Otonomy, Inc. (OTIC) — Overweight

OTIC 2Q Outlook And Beyond: All Eyes On AuriPro Approval; Reiterate OW

CONCLUSION

As we pass the midway point of the year, we are refreshing our thinking on our coverage universe. For OTIC, shares have experienced some weakness in recent weeks in a tough biotech tape but we continue to see the risk/reward as very favorable. AuriPro is on track for FDA approval by year-end and early launch in 2016. The company is advancing OTO-104 into 2 P3 trials for treating Meniere-induced vertigo and is in the midst of finalizing the trial design with the FDA. We believe OTO-104 is an active drug and the probability of hitting primary endpoints (i.e. monthly vertigo reduction vs. placebo) in the P3 trials is high. We reiterate OW and $46 PT; with a derisk late-stage asset addressing a multi-hundred million dollar commercial opportunity in AuriPro and OTO-104 advancing to address an even bigger opportunity, OTIC is one of our top small-cap picks.

- **AuriPro derisked**: We expect AuriPro to be approved by the FDA before Christmas and believe the drug will become a market leader for its lead indication (i.e. patients receiving tympanostomy tubes for middle ear effusions) based upon convenience and assured compliance compared to ear drops. We expect AuriPro to generate peak sales of at least $100M per year for its lead indication alone. Potential label expansion into acute otitis media in patients with tubes already in place and acute otitis externa offers equally attractive market opportunities which we expect AuriPro will unlock, potentially even in advance of specific FDA approvals given the nature of ENT specialists to use drugs off-label. OTIC recently initiated a P2 trial of AuriPro in acute otitis externa and is evaluating delivery of the drug into patients with tympanostomy tubes already in place.

- **OTO-104 advancing into P3**: Based upon the totality of P1b and P2b data, OTIC is moving OTO-104 into 2 identical P3 studies. The company expects to modify the P3 design based on observations in the P2 study, with adjustments in patient selection criteria and statistical analysis geared towards further improving probability of success. We look to hear more update about this program in the fall when the company holds an analyst event in NYC.

- **Financials**: The company ended Q1 with $224M in cash/cash equivalent, which should be sufficient to support the operation until early 2017. With an EV of just ~$300M and a derisked AuriPro (peak sales likely > $200M), we see shares as quite attractive and urge investors to revisit this name ahead of AuriPro approval.

RISKS TO ACHIEVEMENT OF PRICE TARGET

Development candidates may face clinical, regulatory or commercial setbacks.

COMPANY DESCRIPTION

OTIC is developing drugs to treat a variety of ear conditions.

PRICE: US$21.47
TARGET: US$46.00
DCF thru 2022, 10.5% discount rate, 3.0% terminal growth rate

Joshua E. Schimmer, MD
Sr Research Analyst, Piper Jaffray & Co.
212 284-9322, joshua.e.schimmer@pjc.com

Jerry Yang, Ph.D.
Research Analyst, Piper Jaffray & Co.
212 284-9331, jerry.n.yang@pjc.com

Steven P. Breazzano, Ph.D.
Research Analyst, Piper Jaffray & Co.
212 284-6114, steven.p.breazzano@pjc.com

Changes	Previous	Current
Rating	—	Overweight
Price Tgt	—	US$46.00
FY15E Rev (mil)	—	US$0.0
FY16E Rev (mil)	—	US$13.0
FY15E EPS	—	US$(2.98)
FY16E EPS	—	US$(3.76)

52-Week High / Low	US$41.99 / US$15.19
Shares Out (mil)	24.2
Market Cap. (mil)	US$519.6
Avg Daily Vol (000)	243
Book Value/Share	US$7.26
Net Cash Per Share	US$7.37
Debt to Total Capital	0.0%
Div (ann)	US$0.00
Fiscal Year End	Dec

Price Performance - 1 Year

Source: Bloomberg

YEAR	REVENUE (US$ m)						EARNINGS PER SHARE (US$)					
	Mar	Jun	Sep	Dec	FY	FY RM	Mar	Jun	Sep	Dec	FY	FY P/E
2014A	0.0	0.0	0.0	0.0	0.0	NA	(5.07)	(3.86)	(1.23)	(0.46)	(5.46)	NM
2015E	0.0A	0.0	0.0	0.0	0.0	NA	(0.52)A	(0.64)	(0.80)	(1.01)	(2.98)	NM
2016E	—	—	—	—	13.0	40.0x	—	—	—	—	(3.76)	NM

OTIC IN FOCUS – 2H OUTLOOK

As we pass the midway part of the year, we're refreshing our thinking on our coverage universe. Here we focus on OTIC expectations and our outlook for the company. AuriPro is moving towards commercialization for patients undergoing tympanostomy tube placement (TTP) and we expect a timely launch early next year. Investigations into label-expanding opportunities are underway. We believe investors are underappreciating how similar the ENT community is to the retina community and their readiness to not only adopt new procedures/technologies but also to move these into off-label settings. Recent P2 data for OTO-104 (intratympanic dexamethasone for Meniere's disease) barely missed its primary endpoint and shares sold off heavily thereafter. A closer look at the data however provide us high confidence that this is still a viable product and that optimization of the P3 trial design will lead to development, regulatory and ultimately commercial success. OTIC continues to build out its earlier stage pipeline of ear targeting therapies, and benefits from a thoughtful and high quality management team. The company plans on showcasing its expertise in both preparing for AuriPro launch and building out what we believe is the leading pipeline for ear diseases at an analyst event in October 2015.

Where is OTIC now?

The company filed its NDA for AuriPro in February, which is a thermo-sensitive polymer formulation of the antibiotic ciprofloxacin to treat pediatric patients with middle ear infection who require TTP. With 2 positive P3 readouts and no approved drug for this indication, we expect the drug to be approved by the FDA before year-end (FDA has assigned a PDUFA date of Dec. 25th, 2015, and OTIC does not believe an Advisory Committee meeting will be needed). OTIC has been actively engaged with payers, hospital facilities, and ENT community to prepare for launching AuriPro in early 2016 as a highly experienced commercial leadership team is now in place.

In the US, there are ~1M tube placement surgeries (mostly bilateral) taking place annually covered by ~2500 ENT physicians who are in large group practices (~1000 centers), making them fairly easy to target with a modest sales force. OTIC plans to hire 40 sales people to cover 1000 centers, and have specialist level data on prescribing patterns for Ciprodex will help the targeting efforts. Ciprodex, a branded ear drop comprised of ciprofloxacin and dexamethasone, is used in ~50% of TTP surgeries off-label with a price of ~$170 per treatment despite competition from cheaper generic ear drops. AuriPro, in our view, should be able to take away market share from Ciprodex with a conservative pricing of $200-250 given high enthusiasm from the ENT community about the product. As well, specific approval for this use will help capture the remaining 50% of the market. As such, we believe AuriPro should generate peak sales of north of $100M for its lead indication in the US.

The procedures for pediatric patients are primarily performed in hospital outpatient facility (~65%) and ambulatory surgery centers, or ASCs (~20%), where pts are under general anesthesia as it is customary in pediatric pts. The rest of the procedures (~15%) are performed in ENT offices for older pediatric and adult pts where no sedation is required. AuriPro will be reimbursed as a physician-administered drug in the US. As a result, OTIC is preparing to have the product available in hospitals and ASCs. The stocking of AuriPro in hospital outpatient facilities will require approval from hospital pharmacy and therapeutic (P&T) committees, which could take up to 6-9 months and which will make the first year of launch primarily one focused on access. Since hospital outpatient facilities represent a bulk of market for AuriPro, the company expects a slow ramp in year one.

Beyond TTP, OTIC is actively pursuing multiple indication expansion opportunities for AuriPro. On average, each pediatric patient wears tube for 12-18 months, during which half of the pts experience an average of 2 re-infections (i.e. acute otitis media with TTP), translating into roughly ~900,000 incidences of re-infections annually. This represents an equally large opportunity as the TTP indication. OTIC recently successfully finished a feasibility study to evaluate placing Auripro around tubes in awake or alert pediatric patients in the office setting. The next step is to evaluate placing AuriPro through the tubes. The company may initiate a registration trial for this indication by 2017 or sooner. Another sizeable opportunity for AuriPro is severe acute otitis externa (AOE). OTIC recently initiated a P2 trial evaluating AuriPro for this indication. The study is a one-month, prospective, multicenter, open-label trial which is being conducted in the US and OTIC expects to enroll 75 pts with age ranging from 6 months to 80 years old. The subjects will be randomized to receive a single administration of AuriPro ranging in volume from 0.1 mL to 0.4 mL. While otitis externa is often mild and readily treated with topical antibiotics, there are severe cases seen by ENT specialists for which the outer ear canal is so inflamed that drops cannot penetrate to the infected tissue. AuriPro's gel/delivery formulation uniquely allows ENT specialists to administer the topical antibiotic via injection into the inflamed area.

OTO-104 for Meniere's disease is moving into a P3 study by year-end. While the recent P2b readout was seen as discouraging for some investors simply based on the head-line p-value, we actually see the data as very substantiating that 104 is an active drug in reducing vertigo associated with Meniere's disease (and likely from other causes as well). A few tweaks will be made to the P3 trial design to improve probability of success and powering. Patient selection criteria and statistical analysis, borrowing common practices for seizure and migraine trials, should help the next study meet its primary endpoint. The company is meeting with the FDA in the summer and will provide an update on the P3 trial design after. OTIC currently plans to initiate 2 identical P3 trials for Meniere's indication, with the first one to kick off by year-end and the second in Q1 2016.

OTO-311 for tinnitus is entering P1 in healthy volunteers in late 2015/early 2016. Auris's P3 data for AM-101, expected in Q1 2016, will provide validation for the 311 program if positive.

What to watch for in 2H15:

- Update on AuriPro launch prep and OTO-104 trial designs
- AuriPro approval by the FDA
- Initiation and clarity on design of the 1st P3 trial of OTO-104
- OTIC analyst event in October 2015

Financial snapshot:

OTIC has a market cap of ~$500M. The company finished 1Q with $224M in cash/cash equivalents. The company guides operating expense for 2015 to be in range of $70-75M. We expect the current cash level to be sufficient to support the operation until early 2017.

2Q outlook:

As a pre-commercial company, 2Q earnings are of minimal importance for OTIC. Investors will remain on the pipeline.

Our views on the stock:

We rate OTIC OW and a top pick in the small cap biotech space. The shares appear to be bottoming out after the P2 trial of 104 in Menieres' disease barely missed primary endpoint but still demonstrated a true, consistent signal against vertigo. Our recent meetings with investors indicate an emerging interest about the stock. With an EV of just ~$300M and a derisked AuriPro (peak sales likely > $200M), we see shares as quite attractive and urge investors to revisit this name.

Key Events For OTIC				
Program	**Disorder**	Type	Event	Expected Timing
AuriPro	TTP	Regulatory	FDA Approval	2H 2015
	AOMT	Clinical	P2 results	2015/2016
	Acute Otitis Externa	Clinical	P2 results	2016
OTO-104	Ménière's disease	Clinical	Initiate the first P3 trial	2H 2015
		Clinical	Initiate the second P3 trial	1H 2016
OTO-311	Tinnitus	Preclinical	File IND and initiate P1b study	2015
		Competitive/ validating	Auris Medical P3 data for AM-101	1H 2016

Source: Company reports and Piper Jaffray

OTIC Discounted Cash Flow (DCF) and Equity Valuation ($ M):	
Assumed Discount Rate (%)	10.5%
Discounted Net Cash Flow (2014-'20)	846
Terminal Growth Rate (%)	3.0%
Implied Terminal Year FCF Multiple	**13.7x**
NPV of FCFF	$1,145
Terminal Value as % of total	26.1%
Add: Net Cash	201
Shares Outstanding 2017E (million)	29
Price Target	**$46**

Source: Company Reports and Piper Jaffray.

	OTIC DCF Valuation Analysis				
	Discount Rate				
Terminal Growth		10.0%	10.5%	11.0%	11.5%
	2.0%	$44	$41	$37	$34
	3.0%	$51	**$46**	$42	$38
	4.0%	$59	$53	$48	$43
	5.0%	$71	$63	$56	$50
	6.0%	$89	$77	$67	$59

Source: Company Reports and Piper Jaffray.

	OTIC Potential Upside Vs Current				
Terminal Growth		10.0%	10.5%	11.0%	11.5%
	2.0%	107%	89%	73%	60%
	3.0%	136%	114%	95%	78%
	4.0%	176%	147%	123%	102%
	5.0%	231%	192%	160%	133%
	6.0%	313%	257%	212%	175%

Source: Company Reports and Piper Jaffray.

OTIC Annual P&L	2013A	Q1 14A	Q2 14A	Q3 14A	Q4 14A	2014A	Q1 15A	Q2 15E	Q3 15E	Q4 15E	2015E
Total U.S. Product Sales (000s)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
ex-US royalty	$0	0.0	0.0	0.0	0.0	$0	0.0	0.0	0.0	0.0	$0
Total Revenues	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Costs & Expenses:											
Cost of Goods Sold	$0	0.0	0.0	0.0	0.0	$0	0.0	0.0	0.0	0.0	$0
% Product sales	0	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
R&D	$16	9.0	8.3	7.4	7.2	$32	8.6	12.0	13.0	15.0	$49
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SG&A	$4	1.6	1.6	2.0	2.7	$8	3.5	3.0	6.0	9.0	$22
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Operating Expenses	$20	10.6	9.8	9.4	9.9	$40	12.1	15.0	19.0	24.0	$70
Operating Income (loss)	**($20)**	**(10.6)**	**(9.8)**	**(9.4)**	**(9.9)**	**($40)**	**(12.1)**	**(15.0)**	**(19.0)**	**(24.0)**	**($70)**
Interest and Other Income, Net	$0	(0.3)	(0.3)	(2.6)	0.1	($3)	0.1	0.1	0.1	0.1	$1
Accretion, convertible preferred	($1)	(0.0)	(0.0)	(0.0)	0.0	($0)	0.0	0.0	0.0	0.0	$0
Pretax Income (Loss)	($20)	**($11)**	**($10)**	**($12)**	**($10)**	**($43)**	**($12)**	**($15)**	**($19)**	**($24)**	**($69)**
Income Taxes (Benefit)	$0	0.0	0.0	0.0	0.0	$0	0.0	0.0	0.0	0.0	$0
Tax rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net Income, adjusted (GAAP)	**($20)**	**(10.8)**	**(10.2)**	**(12.0)**	**(9.8)**	**($43)**	**(12.0)**	**(14.9)**	**(18.9)**	**(23.9)**	**($70)**
Stock option expenses	0	0.3	0.3	0.3	0.9	2	1	1	1	1	2
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net Income, non-GAAP	($20)	-10.6	-9.9	-11.8	-8.9	($41)	(12.5)	(15.4)	(19.4)	(24.4)	($72)
Diluted EPS (Non-GAAP)	($4.51)	($4.95)	($3.76)	($1.20)	($0.42)	($5.24)	($0.54)	($0.66)	($0.83)	($1.03)	($3.06)
Diluted EPS, GAAP	**($4.47)**	**($5.07)**	**($3.86)**	**($1.23)**	**($0.46)**	**($5.46)**	**($0.52)**	**($0.64)**	**($0.80)**	**($1.01)**	**($2.98)**
Diluted Shares Outstanding (MM)	4.5	2.1	2.6	9.8	21.2	7.9	23.2	23.3	23.5	23.6	23

Source: Company Reports and Piper Jaffray.

Joshua Schimmer: 212-284-9322
Joshua.E.Schimmer@pjc.com

OTIC Product Model	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
TTP Procedures/Yr, U.S. (000s)	1,000	1,000	1,000	1,005	1,010	1,015	1,020	1,025	1,030	1,036	1,041
% children	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*	*90%*
# children TTP procedures/yr, U.S. (000s)	900	900	900	905	909	914	918	923	927	932	937
% of market without payor obstacles	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*
% penetration, low barrier population	*0%*	*0%*	*0%*	*0%*	*10%*	*20%*	*30%*	*35%*	*40%*	*45%*	*50%*
% penetration, high barrier population	*0%*	*0%*	*0%*	*0%*	*2%*	*5%*	*15%*	*20%*	*25%*	*30%*	*35%*
# adult TTP procedures/yr, U.S. (000s)	100	100	100	101	101	102	102	103	103	104	104
% penetration, adults	*0%*	*0%*	*0%*	*0%*	*1%*	*5%*	*15%*	*35%*	*40%*	*50%*	*50%*
AuriPro treatments/yr, U.S. (000s)	$0	$0	$0	$0	$59	126	229	297	350	408	457
Cost/treatment	$225	$225	$225	$225	$225	234	243	253	263	274	285
Total AuriPro revenue, U.S. (mm) For TTP	**$0**	**$0**	**$0**	**$0**	**$13**	**$30**	**$56**	**$75**	**$92**	**$112**	**$135**
AuriPro revenue, Other (mm)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$10**	**$25**	**$40**	**$55**	**$65**
Total AuriPro revenue, U.S. (mm)	**$0**	**$0**	**$0**	**$0**	**$13**	**$30**	**$66**	**$100**	**$132**	**$167**	**$200**
Meniere's patients, U.S. (000s)	650	650	650	663	676	697	717	746	776	807	839
% OTO-104 penetration	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*1%*	*3%*	*5%*	*6%*	*7%*
OTO-104 ears treated, U.S. (000s)	0	0	0	0	0	0	4	19	39	48	59
Cost/yr	$5,000	$5,000	$5,000	$5,000	$5,150	$5,305	$5,517	$5,737	$5,967	$6,206	$6,454
OTO-104 revenue/yr, U.S. (mm)	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$20**	**$107**	**$232**	**$300**	**$380**

Source: Company reports, PJC estimates

OTIC Annual P&L	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Total U.S. Product Sales (000s)	**$0**	**$0**	**$0**	**$0**	**$13**	**$30**	**$85**	**$207**	**$364**	**$467**	**$580**
ex-US royalty	$0	$0	$0	$0	$0	$5	$15	$25	$30	$35	$50
Total Revenues	**$0**	**$0**	**$0**	**$0**	**$13**	**$35**	**$100**	**$232**	**$394**	**$502**	**$630**
Cost of Goods Sold	$0	$0	$0	$0	$1	$3	$9	$21	$36	$47	$58
% Product sales	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
R&D	$8.5	$16.3	$32	$49	$50	$50	$55	$55	$75	$75	$80
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	54.7%	23.7%	19.1%	14.9%	12.7%
SG&A	$2.4	$3.5	$8	$22	$70	$85	$100	$120	$150	$165	$180
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	99.5%	51.7%	38.1%	32.9%	28.6%
Total Operating Expenses	$10.9	$19.9	$40	$70	$121	$138	$164	$196	$261	$287	$318
Operating Income (loss)	**(10.9)**	**(19.9)**	**($40)**	**($70)**	**($108)**	**($103)**	**($63)**	**$36**	**$132**	**$216**	**$312**
Interest and Other Income, Net	$3.4	$0.3	($3)	$1	$1	$1	$1	$1	$1	$1	$1
Accretion, convertible preferred	(0.8)	(0.5)	($0)	$0	$0	$0	$0	$0	$0	$0	$0
Pretax Income (Loss)	**($8)**	**($20)**	**($43)**	**($69)**	**($107)**	**($102)**	**($62)**	**$37**	**$133**	**$217**	**$313**
Income Taxes (Benefit)	0.0	0.0	$0	$0	$0	$0	$0	$11	$40	$65	$94
Tax rate	0%	0%	0%	0%	0%	0%	0%	30%	30%	30%	30%
Net Income, adjusted (GAAP)	**(8.37)**	**(20.1)**	**($43)**	**($70)**	**($107)**	**($102)**	**($62)**	**$26**	**$93**	**$152**	**$219**
Stock option expenses	0	0	2	2	2	3	4	5	8	10	13
% Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2%	2%	2%	2%
Net Income, non-GAAP	($8.6)	($20.3)	($41)	($68)	($105)	($99)	($59)	$31	$101	$162	$232
Diluted EPS (Non-GAAP)	($3.46)	($4.51)	($5.24)	($2.89)	($3.69)	($3.40)	($1.83)	$0.93	$2.95	$4.55	$6.28
Diluted EPS, GAAP	**($3.38)**	**($4.47)**	**($5.46)**	**($2.98)**	**($3.76)**	**($3.50)**	**($1.94)**	**$0.79**	**$2.72**	**$4.27**	**$5.94**
Diluted Shares Outstanding (MM)	2.5	4.5	7.9	23.4	28.5	29.3	31.9	33.0	34.2	35.5	36.9

Source: Company Reports and Piper Jaffray.

Cash Flow Statement	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Net Income (Loss)	-8.4	-20.1	-42.8	-69.7	-107.0	-102.4	-62.1	26.2	93.2	151.6	219.3
Accretion to RV of convert	0.8	0.5	(0.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depreciation and amortization	0.2	0.3	0.2	0.5	1.0	1.2	1.3	1.4	2.0	2.5	3.0
Stock-based compensation	0.2	0.2	1.7	2.0	2.0	3.0	3.5	4.6	7.9	10.0	12.6
Non cash interest exp	0.4	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in FV of convert	(3.8)	(2.8)	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred rent	0.3	(0.0)	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Changes in operating assets and liability	(0.6)	(0.0)	2.6	(1.0)	(1.7)	(5.4)	(17.5)	(36.0)	(41.0)	(27.8)	(32.8)
Cash From Operations	**(10.8)**	**(19.5)**	**(35.1)**	**(68.2)**	**(105.7)**	**(103.7)**	**(74.8)**	**(3.8)**	**62.1**	**136.3**	**202.1**
Capex	(0.2)	(0.5)	(0.8)	(2.0)	(2.5)	(3.0)	(3.5)	(3.5)	(5.9)	(7.5)	(9.5)
FCF	(11.0)	(20.0)	(35.9)	(70.2)	(108.2)	(106.7)	(78.3)	(7.3)	56.2	128.8	192.7
Proceeds from convertible notes	8.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds from issuance of conv pref stocks	0.0	45.6	49.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds from issuance of common stocks	0.0	0.0	104.1	80.0	200.0	0.0	100.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash From Financing	**8.0**	**52.6**	**154.7**	**80.0**	**200.0**	**0.0**	**100.0**	**0.0**	**0.0**	**0.0**	**0.0**
Net increase in cash and cash equivalents	(3.0)	32.6	118.8	9.8	91.8	(106.7)	21.7	(7.3)	56.2	128.8	192.7
Cash/equivalents at beginning	7.7	4.7	37.3	156.1	165.9	257.7	151.1	172.8	165.5	221.7	350.4
Cash/equivalents at end	4.7	37.3	156.1	165.9	257.7	151.1	172.8	165.5	221.7	350.4	543.1

IMPORTANT RESEARCH DISCLOSURES

Notes: The boxes on the Rating and Price Target History chart above indicate the date of the Research Note, the rating, and the price target. Each box represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first Note written during the past three years.

Legend:
I: Initiating Coverage
R: Resuming Coverage
T: Transferring Coverage
D: Discontinuing Coverage
S: Suspending Coverage
OW: Overweight
N: Neutral
UW: Underweight
NA: Not Available
UR: Under Review

Distribution of Ratings/IB Services
Piper Jaffray

			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OW]	428	60.20	104	24.30
HOLD [N]	265	37.27	13	4.91
SELL [UW]	18	2.53	0	0.00

Note: Distribution of Ratings/IB Services shows the number of companies currently in each rating category from which Piper Jaffray and its affiliates received compensation for investment banking services within the past 12 months. FINRA rules require disclosure of which ratings most closely correspond with "buy," "hold," and "sell" recommendations. Piper Jaffray ratings are not the equivalent of buy, hold or sell, but instead represent recommended relative weightings. Nevertheless, Overweight corresponds most closely with buy, Neutral with hold and Underweight with sell. See Stock Rating definitions below.

Analyst Certification — Joshua E. Schimmer, MD, Sr Research Analyst
— Jerry Yang, Ph.D., Research Analyst
— Steven P. Breazzano, Ph.D., Research Analyst

The views expressed in this report accurately reflect my personal views about the subject company and the subject security. In addition, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

Research Disclosures

Piper Jaffray was making a market in the securities of Otonomy, Inc. at the time this research report was published. Piper Jaffray will buy and sell Otonomy, Inc. securities on a principal basis.

Piper Jaffray has received compensation for investment banking services from or has had a client relationship with Otonomy, Inc. within the past 12 months.

Within the past 12 months Piper Jaffray was a managing underwriter of a public offering of, or dealer manager of a tender offer for, the securities of Otonomy, Inc. or the securities of an affiliate.

Within the past 3 years Piper Jaffray participated in a public offering of, or acted as a dealer manager for, Otonomy, Inc. securities.

Affiliate disclosures: This report has been prepared by Piper Jaffray & Co. and/or its affiliate Piper Jaffray Ltd., both of which are subsidiaries of Piper Jaffray Companies (collectively Piper Jaffray). Piper Jaffray & Co. is regulated by FINRA, NYSE and the United States Securities and Exchange Commission, and its headquarters are located at 800 Nicollet Mall, Minneapolis, MN 55402. Piper Jaffray Ltd. is authorized and regulated by the Financial Conduct Authority, and is located at 88 Wood Street, 13th Floor, London EC2V 7RS. Disclosures in this section and in the Other Important Information section referencing Piper Jaffray include all affiliated entities unless otherwise specified.
Piper Jaffray research analysts receive compensation that is based, in part, on overall firm revenues, which include investment banking revenues.

Rating Definitions

Stock Ratings: Piper Jaffray ratings are indicators of expected total return (price appreciation plus dividend) within the next 12 months. At times analysts may specify a different investment horizon or may include additional investment time horizons for specific stocks. Stock performance is measured relative to the group of stocks covered by each analyst. Lists of the stocks covered by each are available at www.piperjaffray.com/researchdisclosures. Stock ratings and/or stock coverage may be suspended from time to time in the event that there is no active analyst opinion or analyst coverage, but the opinion or coverage is expected to resume. Research reports and ratings should not be relied upon as individual investment advice. As always, an investor's decision to buy or sell a security must depend on individual circumstances, including existing holdings, time horizons and risk tolerance. Piper Jaffray sales and trading personnel may provide written or oral commentary, trade ideas, or other information about a particular stock to clients or internal trading desks reflecting different opinions than those expressed by the research analyst. In addition, Piper Jaffray offers technical research products that are based on different methodologies, may contradict the opinions contained in fundamental research reports, and could impact the price of the subject security. Recommendations based on technical analysis are intended for the professional trader, while fundamental opinions are typically suited for the longer-term institutional investor.

- **Overweight (OW):** Anticipated to outperform relative to the median of the group of stocks covered by the analyst.
- **Neutral (N):** Anticipated to perform in line relative to the median of the group of stocks covered by the analyst.
- **Underweight (UW):** Anticipated to underperform relative to the median of the group of stocks covered by the analyst.

Other Important Information

The material regarding the subject company is based on data obtained from sources we deem to be reliable; it is not guaranteed as to accuracy and does not purport to be complete. This report is solely for informational purposes and is not intended to be used as the primary basis of investment decisions. Piper Jaffray has not assessed the suitability of the subject company for any person. Because of individual client requirements, it is not, and it should not be construed as, advice designed to meet the particular investment needs of any investor. This report is not an offer or the solicitation of an offer to sell or buy any security. Unless otherwise noted, the price of a security mentioned in this report is the market closing price as of the end of the prior business day. Piper Jaffray does not maintain a predetermined schedule for publication of research and will not necessarily update this report. Piper Jaffray policy generally prohibits research analysts from sending draft research reports to subject companies; however, it should be presumed that the fundamental equity analyst(s) who authored this report has had discussions with the subject company to ensure factual accuracy prior to publication, and has had assistance from the company in conducting diligence, including visits to company sites and meetings with company management and other representatives.

Notice to customers: This material is not directed to, or intended for distribution to or use by, any person or entity if Piper Jaffray is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to such person or entity. Customers in any of the jurisdictions where Piper Jaffray and its affiliates do business who wish to effect a transaction in the securities discussed in this report should contact their local Piper Jaffray representative. **Europe:** This material is for the use of intended recipients only and only for distribution to professional and institutional investors, i.e. persons who are authorised persons or exempted persons within the meaning of the Financial Services and Markets Act 2000 of the United Kingdom, or persons who have been categorised by Piper Jaffray Ltd. as professional clients under the rules of the Financial Conduct Authority. **United States:** This report is distributed in the United States by Piper Jaffray & Co., member SIPC, FINRA and NYSE, Inc., which accepts responsibility for its contents. The securities described in this report may not have been registered under the U.S. Securities Act of 1933 and, in such case, may not be offered or sold in the United States or to U.S. persons unless they have been so registered, or an exemption from the registration requirements is available.