Zacks Small-Cap Research

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Titan Pharmaceuticals, Inc. (TTNP-NASDAQ)

Molteni Deal Raises Valuation

Based on our DCF model and a 15% discount rate, TTNP is valued at approximately $6.00 per share based on contributions from Probuphine in US/EU and ropinirole. We currently do not include any contribution from the triiodothyronine or other in-development programs. Valuation for pre-clinical programs will be included upon commencement of clinical trials.

Current Price (11/28/17)	$1.65
Valuation	**$6.00**

OUTLOOK

Titan Pharmaceuticals launched its first product, Probuphine, in June 2016 through its partner Braeburn Pharmaceuticals. The company is currently in the process of obtaining approval in Europe and has partnered with Molteni to commercialize Probuphine in the EU and other regions.

Ropinirole is in clinical trials and several other candidates are about to enter the clinical phase of the development pipeline. All products use Titan's proprietary ProNeura drug delivery system. Consisting of ethylene-vinyl acetate and a drug substance, ProNeura is a novel approach to drug delivery that benefits from long-duration slow release and has characteristics beneficial to controlled substance programs.

Titan's development products include a treatment for Parkinson's Disease (ropinirole) and hypothyroidism (T3). The company is also working on a variety of other implants both in-house and with partners.

SUMMARY DATA

52-Week High	**$4.80**
52-Week Low	**$1.30**
One-Year Return (%)	**-61.6**
Beta	**1.72**
Average Daily Volume (sh)	**203,420**
Shares Outstanding (mil)	**21.2**
Market Capitalization ($mil)	**$35.0**
Short Interest Ratio (days)	**7.17**
Institutional Ownership (%)	**13.1**
Insider Ownership (%)	**13.9**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.0**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**6.9**
P/E using 2016 Estimate	**6.9**
P/E using 2017 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Average**
Type of Stock	**Small-Growth**
Industry	**Med-Biomed/Gene**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2016	$0.0 A	$15.0 A	$0.0 A	$0.0 A	$15.1 A
2017	$0.0 A	$0.1 A	$0.0 A	$0.4 E	$0.6 E
2018					$1.5 E
2019					$9.5 E

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2016	-$0.09 A	$0.55 A	-$0.12 A	-$0.11 A	$0.24*A
2017	-$0.14 A	-$0.16 A	-$0.20 A	-$0.18 E	-$0.68 E
2018					-$0.60 E
2019					-$0.27 E

*Quarterly totals do not sum to annual due to mix of diluted and undiluted shares

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WHAT'S NEW

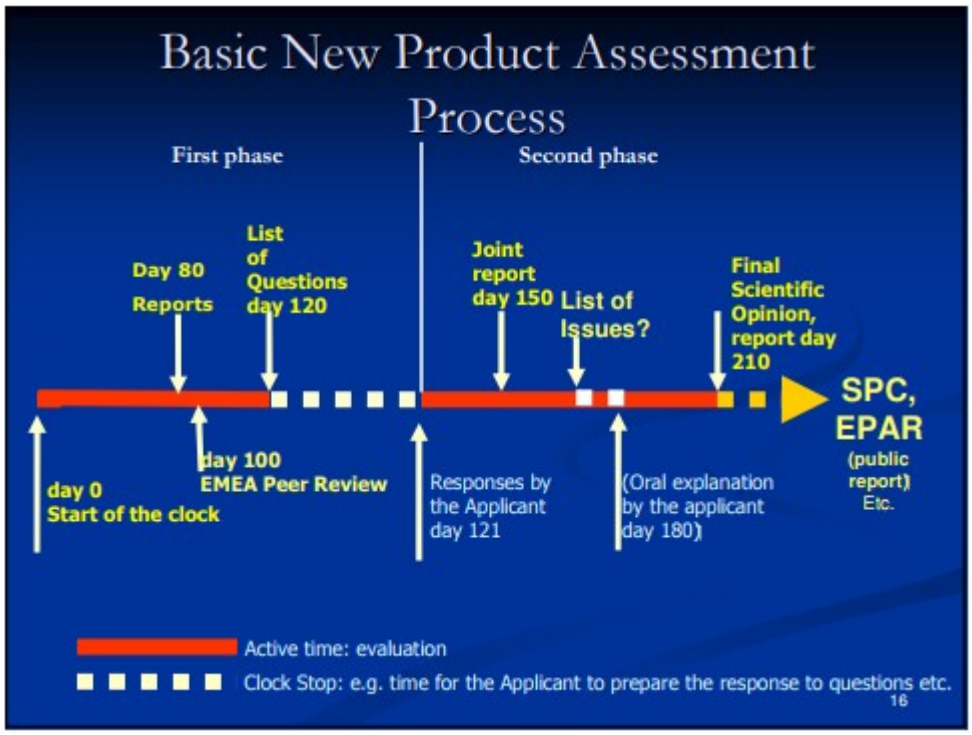
Titan Partners with Molteni for EU Commercialization

Titan Pharmaceuticals, Inc. (NASDAQ: TTNP) announced yesterday an agreement with private Italian company L. Molteni & C. dei F.lli Alitti Società di Esercizio S.p.A. to commercialize Probuphine. The regions included in the agreement will be the European Union, which includes United Kingdom and Northern Ireland, Switzerland, Norway, Iceland, Liechtenstein, Bosnia, Serbia, Montenegro, Macedonia and Albania. It also allows for future expansion of the license into the Middle East, North Africa and the 11 former Soviet Republics, also known as the Commonwealth of Independent States. The agreement is expected to be consummated in 1Q:18.

The deal will provide for a €2.0 million upfront license fee upon execution and additional milestone payments of €4.0 million, with some based on regulatory approval. Royalties on sales by the licensee will be in the low teens to the mid-twenties and tiered based on level of sales. Additional upfront payments may be made for expansion regions.

This announcement follows the September 27th acceptance of Titan's Market Authorization Application (MAA) for Probuphine by the European Medicines Agency (EMA). We anticipate that the agency will require approximately four months to review and develop questions which will be presented to Titan, at which time the clock will stop until the answers are submitted. After the responses have been delivered, there is an additional three month period to develop the final opinion and decide on approval. Based on other approvals, this process is expected to take up to a year, which suggests a potential approval by 4Q:18.

Exhibit I – Timeline for EMA Approval[1]



Molteni Farmaceutici

Molteni is an Italian pharmaceutical company with a focus on pain therapy, addiction and anesthesia. The company's history dates back to 1892 in Florence when a pharmacist named Alfredo Alitti began producing hypodermic vials. In later years, Alitti began production of injectable solutions and water purification products. Throughout the 20th century, the company expanded its product set and built a dominant position in the European medicines market achieving substantial growth in the 1970s and expansion into preclinical research in the 1990s.

[1] EMA Centralized Procedure Presentation, February 1 & 2 2010, Presented by George Wade

In its search for a European partner, Titan was focused on a company that has experience in the European market and that conforms to the regulatory environment for controlled substances. Molteni has developed a proprietary software system that provides critical infrastructure for tracking and maintenance of Schedule II and III substances. Molteni's familiarity with all of the varied requirements in each of the EU member states and their software system which makes it easy for customers to comply with the requirements have attracted a long term and loyal customer base. These attractive features supported Titan's selection of Molteni as partner for commercializing Probuphine.

New Model Assumptions

With the addition of Molteni to commercialize Probuphine in Europe and potentially other adjacent markets, we update our discounted cash flow model to reflect sales and royalties from this relationship. The European market has been recognized to be approximately 10% the size of the US market for addiction treatment based on relative Suboxone sales in the two regions. In the EU market, our research identified approximately 1.3 million high-risk opioid users and about 644,000 of this population seeking treatment in 2016,[2] the latter of which represents the addressable market. We see both population growth and number of addicts seeking treatment as stable over the forecast period.

Titan submitted its application for Probuphine to the EMA and it was accepted in November 2017. Based on the historical turnaround time for these applications, we anticipate an approval announcement by the agency in late 2018, followed by a short marketing preparation period and first sales in the beginning of 2019. We forecast approximately 3% penetration into the population seeking treatment in the first year of sales rising steadily to 18% of this market by 2025. After 2027, competition from either generics or other therapies will contribute to a 5% terminal decline rate. Pricing is estimated to be approximately 50% of US levels or ~$1,100 per implant in 2019. To determine this relationship, we performed comparative analysis on a portfolio of branded drug prices in EU member states and the US. Titan highlighted that royalties will be from the low teens to the mid-twenties and we target near the midpoint of this range and assume a 17.5% royalty rate. We also assume an 85% probability of ultimate EU approval for Probuphine. These assumptions add approximately $1.00 to our previous target price to yield a $6.00 valuation for Titan.

Conclusion

The addition of Molteni as partner for Probuphine distribution in the EU is an important milestone for Titan. Based on this partner's experience in all the member EU states and with controlled substances in the region, we see this established pharmaceutical company as a good partner for Titan's Probuphine commercialization efforts. The deal also provides additional cash to support Titan's development projects and offsets several months of cash burn if milestones are achieved. Despite the trouble with domestic Probuphine sales, Titan has done well this year advancing its development programs, especially with Ropinirole and partnership efforts. Now with the Molteni deal, we see additional value being created and are optimistic that work to improve domestic Probuphine performance can get the company back on course.

Based on our additions to the model we move our price target to $6.00 per share based on the contribution of Probuphine in Europe. The timeline we have identified suggests an early 2019 launch of the product and the receipt of several regulatory related milestones along the way.

[2] European Drug Report, European Monitoring Centre for Drugs & Drug Addiction, 2016.

PROJECTED FINANCIALS

Titan Pharmaceuticals, Inc. - Income Statement

Titan Pharmaceuticals, Inc.	2016 A	Q1 A	Q2 A	Q3 A	Q4 E	2017 E	2018 E	2019 E
Probuphine Royalty	**$0.1**	**$0.0**	**$0.1**	**$0.0**	**$0.4**	**$0.6**	**$1.5**	**$3.9**
YOY Growth	-	-	*1825.0%*	*53.8%*	*1042.9%*	*756.9%*	*163.9%*	*162.5%*
Probuphine Molteni	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$5.6**
YOY Growth								
Licensing & Grant Revenue	**$15.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**
Total Revenues	**$15.1**	**$0.0**	**$0.1**	**$0.0**	**$0.4**	**$0.6**	**$1.5**	**$9.5**
YOY Growth	*801.6%*	-	*-99.5%*	*53.8%*	*1042.9%*	*-96.3%*	*163.9%*	*543.2%*
R&D	$6.1	$2.1	$2.5	$2.7	$2.4	$9.7	$8.5	$9.0
G&A	$4.6	$1.4	$1.2	$1.4	$1.4	$5.3	$6.5	$6.8
Operating Income	$4.3	($3.4)	($3.6)	($4.1)	($3.4)	($14.5)	($13.5)	($6.3)
Operating Margin	*28.8%*	-	*-4702.6%*	*-10175.0%*	*-850.0%*	*-2608.3%*	*-920.4%*	*-67.1%*
Total Other Income	$0.8	$0.4	$0.2	($0.1)	$0.9	$0.0	$0.0	$0.0
Pre-Tax Income	$5.1	($3.0)	($3.5)	($4.2)	($3.9)	($14.5)	($13.5)	($6.3)
Taxes & Other	$0	$0	$0	$0	$0	$0	$0	$0
Tax Rate	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Net Income	$5.1	($3.0)	($3.5)	($4.2)	($3.9)	($14.5)	($13.5)	($6.3)
Net Margin	-	-	-	-	-	-	-	-
Reported EPS	**$0.24**	**($0.14)**	**($0.16)**	**($0.20)**	**($0.18)**	**($0.68)**	**($0.60)**	**($0.27)**
YOY Growth	*-142.5%*	*55.4%*	*-129.9%*	*59.9%*	*66.8%*	*-384.5%*	*-11.3%*	*-55.3%*
Weight Ave. Shares Out	21.5	21.4	21.2	21.2	21.6	21.3	22.4	23.5

Source: Company Filing // Zacks Investment Research, Inc. Estimates

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