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Ligand Pharmaceuticals (NASDAQ: LGND): Appendix

Lemelson Capital further increases short stake and reaffirms 100% downside risk in Ligand Pharmaceuticals (NASDAQ: LGND), ancillary applications for Promacta® and Kyprolis® not commercially viable, Duavee® sales remain immaterial

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Overview

- Despite a significant downward correction in the share price of Ligand Pharmaceuticals (NASDAQ: LGND) since the June 16,2014 publication of its original research report on LGND, Lemelson Capital Management has since continued to increase its short position in the Company.

    - Lemelson Capital's original June 16, 2014 report can be found here.

- Promacta® sales, which represented as much as 72 percent of Ligand royalty revenue as recently as Q4 2013, have slowed sharply in Q1 and are expected to continue to decline, a point recognized in recent analyst commentary. There is no evidence of a significant market for

Promacta® outside of Hepatitis C indications, and suggestions that idiopathic thrombocytopenic purpura (ITP) is a commercially viable alternative application are false.

- Amgen's total revenue from Kyprolis® in Q1 2014 was just $68 million, representing royalties to LGND of just $1,020,000.

- Contrary to recent analyst commentary regarding "significant revenue contribution in the near term" from sales of Duavee® and Captisol-enabled® (CE) Melphalan, Duavee® sales have been and will continue to be immaterial for the foreseeable future, while an NDA has not even been filed for CE Melphalan.

- There are no indications that Captisol® sales will increase materially in the future, and it is likely to become the company's only significant source of future revenue. Recent analyst commentary concedes that single-sourced Captisol® represents the majority of the Company's "pipeline."

- The company's recent and highly complex arrangement with Viking Therapeutics, a sub-tenant in one of Ligands buildings, deserves close scrutiny, since the latter of the two appears to serve only as shell for Ligand to further access pubic markets via a $58 million IPO and an arrangement (not disclosed in related press releases) to convey 50% of Viking equity, post successful offering to Ligand.

- Given extraordinary and growing liabilities associated with Ligand's key products, as well as questionable transactions associated with the Viking IPO, Lemelson Capital reaffirms downside risk for LGND at 100%.

Disclaimer

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ITP not a commercially viable application for Promacta®

"The first line of therapy for ITP is a corticosteroid, usually prednisone. In children, idiopathic thrombocytopenic purpura usually runs its course without the need for treatment."

THE MAYO CLINIC
WWW.MAYOCLINIC.ORG

"Yes. And there's no specific quantification by GSK in terms of ITP or Hep C. Qualitatively, the recent development in the Hep C space is perhaps not helping the analytics.As you can imagine, there's been a real preoccupation with the new therapy."JOHN L. HIGGINS - CHIEF EXECUTIVE OFFICER, PRESIDENT AND EXECUTIVE DIRECTOR

(REFERRING TO NEW THERAPIES THAT WILL REPLACE PROMACTA® AS AN INDICATION FOR HEP C)
LIGAND PHARMACEUTICALS INCORPORATED'S (LGND) Q1 2014 RESULTS EARNINGS CALL TRANSCRIPT

Once the Hep C application is lost, there is no evidence of a significant, commercially viable market for Promacta®. ITP, which has been mentioned as an alternative application, does not have significant commercial viability.

No indication Kyprolis'® 2014 sales will even cover CEO's compensation

"But I think we are just about seeing a peak in the third line area for Kyprolis®."

ANTHONY C. HOOPER - EVP, GLOBAL COMMERCIAL OPERATIONS
AMGEN (AMGN) MANAGEMENT PRESENTS AT GOLDMAN SACHS 35TH ANNUAL GLOBAL HEALTHCARE CONFERENCE

According to Amgen's (NASDAQ: AMGN) form 10-Q for Q1 2014 filed with the SEC, Amgen's total revenue from Kyprolis® in Q1 2014 was just $68 million, representing royalties to LGND of

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just $1,020,000. At an annualized royalty rate of $4,080,000, there is no indication Kyprolis® royalties will even cover Ligand CEO's ever-increasing compensation.

Name	Year	Total Compensation	% Increase
John L. Higgins	2014	?	
	2013	$ 3,004,911	26.7%
	2012	$ 2,371,336	45.2%
	2011	$ 1,633,156	
		Average % Increase:	36.0%

Even if Kyprolis® were to receive designation as a second-line indication and sales reached the highest end of all expectations and tripled in coming years, the royalty rate payable to LGND would barely exceed an anemic $18 million.

"Serious side effects seen with Kyprolis® included heart failure…"

U.S. FOOD AND DRUG ADMINISTRATION (FDA), JULY 20, 2012

Kyprolis® has yet to demonstrate a survival benefit in patients.

The FDA approved Kyprolis® for multiple myeloma in 2012 based on just a 23% response rate to the drug in only 266 patients.

The Phase 3 FOCUS trial, which was recently completed, could easily reinforce Kyprolis' association with heart failure, organ failure, and other serious side effects. In other words, it is essential to consider the significant possibility that Kyprolis® may fail to ever become a second-line indication for AMGN.

Indeed, Kyprolis® might end up demonstrating little to no overall survival benefit in any of the myeloma trials, which would confirm that it too lacks commercial viability.

Despite the FDA approval, many oncologists are understandably hesitant to use Kyprolis® due to the drug's association with heart failure, ischemia, hypertension, and even infusion reactions. Although myeloma patients may have a very poor prognosis after failure to respond to front and second-line therapies, it does not mean that oncologists would gamble with the possibility of drug-induced death.

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"…any setback that may occur with respect to Promacta® or Kyprolis® could significantly impair our operating results and/or reduce the market price of our stock."

ITEM 1A. RISK FACTORS
LIGAND PHARMACEUTICALS INCORPORATED
2013 FORM 10-K

"Further, the manufacture, use or sale of our potential products or our collaborative partners' products or potential products may infringe the patent rights of others. This could impact Captisol, Promacta®, Kyprolis, Avinza, Duavee, Viviant and Conbriza, Nexterone, and other products or potential products."

ITEM 1A. RISK FACTORS
LIGAND PHARMACEUTICALS INCORPORATED
2013 FORM 10-K

"So Kyprolis® you know we have at the moment a third line plus indication. There is a finite level of growth you can get in the third line."

ANTHONY C. HOOPER - EVP, AMGEN'S GLOBAL COMMERCIAL OPERATIONS
AMGEN (AMGN) MANAGEMENT PRESENTS AT GOLDMAN SACHS 35TH ANNUAL GLOBAL HEALTHCARE CONFERENCE

According to the company's proxy statement filed with the SEC, Mr. Higgins' total compensation for 2013 was $3,004,911, or roughly 26% of the Company's 2013 net income. Additionally, Executive VP and COO Mr. Matthew Foehr earned total compensation of $1,965,465. When taken together, these two executive salaries alone are equivalent to approximately 44% of the Company's 2013 net earnings.

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A "Silly" Report? Duavee® and CE® Melphalan

"…we expect significant revenue contribution in the near term from Duavee® and CE® Melphalan"

ROTH CAPITAL ANALYST JOSEPH PANTGINIS RESPONDING TO LCM'S JUNE 16 RESEARCH REPORT ON LGND

"We don't expect a lot from Duavee this year…"

JOHN SHARP, VICE PRESIDENT, FINANCE AND CHIEF FINANCIAL OFFICER (REFERRING TO FY 2014)
"LIGAND PHARMACEUTICALS' CEO DISCUSSES Q4 2013 RESULTS," EARNINGS CALL TRANSCRIPT

CE® Melphalan is not even mentioned in the Company's 2013 annual report. According to the company's website, an NDA has NOT even been filed for CE® Melphalan (a fact also recognized in the company's Q1 2014 conference call).

According to Streetinsider.com, Joseph Pantginis, Roth Capital analyst, on June 17, 2014, referred to the original June 16, 2014 Lemelson Capital Management research report on LGND as "silly." On the same day and again on June 25, 2014, Mr. Pantginis reiterated his buy rating on LGND shares with a $92 price target.

At $92 per share, LGND would trade at 159x earnings and its market cap would swell to over $1.9 billion for a Company that has earned just $9.2 million in the last twelve months. Such a price would represent almost 30x book value (all of which is intangible).

In another article published by SmarterAnlyst, Mr. Pantginis further referred to the report as "foolish."

According to TipRanks, which measures analysts' success rates based on how their calls perform, analyst Joseph Pantginis, who covers LGND, currently has a one-year average return of -6.5% and is ranked #3027 out of 3104 analysts.

During the same period, while Mr. Pantginis returned a loss of 6.5%, the S&P 500 rose approximately 17.6%.

Mr. Pantginis was not able to invalidate any point raised in LCM's original June 16, 2014 research report, but did admit in the response that LGND's "pipeline" is in fact highly concentrated in just one product,

namely Captisol®. Further, Mr. Pantginis acknowledged that current LGND management has been in place ~six of the last ten years (a period of time when shareholders were diluted by some 72%).

Viking Therapeutics

On Thursday May 22, Viking Therapeutics, a clinical-stage biopharmaceutical company, which consists entirely of technologies it in-licenses from Ligand, released a joint statement together with Ligand, announcing that it had signed a "broad licensing deal" with Ligand Pharmaceuticals. Shares of Ligand closed 3% higher on the news, representing an increase of almost $40 million in market capitalization for Ligand in just a matter of hours.

Viking does not intend to conduct any preclinical studies or trials and does not own any products or intellectual property or manufacturing abilities and leases space from Ligand. Viking appears to be a single-purpose vehicle created to raise more capital from public markets for its sponsor, Ligand Pharmaceuticals.

In the release, Mr. Higgins stated:

"A relationship such as this one with Viking gives Ligand the opportunity to entrust valuable internal programs to a dedicated team with the operational resources to take them to the next level."

"This is a creative transaction that establishes a bold portfolio of early- and mid-stage assets that have the potential to generate substantial news flow…"

JOHN HIGGINS, PRESIDENT AND CEO OF LIGAND PHARMACEUTICALS
VIKING SIGNS BROAD LICENSING DEAL WITH LGND FOR RIGHTS TO FIVE NOVEL THERAPEUTIC PROGRAMS

However, once again there is a substantial difference between the Company's press releases and SEC filings in Viking's recent S1 registration.

"Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern."

"Additionally, as of March 31, 2014, we do not believe that we will have sufficient cash to meet our operating requirements for at least the next 12 months..."

In fact, Ligand had to loan Viking $2.5 million in order to get them to take programs that they did, meaning that they literally had to pay the partner in this instance to take on the programs, and apparently the only partner that could be located for these programs was essentially insolvent, just as Ligand is once intangibles are removed from its balance sheet.

It is perhaps a testimony to the biotech bubble that exists when one insolvent company pays another insolvent company to take over not "products," but "programs" in order to generate not "sales" but "news flow," in order for the second insolvent company, which has no immediate hope of generating revenue let alone profits or cash flow (and has never had any revenues) to take itself public.

"We may never become profitable."

VIKING THERAPEUTICS, INC.
FORM S-1 REGISTRATION STATEMENT

And the purpose of the public offering if it should succeed?

"Under the terms of the Master License Agreement, we will pay Ligand an upfront fee of $29.0 million, subject to adjustment in certain circumstances, payable in equity upon the closing of this offering"

VIKING THERAPEUTICS, INC.
FORM S-1 REGISTRATION STATEMENT

$29 million is almost four times what Ligand has earned in the last twelve months. Yet, this fact was somehow left out of its May 22 press release.

Ligand appears to be indirectly creating a shell company through Viking to generate paper profits to stuff its own balance sheet. Viking represents a subsidiary that can start with a clean slate and issue new shares ad infinitum over the years just as Ligand has done over its lifetime. Only this time, the dilution and the inevitable losses will be associated with another name, thus shielding Ligand from the obvious bad press, while allowing the company to access the public markets yet again and add a substantial entry to the "asset" side of the balance sheet, which will be a positive number, behind which in reality will be nothing but further losses based on Ligand's own portfolio of "programs," which apparently were not marketable to any profitable company.

According to Viking's balance sheet, the firm has no assets and yet plans to raise $58 million in public markets, 50% of which, or $29 million apparently will go directly to Ligand, a fact revealed in the SEC filing but not the related press releases on the licensing agreements. On the announcement of the "creative transaction," Ligand shares themselves gained almost $40 million in value. The combined total of these two events equals almost as much as Ligand's projected 2015 gross revenues.

The legality of such a transaction may one day be challenged by shareholders in either company. The ethics should already be clear. The objectives of alchemy have no place in legitimate finance.

The casual observer might even mistake what Ligand leadership has coined a "creative transaction" as a common game of three-card Monte, played on any street corner – shills included.

A curious relationship

On April 7, 2014 Viking suddenly terminated its relationship with its independent registered public accounting firm and auditor MaloneBailey just one month after they had engaged them.

> *On March 4, 2014, we engaged MaloneBailey LLP, or MaloneBailey, to audit our financial statements as of and for the fiscal years ended December 31, 2012 and 2013. On April 7, 2014, our board of directors approved the dismissal of MaloneBailey as our independent registered public accounting firm, effective immediately.*

VIKING THERAPEUTICS, INC.
FORM S-1 REGISTRATION STATEMENT

On April 7, 2014, Viking's Board of Directors appointed Marcum LLP as an independent registered public accounting firm stating:

> *From September 24, 2012 (Inception) through April 7, 2014, neither we nor anyone on our behalf consulted with Marcum regarding (1) the application of accounting principles to a specified transaction, either completed or proposed, (2) the type of audit opinion that might be rendered on our financial statements, or (3) any matter that was either the subject of a disagreement, as described in Item 304(a)(1)(iv) of Regulation S-K and the related instructions thereto, or a "reportable event" as described in Item 304(a)(1)(v) of Regulation S-K.*

In other words, Marcum was merely hired, but the company has not yet even consulted with the firm on any material issues. The financial statements provided on the S1 accordingly are unaudited.

Speculation has no intrinsic value, 100% downside risk reaffirmed

The Company's CY 2015 revenue estimates are $80 million. At such a sales level, net profits continue to be immaterial. Additionally, virtually every major revenue-generating product of the Company faces either a significant competitive or market threat. Current tangible equity is negative $4 million--that is to say, the Company's liabilities far exceed its assets and the Company appears all but certain to show a GAAP loss in Q2, which will further erode the "house of cards" balance sheet the company has maintained.

The impact to sales of Promacta® from revolutionary new drugs has already begun to manifest itself in the Company's Q1 results. Suggestions that ITP is a viable alternative market for Promacta® are contradicted by clinical research and expectations.

Kyprolis®, a third-line indication for multiple myeloma, has been linked to heart failure by the FDA, and there is no evidence to suggest that the results of the Phase 3 FOCUS trial will result in Kyprolis® becoming a second-line indication. However, even if it did achieve this status, the maximum royalties payable to LGND would barely exceed $18 million dollars, a result that would likely take many years to achieve.

The company has engaged in a "creative transaction" with an affiliate shell company called Viking Therapeutics, funding the junior partner to the transaction with a $2.5 million loan, which represents a significant part of Ligand's cash and overall current assets. The purpose of this transaction appears to be the ability of Ligand to access public markets indirectly through Viking in order to further stuff its own balance sheet with what will likely be inflated Viking stock should the Viking IPO succeed. It is indeed possible to infer from the terms of the transaction that the value of the five "programs" licensed to Viking were in fact less than zero since Ligand was required to make a loan to Viking in exchange for Viking taking them over, part of which will be used to pay Ligand rent on space which Ligand is providing to the firm in its own building.

The Company's business model as a "broker" of obscure, third-line, unknown and largely untested indications is inherently flawed and filled with extraordinary risk. It is worth considering why so much time, energy and resources are invested by the company in extraordinarily complex transactions that are often presented to the public in a different light than they are to the SEC.

There is no circumstance where speculation has a legitimate value greater than zero. Indeed transactions can certainly represent an amount less than zero (only liability). For this reason, the intrinsic value of Ligand shares must be reaffirmed as $0 with downside risk justifiably calculated at 100%.

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