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Reason for Report:
Company Update

Changes	Previous	Current
Rating	--	Overweight
Price Tgt	--	$9.00
FY11E Rev (mil)	--	$0.0
FY12E Rev (mil)	--	$0.0
FY11E EPS	--	($1.44)
FY12E EPS	--	($1.60)

Price:	$5.47
52 Week High:	$8.55
52 Week Low:	$2.82
12-Month Price Target:	$9.00
Proj EV of $288M + mid'11E cash	
Shares Out (mil):	32.8
Shares out includes recent PIPE	
Market Cap. (mil):	$179.4
Avg Daily Vol (000):	67
Book Value/Share:	$1.74
Net Cash Per Share:	$1.96
Debt to Total Capital:	0%
Est LT EPS Growth:	NA
P/E to LT EPS Growth (FY11):	NA
Est Next Rep Date:	05/01/2011
Fiscal Year End:	Dec

Rev (mil)	2010A	2011E	2012E
Mar	$0.0A	$0.0E	$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	2010A	2011E	2012E
Mar	($0.83)A	($0.42)E	NA
Jun	($0.36)A	($0.36)E	NA
Sep	($0.36)A	($0.30)E	NA
Dec	($0.40)A	($0.36)E	NA
FY	($1.76)A	($1.44)E	($1.60)E
CY	($1.76)A	($1.44)E	($1.60)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 - $5.47)
Overweight

Updates VISTA-16 Biomarker Futility Timeline and Analytical Method

CONCLUSION:
Anthera hosted a conference call to discuss the timelines and analytical method for the upcoming biomarker futility analysis in the ongoing VISTA-16 trial of varespladib in Acute Coronary Syndrome (ACS). The company expects to report results by the end of 1Q:11 or early April. All biomarkers must show a positive trend and 4/5 must meet statistical significance for VISTA-16 to continue. We view this as a high bar and success would increase our confidence in VISTA-16 going forward. If negative, we would applaud Anthera's decision to terminate the study in order to focus resources on A-623 for lupus. We view shares of ANTH as inexpensive based on either varespladib or A-623 alone, let alone both drugs.

- **VISTA-16 Biomarker Futility Update.** Anthera intends to report the anticipated biomarker futility analysis on the first 1,000 ACS patients in the ongoing VISTA-16 trial by the end of 1Q:11 or early April. The DSMB will conduct another safety review and a blinded, independent statistician will evaluate changes in SPLA2, LDL cholesterol, C-Reactive Protein (CRP), IL-6 and a composite measure of LDLc <70mg/dL and CRP <1mg/dL. All 5 measures must show a positive trend in favor of varespladib and 4/5 including either CRP or IL-6 must meet statistical significance for VISTA-16 to continue. We view this biomarker futility analysis as a high hurdle and success would increase our confidence in VISTA-16 going forward.

- **VISTA-16 Enrollment Ongoing.** We understand enrollment is on-track for the pivotal VISTA-16 trial comparing 500mg once-daily (QD) varespladib to placebo on top of *Lipitor* for 16 weeks. Depending upon the outcome of the biomarker futility analysis, we look for the DSMB to conduct a prespecified efficacy analysis on the primary endpoint after 50% of the Major Adverse Coronary Events (MACE) in September or October. We anticipate final data on the full 385 MACE in late 4Q:11 or early 2012. VISTA-16 is being conducted under a Special Protocol Assessment (SPA) and is 80% powered to show a 25% improvement in MACE. If successful, varespladib has blockbuster potential.

- **PEARL-SC Trial Resumed.** Last month, Anthera resumed patient screening in the Phase IIb PEARL-SC lupus trial of A-623. Anthera is bringing on additional sites and geographies (Korea and Singapore) in order to complete enrollment by late 3Q:11/early 4Q:11. We understand that patient interest in participating in the study is high due to the subcutaneous dosing of A-623.

- **Cash to Reach Value Driving Data.** Anthera ended 2010 with cash of $64 million, which should last to top-line VISTA-16 and PEARL-SC data.

INVESTMENT RECOMMENDATION:
We reiterate our Overweight rating and $9 target valuing varespladib at $288 million. We add mid'11E cash with exercise of warrants. Anthera has no debt.

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.

Anthera Pharmaceuticals

Quarterly Earnings Estimates

($ in thousands except per share)

23-Feb-11

	2009A	1QA[1]	2QA	3QA	4QA	2010E	1QE	2QE	3QE	4QE	2011E	2012E
Total Revenues	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Operating Expenses:												
R&D Expense	8,415	$5,242	$6,438	6,885	10,892	29,457	12,000	10,000	8,000	10,000	40,000	45,000
SG&A Expense	3,425	1,224	1,510	1,510	2,057	6,301	2,000	2,000	2,000	2,000	8,000	9,000
Total Operating Expenses	**11,841**	**$6,466**	**$7,948**	**$8,395**	**$12,949**	**35,758**	**$14,000**	**$12,000**	**$10,000**	**$12,000**	**48,000**	**54,000**
Operating Loss	**($11,841)**	**($6,466)**	**($7,948)**	**($8,395)**	**($12,949)**	**($35,758)**	**($14,000)**	**($12,000)**	**($10,000)**	**($12,000)**	**($48,000)**	**($54,000)**
Total Other Income (Expense)	(362)	(4,638)	12	62	(92)	(4,656)	55	45	30	20	150	15
Pre-Tax Loss	**($12,203)**	**($11,104)**	**($7,936)**	**($8,334)**	**($13,040)**	**($40,414)**	**($13,945)**	**($11,955)**	**($9,970)**	**($11,980)**	**($47,850)**	**($53,985)**
Income Tax Expense	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Loss	**($12,203)**	**($11,104)**	**($7,936)**	**($8,334)**	**($13,040)**	**($40,414)**	**($13,945)**	**($11,955)**	**($9,970)**	**($11,980)**	**($47,850)**	**($53,985)**
Net Loss per Share	**($8.06)**	**($0.83)**	**($0.36)**	**($0.36)**	**($0.40)**	**($1.76)**	**($0.42)**	**($0.36)**	**($0.30)**	**($0.36)**	**($1.44)**	**($1.60)**
Shares Outstanding	1,514	13,344	22,224	22,964	32,829	22,910	33,000	33,100	33,200	33,400	33,175	33,650

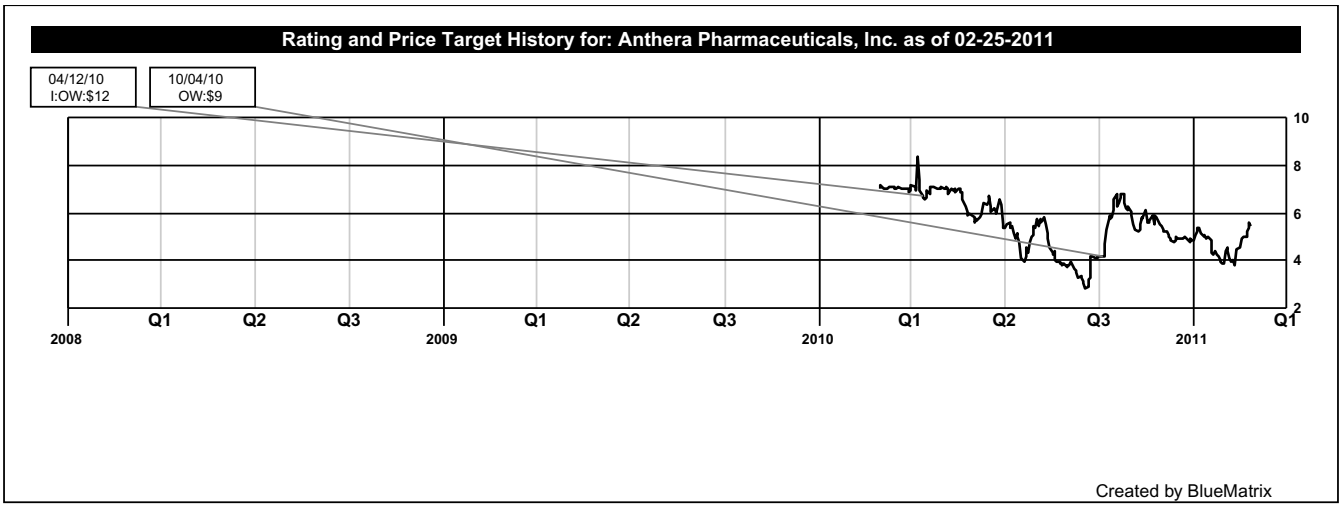
Source: Company reports and Piper Jaffray estimates.

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.

Current disclosure information fc 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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R: Resuming Coverage

T: Transferring Coverage

D: Discontinuing Coverage

S: Suspending Coverage

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N: Neutral

UW: Underweight

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NA: Not Available

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Distribution of Ratings/IB Services
Piper Jaffray

			IB Serv./Past 12 Mos.	
Rating	Count	Percent	Count	Percent
BUY [OW]	311	49.90	68	21.86
HOLD [N]	264	42.40	25	9.47
SELL [UW]	48	7.70	2	4.17

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Analyst Certification — Edward A. Tenthoff, Sr Research Analyst

— Chad J. Messer, Ph.D., Research Analyst

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