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Reason for Report:
Company Update

Changes	Previous	Current
Rating	--	Overweight
Price Tgt	--	$12.00
FY10E Rev (mil)	--	$0.0
FY11E Rev (mil)	--	$0.0
FY10E EPS	--	($1.76)
FY11E EPS	--	($1.97)

Price:	$5.04
52 Week High:	$8.55
52 Week Low:	$4.82
12-Month Price Target:	$12.00
Proj EV of $288M + mid'11E cash of $4M	
Shares Out (mil):	23.8
Includes impact of recent IPO	
Market Cap. (mil):	$120.0
Avg Daily Vol (000):	22
Book Value/Share:	$2.22
Cash Per Share:	$2.55
Debt to Total Capital:	0%
Est LT EPS Growth:	NA
P/E to LT EPS Growth (FY10):	NA
Est Next Rep Date:	08/08/2010
Fiscal Year End:	Dec

Incl partial exercise of over allotment

Rev (mil)	2009A	2010E	2011E
Mar	$0.0A	$0.0A	$0.0E
Jun	$0.0A	$0.0E	$0.0E
Sep	$0.0A	$0.0E	$0.0E
Dec	$0.0A	$0.0E	$0.0E
FY	$0.0A	$0.0E	$0.0E
CY	$0.0A	$0.0E	$0.0E
FY RM	NM	NM	NM
CY RM	NM	NM	NM

EPS	2009A	2010E	2011E
Mar	($2.57)A	($0.48)A	($0.58)E
Jun	($2.22)A	($0.24)E	($0.49)E
Sep	($2.40)A	($0.43)E	($0.41)E
Dec	($0.98)A	($0.62)E	($0.49)E
FY	($8.06)A	($1.76)E	($1.97)E
CY	($8.06)A	($1.76)E	($1.97)E
FY P/E	NM	NM	NM
CY P/E	NM	NM	NM

Quarterly EPS does not add to full year result

Anthera Pharmaceuticals (ANTH - $5.04)
Overweight

Enrolled First Patient in Pivotal VISTA-16 Study

CONCLUSION:
Last month, Anthera began enrollment in the 6,500-patient Phase III VISTA-16 study of *varespladib*. Anthera has an SPA agreement with the FDA for a single Phase III Acute Coronary Syndrome (ACS) study. A safety analysis will be performed after the first 1000 patients are treated and we expect final data in late 2011 or early 2012. We estimate Anthera holds *pro forma* cash of ~$61 million, sufficient to begin VISTA-16 and a Phase II trial of A-623 in lupus in 3Q:10.

- **VISTA-16 Patient Enrollment Commenced on Schedule.** Anthera has begun enrolling patients in the pivotal VISTA-16 trial of varespladib. Anthera has a Special Protocol Assessment (SPA) agreement with the FDA for a single Phase III ACS study comparing 500mg QD Varespladib to placebo on top of *Lipitor* for 16 weeks. High-risk ACS patients are defined as those who have additional disease characteristics that increase their likelihood of experiencing another coronary event. VISTA-16 will enroll up to 6,500 ACS patients yielding an expected 385 events powered to show a 25% improvement in MACE. A safety analysis will be performed after the first 1000 patients are treated and we expect final VISTA-16 data in late 2011 or early 2012.

- **Phase II Biomarker Data Gives Confidence in Pivotal Study.** There is a growing body of evidence that inflammation plays an important role in cardiovascular disease (CVD) and heart attack. Varespladib is an sPLA2 inhibitor that acts by lowering cardiac inflammation. The Phase II PLASMA and FRANCIS studies showed varespladib in combination with statins reduced target sPLA2, C-Reactive Protein (CRP) and LDL cholesterol. These results give us confidence that varespladib can successfully prevent recurrent Major Adverse Coronary Events (MACE) in the VISTA-16 trial.

- **Sufficient Cash to Begin Studies.** Following the recent successful IPO, Anthera holds *proforma* cash of ~$60.7 million, sufficient to begin VISTA-16 and a Phase II trial of A-623 in lupus in 3Q:10. We expect Anthera to either partner A-623 or varespladib overseas or raise additional capital in order to complete the studies.

INVESTMENT RECOMMENDATION:
We reiterate our Overweight rating and $12 price target. We value varespladib at $288 million by applying a standard 5x multiple to 2015E U.S. sales of $307 million discounted back at 45% annually. To this we add mid'11E cash. At present, we assign no value for European varespladib sales or A-623 in lupus providing potential upside. Please see our April 12th note for more varespladib sales detail.

RISKS TO ACHIEVEMENT OF TARGET PRICE:
Risks include clinical, regulatory and commercial. Varespladib and/or A-623 may fail in the clinic. Anthera may require additional cash from the capital markets.

COMPANY DESCRIPTION:
Anthera is a biopharmaceutical company developing varespladib and A-623.

VARESPLADIB (A-002)

Varespladib is a first-in-class oral sPLA2 inhibitor. Varespladib has a dual mechanism of action that both reduces cardiac inflammation as well as LDLc, total cholesterol and non-HDLc. Specifically varespladib lowers pro-atherogenic LDLc particles. This is an important point of differentiation from LpPLA2 inhibitors like Darapladib that have not demonstrated similar effects on lipids. The effect of Varespladib on inflammation has been demonstrated in human clinical trial by a statistically significant reduction in IL-6, CRP and sPLA2. In animal studies, Varespladib has shown synergistic reductions of plaque volume when added to statins.

VISTA-16 Trial

Anthera received a Special Protocol Assessment (SPA) from the FDA for a single Phase III ACS study. The VISTA-16 trial will randomize up to 6,500 ACS patients within 96 hours of event or hospitalization to either 500mg QD Varespladib or placebo for 16 weeks on top of Lipitor and background standard-of-care. The number of subjects who undergo PCI following MI and prior to randomization will be limited to <55%. Physician will determine Lipitor dose of 20mg, 40mg or 80mg QD with a one-time dose adjustment permitted after 8 weeks if LDLc remains above target 100mg/dL. The primary endpoint of the trial is reduction in repeat Major Adverse Coronary Events (MACE) at week 16. All cause mortality is a key secondary endpoint. The study is expected to yield a minimum of 385 events and is powered to show a 25% improvement in MACE. VISTA-16 began enrollment on June 23rd and we look for final data in late 2011 or early 2012.

An independent Data Safety Monitoring Board (DSMB) will conduct safety reviews and one interim biomarker efficacy analysis. The interim analysis will occur when at least 1,000 patients have completed treatment and 50% of the number of target events has occurred, which we expect will occur in 1H:11. The DSMB may also assess futility. The survival status for all subjects who have not withdrawn consent will be measured at the end of the study and 6 months after they complete the study.

Varespladib Sales Forecast

Coronary Artery Disease (CAD) is the leading cause of death in the developed world and Acute Coronary Syndrome (ACS) is a major cause of emergency medical care and hospitalization. Annual incidence of ACS in the U.S. based on hospital discharges is approximately 1.3 million with 41% of the admissions due to Unstable Angina, 36% due to STEMI and 40% due to NSTEMI. (*Circulation* Jan. 2009) An estimated 15% of ACS patients have congestive heart failure (CHF) or other co-morbidities that are excluded from VISTA-16 enrollment criteria and thus may not be included on the Varespladib label.

VISTA-16 began enrollment on June 23, 2010. We look for final data in late 2011 or early 2012. Based on positive pivotal data, we expect NDA filing in 2012 and U.S. approval in 2013 and in Europe by 2014. Shionogi retains rights in Japan. Assuming modest 15% penetration of the U.S. ACS market with a selling price of ~$1,700 and 10% penetration of the European ACS market with a lower selling price of less than $1,400, we forecast global sales of $438 million in 2015. We forecast global Varespladib sales will grow to $830 million by 2020 and exceed $1 billion in 2023. Please see our note from April 12th for more varespladib sales detail.

We expect Anthera will enter into a major Varespladib distribution alliance bringing in significant capital and a cardiology sales force. Importantly, we ultimately believe that a partner may explore use of varespladib more broadly in CAD much like darapladib representing significant upside to our forecast.

VALUATION:

We are reiterating our Overweight rating and $12 price target. We value varespladib at $288 million by applying a standard 5x multiple to 2015 U.S. sales of $307 million discounted back at 45% annually. We believe this discount rate is on the high side (30-45%) for a Phase III-ready drug. To this we add mid'11E cash of $4 million. At present, we assign no value for European varespladib sales or A-623 in lupus providing potential upside.

Anthera Pharmaceuticals

Quarterly Earnings Estimates

($ in thousands except per share)

7-May-10

	1QA	2QA	3QA	4QA	2009A	1QE [1]	2QE	3QE	4QE	2010E	1QE	2QE	3QE	4QE	2011E
Total Revenues	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Operating Expenses:															
R&D Expense	2,915	2,286	2,526	688	8,415	$5,242	4,000	8,500	13,000	30,742	12,000	10,000	8,000	10,000	40,000
SG&A Expense	846	999	885	695	3,425	1,224	1,700	1,800	2,000	6,724	2,000	2,000	2,000	2,000	8,000
Total Operating Expenses	**$3,761**	**$3,286**	**$3,411**	**$1,383**	**11,841**	**$6,466**	**$5,700**	**$10,300**	**$15,000**	**37,466**	**$14,000**	**$12,000**	**$10,000**	**$12,000**	**48,000**
Operating Loss	**($3,761)**	**($3,286)**	**($3,411)**	**($1,383)**	**($11,841)**	**($6,466)**	**($5,700)**	**($10,300)**	**($15,000)**	**($37,466)**	**($14,000)**	**($12,000)**	**($10,000)**	**($12,000)**	**($48,000)**
Interest and Other Income	13	9	(0)	2	24	25	50	45	35	155	45	50	40	35	170
Interest Expense	(37)	(59)	(193)	(96)	(385)	0	0	0	0	0	0	0	0	0	0
Total Other Income (Expense)	(24)	(50)	(193)	(94)	(362)	25	50	45	35	155	45	50	40	35	170
Pre-Tax Loss	**($3,785)**	**($3,336)**	**($3,604)**	**($1,477)**	**($12,203)**	**($6,441)**	**($5,650)**	**($10,255)**	**($14,965)**	**($37,311)**	**($13,955)**	**($11,950)**	**($9,960)**	**($11,965)**	**($47,830)**
Income Tax Expense	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Loss	**($3,785)**	**($3,336)**	**($3,604)**	**($1,477)**	**($12,203)**	**($6,441)**	**($5,650)**	**($10,255)**	**($14,965)**	**($37,311)**	**($13,955)**	**($11,950)**	**($9,960)**	**($11,965)**	**($47,830)**
Net Loss per Share	**($2.57)**	**($2.22)**	**($2.40)**	**($0.98)**	**($8.06)**	**($0.48)**	**($0.24)**	**($0.43)**	**($0.62)**	**($1.76)**	**($0.58)**	**($0.49)**	**($0.41)**	**($0.49)**	**($1.97)**
Shares Outstanding	1,471	1,500	1,500	1,500	1,514	13,344	23,750	23,850	24,000	21,236	24,100	24,200	24,300	24,500	24,275

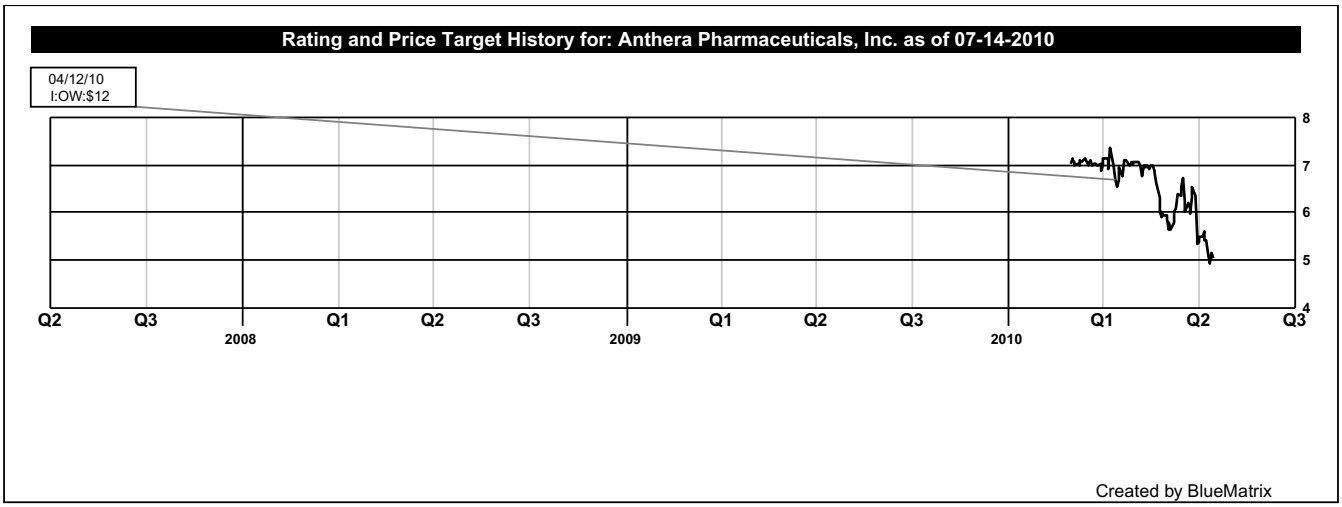
Source: Company reports and Piper Jaffray estimates.

Note: CY:09A results include adjusted primary share count excluding preferred stock. As a result, quarterly EPS does not add to full year result.

1. 1Q:10 R&D expense includes $3.5 million non-cash milestone payment in IPO stock to Lilly and Shinogi.

For up-to-date company disclosure information, please visit http://www.piperjaffray.com/researchdisclosures

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.

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T: Transferring Coverage

D: Discontinuing Coverage

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			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OW]	358	51.50	81	22.63
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