possession of any material nonpublic information regarding Company or the Shares; and

(f) it is not entering into this Agreement to create actual or apparent trading activity in the Shares (or any security convertible into or exchangeable for the Shares) or to raise or depress or otherwise manipulate the price of the Shares (or any security convertible into or exchangeable for the Shares) or otherwise in violation of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

4. Representations and Warranties of Dealer. Dealer represents and warrants to Company on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with; and

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

5. Governing Law. This Agreement and any dispute arising hereunder shall be governed by and construed in accordance with the laws of the State of New York (without reference to choice of law doctrine).

6. Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if all of the signatures thereto and hereto were upon the same instrument.

7. No Reliance, etc. Company confirms that it has relied on the advice of its own counsel and other advisors (to the extent it deems appropriate) with respect to any legal, tax, accounting, or regulatory consequences of this Agreement, that it has not relied on Dealer or its affiliates in any respect in connection therewith, and that it will not hold Dealer or its affiliates accountable for any such consequences.

8. No Other Changes. Except as expressly set forth herein, all of the terms and conditions of the Call Option Confirmations shall remain in full force and effect and are hereby confirmed in all respects.

*[Signature Page Follows]*

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

**Barclays Bank PLC**

By: /s/ Steven R. Halperin  
Name: Steven R. Halperin  
Title: Managing Director

**Ligand Pharmaceuticals Incorporated**

/s/ Matthew  
Korenberg

By: \_\_\_\_\_  
Name: Matthew Korenberg  
Title: Executive Vice President and Chief Financial Officer

[Signature Page to Call Option Amendment Agreement]

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**CALL OPTION AMENDMENT AGREEMENT**  
**dated as of April 6, 2020**

**Between LIGAND PHARMACEUTICALS INCORPORATED and DEUTSCHE BANK AG, LONDON BRANCH**

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THIS CALL OPTION AMENDMENT AGREEMENT (this “**Agreement**”) with respect to the Call Option Confirmations (as defined below) is made as of April 6, 2020 between Ligand Pharmaceuticals Incorporated (“**Company**”) and Deutsche Bank AG, London Branch (“**Dealer**”).

WHEREAS, Company issued \$650,000,000 principal amount of 0.75% Convertible Senior Notes due 2023 (the “**Convertible Notes**”) pursuant to an Indenture dated as of May 22, 2018 between Company and Wilmington Trust, National Association as trustee;

WHEREAS, in connection with the pricing of the Convertible Notes, Company and Dealer entered into a Base Call Option Transaction (the “**Base Call Option Transaction**”) pursuant to an ISDA confirmation dated as of May 17, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 650,000 call options (as amended, modified, terminated or unwound from time to time, the “**Base Call Option Confirmation**”), with an Applicable Percentage of 20% applicable to Dealer;

WHEREAS, in connection with the exercise of the over-allotment option by the initial purchasers of the Convertible Notes, Company and Dealer entered into an Additional Call Option Transaction (the “**Additional Call Option Transaction**”) and, together with the Base Call Option Transaction, the “**Call Option Transactions**”) pursuant to an ISDA confirmation dated as of May 18, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 100,000 call options (as amended, modified, terminated or unwound from time to time, the “**Additional Call Option Confirmation**”) and, together with the Base Call Option Confirmation, the “**Call Option Confirmations**”), with an Applicable Percentage of 20% applicable to Dealer; and

WHEREAS, in connection with a repurchase by Company of \$234,440,000 aggregate principal amount of Convertible Notes (the “**March 2020 Repurchase**”), the Company has requested and the Dealer has agreed to make certain amendments to the Call Option Confirmations for the Options relating to such repurchased Convertible Notes to remain outstanding until a later exercise, notwithstanding the repurchase of the corresponding Convertible Notes;

NOW, THEREFORE, in consideration of their mutual covenants herein contained, the parties hereto, intending to be legally bound, hereby mutually covenant and agree as follows:

1. Defined Terms. Any capitalized term not otherwise defined herein shall have the meaning set forth for such term in the Call Option Confirmations.
  2. Amendment. Each of the Call Option Confirmations shall be amended by:
    - (i) adding the sentence “Notwithstanding anything to the contrary herein, the March 2020 Repurchase shall not constitute a Repayment Event” to the end of Section 8(a)(iii);
    - (ii) replacing the caption “Automatic Exercise” and the corresponding text with the caption “Automatic Exercise during Final Conversion Period” and the corresponding text “Applicable and means that (unless Counterparty notifies Dealer in writing prior to 5:00 p.m., New York City time, on the Expiration Date that it does not wish Automatic Exercise to occur) all Options then outstanding as of 5:00 p.m., New York City time, on the Expiration Date will be deemed to be automatically exercised (such Options, the “**Automatic Conversion Options**”) as if (x) a number of Convertible Securities (in denominations of USD1,000 principal amount) equal to such number of then-outstanding Options were converted with a “Conversion Date” (as defined in the Indenture) occurring during the Final Conversion Period, (y) the Convertible Security Settlement Method applied to such Convertible Securities and (z) the “Observation Period” (as such term is defined in the Indenture) were the 60 consecutive “VWAP Trading Days” (as defined in the Indenture) beginning on, and including, the 61st “Scheduled Trading Day” (as defined in the Indenture) immediately preceding the Maturity Date (as defined in the Indenture); provided that, no such automatic exercise pursuant to this paragraph will occur if the “Daily VWAP” (as defined in the Indenture) for each “VWAP Trading Day” (as defined in the Indenture) during such period is less than or equal to the Strike Price”;
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(iii) amending the text opposite the caption “Notice of Exercise” by adding “but subject to “Automatic Exercise during Final Conversion Period” above” following the words “Equity Definitions” in the first line thereof;

(iv) amending the text opposite the caption “Delivery Obligation” by adding the words *provided*, that, for the avoidance of doubt, such cap shall not apply to the Delivery Obligation related to any Automatic Conversion Options”;

(v) amending the text opposite the caption “Notice of Delivery Obligation” by adding the words *provided further*, that, for the avoidance of doubt, Counterparty shall not be required to deliver such notice in respect of any Automatic Conversion Options”;

(vi) adding “; *provided*, that, for the avoidance of doubt, such cap shall not apply to the exercise of any Automatic Conversion Options” to the end of the final sentence of Section 8(a)(ii).

3. Representations and Warranties of Company. Company represents and warrants to Dealer on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with;

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law));

(e) it is not in possession of any material nonpublic information regarding Company or the Shares; and

(f) it is not entering into this Agreement to create actual or apparent trading activity in the Shares (or any security convertible into or exchangeable for the Shares) or to raise or depress or otherwise manipulate the price of the Shares (or any security convertible into or exchangeable for the Shares) or otherwise in violation of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

4. Representations and Warranties of Dealer. Dealer represents and warrants to Company on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with; and

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

5. Governing Law. This Agreement and any dispute arising hereunder shall be governed by and construed in accordance with the laws of the State of New York (without reference to choice of law doctrine).

6. Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if all of the signatures thereto and hereto were upon the same instrument.

7. No Reliance, etc. Company confirms that it has relied on the advice of its own counsel and other advisors (to the extent it deems appropriate) with respect to any legal, tax, accounting, or regulatory consequences of this Agreement, that it has not relied on Dealer or its affiliates in any respect in connection therewith, and that it will not hold Dealer or its affiliates accountable for any such consequences.

8. No Other Changes. Except as expressly set forth herein, all of the terms and conditions of the Call Option Confirmations shall remain in full force and effect and are hereby confirmed in all respects.

9. U.S. Stay Regulations. The parties agree that (i) to the extent that prior to the date hereof both parties have adhered to the 2018 ISDA U.S. Resolution Stay Protocol (the "**Protocol**"), the terms of the Protocol are incorporated into and form a part of this Agreement and the Call Option Confirmations, and for such purposes each of this Agreement and the Call Option Confirmations shall be deemed a Protocol Covered Agreement and each party shall be deemed to have the same status as "Regulated Entity" and/or "Adhering Party" as applicable to it under the Protocol; (ii) to the extent that prior to the date hereof the parties have executed a separate agreement the effect of which is to amend the qualified financial contracts between them to conform with the requirements of the QFC Stay Rules (the "**Bilateral Agreement**"), the terms of the Bilateral Agreement are incorporated into and form a part of this Agreement and the Call Option Confirmations and each party shall be deemed to have the status of "Covered Entity" or "Counterparty Entity" (or other similar term) as applicable to it under the Bilateral Agreement; or (iii) if clause (i) and clause (ii) do not apply, the terms of Section 1 and Section 2 and the related defined terms (together, the "**Bilateral Terms**") of the form of bilateral template entitled "Full- Length Omnibus (for use between U.S. G-SIBs and Corporate Groups)" published by ISDA on November 2, 2018 (currently available on the 2018 ISDA U.S. Resolution Stay Protocol page at [www.isda.org](http://www.isda.org) and, a copy of which is available upon request), the effect of which is to amend the qualified financial contracts between the parties thereto to conform with the requirements of the QFC Stay Rules, are hereby incorporated into and form a part of this Agreement and the Call Option Confirmations, and for such purposes each of this Agreement and the Call Option Confirmations shall be deemed a "Covered Agreement," Dealer shall be deemed a "Covered Entity" and Company shall be deemed a "Counterparty Entity." In the event that, after the date of this Agreement, both parties hereto become adhering parties to the Protocol, the terms of the Protocol will replace the terms of this paragraph. In the event of any inconsistencies between this Agreement and the terms of the Protocol, the Bilateral Agreement or the Bilateral Terms (each, the "**QFC Stay Terms**"), as applicable, the QFC Stay Terms will govern. Terms used in this paragraph without definition shall have the meanings assigned to them under the QFC Stay Rules. For purposes of this paragraph, references to "this Agreement and the Call Option Confirmations" include any related credit enhancements entered into between the parties or provided by one to the other. In addition, the parties agree that the terms of this paragraph shall be incorporated into any related covered affiliate credit enhancements, with all references to Dealer replaced by references to the covered affiliate support provider.

"**QFC Stay Rules**" means the regulations codified at 12 C.F.R. 252.2, 252.81-8, 12 C.F.R. 382.1-7 and 12 C.F.R. 47.1-8, which, subject to limited exceptions, require an express recognition of the stay-and-transfer powers of the FDIC under the Federal Deposit Insurance Act and the Orderly Liquidation Authority under Title II of the Dodd Frank Wall Street Reform and Consumer Protection Act and the override of default rights related directly or indirectly to the entry of an affiliate into certain insolvency proceedings and any restrictions on the transfer of any covered affiliate credit enhancements.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

**Deutsche Bank AG, London Branch**

By: /s/ Faiz Khan  
Name: Faiz Khan  
Title: Managing Director

By: /s/ Paul Stowell  
Name: Paul Stowell  
Title: Managing Director

**Deutsche Bank Securities Inc., acting solely as  
Agent in connection with the Call Option Confirmations**

By: /s/ Faiz Khan  
Name: Faiz Khan  
Title: Managing Director

By: /s/ Paul Stowell  
Name: Paul Stowell  
Title: Managing Director

**Ligand Pharmaceuticals Incorporated**

/s/ Matthew  
Korenberg

By: \_\_\_\_\_  
Name: Matthew Korenberg  
Title: Executive Vice President and Chief Financial  
Officer

[Signature Page to Call Option Amendment Agreement]

**CALL OPTION AMENDMENT AGREEMENT**  
**dated as of April 6, 2020**

**Between LIGAND PHARMACEUTICALS INCORPORATED and GOLDMAN SACHS & CO. LLC**

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THIS CALL OPTION AMENDMENT AGREEMENT (this “**Agreement**”) with respect to the Call Option Confirmations (as defined below) is made as of April 6, 2020 between Ligand Pharmaceuticals Incorporated (“**Company**”) and Goldman Sachs & Co. LLC (“**Dealer**”).

WHEREAS, Company issued \$650,000,000 principal amount of 0.75% Convertible Senior Notes due 2023 (the “**Convertible Notes**”) pursuant to an Indenture dated as of May 22, 2018 between Company and Wilmington Trust, National Association as trustee;

WHEREAS, in connection with the pricing of the Convertible Notes, Company and Dealer entered into a Base Call Option Transaction (the “**Base Call Option Transaction**”) pursuant to an ISDA confirmation dated as of May 17, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 650,000 call options (as amended, modified, terminated or unwound from time to time, the “**Base Call Option Confirmation**”), with an Applicable Percentage of 40% applicable to Dealer;

WHEREAS, in connection with the exercise of the over-allotment option by the initial purchasers of the Convertible Notes, Company and Dealer entered into an Additional Call Option Transaction (the “**Additional Call Option Transaction**”) and, together with the Base Call Option Transaction, the “**Call Option Transactions**”) pursuant to an ISDA confirmation dated as of May 18, 2018, which supplements, forms a part of, and is subject to an agreement in the form of the 2002 ISDA Master Agreement, pursuant to which Company purchased from Dealer 100,000 call options (as amended, modified, terminated or unwound from time to time, the “**Additional Call Option Confirmation**”) and, together with the Base Call Option Confirmation, the “**Call Option Confirmations**”), with an Applicable Percentage of 40% applicable to Dealer; and

WHEREAS, in connection with a repurchase by Company of \$234,440,000 aggregate principal amount of Convertible Notes (the “**March 2020 Repurchase**”), the Company has requested and the Dealer has agreed to make certain amendments to the Call Option Confirmations for the Options relating to such repurchased Convertible Notes to remain outstanding until a later exercise, notwithstanding the repurchase of the corresponding Convertible Notes;

NOW, THEREFORE, in consideration of their mutual covenants herein contained, the parties hereto, intending to be legally bound, hereby mutually covenant and agree as follows:

1. Defined Terms. Any capitalized term not otherwise defined herein shall have the meaning set forth for such term in the Call Option Confirmations.
  2. Amendment. Each of the Call Option Confirmations shall be amended by:
    - (i) adding the sentence “Notwithstanding anything to the contrary herein, the March 2020 Repurchase shall not constitute a Repayment Event” to the end of Section 8(a)(iii);
    - (ii) replacing the caption “Automatic Exercise” and the corresponding text with the caption “Automatic Exercise during Final Conversion Period” and the corresponding text “Applicable and means that (unless Counterparty notifies Dealer in writing prior to 5:00 p.m., New York City time, on the Expiration Date that it does not wish Automatic Exercise to occur) all Options then outstanding as of 5:00 p.m., New York City time, on the Expiration Date will be deemed to be automatically exercised (such Options, the “**Automatic Conversion Options**”) as if (x) a number of Convertible Securities (in denominations of USD1,000 principal amount) equal to such number of then-outstanding Options were converted with a “Conversion Date” (as defined in the Indenture) occurring during the Final Conversion Period, (y) the Convertible Security Settlement Method applied to such Convertible Securities and (z) the “Observation Period” (as such term is defined in the Indenture) were the 60 consecutive “VWAP Trading Days” (as defined in the Indenture) beginning on, and including, the 61st “Scheduled Trading Day” (as defined in the Indenture) immediately preceding the Maturity Date (as defined in the Indenture); provided that, no such automatic exercise pursuant to this paragraph will occur if the “Daily VWAP” (as defined in the Indenture) for each “VWAP Trading Day” (as defined in the Indenture) during such period is less than or equal to the Strike Price”;
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(iii) amending the text opposite the caption “Notice of Exercise” by adding “but subject to “Automatic Exercise during Final Conversion Period” above” following the words “Equity Definitions” in the first line thereof;

(iv) amending the text opposite the caption “Delivery Obligation” by adding the words *provided*, that, for the avoidance of doubt, such cap shall not apply to the Delivery Obligation related to any Automatic Conversion Options”;

(v) amending the text opposite the caption “Notice of Delivery Obligation” by adding the words *provided further*, that, for the avoidance of doubt, Counterparty shall not be required to deliver such notice in respect of any Automatic Conversion Options”;

(vi) adding “; *provided*, that, for the avoidance of doubt, such cap shall not apply to the exercise of any Automatic Conversion Options” to the end of the final sentence of Section 8(a)(ii).

3. Representations and Warranties of Company. Company represents and warrants to Dealer on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with;

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law));

(e) it is not in possession of any material nonpublic information regarding Company or the Shares; and

(f) it is not entering into this Agreement to create actual or apparent trading activity in the Shares (or any security convertible into or exchangeable for the Shares) or to raise or depress or otherwise manipulate the price of the Shares (or any security convertible into or exchangeable for the Shares) or otherwise in violation of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

4. Representations and Warranties of Dealer. Dealer represents and warrants to Company on the date hereof that:

(a) it has the power to execute this Agreement and any other documentation relating to this Agreement to which it is a party, to deliver this Agreement and to perform its obligations under this Agreement and has taken all necessary action to authorize such execution, delivery and performance;

(b) such execution, delivery and performance do not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or other agency of government applicable to it or any of its assets or any material contractual restriction binding on or affecting it or any of its assets;

(c) all governmental and other consents that are required to have been obtained by it with respect to this Agreement have been obtained and are in full force and effect and all conditions of any such consents have been complied with; and

(d) its obligations under this Agreement constitute its legal, valid and binding obligations, enforceable in accordance with their respective terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or at law)).

5. Governing Law. This Agreement and any dispute arising hereunder shall be governed by and construed in accordance with the laws of the State of New York (without reference to choice of law doctrine).

6. Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if all of the signatures thereto and hereto were upon the same instrument.

7. No Reliance, etc. Company confirms that it has relied on the advice of its own counsel and other advisors (to the extent it deems appropriate) with respect to any legal, tax, accounting, or regulatory consequences of this Agreement, that it has not relied on Dealer or its affiliates in any respect in connection therewith, and that it will not hold Dealer or its affiliates accountable for any such consequences.

8. No Other Changes. Except as expressly set forth herein, all of the terms and conditions of the Call Option Confirmations shall remain in full force and effect and are hereby confirmed in all respects.

9. U.S. Resolution Stay Provisions

(a) Recognition of the U.S. Special Resolution Regimes.

(i) In the event that Dealer becomes subject to a proceeding under (x) the Federal Deposit Insurance Act and the regulations promulgated thereunder or (y) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder (a "**U.S. Special Resolution Regime**") the transfer from Dealer of this Agreement and the Call Option Confirmations, and any interest and obligation in or under, and any property securing, this Agreement and the Call Option Confirmations, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if each of this Agreement, the Call Option Confirmations, and any interest and obligation in or under, and any property securing, this Agreement or the Call Option Confirmations were governed by the laws of the United States or a state of the United States.

(ii) In the event that Dealer or an Affiliate becomes subject to a proceeding under a U.S. Special Resolution Regime, any Default Rights (as defined in 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable ("**Default Right**")) under this Agreement or the Call Option Confirmations that may be exercised against Dealer are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement or the Call Option Confirmations, as applicable, were governed by the laws of the United States or a state of the United States.

(b) Limitation on Exercise of Certain Default Rights Related to an Affiliate's Entry Into Insolvency Proceedings. Notwithstanding anything to the contrary in this Agreement or either of the Call Option Confirmations, the parties expressly acknowledge and agree that:

(i) The Company shall not be permitted to exercise any Default Right with respect to this Agreement or either Call Option Confirmation or any Affiliate Credit Enhancement that is related, directly or indirectly, to an Affiliate of Dealer becoming subject to receivership, insolvency, liquidation, resolution, or similar proceeding (an "**Insolvency Proceeding**"), except to the extent that the exercise of such Default Right would be permitted under the provisions of 12 C.F.R. 252.84, 12 C.F.R. 47.5 or 12 C.F.R. 382.4, as applicable; and

(ii) Nothing in this Agreement or any Call Option Confirmation shall prohibit the transfer of any Affiliate Credit Enhancement, any interest or obligation in or under such Affiliate Credit Enhancement, or any property securing such Affiliate Credit Enhancement, to a transferee upon or following an Affiliate of Dealer becoming subject to an Insolvency Proceeding, unless the transfer

would result in the Company being the beneficiary of such Affiliate Credit Enhancement in violation of any law applicable to the Company.

For the purpose of this paragraph, “**Affiliate**” is defined in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k) and “**Credit Enhancement**” means any credit enhancement or credit support arrangement in support of the obligations of Dealer under or with respect to this Agreement or any Call Option Confirmation, including any guarantee, collateral arrangement (including any pledge, charge, mortgage or other security interest in collateral or title transfer arrangement), trust or similar arrangement, letter of credit, transfer of margin or any similar arrangement.

(c) U.S. Protocol. If the Company has previously adhered to, or subsequently adheres to, the ISDA 2018 U.S. Resolution Stay Protocol as published by the International Swaps and Derivatives Association, Inc. as of July 31, 2018 (the “**ISDA U.S. Protocol**”), the terms of such protocol shall be incorporated into and form a part of this Agreement and each Call Option Confirmation and the terms of the ISDA U.S. Protocol shall supersede and replace the terms of this section. For purposes of incorporating the ISDA U.S. Protocol, Dealer shall be deemed to be a Regulated Entity, the Company shall be deemed to be an Adhering Party, and this Agreement and each Call Option Confirmation shall each be deemed to be a Protocol Covered Agreement. Capitalized terms used but not defined in this paragraph shall have the meanings given to them in the ISDA U.S. Protocol.

(d) Pre-existing In-Scope Agreements. Dealer and the Company agree that to the extent there are any outstanding “in-scope QFCs,” as defined in 12 C.F.R. § 252.82(d), that are not excluded under 12 C.F.R. § 252.88, between Dealer and the Company that do not otherwise comply with the requirements of 12 C.F.R. § 252.2, 252.81–8 (each such agreement, a “**Preexisting In-Scope Agreement**”), then each such Preexisting In-Scope Agreement is hereby amended to include the foregoing provisions in this section, with references to “this Confirmation and each Call Option Confirmation” being understood to be references to the applicable Preexisting In-Scope Agreement.

*[Signature Page Follows]*

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first written above.

**Goldman Sachs & Co. LLC**

By: /s/ Jonathan Armstrong  
Name: Jonathan Armstrong  
Title: Managing Director

**Ligand Pharmaceuticals Incorporated**

/s/ Matthew  
Korenberg

By:

\_\_\_\_\_  
Name: Matthew Korenberg  
Title: Executive Vice President and Chief Financial  
Officer

[Signature Page to Call Option Amendment Agreement]



**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, John L. Higgins, certify that:

- 1 I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;
  - 2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
  - 3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
  - 4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
  - 5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.
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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

Date: May 8, 2020

/s/ John L. Higgins

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John L. Higgins

Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Matthew Korenberg, certify that:

- 1 I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;
  - 2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
  - 3 Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
  - 4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
  - 5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.
-

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)  
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

Date: May 8, 2020

/s/ Matthew Korenberg

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Matthew Korenberg

Executive Vice President, Finance and Chief Financial Officer

(Principal Financial Officer)

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER**

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John L. Higgins, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.
- Date: May 8, 2020

/s/ John L. Higgins

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**John L. Higgins**  
**Chief Executive Officer**  
**(Principal Executive Officer)**

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER**

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Matthew Korenberg, Executive Vice President, Finance and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
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(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 8, 2020

/s/ Matthew Korenberg

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**Matthew Korenberg**  
**Executive Vice President, Finance and Chief Financial**  
**Officer**  
**(Principal Financial Officer)**

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.