

Reason for report:

**EARNINGS**

## T2 BIOSYSTEMS, INC.

### First Customer Wins, But Tapering Forecast

• **Bottom Line:** We are encouraged by TTOO's first two customer wins but are tapering our revenue forecast to better reflect the length of the sales cycle and ramp process once a customer adopts. We maintain our Outperform rating and our \$23 price target.

• **First two customer contracts announced.** TTOO's March quarter report was highlighted by the announcement that the company has secured its first two contracts for its T2Candida test. TTOO has completed installation at one of these two accounts.

• **High-volume hospital, European reference lab the first to adopt.** The sales process with the first hospital contract took less than 6 months. The customer is currently going through instrument verification and expected to commence live patient testing in 3Q. We expect this customer will initially screen high-risk intensive care unit (ICU) patients with T2Candida, and deploy this testing to other wards (e.g., oncology, transplant) over time. The second customer, a reference lab in Denmark, is a surprise, since we didn't think a reference lab could fully benefit from the rapid time-to-result enabled by TTOO's testing. That said, this reference lab plans to offer this testing to its customers with a more rapid turn-around-time than they can achieve with conventional methods. Both contracts are reagent rental agreements.

• **Economic analysis should help the cause.** We expect TTOO's selling process should be augmented by the recent publication of the economic impact of T2Candida in a large volume hospital setting. The study, published in Future Microbiology, suggested that testing 5,100 high-risk patients in a 500-bed hospital could lead to savings of ~\$5.8M (or ~\$4.5M net of test costs) and prevent 60% of Candida-related deaths each year. Savings come largely from reduced stay in the hospital and ICU.

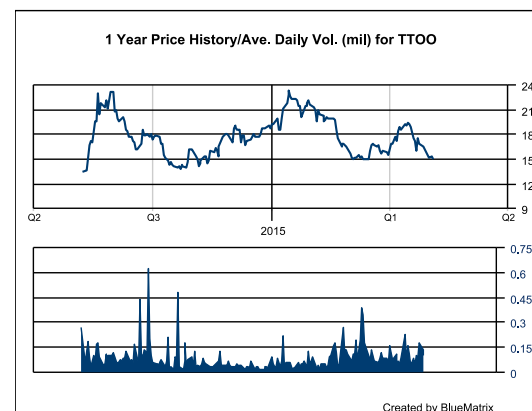
• **Later stage customer funnel continues to build.** Since 4Q, the number of high-volume hospitals that have performed an in-depth return-on-investment analysis for T2Candida has increased from 9 to 25.

• **That said, ramp could be more gradual than earlier forecast.** While we are encouraged by progress to date, the pace of customer wins could perhaps be more back-end loaded than we originally contemplated. That, coupled with implementation lags once a contract is signed, motivated the reduction in our revenue forecast.

#### Key Stats:

(NASDAQ:TTOO)

<b>S&amp;P 600 Health Care Index:</b>	<b>1,591.60</b>
<b>Price:</b>	<b>\$14.92</b>
Price Target:	\$23.00
Methodology:	~7x Dec.-17E TTM revs., discounted 1 year back at ~20% rate
52 Week High:	\$24.50
52 Week Low:	\$11.00
Shares Outstanding (mil):	20.1
Market Capitalization (mil):	\$299.9
Book Value/Share:	\$2.64
Cash Per Share:	\$3.25
Net Debt to Total Capital:	NM
Dividend (ann):	\$0.00
Dividend Yield:	0.0%



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2014A	0.0	0.0	0.0	\$0.1	\$0.1	(\$4.90)	(\$6.35)	(\$0.71)	(\$0.45)	(\$4.15)	NM
2015E - New	<b>\$0.2A</b>	<b>\$0.4</b>	<b>\$0.9</b>	<b>\$1.4</b>	<b>\$2.8</b>	<b>(\$0.53)A</b>	<b>(\$0.55)</b>	<b>(\$0.58)</b>	<b>(\$0.60)</b>	<b>(\$2.26)</b>	<b>NM</b>
2015E - Old	\$0.2A	\$0.3	\$1.4	\$2.8	\$4.6	(\$0.59)	(\$0.60)	(\$0.56)	(\$0.51)	(\$2.27)	NM
2016E - New	--	--	--	--	<b>\$28.8</b>	--	--	--	--	<b>(\$2.22)</b>	<b>NM</b>
2016E - Old	--	--	--	--	\$38.5	--	--	--	--	(\$2.08)	NM
2017E - New	--	--	--	--	<b>\$100.0</b>	--	--	--	--	<b>(\$1.31)</b>	<b>NM</b>
2017E - Old	--	--	--	--	\$114.0	--	--	--	--	(\$1.11)	NM

Source: Company Information and Leerink Partners LLC Research  
Revenues in \$MM.

GAAP EPS presented. Quarterly figures may not sum to annual total due to change in shares out. IPO was 8.7.14.

## INVESTMENT THESIS

TTOO is a developmental stage manufacturer of a novel detection platform with broad application. Its initial focus is to commercialize instruments and diagnostic tests for sepsis and hemostasis, and the company has received FDA clearance for its first product, a test to detect Candida infection in the bloodstream. TTOO's instruments and tests are based on a unique technology which capitalizes on the magnetic properties of water to detect a broad range of analytes in solution. We believe the market opportunities for TTOO's technology are broad and view the risk/reward on the stock favorably at current levels.

## VALUATION

The median emerging growth tools and diagnostics company currently trades for ~7x forward-twelve month revenue. We believe TTOO deserves a multiple of at least parity to the peer group due to its unique, patent-protected technology, large market opportunity, and revenue growth prospects. We consider ~7x FTM revenue a fair reflection of these positive attributes, offset by inherent uncertainties over the revenue ramp for TTOO's products. When calculating a 12-month price target, we would normally calculate an enterprise value, using projected levels of debt and cash, that is a multiple of revenue for the twelve months ended Dec.-16 (the forward twelve month revenue estimate, twelve months from now). However, for TTOO, we project out a year further given the company's stage in its product adoption. Therefore, we apply our revenue multiple of ~7x to our revenue estimate of ~\$100M for the twelve months ended Dec.-17 to yield a price of \$28 in two years. We discount that back at a rate of 20% to arrive at a \$23 12-month price target.

## RISKS TO VALUATION

The primary risks to our price target for TTOO include, but are not limited to: a slower-than-projected adoption curve for the company's sepsis products, a smaller-than-projected market opportunity for the company's sepsis products, an unforeseen detrimental impact from an evolving competitive environment, regulatory risk, product development risk, and financing risk.

## TTOO Biosystems (TTOO)

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## Income Statement

	2013	Mar-14	Jun-14	Sep-14	Dec-14	2014	Mar-15	Jun-15e	Sep-15e	Dec-15e	2015e	2016e	2017e
Revenue													
<b>Product</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10</b>	<b>\$100</b>	<b>\$550</b>	<b>\$950</b>	<b>\$1,610</b>	<b>\$26,800</b>	<b>\$97,000</b>
Other	266	0	0	0	119	119	178	300	350	400	1,228	2,000	3,000
Total revenue	266	0	0	0	119	119	188	400	900	1,350	2,838	28,800	100,000
COGS	0	0	0	0	0	0	3	100	400	600	1,103	11,520	40,000
Gross profit	266	0	0	0	119	119	185	300	500	750	1,735	17,280	60,000
SG&A	5,022	1,842	2,446	2,984	3,747	11,019	4,468	4,800	5,200	5,400	19,868	30,240	45,000
R&D	14,936	5,065	4,703	4,803	5,210	19,781	5,868	6,000	6,500	7,000	25,368	30,240	39,463
<b>Operating income (loss)</b>	<b>(19,692)</b>	<b>(6,907)</b>	<b>(7,149)</b>	<b>(7,787)</b>	<b>(8,838)</b>	<b>(30,681)</b>	<b>(10,151)</b>	<b>(10,500)</b>	<b>(11,200)</b>	<b>(11,650)</b>	<b>(43,501)</b>	<b>(43,200)</b>	<b>(24,463)</b>
Interest expense (income)	403	86	80	304	251	721	477	493	500	506	1,977	2,169	2,685
Other expense, net	515	(73)	74	0	(13)	(12)	(9)	0	0	0	(9)	0	0
Pretax income	(20,610)	(6,920)	(7,303)	(8,091)	(9,076)	(31,390)	(10,619)	(10,993)	(11,700)	(12,156)	(45,469)	(45,369)	(27,148)
Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0
Net income	(\$20,610)	(\$6,920)	(\$7,303)	(\$8,091)	(\$9,076)	(\$31,390)	(\$10,619)	(\$10,993)	(\$11,700)	(\$12,156)	(\$45,469)	(\$45,369)	(\$27,148)
Accretion of redeemable preferred	(6,908)	(1,906)	(1,906)	(758)	0	(4,570)	0	0	0	0	0	0	0
Net income applicable to common	(\$27,518)	(\$8,826)	(\$9,209)	(\$8,849)	(\$9,076)	(\$35,960)	(\$10,619)	(\$10,993)	(\$11,700)	(\$12,156)	(\$45,469)	(\$45,369)	(\$27,148)
Basic shares outstanding	2,373	1,412	1,451	12,379	20,042	8,675	20,081	20,131	20,181	20,231	20,156	20,418	20,781
Diluted shares outstanding	2,373	1,412	1,451	12,379	20,042	8,675	20,081	20,131	20,181	20,231	20,156	20,418	20,781
<b>EPS diluted</b>	<b>(\$8.69)</b>	<b>(\$4.90)</b>	<b>(\$6.35)</b>	<b>(\$0.71)</b>	<b>(\$0.45)</b>	<b>(\$4.15)</b>	<b>(\$0.53)</b>	<b>(\$0.55)</b>	<b>(\$0.58)</b>	<b>(\$0.60)</b>	<b>(\$2.26)</b>	<b>(\$2.22)</b>	<b>(\$1.31)</b>
<i>EPS growth</i>													
Sales growth							nm	nm	nm	1034.5%	2284.9%	914.8%	247.2%
Gross margin	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	98.4%	75.0%	55.6%	55.6%	61.1%	60.0%	60.0%
SG&A % of revenue	1888.0%	nm	nm	nm	3148.7%	9259.7%	2376.6%	1200.0%	577.8%	400.0%	700.1%	105.0%	45.0%
R&D % of revenue	5615.0%	nm	nm	nm	4378.2%	16622.7%	3121.3%	1500.0%	722.2%	518.5%	893.9%	105.0%	39.5%
<b>Operating margin</b>	<b>(7403.0%)</b>	<b>nm</b>	<b>nm</b>	<b>nm</b>	<b>(7426.9%)</b>	<b>(25782.4%)</b>	<b>(5399.5%)</b>	<b>(2625.0%)</b>	<b>(1244.4%)</b>	<b>(863.0%)</b>	<b>(1532.8%)</b>	<b>(150.0%)</b>	<b>(24.5%)</b>
Tax rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
D&A	\$584	\$144	\$0	\$0	\$0	\$144	\$0	\$250	\$350	\$300	\$900	\$2,680	\$2,910
<b>EBITDA</b>	<b>(\$19,108)</b>	<b>(\$6,763)</b>	<b>(\$7,149)</b>	<b>(\$7,787)</b>	<b>(\$8,838)</b>	<b>(\$30,537)</b>	<b>(\$10,151)</b>	<b>(\$10,250)</b>	<b>(\$10,850)</b>	<b>(\$11,350)</b>	<b>(\$42,601)</b>	<b>(\$40,520)</b>	<b>(\$21,553)</b>
<b>Free cash flow</b>													
Operating cash flow	(\$18,053)	(\$5,791)	(\$6,400)	(\$7,508)	(\$8,485)	(\$28,184)					(\$50,212)	(\$40,590)	(\$17,063)
CapX	(513)	(263)	(245)	(531)	(1,045)	(2,084)					(2,000)	(3,448)	(10,610)
Free cash flow	(\$18,566)	(\$6,054)	(\$6,645)	(\$8,039)	(\$9,530)	(\$30,268)					(\$52,212)	(\$44,038)	(\$27,673)

## Notes:

Source: Company reports and Leerink Partners estimates

## Disclosures Appendix

### Analyst Certification

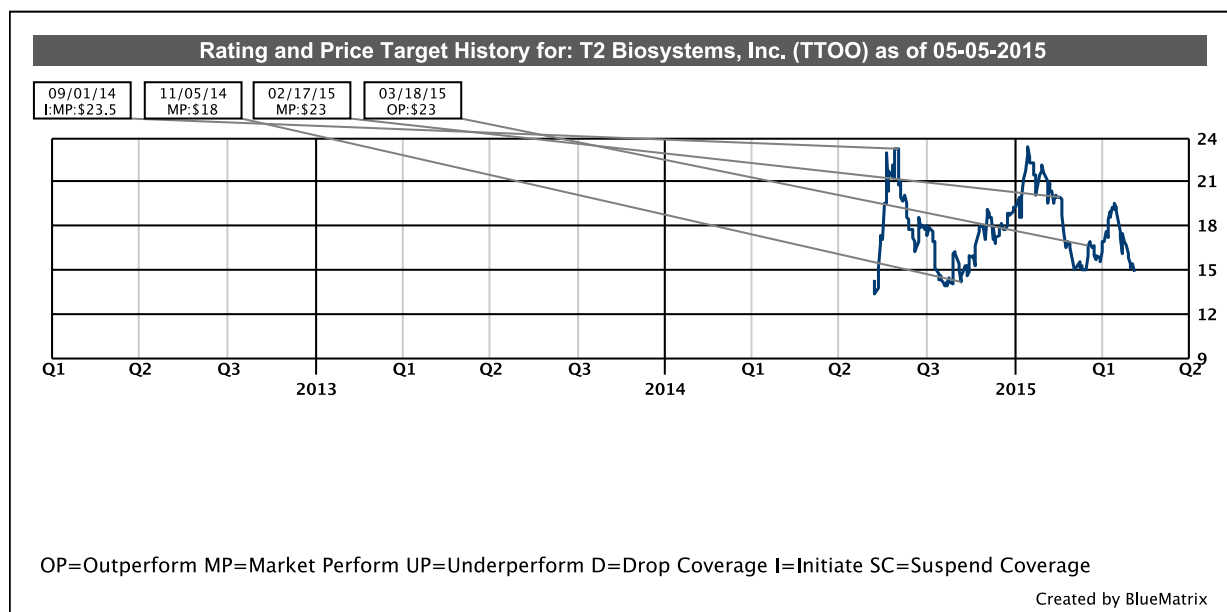
I, Dan Leonard, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

### Valuation

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Distribution of Ratings/Investment Banking Services (IB) as of 03/31/15				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	151	70.20	55	36.00
HOLD [MP]	64	29.80	2	3.00
SELL [UP]	0	0.00	0	0.00

## Explanation of Ratings

**Outperform (Buy):** We expect this stock to outperform its benchmark over the next 12 months.

**Market Perform (Hold/Neutral):** We expect this stock to perform in line with its benchmark over the next 12 months.

**Underperform (Sell):** We expect this stock to underperform its benchmark over the next 12 months. The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over \$2 billion.

## Important Disclosures

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Leerink Partners LLC makes a market in T2 Biosystems, Inc.

Leerink Partners LLC has acted as a co-manager for a public offering of T2 Biosystems, Inc. in the past 12 months.

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