

Reason for report:  
**FLASH NOTE**

## T2 BIOSYSTEMS, INC.

### T2Candida Clearance Paves Way for Commercialization

• **Bottom Line:** Today's announcement that the FDA has cleared TTOO's Candida test (and associated T2Dx instrument) came sooner than expected and represents an early win for the newly public company. We maintain our Market Perform rating as we look for upside to our adoption forecasts.

• **T2Candida test cleared by the FDA sooner than expected.** TTOO announced today that the FDA has cleared its T2Candida test and associated T2Dx instrument. The company submitted its application to the FDA on May 27th, through the de novo 510(k) process, and we consider an ~4 month approval exceptionally fast, especially for a submission on a new instrument platform. A de novo 510(k) is a review mechanism the FDA uses in only a small number of diagnostics and applies to those diagnostics deemed low-risk but for which there is no predicate device on the market. The traditional 510(k) clearance process usually takes 3 – 4 months, whereas full premarket approval (PMA) can take 6 – 12 months. We thought the time to clearance for TTOO's de novo 510(k) application would be somewhere in the middle, with 6 months a reasonable assumption. The speedier clearance could indicate positively the FDA's view of the unmet medical need addressed by the test and the opportunity to improve patient care with a rapid diagnostic.

• **Commercial launch to occur in the coming months.** We believe TTOO will commercialize its T2Candida test in the coming months, and we would not be surprised to see commercialization before year-end, earlier than our anticipated 1H15 launch.

• **Candida is one of the leading causes of sepsis, which we see as a \$2B+ market in the U.S.** The T2Candida panel tests for five of the most prevalent strains of Candida in humans direct from blood---C. albicans, C. tropicalis, C. parapsilosis, C. glabrata, and C. krusei---with turnaround in as little as 3 – 4 hours. Traditional diagnosis involves blood culture followed by species identification and susceptibility testing, a process that lasts from 2 to 5 days. We see significant unmet need in the sepsis diagnostic market and estimate a rapid diagnostic could yield up to \$800 in cost savings per test between reduced use of prophylactic anti-fungals in addition to reduced length of stay in hospitals. Further detail on Candida, sepsis and T2's pipeline products can be found in our initiation report: [Compelling Opportunity, Priced Accordingly](#).

• **Please see [FDA press release](#) for further details on the T2Candida clearance.**

#### Key Stats:

(NASDAQ:TTOO)

<b>S&amp;P 600 Health Care Index:</b>	<b>1,286.40</b>
<b>Price:</b>	<b>\$16.93</b>
52 Week High:	\$24.50
52 Week Low:	\$11.00
Shares Outstanding (mil):	20.0
Market Capitalization (mil):	\$338.6

## 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

The median emerging growth tools and diagnostics company currently trades for ~5.5x forward-twelve month revenue (an average of the 2014e and 2015e median multiples). We believe TTOO deserves a premium to the peer group due to its unique, patent-protected technology, large market opportunity, and forecast for faster revenue growth than the peer group. We consider ~8x 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 Sept-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 curve. Therefore, we apply our revenue multiple of ~8x to our revenue estimate of ~\$85M for the twelve months ended Sept-17 to yield a price of \$28 in two years. We discount that back at a rate of 20% to arrive at a \$23.50 12-month price target.

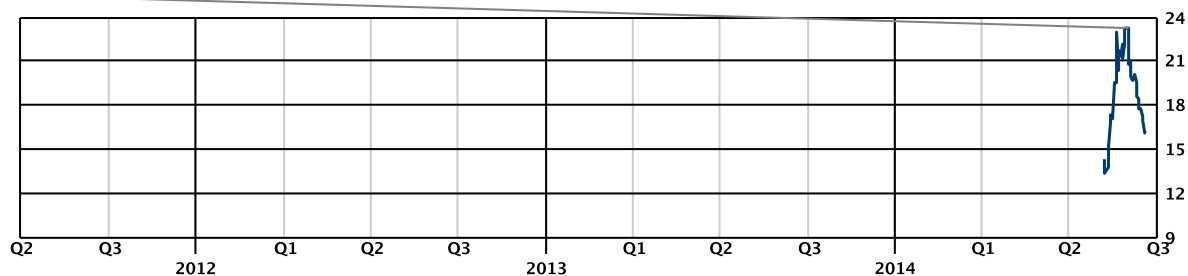
When considering valuation on a company like TTOO, investors should also be aware of the healthy prices strategic acquirers have paid for easy to use, novel molecular diagnostics assets. BDX paid \$505M for what is now its BD Max offering (\$230M for GeneOhm and \$275M for HandyLab), Roche paid \$275M upfront (\$450M including contingent incentives) for IQuum. ABT paid ~\$225M for Ibis. BioFire is also a relevant comparable transaction, though unlike these other examples, the company had meaningful revenue at the time of acquisition. bioMeriuex acquired BioFire for \$485M.

### 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, and product development risk.

### Rating and Price Target History for: T2 Biosystems, Inc. (TTOO) as of 09-19-2014

09/01/14  
I:MP:\$23.5



OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

### Rating and Price Target History for: Abbott Laboratories (ABT) as of 09-19-2014

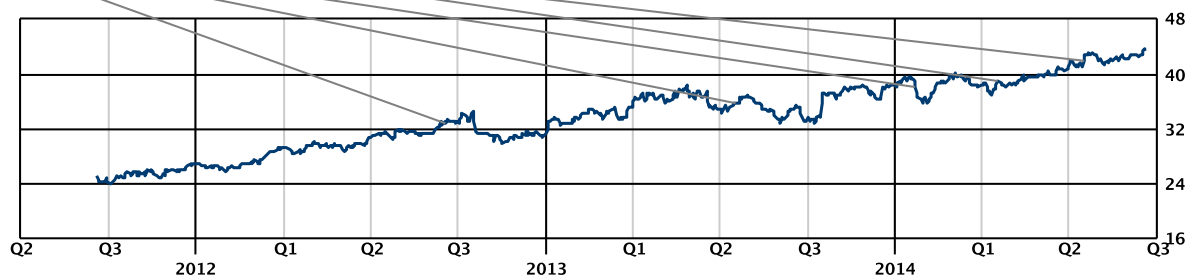
09/18/12  
MP

07/18/13  
MP:\$37

01/22/14  
MP:\$40

04/17/14  
MP:\$42

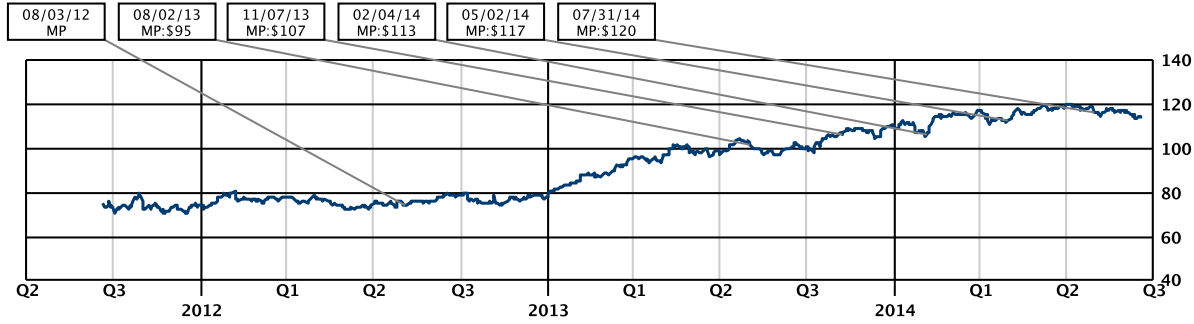
07/17/14  
MP:\$45



Leerink Swann placed an Outperform rating on ABT on October 31, 2005. On June 11, 2013, Leerink Swann began a transition to specific price targets for the stocks under its coverage, replacing valuation ranges.

OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

**Rating and Price Target History for: Becton, Dickinson and Company (BDX) as of 09-19-2014**


Leerink Swann initiated coverage of BDX with an Outperform rating on April 25, 2003. On June 11, 2013, Leerink Swann began a transition to specific price targets for the stocks under its coverage, replacing valuation ranges.

OP=Outperform MP=Market Perform UP=Underperform D=Drop Coverage I=Initiate SC=Suspend Coverage

Created by BlueMatrix

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/14				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	138	69.00	50	36.20
HOLD [MP]	62	31.00	2	3.20
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

This information (including, but not limited to, prices, quotes and statistics) has been obtained from sources that we believe reliable, but we do not represent that it is accurate or complete and it should not be relied upon as such. All information is subject to change without notice. This is provided for information purposes only and should not be regarded as an offer to sell or as a solicitation of an offer to buy any product to which this information relates. The Firm, its officers, directors, employees, proprietary accounts and affiliates may have a position, long or short, in the securities referred to in this report, and/or other related securities, and from time to time may increase or decrease the position or express a view that is contrary to that contained in this report. The Firm's salespeople, traders and other professionals may provide oral or written market commentary or trading strategies that are contrary to opinions expressed in this report. The Firm's proprietary accounts may make investment decisions that are inconsistent with the opinions expressed in this report. The past performance of securities does not guarantee or predict future performance. Transaction strategies described herein may not be suitable for all investors. Additional information is available upon request by contacting the Editorial Department at One Federal Street, 37th Floor, Boston, MA 02110.

Like all Firm employees, analysts receive compensation that is impacted by, among other factors, overall firm profitability, which includes revenues from, among other business units, Institutional Equities, and Investment Banking. Analysts, however, are not compensated for a specific investment banking services transaction.

MEDACorp is a network of healthcare professionals, attorneys, physicians, key opinion leaders and other specialists accessed by Leerink and it provides information used by its analysts in preparing research.

**In the past 12 months, the Firm has received compensation for providing investment banking services to T2 Biosystems, Inc. .**

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

**Leerink Partners LLC is willing to sell to, or buy from, clients the common stock of Abbott Laboratories and Becton, Dickinson and Company on a principal basis.**

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

**©2014 Leerink Partners LLC. All rights reserved. This document may not be reproduced or circulated without our written authority.**

## Leerink Partners LLC Equity Research

<b>Director of Equity Research</b>	<b>John L. Sullivan, CFA</b>	(617) 918-4875	john.sullivan@leerink.com
<b>Associate Director of Research</b>	<b>Alice C. Avanian, CFA</b>	(617) 918-4544	alice.avanian@leerink.com
<b>Healthcare Strategy</b>	<b>John L. Sullivan, CFA</b>	(617) 918-4875	john.sullivan@leerink.com
	<b>Alice C. Avanian, CFA</b>	(617) 918-4544	alice.avanian@leerink.com
<b>Biotechnology</b>	<b>Howard Liang, Ph.D.</b>	(617) 918-4857	howard.liang@leerink.com
	<b>Joseph P. Schwartz</b>	(617) 918-4575	joseph.schwartz@leerink.com
	<b>Michael Schmidt, Ph.D.</b>	(617) 918-4588	michael.schmidt@leerink.com
	<b>Gena Wang, Ph.D., CFA</b>	(212) 277-6073	gena.wang@leerink.com
	Jonathan Chang, Ph.D.	(617) 918-4015	jonathan.chang@leerink.com
	Paul Matteis	(617) 918-4585	paul.matteis@leerink.com
	Richard Goss	(617) 918-4059	richard.goss@leerink.com
<b>Life Science Tools and Diagnostics</b>	<b>Dan Leonard</b>	(212) 277-6116	dan.leonard@leerink.com
	Justin Bowers, CFA	(212) 277-6066	justin.bowers@leerink.com
<b>Pharmaceuticals/Major</b>	<b>Seamus Fernandez</b>	(617) 918-4011	seamus.fernandez@leerink.com
	Ario Arabi	(617) 918-4568	ario.arabi@leerink.com
	Aneesh Kapur	(617) 918-4576	aneesh.kapur@leerink.com
<b>Specialty Pharmaceuticals</b>	<b>Jason M. Gerberry, JD</b>	(617) 918-4549	jason.gerberry@leerink.com
<b>Medical Devices, Cardiology &amp; Orthopedics</b>	<b>Danielle Antalffy</b>	(212) 277-6044	danielle.antalffy@leerink.com
	Puneet Souda	(212) 277-6091	puneet.souda@leerink.com
	<b>Richard Newitter</b>	(212) 277-6088	richard.newitter@leerink.com
	Ravi Misra	(212) 277-6049	ravi.misra@leerink.com
<b>Healthcare Services</b>	<b>Ana Gupte, Ph.D.</b>	(212) 277-6040	ana.gupte@leerink.com
<b>Healthcare Technology &amp; Distribution</b>	<b>David Larsen, CFA</b>	(617) 918-4502	david.larsen@leerink.com
	Christopher Abbott	(617) 918-4010	chris.abbott@leerink.com
<b>Sr. Editor/Supervisory Analyst</b>	<b>Mary Ellen Eagan, CFA</b>	(617) 918-4837	maryellen.eagan@leerink.com
<b>Supervisory Analysts</b>	Robert Egan		bob.egan@leerink.com
	Amy N. Sonne		amy.sonne@leerink.com
<b>Editorial</b>	Cristina Diaz-Dickson	(617) 918-4548	cristina.diaz-dickson@leerink.com
<b>Research Assistant</b>	Carmen Augustine	(212) 277-6012	carmen.augustine@leerink.com

**New York**  
299 Park Avenue, 21<sup>st</sup> floor  
New York, NY 10171  
(888) 778-1653

**Boston**  
**One Federal Street, 37<sup>th</sup> Floor**  
**Boston, MA 02110**  
**(800) 808-7525**

**San Francisco**  
201 Spear Street, 16<sup>th</sup> Floor  
San Francisco, CA 94105  
(800) 778-1164