William Blair

Aratana Therapeutics, Inc.

The Cat's Out of the Bag: A Novel Approach to Pet Therapeutics

July 25, 2013
Basic Report (13-088)

Stock Rating:	**Outperform**
Company Profile:	**Aggressive Growth**
Symbol:	PETX (NASDAQ)
Price:	$9.40 (52-Wk.: $6–$10)
Market Value (mil.):	$199
Fiscal Year End:	December

Estimates	**2012A**	**2013E**	**2014E**
EPS	-$0.91	-$0.84	-$0.94
Valuation			
P/E	NA	NA	NA

Trading Data	
Shares Outstanding (mil.)	20.7
Float (mil.)	7.3
Average Daily Volume	80,000
Financial Data	
Long-Term Debt/Total Capital	10%
Book Value Per Share	$2.21
Enterprise Value (mil.)	$160

We recently initiated coverage of Aratana Therapeutics with an Outperform rating and an Aggressive Growth company profile following its initial public offering on June 26, 2013. The company was founded in 2010 to pursue an underserved niche of developing novel therapeutics for dogs and cats. While only three years old, Aratana has assembled an impressive management team of industry leaders and secured worldwide rights to three molecules, which, if effective, could produce six marketed products by 2016. This development-stage company has no revenues, but we believe it could be profitable by 2017 with profits ramping up quickly. While we view Aratana as higher risk than other vet industry peers, we believe the $160 million enterprise valuation ($200 million market cap) and unique business model offer a compelling opportunity for small-cap investors.

Attractive market dynamics. Over the last several decades, the animal health market has outgrown the U.S. economy and been more resistant to economic cycles. We view the vet market as an attractive vehicle for investors to participate in the growth of the broader healthcare industry without reimbursement risk. U.S. consumers will spend an estimated $55 billion on pets this year—a number that has been growing at a pace of more than 5% over the past decade. Therapeutics constitutes a small portion of this market (less than $2 billion) but is poised to expand as pet care becomes more complex and companies such as Aratana roll out new products for unmet needs.

Compelling business model. We view Aratana's strategy as compelling, applying a twist on the traditional specialty pharmaceutical business model. In comparison to human therapeutics, drug development for pets is typically faster, costs much less money, and offers a substantially lower clinical failure rate. Management plans to in-license products in early human testing, which have already completed animal safety studies, further reducing the product's risk profile. While a "blockbuster" product in animal health is perhaps $100 million rather than $1 billion or more in human health, the end-of-cycle pressure from generics is also much less intense, allowing for a portfolio of many products, each generating a small revenue stream with a long tail. Therefore, while Aratana must successfully complete the clinical development of its current (and future) product portfolio, we believe that if the company is successful, it has a clear path to profitability with relatively low capital requirements over the coming three to five years.

Key risks. We view the following as key risks for Aratana in the next three to five years: 1) the three molecules under clinical development might not be successful and might thus fail to reach the market; 2) larger competitors with greater financial resources, like Zoetis, might start pursuing a similar in-licensing strategy, causing deal terms to deteriorate; and 3) the company will probably need to raise additional capital within the next two years.

Aratana is a specialty biopharmaceutical company focused solely on the companion-animal market. The company was founded in Kansas City, Kansas, in 2010 to pursue in-licensing, development, and commercialization of novel therapeutics for cats and dogs. The company has three molecules focused on osteoarthritic pain, lack of appetite, and post-surgical pain in both dogs and cats, which, if effective, could reach the market by 2016.

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Please consult pages 37-38 of this report for all disclosures.

Executive Summary

We recently initiated coverage of Aratana Therapeutics with an Outperform rating and an Aggressive Growth company profile following the company's June 26 IPO at $6.00. Aratana is based in Kansas City, Kansas, and was founded in 2010. The company's strategy is to in-license, develop, and commercialize novel therapeutics with an exclusive focus on the companion pet market. The company is building the infrastructure to sell directly and through distributors in the United States. While it has worldwide rights to its current portfolio, management intends to partner and out-license non-U.S. rights.

We view Aratana as a speculative investment given the company's short track record and lack of approved products or revenues. However, we are encouraged with the execution thus far and believe the model should yield attractive returns longer term. Aratana has a unique strategy that takes drugs originally developed for humans and seeks to apply them to the veterinary market. We believe shares hold a higher-risk profile than companies typically in the veterinary space but less risk than the typical development-stage company focused on human diseases.

The company has assembled an impressive management team, with more than 100 years of combined experience in animal health, spanning technology assessment, development, regulatory affairs, and commercialization. The company has to date in-licensed worldwide rights to three molecules that, if proved effective, will be commercialized as six distinct products (three compounds, each of which will be available separately for dogs and cats):

- AT-001 is being developed for osteoarthritic pain and inflammation in dogs and cats. It was in-licensed from RaQualia for $3.0 million upfront, potential milestone payments of up to $10 million, and back-end royalties in the midsingle digits. While Pfizer's Rimadyl has been successful in this category, there is no effective product for pain in cats, given toxicity issues with the category leader.

- AT-002 is being developed as an appetite stimulant in both dogs and cats. This product was also in-licensed from RaQualia for $4.4 million, potential milestones of $8.5 million, and back-end royalties in the midsingle digits. Lack of appetite and thus malnutrition is a major problem for elderly and sick pets, such as those suffering from cancer and renal failure. There are no approved alternatives for inappetence.

- AT-003 is being developed for post-surgical pain and would be injected as a delayed-release anesthetic during surgery. This product is already approved in humans (Pacira's Exparel) and was in-licensed for $1.5 million (our estimate) plus an estimated $42 million in additional milestones, and back-end royalties in the low- to mid-20s percent range. There are a number of shortcomings from other alternatives now available to treat pain for the roughly 33 million pets that undergo surgery in the U.S. each year, including the diversion and abuse risks of opioids.

If these products prove effective, management's strategy is to launch all in 2016, thus achieving some degree of critical mass in the U.S. companion-animal market (refer to the key dates in exhibit 1). Beyond these initial three molecules, we believe there are abundant opportunities for future in-licensing deals as well as opportunities to drive returns by partnering the current portfolio for sale in Europe. The company has a stated goal of uncovering more that 20 therapeutic areas for pets that overlap with human biopharma development.

Exhibit 1
Aratana Therapeutics, Inc.
Anticipated Time and Events—Three Year Outlook

Product	Event
2013	
AT-001	Completion of 300 dog efficacy and dose confirmation study during the fourth quarter
AT-001	Choose proper indication for cats then initiate dose confirmation study
AT-002	Data from dose confirmation study of AT-002 for appetite stimulation in dogs and cats during the fourth quarter
AT-002	**Begin pivotal efficacy study for dogs in second half 2013 for the indication of appetite stimulation**
AT-002	Data from dose confirmation study of AT-002 in client-owned cats by mid-2013
AT-003	Dose confirmation study in post-operative pain in dogs
AT-003	Dose confirmation study in post-operative pain in cats
2014	
AT-001	**Initiate final pivotal efficacy study of AT-001 in dogs early in the year**
AT-001	File NADA of AT-001 in dogs for pain and inflammation associated with osteoarthritis by year-end
AT-001	Choose proper indication for cats then initiate dose confirmation study
AT-002	**Data from pivotal efficacy study for dogs for the indication of appetite stimulation**
AT-003	**Initiation of pivotal trials in post-operative pain in dogs**
AT-003	**Initiation of pivotal trials in post-operative pain in cats**
2015	
AT-001	Initiate pivotal study of AT-001 in cats
AT-001	**Filing of AT-001 NADA in cats**
AT-002	**Filing of AT-002 NADA for the indication of appetite stimulation in dogs and cats**
AT-003	**Filing of NADA for AT-003 for the treatment of post-operative pain in dogs**
AT-003	**Filing of NADA for AT-003 for the treatment of post-operative pain in cats**
2016	
Potential launch of all six products	

Sources: Company reports and William Blair & Company, L.L.C. estimates

While it is still in the early stages and unproven, Aratana's business model has the potential for attractive returns on investment, in our view. To elaborate, the management team is rich with animal health experience and is already built. When a product is in-licensed, it generally comes from a drug company focused on human therapeutics. Management's intent is to target products in early-stage human testing; thus, the products will have already demonstrated safety in animals (usually dogs). This demonstrated safety profile in one of two key target species substantially lowers the development risk for Aratana, in our opinion. Further lowering the financial risk is the fact that clinical trials are generally sized at 200-300 client-owned animals, take about one to two years to complete, and cost less than $10 million. So even if a protocol fails to produce the expected safety and efficacy results, it can easily be adjusted and re-run for a modest investment of time and money. We also understand that the Center for Veterinary Medicine (CVM) within the Food and Drug Administration has been quite collaborative with new product developers, helping to prospectively review each drug's trial protocols. This reduces the risk of negative surprise at the regulatory approval stage, which often arises during the development of human therapeutics.

To illustrate the attractive return potential of Aratana's model, we estimate in exhibit 2 that over a five-year period, a given drug must generate only $50 million to $60 million in cumulative revenue to have a positive return on investment (ROI) once the sales infrastructure has been established. To

achieve this, we assume total initial invested capital of $27 million on average (including $5 million in up-front costs for the drug, $6 million-$8 million in research and development, $10 million in milestone payments, and $5 million in launch costs) and a range of incremental margin assumptions between 40% and 70% (including cost of goods sold and variable sales costs). While $10 to $12 million in annual sales is not a trivial amount, in our view once incremental compounds are added to the existing infrastructure, we believe that generating a positive return becomes easier with each additional compound.

Exhibit 2
Aratana Therapeutics
Cumulative Five-Year ROI Estimates

Net Inflow as a Percent of Revenue	Revenue (Millions) $20	$30	$40	$50	$60	$70	$80	$90	$100
40%	-70%	-56%	-41%	-26%	-11%	4%	19%	33%	48%
45%	-67%	-50%	-33%	-17%	0%	17%	33%	50%	67%
50%	-63%	-44%	-26%	-7%	11%	30%	48%	67%	85%
55%	-59%	-39%	-19%	2%	22%	43%	63%	83%	104%
60%	-56%	-33%	-11%	11%	33%	56%	78%	100%	122%
65%	-52%	-28%	-4%	20%	44%	69%	93%	117%	141%
70%	-48%	-22%	4%	30%	56%	81%	107%	133%	159%

*Returns are caluclated assuming a tax rate of 36%

Sources: Company reports and William Blair & Company, L.L.C. estimates

The existing three molecules have been in-licensed for roughly $10 million in aggregate and will take perhaps $15 million to $25 million more in R&D expenses to reach the new animal drug application (NADA) stage, by our estimates. The company has roughly $50 million in net cash on hand post-IPO. Considering a cash burn of $20 million to $25 million annually for the next three years, we estimate the company will probably require roughly $40 million in additional capital to get these six products to market—not including potential milestone payments, which we understand could reach $50 million to $60 million in total under the most optimistic commercial scenario.

We assume the company's annual net losses climb from $13.7 million in 2012 to $15.4 million in 2013 and peak in 2015 at $23.4 million. We assume product approvals take place in 2016, driving a reduced loss that year and modest profits by 2017: $0.09 in EPS, with $53 million in revenues and a 4% EBIT margin. Given moderating R&D and SG&A spending growth, we estimate EBIT margin to climb to 28% by 2019 and 35% by 2020, on revenues of $127 million and $183 million, respectively. Our estimated income statement is summarized in exhibit 3.

Exhibit 3
Aratana Therapeutics
Summary of Key Financials
(in millions)

	2011	2012	2013(E)	2014(E)	2015(E)	2016(E)	2017(E)	2018(E)	2019(E)	2020(E)
AT-001	-	-	-	-	-	$9.2	$18.1	$25.1	$37.1	$56.9
AT-002	-	-	-	-	-	$11.1	$19.3	$32.4	$48.6	$70.5
AT-003	-	-	-	-	-	$2.0	$11.0	$19.8	$29.8	$40.2
Royalties	-	-	-	-	-	$2.6	$4.2	$7.8	$11.3	$15.4
Total Revenue	**-**	**-**	**-**	**-**	**-**	**$24.8**	**$52.6**	**$85.1**	**$126.8**	**$182.9**
COGS	$0.0	$0.0	$0.0	$0.0	$0.0	$4.6	$10.8	$17.4	$26.1	$37.5
R&D	$2.2	$7.3	$8.7	$10.5	$12.1	$13.3	$15.7	$18.6	$21.3	$24.5
SG&A	$1.3	$3.0	$6.1	$9.3	$11.5	$16.1	$23.9	$33.5	$43.6	$56.2
EBIT	**-$3.5**	**-$10.3**	**-$14.9**	**-$19.8**	**-$23.6**	**-$9.2**	**$2.2**	**$15.6**	**$35.7**	**$64.6**
Margin	NA	NA	NA	NA	NA	NA	4%	18%	28%	35%
EPS	**-$0.31**	**-$0.91**	**-$0.84**	**-$0.94**	**-$1.01**	**-$0.38**	**$0.09**	**$0.40**	**$0.91**	**$1.64**
Cash Balance	**$12.4**	**$20.4**	**$30.8**	**$11.5**	**$25.2**	**$7.8**	**$4.3**	**$6.8**	**$19.4**	**$45.7**

Sources: Company reports and William Blair & Company, L.L.C. estimates

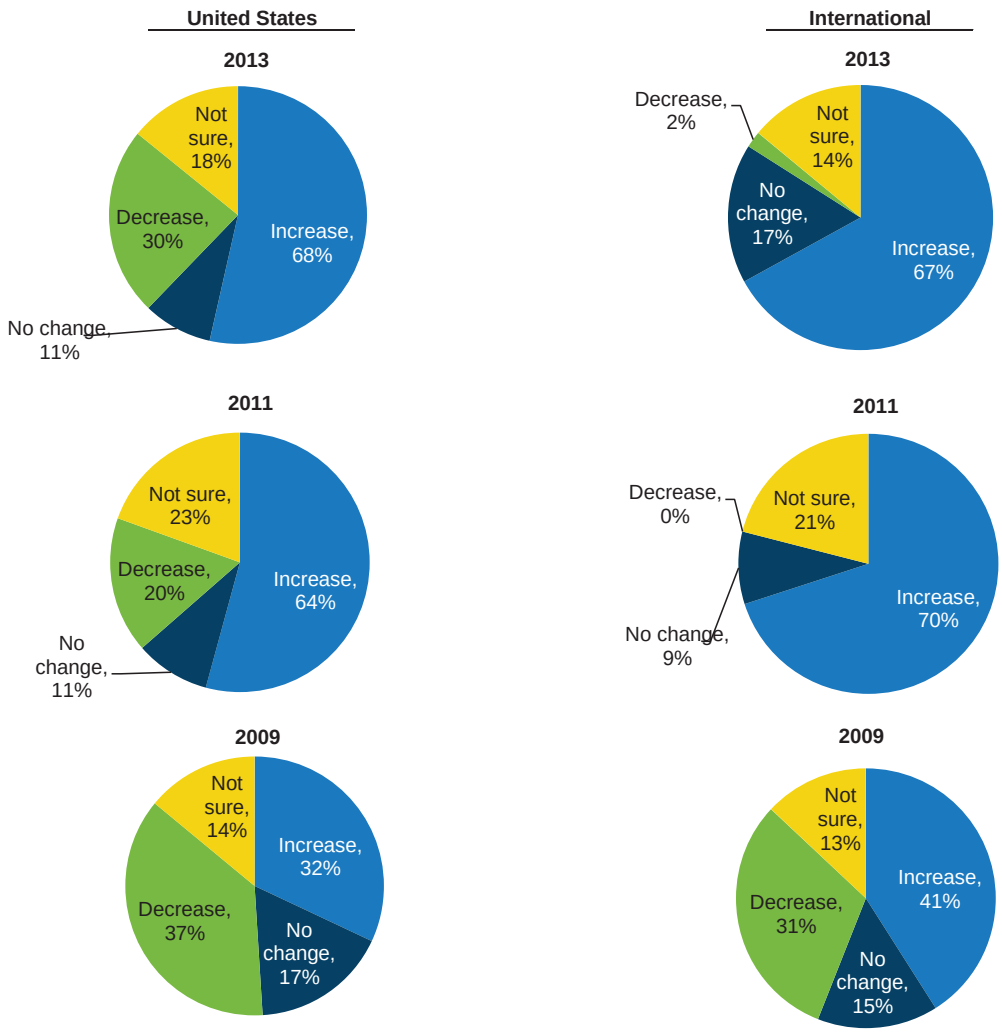
After a 57% boost in share price post-IPO, Aratana carries a market capitalization of $200 million and an enterprise value of $160 million. We approach valuation on this name through a net present value calculation and also by applying comparable earnings multiples to 2020 EPS and discounting back to the present. Both techniques suggest attractive upside potential into the midteens per share in the coming year for investors willing to accept the risks of this early-stage business model. As a result, we rate Aratana Outperform with an Aggressive Growth company profile. We believe the stock is appropriate for small-cap investors.

Investment Highlights

Attractive Market Dynamics

Over the last several decades, the animal health market has persistently outgrown the U.S. economy and been more resistant to economic cycles. We view the vet market as an attractive vehicle for investors to participate in the growth of the broader healthcare industry with none of the reimbursement risk. U.S. consumers will spend an estimated $55 billion on pets this year. This total has grown at an average pace of more than 5% over the past decade and nearly 10% before the recession. Thus, we see some potential for acceleration in the coming years if the domestic economy improves. According to our survey of 1,000 veterinarians conducted last January at the North American Veterinary Conference (NAVC), the industry expects improvements in 2013, driven in part by novel products, such as diagnostics and technologies, that are expanding the traditional veterinary market. We believe companies such as Aratana have the ability to create similar growth by expanding the market for therapeutics. Therapeutics comprises a relatively small portion of this market today (estimated at less than $2 billion), but we believe it is poised to expand (and thus outgrow the broader vet market) as pet care becomes increasingly medically complex and as companies such as Aratana roll out new products for unmet needs. There has been a rapid uptake of other new product entries in recent years that supports this view (such as Eli Lilly/Elanco's Trifexis, a combination product launched in 2011 to control fleas and heartworm).

Exhibit 4
Veterinary Healthcare Survey
Over the Next Year (2013), What Trend Do You Expect to See in Your Practice's Revenue (by Geography)?



Note: 2013 data includes 861 respondents; 2011 data includes 886 respondents; 2009 data includes 878 respondents
Source: William Blair & Company, L.L.C. veterinary surveys

Management Team Unusually Accomplished for a Small and Young Company

The success of a specialty pharmaceutical business model often hinges on the skills of the management team to pick the right categories to target and the right products to in-license, and be able to efficiently develop and commercialize them. We are impressed with the team that CEO Steven St. Peter has assembled. For example, Ernst Heinen, head of drug evaluation and development, served for 22 years at Bayer Animal Health, including as vice president of R&D, and is thus an expert at technology assessment. Linda Rhodes, chief scientific officer, founded an animal health contract research organization (CRO), taught veterinary medicine, and worked at Merial and Merck; she is an expert in technology assessment, development, and regulatory affairs. Julia Stephanus, chief commercial officer, helped launch many of the major animal health products at Ceva, VetPharm, and Pfizer, including Rimadyl and Revolution. This leadership team has been involved in many of the most successful products in animal health and is arguably one of the most qualified to successfully execute this strategy.

Specialty Pharmacy Business Model Is Compelling
A typical companion-animal drug takes roughly three to four years to test and less than $10 million to fund the necessary trials. New-product candidates typically already have animal safety data (usually dogs), lowering the risk of failure during clinical trials. We have been encouraged by the collaborative approach of the FDA's CVM arm. This leads to an increased success rate for new products in this niche, which we believe to be higher than what is observed in human health, combined with a much lower cost of trial failure (in terms of time and dollars). Combine this financial model with the accomplished team noted above and we view the overall chances of success for Aratana as quite good over the coming five years. We expect clinical data to help validate this opinion over the next one to two years, followed by approval applications in 2015 and potential approvals in 2016.

Existing Portfolio Targets Unmet or Poorly Met Needs in Potentially Large Therapeutic Categories
Osteoarthritic pain afflicts 13% of geriatric dogs (about 1.5 million dogs) in the United States, and given the toxicity of nonsteroidal anti-inflammatory drugs (NSAIDs), cats in particular have no good option for pain relief. According to the American Veterinary Medical Association (AVMA), roughly 15% of dogs and 20% of cats are geriatric (i.e., more than 11 years old). Lack of appetite is also a common problem for elderly pets or those with cancer or kidney disease, which number a combined 600,000 dogs and cats in the United States. In addition, better management of post-surgical pain would be potentially attractive for the 33 million dogs and cats undergoing surgery each year. As discussed in more detail below, we believe the company's six products that address these needs, if proven effective, could reach the U.S. market by 2016 and generate $183 million in aggregate sales by 2020.

Investment Risks

We view Aratana as a speculative investment: the company has no approved products and no revenues; therefore, it is likely to burn cash for the next three years. However, by the standards of the specialty pharmaceutical model, we believe the risk profile of the company is lower than would be the case for human therapeutics, given lower cost, shorter timelines, and lower failure rates. Key risks for Aratana's stock in the next three to five years include the following.

- Any or all of the three molecules under development might not work and might not reach the market as a result. We expect the company to collect data that should help validate the safety and efficacy of each product in the coming year or two, and thus we expect this risk to diminish by the end of 2014. Each product already has safety data in dogs but typically does not come with similar data for cats. We view this as an important risk for AT-001 in particular, given the significant toxicity other pain products have shown in cats.

- Larger competitors with greater financial resources, like Zoetis (the recent animal health spinout from Pfizer), might eventually pursue a similar in-licensing strategy to Aratana. Such an increase in competition for in-licensing deals could cause terms to deteriorate, such as larger up-front fees and higher back-end royalties. This could result in a smaller product portfolio for Aratana and lower commercial margins.

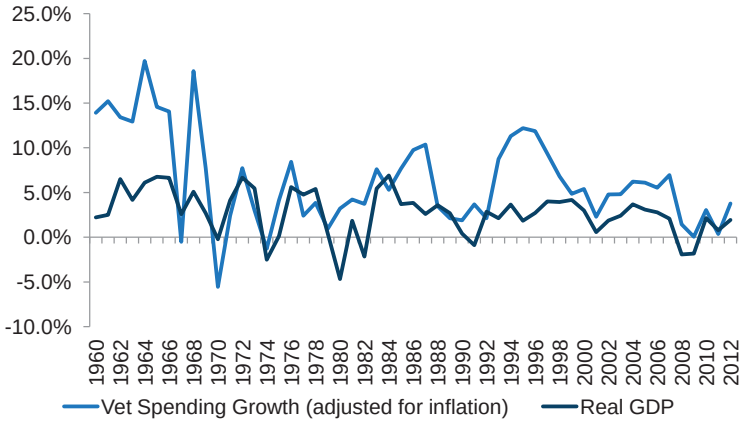
- Given that Aratana's initial public offering in June raised less capital than expected ($30 million versus $45 million), the company will likely need to raise additional capital within the next two years to bring its initial six products to market and execute additional in-licensing deals. We assume in our model that a second equity capital raise will be conducted in 2015 for $40 million. In addition, the three molecules carry potential milestone liabilities that in aggregate could reach $50 million to $60 million under the most optimistic commercial scenario.

Animal Health Industry Overview

Since 1960, personal consumption expenditures on veterinary and other services for pets have averaged 10.4% (6.4% since 2000) on a nominal basis, according to U.S. government data. This compares with U.S. nominal GDP growth of 6.7%. On an inflation-adjusted basis, vet spending was 6.4% on average, compared with U.S. real GDP growth of 2.7%. Exhibit 5 shows the historical real vet spending growth compared with real GDP. Over the past 50 years, the vet industry has demonstrated remarkably consistent growth in periods of recession as well as economic expansion. Over the course of this analysis, there have been seven years of negative real GDP growth averaging -2.03%. During those same periods, vet spending was only negative twice, with an average annual growth rate of 0.76% (exhibit 7). This resiliency in growth is believed to be partly due to the changing attitude of owners viewing pets as members of their immediate family.

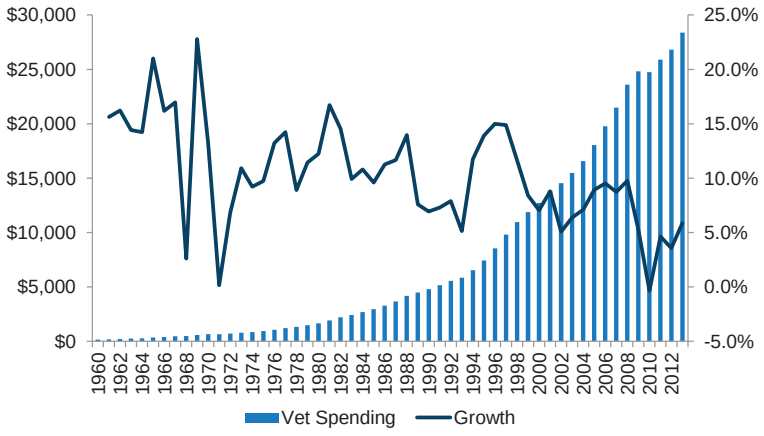
Exhibits 6 and 8 illustrate the economic resiliency in annual vet spending as it has become a larger piece of GDP. Vet spending increased in excess of 10% for 12 of the last 50 years while GDP has never achieved that level of growth. We believe vet spending has been driven primarily by increased spending per pet due to an increasing array of veterinary medical interventions and services available to pet owners. The number of pets in the United States has also increased by roughly 1% annually over this period.

Exhibit 5
Real Veterinary Expenditure Growth Compared With Real GDP Growth



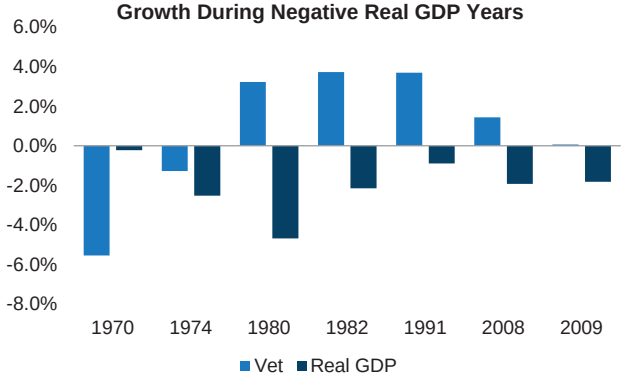
Source: Bureau of Economic Analysis; U.S. Inflation Calculator

Exhibit 6
Real Veterinary Expenditure Growth Compared With Real GDP Growth



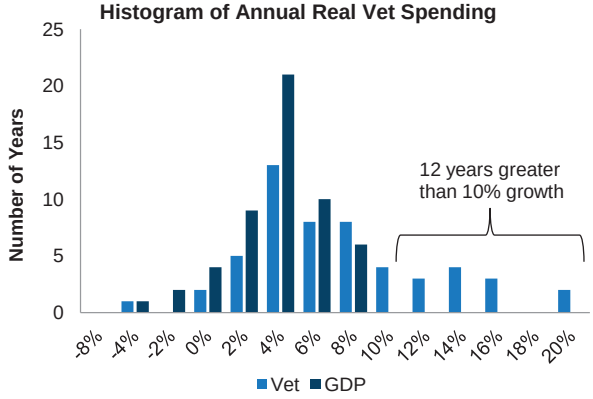
Source: Bureau of Economic Analysis; U.S. Inflation Calculator

Exhibit 7
Aratana Therapeutics
Growth During Negative Real GDP Years



Source: Bureau of Economic Analysis; U.S. Inflation Calculator

Exhibit 8
Aratana Therapeutics
Histogram of Annual Real Vet Spending

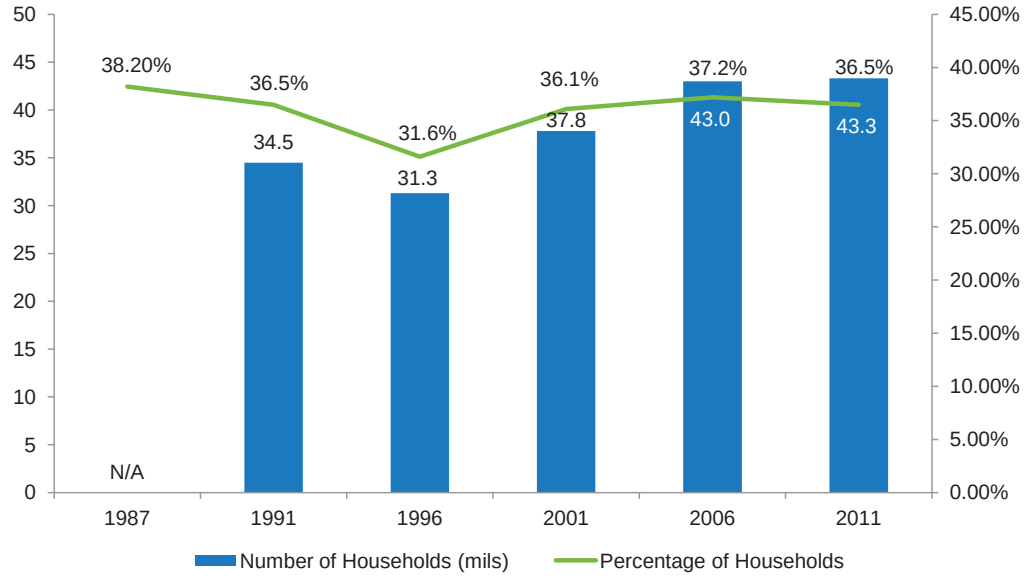


Source: Bureau of Economic Analysis; U.S. Inflation Calculator

By the end of 2013, total U.S. pet expenditures are estimated to exceed $55 billion according to the American Pet Products Association (APPA). If we exclude spending on food and pet acquisition, the market approaches $30 billion. As illustrated in exhibit 14, the pet market has been consistently growing in the midsingle-digit range at a compound annual rate of 5.5%. The APPA segments the pet market into food, supplies/OTC medicine, vet care, live animal purchases, and other; every year, the organization tracks the expenditures in each category and aggregates them to get a total dollar value. Not surprisingly, food represents the largest portion of the market at 38%; however, in recent years, vet care and OTC medicine have seen stronger growth. This bodes well for Aratana, as the company will be a direct beneficiary of increased medical spending, specifically in therapeutics. According to the APPA and our estimates, the current market size of pet therapeutics is $1.6 billion. Although this is considerably lower than the anti-parasite/vaccines segment, we believe pet therapeutic companies like Aratana have an opportunity to generate leading industry growth rates. We believe the pet market, driven in part by the expansion of the vet care segment, will continue to grow and that the introduction of new pet drugs offering significant safety and benefits over existing products will result in pet therapeutics garnering a larger share of consumer spending on pets. Another tailwind that should benefit the pet therapeutics industry is the increasing number of pet owners who feel comfortable treating pet ailments with medicine. According to the APPA, roughly 78% of U.S. dog owners and 47% of cat owners used medication to treat their pet in 2010, compared with 50% and 31%, respectively, in 1998.

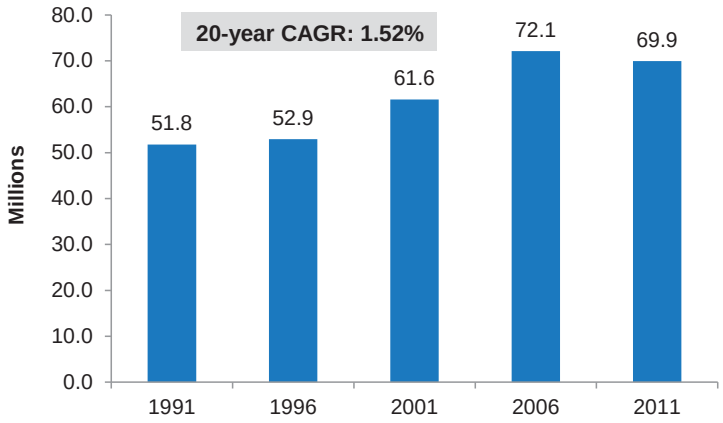
While vet spending overall is resistant to economic downturns, there is some correlation given that pet ownership tends to ebb and flow, based on the broader economic environment (i.e., more households own a pet during prosperous economic periods). As shown in exhibits 9 through 12, dog and cat ownership has been generally stable at about 30% of households for cats and 35% for dogs, though there is some variability as demonstrated by decreased ownership following the recession in 2009. While studies have suggested that the number of visits per pet has declined, the amount spent per visit has increased. According to AVMA, on an annual basis, 45% of households that own a pet spend in excess of $200 annually. Expenditures vary significantly by animal type, ranging from $227 annually on average for dogs ($146 per visit) to $90 annually on average for cats ($122 per visit). Dogs make up an estimated 68% of total veterinary expenditures, followed by cats at 26.3%, as these are the most popular pets and the most likely to receive vet treatment.

Exhibit 9
U.S. Dog Ownership Statistics



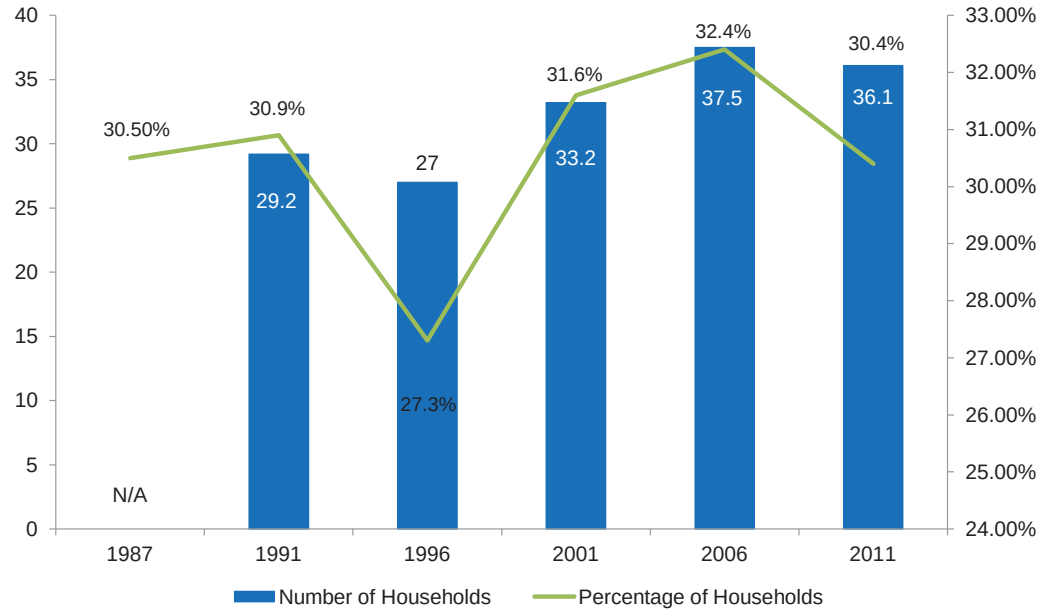
Source: American Veterinary Medical Association

Exhibit 10
Historical U.S Dog Population



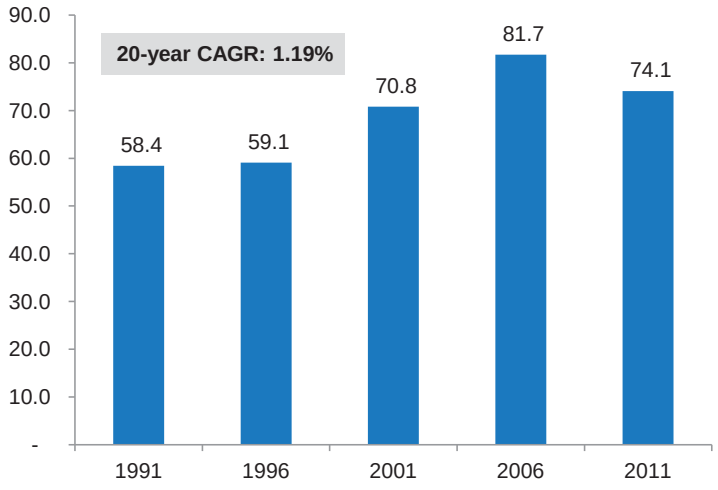
Source: American Veterinary Medical Association

Exhibit 11
U.S. Cat Ownership Statistics



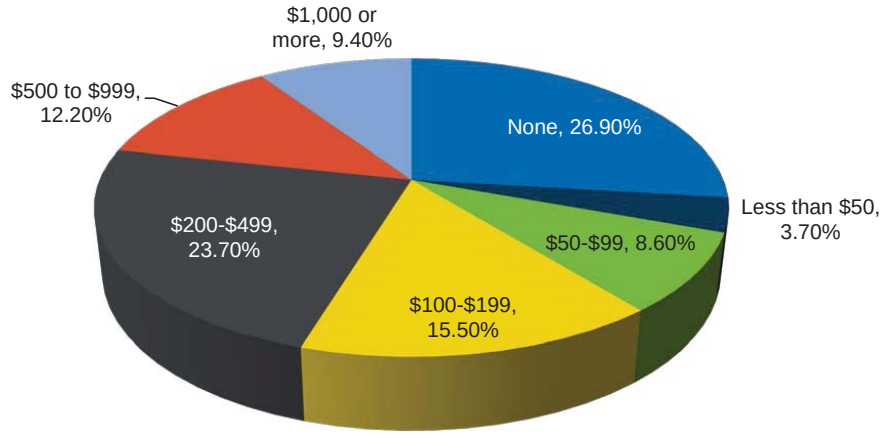
Source: American Veterinary Medical Association

Exhibit 12
Historical U.S Cat Population



Source: American Veterinary Medical Association

Exhibit 13
Distribution of Pet-Owning Households by Veterinary Expenditure, 2011



Source: American Veterinary Medical Association

Interestingly, at 6.6% growth since 2006, total medication expenditures for pets has increased at a faster rate than overall spending, at 5.5%. Over the past two decades (as more therapeutics have been added), AVMA data suggests that the frequency of vet visit spending on drugs and medications has actually declined. Specifically, in 1987, drugs or medications were purchased as part of a given vet visit 42.4% of the time, but as of 2011 that number had declined to 25.3%. We believe this is partly due to the rise of Internet pharmacies, such as PetMed Express and over-the-counter purchases of parasiticides (flea, tick, and heartworm medications) at big-box retailers, but it could also be explained by the improving health of pets overall. As a result, vets have lost a significant driver of patient traffic, and we believe any medication that satisfies an unmet clinical need and is distributed through the vet office would likely receive significant support. In our view, this is a great opportunity for Aratana, as it will be providing new therapeutics for vets to prescribe that will not be distributed online or through big-box retailers.

Exhibit 14

Estimated U.S. Vet Spending by Category

($ in billions)	1994	1996	1998	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E
Food	$6.19	$7.69	$8.47	$10.55	$10.98	$12.12	$12.94	$13.72	$14.63	$15.74	$16.59	17.57	$18.76	$19.85	$20.46
Supplies/OTC Med	3.52	4.38	4.85	6.06	6.34	7.02	7.53	8.01	8.58	9.26	9.80	10.41	10.94	11.77	12.56
Veterinary Care	6.18	7.45	7.95	9.60	9.67	10.33	10.66	10.92	11.23	11.65	11.83	12.05	13.01	13.41	13.59
Live Animal Purchases	0.43	0.58	0.68	0.90	0.99	1.15	1.29	1.43	1.60	1.79	1.96	2.16	2.13	2.14	2.15
Other Services	0.68	0.90	1.06	1.39	1.53	1.78	1.99	2.21	2.46	2.76	3.02	3.32	3.51	3.79	4.11
Total	**$17.00**	**$21.00**	**$23.00**	**$28.50**	**$29.50**	**$32.40**	**$34.40**	**$36.30**	**$38.50**	**$41.20**	**$43.20**	**$45.50**	**$48.35**	**$50.96**	**$52.87**

Year-over-Year Growth	1994	1996*	1998*	2001*	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E
Food		11.4%	4.9%	7.6%	4.1%	10.4%	6.7%	6.1%	6.6%	7.6%	5.4%	5.9%	6.8%	5.8%	3.1%
Supplies/OTC Med		11.7%	5.2%	7.7%	4.5%	10.9%	7.2%	6.5%	7.0%	8.0%	5.8%	6.3%	5.1%	7.6%	6.7%
Veterinary Care		9.8%	3.3%	6.5%	0.7%	6.8%	3.2%	2.5%	2.9%	3.7%	1.5%	1.9%	8.0%	3.1%	1.3%
Live Animal Purchases		15.4%	8.4%	9.8%	10.1%	16.4%	12.2%	11.2%	11.4%	12.2%	9.7%	10.0%	-1.4%	0.5%	0.5%
Other Services		15.2%	8.2%	9.7%	9.9%	16.2%	12.0%	11.0%	11.3%	12.0%	9.6%	9.8%	5.8%	8.0%	8.4%
Total		**11.1%**	**4.7%**	**7.4%**	**3.5%**	**9.8%**	**6.2%**	**5.5%**	**6.1%**	**7.0%**	**4.9%**	**5.3%**	**6.3%**	**5.4%**	**3.7%**

Category as % of Total	1994	1996	1998	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E
Food	36.4%	36.6%	36.8%	37.0%	37.2%	37.4%	37.6%	37.8%	38.0%	38.2%	38.4%	38.6%	38.8%	39.0%	38.7%
Supplies/OTC Med	20.7%	20.9%	21.1%	21.3%	21.5%	21.7%	21.9%	22.1%	22.3%	22.5%	22.7%	22.9%	22.6%	23.1%	23.8%
Veterinary Care	36.4%	35.5%	34.6%	33.7%	32.8%	31.9%	31.0%	30.1%	29.2%	28.3%	27.4%	26.5%	26.9%	26.3%	25.7%
Live Animal Purchases	2.5%	2.7%	2.9%	3.1%	3.3%	3.5%	3.7%	3.9%	4.1%	4.3%	4.5%	4.7%	4.4%	4.2%	4.1%
Other Services	4.0%	4.3%	4.6%	4.9%	5.2%	5.5%	5.8%	6.1%	6.4%	6.7%	7.0%	7.3%	7.3%	7.4%	7.8%

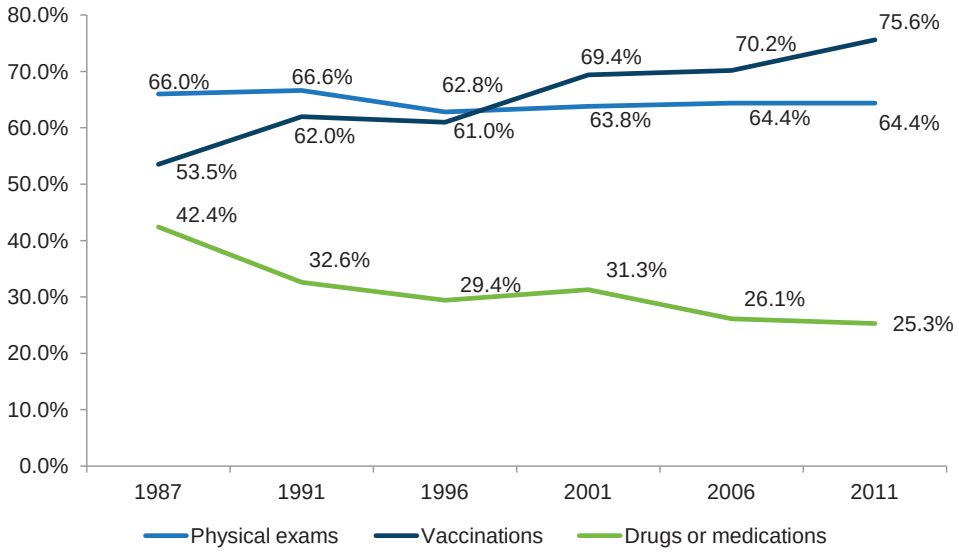
Notes:

* - Growth rates for 1996, 1998, and 2001 represent average annual growth as data for years between these ranges are not available

William Blair estimates (as highlighted in green) were derived from estimated proportion of category to total spending.

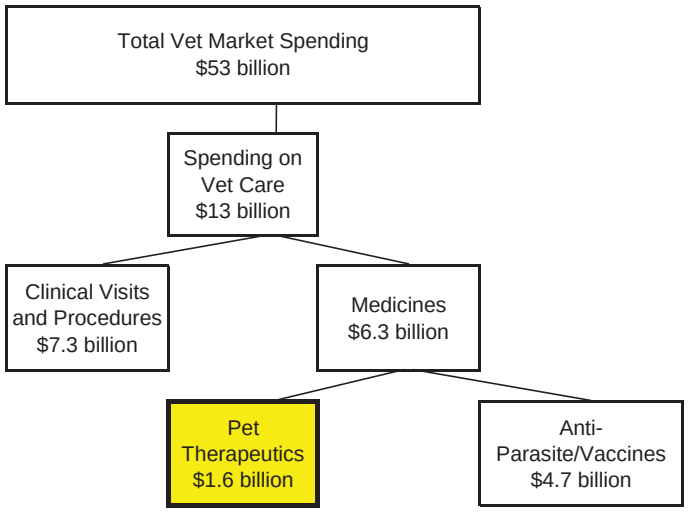
Sources: APPA, Veterinary Practice News, and William Blair & Company, L.L.C. estimates

Exhibit 15
Top Three Services and Products of 2011 Purchased at the Most Recent Veterinary Visit by Dog-Owning Households, 1987-2011



Source: AVMA

Exhibit 16
Pet Therapeutic Market



Source: Company reports

The majority of medications given to pets are parasiticides and drugs originally developed to fight human disease. Given the recent increase in consumer spending on pets, we believe medicine specifically developed for pets can improve the lives of animals and help vets achieve better medical outcomes. This increased efficiency will not only enhance vet practices but also generate an additional revenue stream. Aratana's strategy is to sell directly to veterinarians (and through the leading U.S. distributors, such as Henry Schein, MWI, and Patterson).

Due to the small market size of pet therapeutics (only an estimated $1.6 billion market out of the $55 billion spent on the broader vet market), there are relatively few companies that focus exclusively on therapeutic drug development. Many large pharmaceutical companies have segments focused on animal health, but they are geared primarily toward the larger anti-parasite/vaccine market as well as the production-animal segment. We believe Zoetis, which recently spun out of Pfizer, will be a key competitor to watch given its exclusive focus on animal health (both production and companion), broad product portfolio, commercial infrastructure, and deep financial resources. Other companies that could prove to be formidable competitors for deals are large pharma companies, such as Eli Lilly's Elanco division, Novartis, Bayer, Merial, and Merck, as well as private equity players that could create a similar structure.

Exhibit 17
Aratana Therapeutics
Estimated Revenue For Potential Competitors

	2012 Revenue
Zoetis	$4,336
Merck	$3,399
Merial (Sanofi)	$2,802
Elanco (Eli Lilly)	$2,037
Bayer	$1,676
Boehringer Ingelheim	$1,322
Novartis	$1,000
Virbac	$916
Ceva	$800
Dechra*	$761

*Includes distribution revenue which was recently divested
Sources: FactSet, company reports, and William Blair & Company, L.L.C. estimates

Another key difference between the human and vet therapeutics market is the lack of generic competition. When a generic comes to market, prices do not drop nearly to the levels they do in human healthcare. Oftentimes, branded drugs maintain their market share even after losing patent protection (as has happened with Merial's Heartgard and Zoetis's Rimadyl). If therapeutics becomes a larger portion of vet spending and represents a larger potential opportunity for manufacturers, it is possible that additional players will enter the market, but for now we do not expect a significant increase in the presence of generic products.

Aratana's Pipeline

Aratana Therapeutics is focused on commercializing innovative therapies for pets (directly in the United States and via international partners). The company's strategy is to leverage existing data sets produced by innovative developmental-stage human therapeutics companies for use in the veterinary space through in-licensing. Aratana will then market these therapies through their own sales team domestically and will leverage partners in territories outside of the United States. The company has three molecules in clinical development that represent six products for dogs and cats. Both AT-001 and AT-002 are licensed from RaQualia Pharma Inc., a Japanese spinout from Pfizer, and are in development for the treatment of osteoarthritis pain and for stimulating appetite in dogs and cats, respectively. The company's third compound, AT-003, is licensed from Pacira Pharmaceuticals, Inc., and is being developed for post-operative pain management. Aside from these three initial development projects, management is looking to in-license additional compounds from other partners. We include a summary of Aratana's pipeline in exhibit 18, on the following page.

Exhibit 18
Aratana Therapeutics
Product Pipeline

Product	Licensor	Species	Development Status	Expected Next Step	Potential Launch	Indication
AT-001	RaQualia	Dog	Dose confirmation study ongoing	Pivotal field effectiveness study	2016	Pain and inflammation associated with osteoarthritis
		Cat	Selection of indication	Dose confirmation study	2016-2017	Pain management
AT-002	RaQualia	Dog	Dose confirmation study ongoing	Pivotal field effectiveness study	2016	Stimulation of appetite, small molecule ghrelin agonist
		Cat	Dose confirmation study ongoing	Pivotal field effectiveness study	2016	Stimulation of appetite, small molecule ghrelin agonist
AT-003	Pacira	Dog	Proof-of-concept study ongoing	Dose confirmation study	2016-2017	Post-operative pain management, DepoFoam formulation of bupivacaine
		Cat	Proof-of-concept study ongoing	Dose confirmation study	2016-2017	Post-operative pain management, DepoFoam formulation of bupivacaine

Sources: Company reports and William Blair & Company, L.L.C.

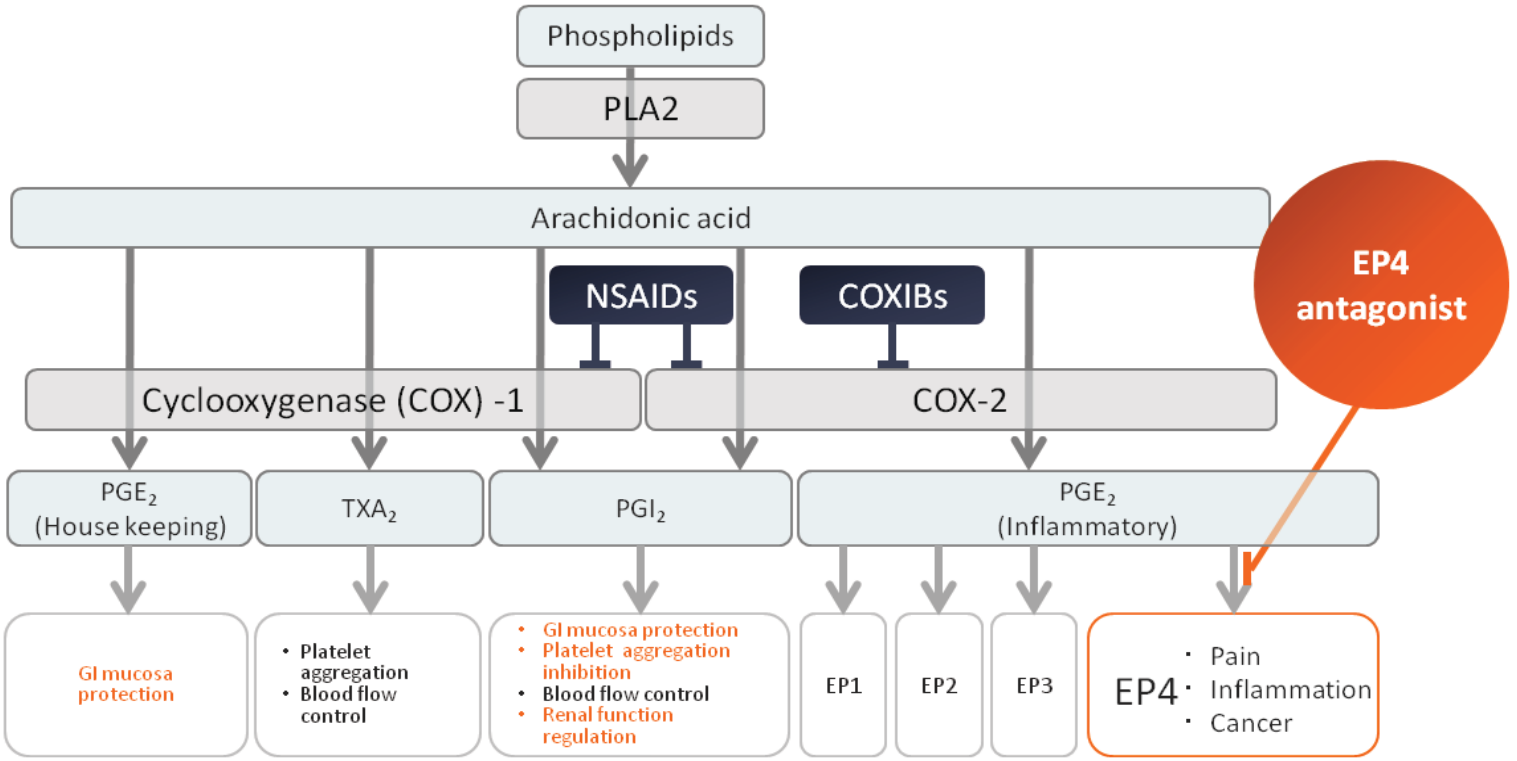
Aratana intends to conduct and complete clinical studies and file a new animal drug application NADA for regulatory approval of all six products over the next two to three years. It expects to gain regulatory approval for the United States in 2015 or 2016 and for the European Union in 2016 or 2017. The company plans to commercialize its products in the United States via a direct salesforce (and distribution partners) and with commercial partners for the rest of the world. Aratana holds worldwide veterinary marketing rights for the three molecules in development.

AT-001 for Pain and Inflammation Associated With Osteoarthritis

Aratana's first compound, AT-001, is a selective EP4 antagonist discovered by Pfizer Inc. and developed by RaQualia Pharma Inc. In 2012 RaQualia reported a positive proof-of-concept study of AT-001 in a Phase IIa trial for the treatment of osteoarthritis related knee pain in humans. The study demonstrated that AT-001 produced equivalent efficacy compared with NSAIDs while maintaining an improved gastrointestinal safety profile. On March 4, 2011, Aratana announced a licensing agreement with RaQualia and received two compounds: AT-001 and AT-002.

AT-001 is different from existing NSAIDs, which inhibit cyclooxygenase (COX-1 and COX-2) in that it is a selective antagonist toward the EP4 receptor. This target is a G-protein-coupled PGE2 receptor generally located on mammalian cell membranes. Preclinical data has suggested that EP4 is the predominant receptor for pain resulting from rheumatoid arthritis, osteoarthritis, and inflammation. In preclinical studies, mice that have been genetically altered not to express the EP4 receptor displayed lower levels of inflammation, incidence, and severity of disease. AT-001 binds to the EP4 receptor exclusively and with high affinity, thus blocking the associated pain and avoiding side effects caused by binding to other receptors such as EP1, EP2, and EP3. Exhibit 19 summarizes the mechanism of action for AT-001 and the respective targets.

Exhibit 19
Aratana Therapeutics
AT-001 Mechanism of Action



Sources: Company reports and William Blair & Company, L.L.C.

Several clinical trials studying AT-001 in humans and animals have been completed, with RaQualia most recently concluding a proof-of-concept Phase IIa trial. The multicenter, randomized, double-blind, and placebo-controlled study was designed so that patients received AT-001, Naproxen (a popular NSAID), or placebo. More than 500 patients received AT-001, and it was found to be well tolerated, producing pain reduction scores similar to Naproxen, and had an improved gastrointestinal safety profile. RaQualia also performed a toxicology and safety study in dogs to support its human drug development. In the proof-of-concept study, 36 dogs were split into four dosing groups and were orally given between 0 mg/kg and 50 mg/kg of AT-001. Side effects observed during this study included loose or bloody stool as well as a decrease in mean serum albumin at higher doses. Otherwise, no important safety observations were noted during the recovery period. Aratana also conducted a small-scale initial proof-of-concept study in dogs with artificially induced arthritis. The results were positive and indicated efficacy, but the study group was too small for Aratana to make any notable claims.

AT-001 is also being evaluated in cats, though only minor laboratory studies have been completed. A 28-day safety study in 24 normal, healthy cats showed that the compound was well tolerated. Another small study showed that under a post-operative setting, there was a transient increase in liver enzymes that might signal a safety concern (but it might also simply be a result of the combination of anesthesia and AT-001).

Aratana is enrolling more than 300 client-owned dogs for a large efficacy and dose confirmation study for the treatment of pain and inflammation associated with osteoarthritis. Patients will be split into four arms consisting of three different treatment regimens and a placebo. The study will be multi-site, randomized, blinded, and placebo controlled. Efficacy will be measured by a scoring system called the canine brief pain inventory, which includes a series of questions for dog owners to determine the severity of the pain and how much deviation there is from the dog's normal routine. This study began in February 2013 and is expected to be complete late this year. Shortly afterward, a pivotal field effectiveness study is expected to be initiated for AT-001. As of now, an appropriate indication for cats is being chosen. Aratana is testing safety in cats and believes that the CVM process would be similar to that for dogs. After an indication is chosen, the next step is to initiate a dose confirmation study.

Osteoarthritis is common among cats and dogs that are at least nine years old, although it is known to occur in younger pets as well. Aratana says that prevalence has on the rise over the past five years, with 13% of all geriatric dogs and 22% of giant-breed dogs diagnosed with arthritis. Analgesic and anti-inflammatory drugs are the only options available on the market to deal with pain from osteoarthritis in cats and dogs. According to Brakke Consulting's pain management products survey, the analgesic market for cats and dogs in 2011 was about $260 million, with sales of NSAIDs (a subset of the total market) exceeding $220 million in the United States. Aratana estimates that the worldwide market for cat-and-dog NSAIDs is more than $450 million. Brakke Consulting also surveyed 233 veterinarians in March 2013 and found that veterinarians recommended NSAIDs for 82% of osteoarthritis patients and that 60% of those actually received treatment. Market Dynamics Inc. found that 4 million dogs per year receive an average of 20 days of NSAID treatment. Assuming all milestones are achieved on schedule with successful results, Aratana could achieve NADA approval in the United States for pain and inflammation resulting from osteoarthritis by 2016 as well as European regulatory approval in 2017 for both cats and dogs.

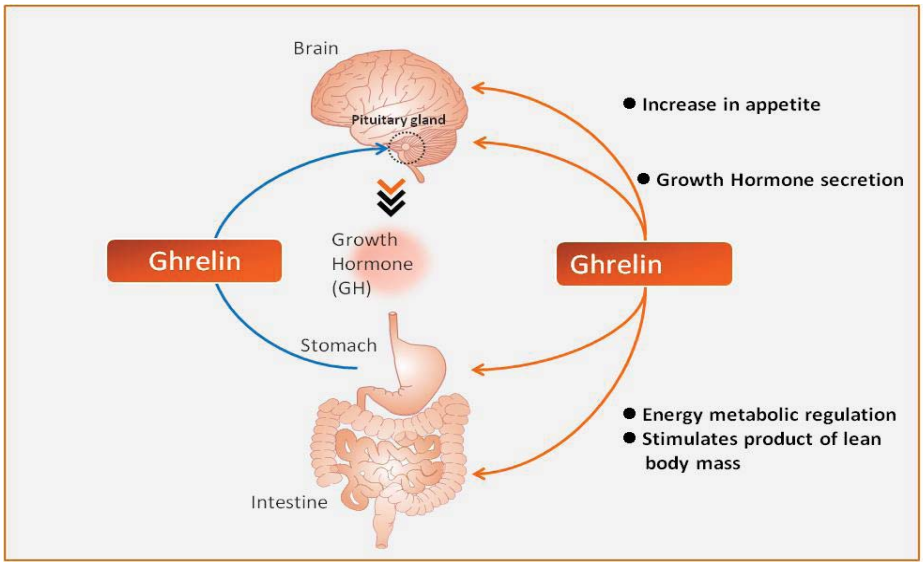
We anticipate approval of AT-001 in 2016 with sales of $9 million ramping up to $57 million by 2020. Launches are always difficult to estimate, especially prior to the approval of a label; our 2020 estimate is based on a $1 per day treatment price, a treatment duration of 260 days (assuming chronic therapy use, with a discount for noncompliance), a 20% gross-to-net assumption, and more than 270,000 dogs and cats being treated in 2020.

AT-002 for Stimulation of Appetite

Aratana's second drug, AT-002, is a potent and selective ghrelin agonist. The formulation is an oral once-a-day small molecule taken in a flavored liquid format that is being clinically developed to stimulate appetite in cats and dogs. Originally discovered by Pfizer, AT-002 completed Phase I and II trials for treatment of frailty, congestive heart failure, and fibromyalgia in humans. The compound was found to be generally safe for humans and displayed side effects of weight gain and increased appetite. The entire program was transferred to Pfizer's spinout, RaQualia, which in turn licensed AT-002 to Aratana. The company is continuing a dose confirmation study for appetite stimulation in dogs and cats.

Ghrelin is a 28-amino-acid peptide typically produced in the stomach and is also colloquially known as the hunger hormone. Ghrelin binds the growth hormone secretagogue receptor, or GHS-R, and causes an increase in appetite by affecting signaling and hormone interactions in the hypothalamus, creating the perceived feeling of hunger. Ghrelin is also able to elicit growth hormone secretion by binding to receptors in the pituitary gland and regulating gastrointestinal mobility and energy balance. Exhibit 20 summarizes the ghrelin mechanism and its effects.

Exhibit 20
Aratana Therapeutics
AT-002 Mechanism of Action



Sources: Company reports and William Blair & Company, L.L.C.

The market opportunity for AT-002 is based on the idea that pets cannot be rationalized into maintaining a healthy food intake, resulting in malnutrition due to poor appetite. To treat lack of appetite in cats and dogs, veterinarians initially recommend a change in diet to highly palatable food options, which are often supported by fluids and electrolytes, as well as treatment of the underlying cause of the inappetence. In long-term cases, hospitalization and the use of a feeding tube might be necessary. There are no medically approved therapeutics on the market to treat inappetence in dogs and cats. This forces veterinarians to turn to unapproved human drugs with limited efficacy and functionality, such as benzodiazepines, cyproheptadine, and mirtazapine, which affect the central nervous system's control of feeding. We include a list of therapies used by veterinarians for the treatment of inappetence in exhibit 21, on the following page.

Exhibit 21
Aratana Therapeutics, Inc.
Therapies Currently Used to Treat Inappetence in Cats and Dogs

Treatment	Administration	Class	Drawback
Benzodiazepines	Oral	NSAID	Approved but not for more than three days of use
Cyproheptadine	Injectable	NSAID	Approved for one injection only
Mirtazapine	Oral	NSAID	Only approved for use in dogs
Buprenorphine	Injectable	Opioid	Effective although holds abuse potential, not approved by CVM

Sources: Company reports and William Blair & Company, L.L.C.

There are many reasons for a dog or cat to lose appetite, including fear, pain, trauma, disease, age, oral and dental problems, and cancer. Cancer is of particular interest, as 2.1% of dogs are diagnosed with cancer each year and 58% of those receive chemotherapy. According to Aratana's market research, 30% of dogs who receive chemotherapy will also suffer from inappetence. Another potentially important source of patients are cats with inappetence due to chronic renal failure. Aratana estimates that 1.6% of cats in the United States have chronic renal failure and of those, 30% have lower appetites. For these reasons, we believe that there is a significant market opportunity for AT-002, especially considering the lack of approved therapies.

A toxicology study for early development of the compound in humans was conducted to support an investigational new drug application and focused on safety. The study was conducted on male and female dogs, and therefore Aratana intends to use data from this 12-month study to prove safety in dogs once they file AT-002 for regulatory approval. In this study, AT-002 was administered to 32 dogs in four different dosage groups ranging from 0-40 mg/kg. All patients were observed closely with a wide variety of parameters at the end of the study. Side effects observed include intermittent loose stools and occasional vomiting. One dog was observed to lose muscle control and coordination and one died from accidentally ingesting the drug into the respiratory system. There were a few treatment-related changes at high doses such as an increase of serum alkaline phosphatase, an increase in cholesterol and HDL associated with accelerated lipolysis. Aratana believes that based on this information, AT-002 was well tolerated in dogs. Prior to the license agreement, several studies were run to determine efficacy in dogs. These were found to show an increase in food intake and body weight. Aratana conducted their own seven-day placebo-controlled and blinded dosing study and confirmed the results.

Aratana and the CVM have already agreed on pivotal data requirements. Aratana plans to begin the pivotal effectiveness test for dogs in the second half of 2013. Once complete they will submit the data along with the 12-month GLP toxicology study and a pharmacokinetic bridge study. If successful, we expect NADA approval for treatment of dogs by the end of 2015 or early 2016. Aratana believes that approval in the United States will largely satisfy European Medicines Agency (EMA) requirements and expects approval in Europe in 2017 or 2018.

When Aratana licensed AT-002, the company received data from a two-week safety study in cats, along with a model of the kidney. They found that the compound was well tolerated and believe that it has a safety profile that supports a pivotal trial initiation. Prior trials in cats showed weight and food intake increased. Aratana confirmed these results with a 10-day study. They are concluding a dosing study in client-owned cats, as opposed to laboratory cats and expect results later this year. Aratana expects chemistry, manufacturing, and controls (CMC) for AT-002 to be similar to the one for dogs and plans to present to the CVM in cats later in 2013. Assuming all milestones are completed, Aratana anticipates filing for approval at the beginning of 2016.

We anticipate approval of AT-002 in 2016, with sales of $11 million, ramping to $70 million by 2020. While launches are always difficult to estimate, especially prior to the approval of a label, our 2020 estimate is based on a $1 per day treatment price, a treatment duration of 250 days (assuming chronic therapy use, with what looks like an improved tolerability, and motivated owners), a 20% gross to net assumption, and over 284,000 dogs and cats being treated in 2020.

AT-003 for Post-Operative Pain

Aratana's third product in development, AT-003, is in dose confirmation studies in dogs and cats, for post-operative pain management. AT-003 is a 1.3% bupivacaine liposome injectable suspension, which is already approved for use in humans in the same indication and is marketed by Pacira, the licensee of AT-003. Pacira Pharmaceuticals develops the liposomal technology employed in the bupivacaine-based product, which is marketed as Exparel.

Liposomes are microscopic structures consisting of a phospholipid bilayer, a structure commonly found within mammals, forming the composition of cell membranes and proteins. This liposomal matrix is a honeycomb-like structure holding bupivacaine in small vesicles of water and drug, which are released as the liposomal structure degrades. This delayed release occurs as the liposomal pockets allow for a significantly longer duration of effect than the backbone anesthetic compound. In the human clinical studies of Exparel the treatment effect was observed 96 hours following a surgical procedure. This contrasts the normal half-life of bupivacaine, which according to the package insert for 0.5% mg/mL injection suggests a half-life of 2.7 hours. We include the differences between Exagel (1.3% bupivacaine liposome bupivacaine injection) and 0.5% mg bupivacaine/mL injection in exhibit 22.

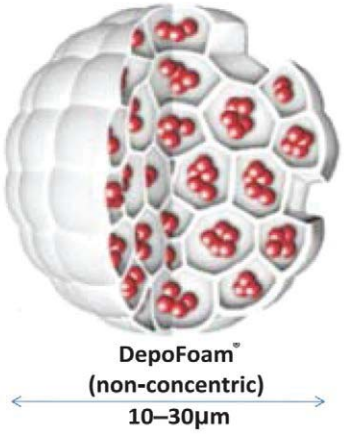
Exhibit 22
Aratana Therapeutics, Inc.
Therapies for Post-operative Pain

Compound	Formulation	Duration of Effect
Bupivacaine	0.5% mg/mL injection	Half life of 2.7 hours
Exparel	1.3% bupivacaine liposome injection	Efficacy three days following dosing

Sources: Company reports and William Blair & Company, L.L.C.

The liposomal matrix (which forms AT-003 and the human formulation Exagel) is derived from natural, well-tolerated sources and cleared by normal metabolic pathways. Accordingly, there is reduced risk for immune reactions and other toxicities that might arise in the development of similar products. Exhibit 23 shows a schematic of AT-003 and the liposomal matrix that comprises the bupivacaine delivery vehicle.

Exhibit 23
Aratana Therapeutics, Inc.
Cross-Sectional Diagram of AT-003: A Liposome-Encapsulated Bupivacaine



Source: Pacira website

In the case of AT-003, the analgesic bupivacaine is used as a local and systemic anesthetic. Bupivacaine acts through binding to the inner side of sodium channels within nerve cells, thereby inactivating pain signaling. Pacira Pharmaceuticals developed its liposomal bupivacaine in a foam-based vehicle, branded DepoFoam. This was approved by the FDA for use in post-surgical pain in 2011 and is marketed as Exparel.

Target customers for AT-003 will be veterinarians who perform surgeries on companion animals. Similar to the market for novel non-opioid pain therapies for humans, the analogous veterinarian market in the United States is large. Aratana management estimates that veterinarians perform roughly 19 million dog surgeries and 14 million cat surgeries each year. Of these, roughly 50% of dog surgeries and 58% of cat surgeries are spays and neuters. Other common surgeries performed by veterinarians include those for cancer, declawing, cruciate ruptures, and fractures. There are currently no standards in the veterinary market for treating pain in the post-surgical setting; veterinarian preference and animal pain tolerance typically guide the use of pain relievers.

AT-003 will compete with other pain relievers commonly used in this setting, including NSAIDs from the COX inhibitor class and injectable anesthetics, such as unapproved bupivacaine or the more powerful opioid therapies. The only therapies approved by the FDA for post-surgical veterinary pain include the COX inhibitors and the powerful opioid fentanyl, which is normally prescribed in patch form. However, similar to the human market, the COX inhibitors are normally viewed as weak analgesics. While opioids are often viewed as effective, veterinarians have become increasingly risk-averse given drug-seeker abuse issues. There are currently two NSAIDs approved by the CVM for use in post-operative pain. We believe both have their respective issues that make them less-than-ideal therapies for this setting. In general, given the gastrointestinal and hepatic side effects normally observed with the use of NSAIDs in both the human and veterinary settings, costly monitoring is often suggested with this class of therapies, making their profiles less than ideal for post-operative pain. The use of buprenorphine, a partial opioid antagonist, is also prescribed in this setting; however, this drug is not approved by the CVM. With the drug being an opioid, the concerns with diversion apply to the therapy's use in this setting.

Exhibit 24
Aratana Therapeutics, Inc.
Therapies for Post-operative Pain

Compound	Administration	Class	Drawback
Onsior	Oral	NSAID	Approved but not for more than three days of use
Metacam	Injectable	NSAID	Approved for one injection only
Rimadyl	Oral	NSAID	Only approved for use in dogs
Buprenorphine	Injectable	Opioid	Effective although holds abuse potential, not approved by CVM

Sources: Company reports and William Blair & Company, L.L.C.

In line with the general strategy at Aratana, when the company licensed AT-003 from Pacira in December 2012, the developer had already conducted significant clinical work in animals. Aratana will use this data to expedite the development of AT-003 for the veterinary setting. Both the liposome formulation and the bupivacaine-formulated product underwent extensive in vitro and in vivo safety testing, which included studies performed on laboratory dogs. In total, Aratana brought in AT-003 with seven studies that management will leverage for the eventual regulatory filing.

The most robust of the studies performed by the innovator company enrolled 60 dogs allotted to five groups of six male and six female dogs. Three of these groups were treated twice weekly with Exparel at different dose levels, one group with bupivacaine hydrochloride injection and one group with normal saline solution. After four weeks of dosing, three male and three female dogs were maintained for a 28-day recovery period. Extensive clinical work was conducted on the animals during the dosing period, including electrocardiograms and urinalysis; researchers also looked for

signs of hematology and serum chemistry abnormalities. Following this period, all animals were sacrificed, after which researchers recorded organ weights and examined tissues. Following this study, only injection-site reactions were observed in the Exparel treatment group, a known effect of the liposomal vehicle. To date, no efficacy data has been performed in the veterinary setting, although we believe results observed to date in humans have been robust.

Exhibit 25
Aratana Therapeutics, Inc.
Human Experience With Exparel

Surgical Intervention	Design	Efficacy
Bunionectomy	193 patients, multicenter, randomized, double-blind, placebo-controlled, parallel-group study	Signifcant reduction in pain intensity score over first 24-hour period, not over 24-72 hours
Hemorrhoidectomy	189 patients, multicenter, randomized, double-blind, placebo-controlled, parrallel-group study	Significant reduction in pain intensity score over first 24-hour period, with minimal to no difference in pain scores; periods 24-72 hours, however, showed reduced opioid consumption

Source: Exparel label

The next steps for Aratana include the conclusion of the dose confirmation studies in both cats and dogs, followed by the initiation of pivotal trials in both species, which we believe will occur in 2014. After a dose regimen is established, Aratana will submit to the CVM pivotal study protocols to demonstrate the efficacy of AT-003 in cats and dogs. The company anticipates a filing of the AT-003 NADA for both cats and dogs in 2015; assuming a positive regulatory review, the company could receive approval of its NADA in 2016 or 2017, with approval from the European Medicines Agency roughly one year later. Under the terms of the agreement, Aratana will pay Pacira a royalty based on end-user sales of AT-003. Though unspecified, we model as a 20% royalty payment to Pacira, which we believe is a close approximation.

Key Management

Aratana was founded by **President and CEO Steven St. Peter, M.D.,** to focus on the market for unmet pet medical needs. Although this is a relatively untapped market, Aratana believes it presents an opportunity to develop medications for pets not only to improve an animal's quality of life, but also to help veterinarians become more efficient and run better practices. To successfully execute its plan, Aratana brought together industry leaders, including vets, other physicians, scientists, and marketing professionals with more than 100 years of combined industry experience.

Aratana's chief competitive advantage lies in the idea that its leadership team has a better understanding of how to develop and commercialize animal health products given their experience. For example, **Dr. Linda Rhodes, chief scientific officer,** has more than 30 years of experience in the clinical research and development of animal drugs. She was also the co-founder of AlcheraBio LLC; a CRO focused on the discovery and development of new technology for animal health. Ms. Rhodes's leadership and experience bringing animal drugs from their early stages to registration will be critical to Aratana's success. Another influential member of the executive team is **Julia Stephanus, chief commercial officer.** She has more than 25 years of animal health marketing experience and is well known for her development and launch of Vectra, which is expected to become a $100 million-plus brand. Ms. Stephanus was also responsible for the promotion of 22 animal health products, including Zoetis's Rimadyl and Revolution.

Lastly, **Dr. Ernst Heinen, head of drug evaluation and development,** will be instrumental in Aratana's goal of uncovering more than 20 therapeutic areas that overlap with human biopharma development. With 22 years of experience, his most notable accomplishment is helping Bayer

Animal Health deliver consistent double-digit growth. In our view, this management team is as well equipped as any to find and efficiently develop and market a basket of novel therapeutics in the animal health industry.

Exhibit 26
Aratana Therapeutics, Inc.
Management Biographies

Name	Position	Previous Experience	Comments
Steven St. Peter, M.D.	Founder, President, and CEO	Managing Director at MPM Capital	Led MPM's investment in Aratana
Louise A. Mawhinney	Chief Financial Officer	Senior Vice President, President, and CFO of Ikonisys, a molecular diagnostics company	15 years' experience as CFO of various companies, including experience overseeing the IPO process
Julia A. Stephanus	Chief Commercial Officer	Director of Companion Animal Franchise at Ceva Animal Health; Pfizer	25 years' experience in animal health marketing and development; founder of Summit VetPharma; responsible for the launch of several blockbuster products, including Vectra and Rimadyl
Linda Rhodes, VMD, Ph.D.	Chief Scientific Officer	Co-founder of AlcheraBio LLC, an animal health CRO; Merial	30 years' experience in product development including experience at Merial and Merck
Ernst Heinen, DVM, Ph.D.	Head of Drug Evaluation and Development	Bayer Animal Health	22 years' experience in product research and development

Source: Company reports

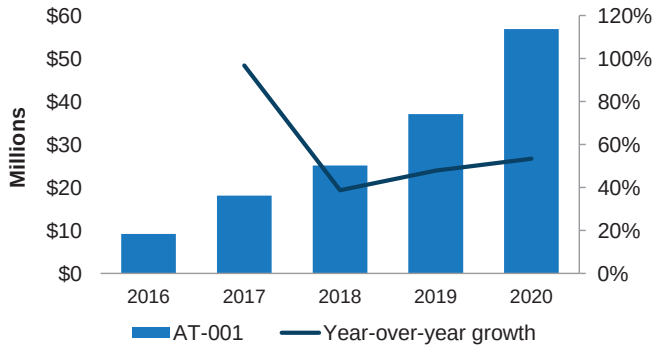
Financials

Revenue Model

Since 2010, Aratana has licensed three compounds (AT-001, AT-002, and AT-003), which are undergoing clinical studies. Because they are still in the early stages of development, we do not expect Aratana to generate any revenue until they get regulatory approval to commercialize at least one of their six products. We estimate this process could take up to three years. As we await further clinical evidence for 001, 002, and 003, we made a number of assumptions to develop our revenue and income model.

- ***AT-001*** is being developed for the treatment of pain and inflammation for cats and dogs diagnosed with osteoarthritis, the most-common inflammatory joint disease in pets. We estimate there are currently 78 million dogs and 86 million cats in the United States, with roughly 10 percent of each suffering from osteoarthritis. We assume drug penetration rates for dogs will accelerate from 0.13% to 1.3% from 2016 to 2020. This would imply 101,000 dogs would be receiving treatment by 2020, generating net sales of $21.1 million (assuming an annual therapy cost of $260 per pet). For cats, we assume drug penetration rates will accelerate from 0.42% in 2016 to 2.0% in 2020 (we assume a faster ramp in cats, due to the lack of a good alternative today). This would generate $35.8 million in net sales, treating 172,000 cats by 2020 at an average annual therapy cost of $260 per pet. Our model assumes an 80% gross profit margin for AT-001.

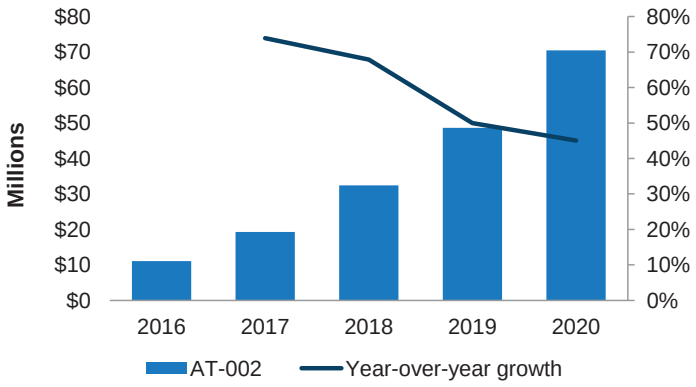
Exhibit 27
Aratana Therapeutics, Inc.
AT-001 Net Sales and Year-Over-Year Growth



Sources: Company reports and William Blair & Company, L.L.C. estimates

- ***AT-002*** is being tested for the stimulation of appetite. It is believed that cancer is the leading cause of inappetence and associated malnutrition in pets. We estimate that 2% of dogs currently suffer from cancer and 1.6% of cats suffer from renal disease. Our model assumes drug penetration rates in dogs will grow from 2.25% of the dogs with cancer in 2016 to 13.95% in 2020. This would translate into 229,000 dogs treated annually by 2020 and generate $45.7 million in net revenue at an average annual therapy cost of $250 per pet. Penetration rates for cats are considerably lower, growing from 1.3% of cats with renal failure in 2016 to 9.0% in 2020, generating net revenue in 2020 of $24.7 million (assuming an average annual therapy cost of $250 per pet). Our model assumes an 80% gross profit margin for AT-002.

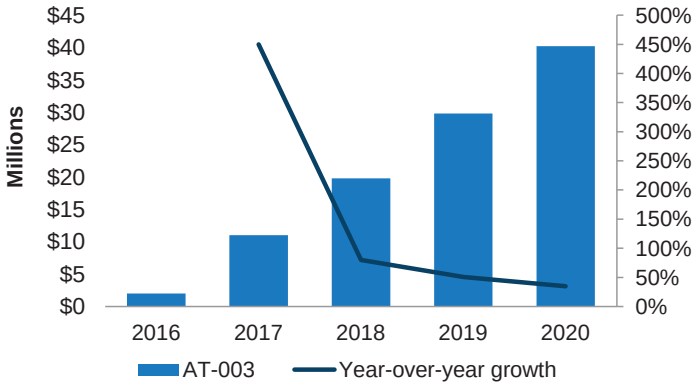
Exhibit 28
Aratana Therapeutics, Inc.
AT-002 Net Sales and Year-Over-Year Growth



Sources: Company reports and William Blair & Company, L.L.C. estimates

- ***AT-003*** is an injectable analgesic being tested for the reduction of post-surgical pain. It is estimated that vets perform around 19 million surgeries on dogs and 14 million surgeries on cats each year, with the majority being spays and neuters. We assume 19,000 dogs at a 0.10% penetration rate in 2016 will grow to 380,000 at 2% in 2020, generating $15.2 million in net sales (assuming an average cost per therapy of $50). We anticipate penetration rates for cats are considerably higher, growing from 0.60% in 2016 to 4.5% in 2020, generating net sales of $25.0 million (assuming average cost per therapy of $50). Our model assumes 70% gross profit margin for AT-003 given the larger royalty to Pacira.

Exhibit 29
Aratana Therapeutics, Inc.
AT-003 Net Sales and Year-Over-Year Growth



Sources: Company reports and William Blair & Company, L.L.C. estimates

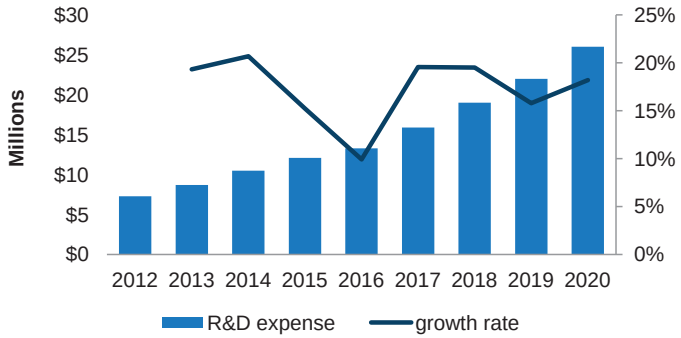
Operating Expenses

For the past three years, Aratana has been generating expanding operating losses as it builds its infrastructure and ramps up R&D spend on their pipeline. We assume these losses will continue and expand until product sales commence in 2016.

Research-and-Development Expense

We estimate steady increases in R&D spend through 2020 at a CAGR of 15%. Importantly, this increase assumes the company will be working on a growing portfolio of new drugs, since most of the spending related to the current molecules (AT-001, AT-002, and AT-003) will be done by 2015 or 2016. Management estimates each product will take roughly $6 million to $8 million to develop to the point of NADA or $36 million to $48 million in aggregate for the whole portfolio. In contrast, our cumulative R&D spending from 2012 to 2020 is $130 million. In this respect, we view our Aratana model as quite conservative, given no assumed revenues resulting from this R&D spending on future new products.

Exhibit 30
Aratana Therapeutics, Inc.
Annual R&D Expense and Growth Rate



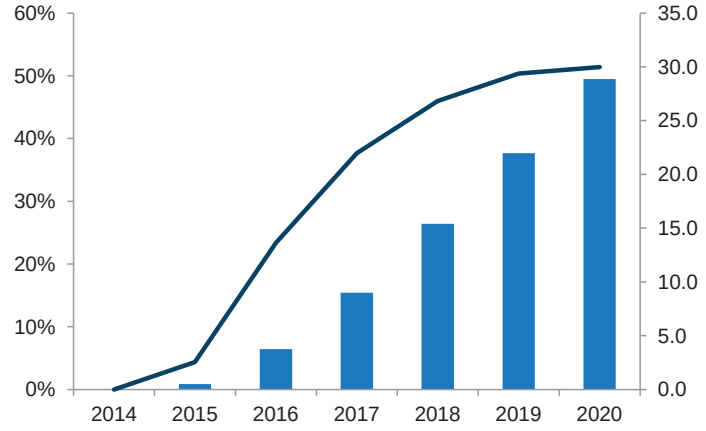
Sources: Company reports and William Blair & Company, L.L.C. estimates

Selling, General, and Administrative Expense

We assume general-and-administrative expenses should increase roughly $200,000 per quarter as Aratana expands operations. We expect Aratana will start to build its salesforce by 2015 in anticipation of approvals for AT-001, AT-002, and AT-003 in 2016. Exhibit 32 shows our yearly salesforce

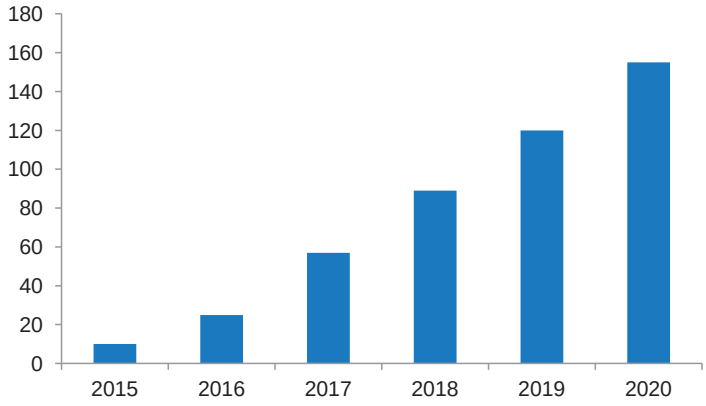
growth forecasts from 10 reps in 2015 to 155 reps by 2020. Exhibit 31 shows the percentage of rep costs as it relates to total SG&A. It starts to taper off around 50% in 2020, accounting for roughly $30 million. We estimate the total cost associated with each sales rep to be $200,000 a year.

Exhibit 31
Aratana Therapeutics, Inc.
Salesforce Cost as Percentage of Total SG&A



Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 32
Aratana Therapeutics, Inc.
Yearly Salesforce



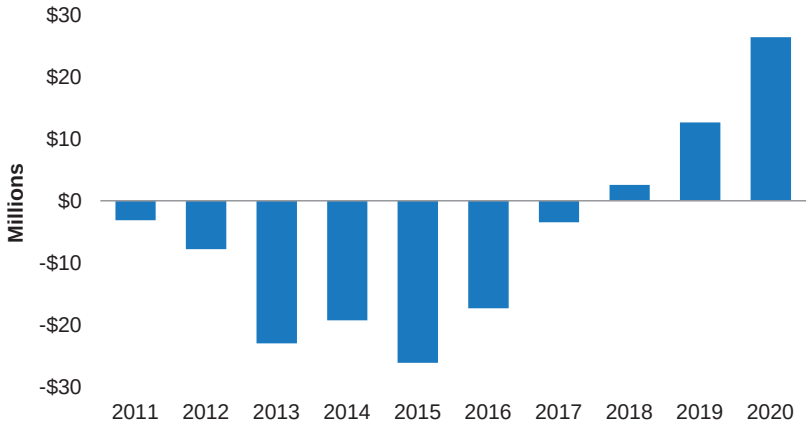
Sources: Company reports and William Blair & Company, L.L.C. estimates

Balance Sheet and Cash Flow

Since 2010, the majority of Aratana's resources have been devoted to the development of three compounds. The amount of time it takes to complete the development stage and gain regulatory approval requires a certain level of liquidity that must be maintained. Based on Aratana's balance sheet post IPO, the company has net cash of $55 million and a quarterly cash burn rate of $3 million to $6 million through the end of 2014, by our estimates. Thus, assuming no other in-licensing deals or European partnerships, we believe the company now has financing to operate through 2015. Exhibit 33, on the following page, shows the company's annual cash burn as we model it, and exhibit 34 shows the resulting year-end cash position, assuming one additional round of financing in 2015 of $40 million.

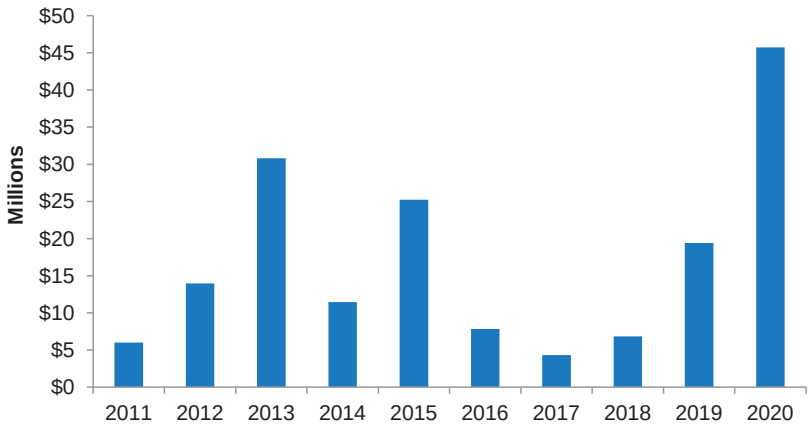
While the details of the potential milestone payments associated with the current portfolio of products are not available, we know they are made up of a combination of regulatory and commercial milestones that likely will not become material until late phase trials are completed (probably not before late 2014 and 2015). We would assume that the largest portion of these milestones are related to the commercial success of the product and therefore would not be likely to be incurred as cash expenses until 2016 or later. Due to the uncertain timing of these potential outflows, we do not include milestone expenses in our earnings or cash flow model.

Exhibit 33
Aratana Therapeutics, Inc.
Annual Operating Cash Flow



Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 34
Aratana Therapeutics, Inc.
Annual Cash Balance



Sources: Company reports and William Blair & Company, L.L.C. estimates

As is summarized in exhibit 39, in aggregate we assume Aratana will begin generating revenue from AT-001, AT-002 and AT-003 in 2016, reaching $26 million on the top line that year. We model revenue to ramp to $183 million by 2020, assuming all 3 of these molecules are successful but no other products are added to the portfolio.

We assume overall gross margin on the portfolio trends just below 80% (a blended average of 80% for -001 and -002, and 70% for -003). We assume both R&D and SG&A will continue to grow, but at a decelerating pace once the approval applications are complete and the salesforce has been established. If this scenario plays out, we model the company will break into profitability by 2017 with an operating margin of 4% and EPS of $0.09, ramping to 35% EBIT by 2020 and EPS of $1.64.

Looking at the sensitivity of key assumptions, by 2020, every $20 million in incremental revenues translate into $0.18 in annual EPS, holding our margin assumptions constant. Similarly, every 200 basis points in EBIT margin translate into $0.09 in incremental annual EPS by 2020, holding our revenue assumptions constant.

Valuation

We have used two different valuation methodologies for Aratana; a net present value (NPV) calculation of the company's three development programs, and an EPS multiple-based approach, discounting 2020 earnings to 2014 and comparing it to veterinarian and specialty pharma peers. While we are not formally placing a price target on shares of Aratana, both valuation exercises suggest 12-month upside potential to increase to the midteens per share from roughly $10 today.

For our NPV analysis we assume peak-year sales of between $50 million and $100 million for AT-001, AT-002, and AT-003 (combining dog and cat sales), given the success of previously launched products by Aratana's management. For our NPV analysis, we assume the launch of all three products by 2016 and estimate revenue for the company of $24.8 million in 2016, ramping to $183 million in 2020. Using a 10% discount rate, EBIT margins that should reach 35% by 2020, and a terminal growth of 5% suggest a reasonable value of approximately $312 million twelve months from now including cash, or roughly $14.60 per share. We outline our NPV assumptions in exhibit 35, on the following page.

We also calculated several multiple-based valuation metrics for Aratana shares using a range of forward earnings multiples between 23 and 25 times and discount rates ranging from 10% to 25%. This calculation results in a value of between $13 per share on the low end (using a 23-times EPS multiple and a 20% discount rate) and $18 on the high end (using a 25-times EPS multiple and a 15% discount rate). We include this matrix for various multiples and discount rates in exhibit 36, on page 31. While we acknowledge the somewhat arbitrary nature of choosing 2020 EPS as a basis for valuation, we do not estimate Aratana will generate positive earnings until 2017 and view 2020, with an estimated operating margin of 35%, as the first year in which the company will report mature 30%-plus operating margins.

Exhibit 35
Aratana Therapeutics, Inc.
Net Present Value of Estimated Cash Flows: 12-Month Outlook

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Stage of Development	Clinical	Clinical	Clinical	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market
Total Cost	15	20	24	31.94	38	65	85	109	119	130	135	139	144	147	150
Revenue	-	0	0	25	53	85	127	183	221	266	279	293	307	314	320
Effective Tax Rate	0%	0%	0%	0%	8%	36%	36%	36%	36%	36%	36%	36%	36%	36%	36%
Net Cash Flow	(15)	(20)	(24)	(7)	14	13	27	47	65	86	92	98	105	107	109
NPV of Cash Flows	(16)	(19)	(21)	(6)	10	8	16	26	33	40	38	37	36	34	31

all numbers in millions of dollars

NPV ($ Million)	$280.5
NPV (Per Share)	$13.19
Cash Following IPO (M)	$31
NPV+Cash	**$ 14.64**

Source: William Blair & Company, L.L.C. estimates

Exhibit 36
Aratana Therapeutics, Inc.
Valuation on 2020 EPS

	Earnings Multiples							
Discount Rate	20	21	22	23	24	25	26	27
10%	$19	$19	$20	$21	$22	$23	$24	$25
15%	$14	$15	$16	$16	$17	$18	$18	$19
20%	$11	$12	$12	$13	$13	$14	$14	$15
25%	$9	$9	$9	$10	$10	$11	$11	$12

Source: William Blair & Company, L.L.C. estimates

As Aratana spans the veterinary and development-stage therapeutics space, we include valuations from comparable companies spanning both industries in exhibit 37, on the following page. For the selection of therapeutics companies we include development-stage specialty pharmaceutical companies focused on pain management as well as more mature cash flow positive specialty pharmaceutical companies focused on in-licensing, such as Salix Pharmaceuticals.

We recently initiated coverage of Aratana with an Outperform rating, based on the company's $160 million enterprise value (and $200 million market cap) for six product candidates in place and a unique capital-efficient business model. In general, we believe a development-stage human therapeutics company holds significantly more risk given the strict nature of the FDA and the high level of competition. Aratana, in contrast, appears to be an early mover with the strategy to leverage existing human therapeutic candidates into underserved companion-animal niches. We view the return potential as compelling and believe the business model and management's experience provide strong odds of success over the coming three to five years.

Conclusion

In summary, we believe that while Aratana is still early in its life cycle, it has assembled an impressive management team of industry leaders and secured worldwide rights to three molecules that, if effective, could produce six marketed products by 2016 and profitability by 2017. We are believers in the investability of the animal health space, as it has persistently outgrown the U.S. economy, has been more resistant to economic cycles, and is immune to reimbursement risk. We believe Aratana's strategy for approaching the market is compelling, as in comparison to human therapeutics, drug development for pets is typically faster and costs much less money; further, the failure rate appears substantially lower. While a blockbuster product in animal health is perhaps $100 million rather than $1 billion or more in human health, the end-of-cycle pressure from generics is also much less intense, allowing for the creation of a portfolio of many products, each generating a small revenue stream with a long tail. Therefore, while Aratana's product pipeline still holds development risk, we believe the company has a clear path to profitability with relatively low capital requirements over the coming three to five years if the pipeline proves successful. As a result, we rate the company Outperform.

Exhibit 37
Aratana Therapeutics, Inc.
Comparative Valuation Summary

Company	Rating / Profile	7/22/2013 Price	% Chg YTD	Market Cap.	Ent. Value	Calendar Year EPS 2013(E)	Calendar Year EPS 2014(E)	P/E Ratio '13(E)	P/E Ratio '14(E)	EV/EBITDA '14(E)	EV/Sales '14(E)	3 Yr Est Growth Rate	2013 P/E to Growth	FCF yield '13 (E)	DVD yield (ann.)	Last Quarter Actual Growth Rate Rev	Last Quarter Actual Growth Rate EPS	Last Quarter Actual EBIT Margin
Aratana Therapeutics (PETX)	O/A	9.40	57%	$199	$160	($0.84)	($0.94)	NA	NA	NA	NA	NA	NA	46.8%	NA	NA	NA	NA

Company	Rating / Profile	7/22/2013 Price	% Chg YTD	Market Cap.	Ent. Value	Calendar Year EPS 2013(E)	Calendar Year EPS 2014(E)	P/E Ratio '13(E)	P/E Ratio '14(E)	EV/EBITDA '14(E)	EV/Sales '14(E)	3 Yr Est Growth Rate	2013 P/E to Growth	FCF yield '13 (E)	DVD yield (ann.)	Last Quarter Actual Growth Rate Rev	Last Quarter Actual Growth Rate EPS	Last Quarter Actual EBIT Margin
BioDelivery Sciences International, Inc. (BDSI)	O/A	4.73	10%	$177	$128	($1.02)	($0.61)	NA	NA	NA	4.9x	NA	NA	NA	0.0%	-95%	-149%	-845%
Cadence Pharmaceuticals, Inc. (CADX)	NR	7.86	64%	$673	$637	($0.32)	$0.06	NA	NA	51.6x	3.9x	107%	NA	NA	0.0%	195%	-93%	-34%
DURECT Corporation (DRRX)	NR	1.15	25%	$117	$93	($0.11)	($0.20)	NA	NA	NA	6.5x	NA	NA	NA	0.0%	-90%	-114%	-125%
Horizon Pharma, Inc. (HZNP)	NR	2.56	10%	$159	$127	($1.23)	($0.54)	NA	NA	NA	1.0x	NA	NA	NA	0.0%	263%	-58%	-183%
Pacira Pharmaceuticals, Inc. (PCRX)	NR	35.52	103%	$1,162	$1,149	($1.70)	$0.40	NA	NA	35.9x	7.5x	NA	NA	NA	0.0%	48%	51%	-161%
Pain Therapeutics, Inc. (PTIE)	NR	2.26	-17%	$102	$47	($0.07)	$0.23	NA	NA	1.7x	2.1x	NA	NA	NA	0.0%	-34%	NA	NA
Salix Pharmaceuticals (SLXP)	NR	70.14	73%	$4,448	$4,362	$3.37	$4.39	20.8x	16.0x	9.4x	3.9x	NA	NA	NA	0.0%	18%	-6%	31%
Zogenix, Inc. (ZGNX)	O/A	1.56	17%	$157	$160	($0.56)	($0.35)	NA	NA	NA	2.4x	NA	NA	NA	0.0%	-62%	6%	-217%
SPECIALTY PHARMA AVERAGE			**36%**					**20.8x**	**16.0x**	**24.7x**	**4.0x**	**107%**	**NA**			**31%**	**-52%**	**-219%**

Company	Rating / Profile	7/22/2013 Price	% Chg YTD	Market Cap.	Ent. Value	Calendar Year EPS 2013(E)	Calendar Year EPS 2014(E)	P/E Ratio '13(E)	P/E Ratio '14(E)	EV/EBITDA '13(E)	EV/Sales '14(E)	3 Yr Est Growth Rate	2013 P/E to Growth	FCF yield '13 (E)	DVD yield (ann.)	Last Quarter Actual Growth Rate Rev	Last Quarter Actual Growth Rate EPS	Last Quarter Actual EBIT Margin
Henry Schein, Inc. (HSIC)	O/C	103.95	29%	$9,230	$9,641	$4.86	$5.40	21.4x	19.2x	10.7x	1.0x	10%	2.1x	4.2%	0.0%	9%	8%	7%
MWI Veterinary Supply, Inc. (MWIV)	O/A	133.15	21%	$1,692	$1,756	$5.05	$5.82	26.3x	22.9x	13.4x	0.7x	15%	1.8x	0.3%	0.0%	11%	15%	4%
Patterson Companies (PDCO)	M/C	40.47	18%	$4,133	$4,353	$2.13	$2.30	19.0x	17.6x	9.6x	1.1x	10%	1.9x	7.5%	1.6%	3%	7%	11%
VET DISTRIBUTION AVERAGE			**23%**					**22.2x**	**19.9x**	**11.2x**	**0.9x**	**12%**	**1.9x**			**8%**	**10%**	**7%**

Company	Rating / Profile	7/22/2013 Price	% Chg YTD	Market Cap.	Ent. Value	Calendar Year EPS 2013(E)	Calendar Year EPS 2014(E)	P/E Ratio '13(E)	P/E Ratio '14(E)	EV/EBITDA '14(E)	EV/Sales '14(E)	3 Yr Est Growth Rate	2013 P/E to Growth	FCF yield '13 (E)	DVD yield (ann.)	Last Quarter Actual Growth Rate Rev	Last Quarter Actual Growth Rate EPS	Last Quarter Actual EBIT Margin
Abaxis (ABAX)	NR	49.51	33%	$1,108	$1,031	$1.10	$1.25	45.0x	39.8x	21.8x	4.5x	15%	3.0x	2.4%	0.0%	17%	43%	18%
Dechra Pharmaceuticals (DPH-GB)	NR	10.65	9%	$928	$1,064	$0.61	$0.64	17.5x	16.7x	12.7x	1.8x	17%	1.1x	5.3%	0.0%	NA	NA	NA
IDEXX Laboratories (IDXX)*	O/E*	97.42	5%	$5,406	$5,440	$3.44	$3.82	28.3x	25.5x	15.1x	3.7x	14%	2.0x	3.7%	0.0%	3%	13%	18%
Neogen (NEOG)	NR	59.16	31%	$1,444	$1,369	$1.23	NA	47.9x	NA	NA	NA	19%	2.6x	NA	0.0%	14%	23%	19%
VCA Antech (WOOF)*	O/C*	28.25	34%	$2,525	$3,042	$1.53	$1.72	18.5x	16.4x	8.9x	1.6x	14%	1.3x	8.1%	0.0%	7%	9%	13%
Petsmart (PETM)*	M/C*	71.64	5%	$7,492	$7,686	$3.92	$4.48	18.3x	16.0x	7.9x	1.0x	15%	1.2x	7.4%	0.9%	5%	15%	10%
Petmed Express (PETS)	NR	17.17	55%	$344	$311	$0.87	$0.93	19.7x	18.5x	10.3x	1.3x	5%	3.9x	NA	3.5%	-9%	15%	14%
Virbac S.A. (VIRP-FR)	NR	201.53	2%	$1,705	$1,879	$10.67	$11.83	18.9x	17.0x	9.6x	1.8x	12%	1.6x	3.1%	0.0%	4%	NA	NA
Zoetis (ZTS)	NR	30.27	16%	$15,138	$18,316	$1.40	$1.62	21.6x	18.7x	12.9x	3.8x	17%	1.3x	3.5%	0.0%	4%	NA	25%
VETERINARY AVERAGE			**21%**					**26.2x**	**21.1x**	**12.4x**	**2.4x**	**14%**	**2.0x**			**6%**	**20%**	**17%**

(in millions, except per-share data)

*Covered by William Blair under another Analyst; estimates for these names represent consensus estimates from FactSet

(NR) Not Rated

(A) Consensus estimates from Factset for companies not rated by William Blair & Company, L.L.C.

Sources: Company reports and William Blair & Company, L.L.C.

Exhibit 38
Aratana Therapeutics, Inc.
Income Statement
($ in millions, except EPS)

	FY:11A	FY:12A	Q1A	Q2E	Q3E	Q4E	FY:13E	Q1E	Q2E	Q3E	Q4E	FY:14E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E
Revenues																		
AT-001	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	18.1	25.1	37.1	56.9
% growth (y/y)														NM	95%	45%	35%	25%
AT-002	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1	19.3	32.4	48.6	70.5
% growth (y/y)														NM	90%	55%	50%	45%
AT-003	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	11.0	19.8	29.8	40.2
% growth (y/y)														NM	215%	80%	50%	35%
Total Net Product Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	22.2	48.4	77.3	115.5	167.5
Royalty Revenue (E.U.)		-	-	-	-	-	-	-	-	-	-	-	-	2.6	4.2	7.8	11.3	15.4
Total Net Revenues	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	24.8	52.6	85.1	126.8	182.9
% growth (y/y)														NM	112%	62%	49%	44%
Expenses					-	-												
COGS	-	-	-	0.0	0.0	0.0	0	0	0	0	0	0	0	5	10.8	17.4	26.1	37.5
% of revenues	*NM*	*NM*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*15.0%*	*15.0%*	*15.0%*	*15.0%*	*NM*	*0.0%*	*18.7%*	*20.5%*	*20.5%*	*20.6%*	*20.5%*
R&D expense	2.196	7.291	*2.114*	2.187	2.187	2.187	8.7	2.6	2.6	2.6	2.6	10.5	12.1	13.3	15.7	18.6	21.3	24.5
% growth (y/y)			*20.7%*	*18.4%*	*18.4%*	*18.4%*	*20%*	*24.2%*	*20.0%*	*20.0%*	*20.0%*	*20%*	*15%*	*10%*	*18%*	*18%*	*15%*	*15%*
SG&A expense	1.274	2.987	*1.226*	1.426	1.626	1.826	6.1	2.0	2.2	2.4	2.6	9.3	11.5	16.1	23.9	33.5	43.6	56.2
% growth (y/y)	-	-	*146.2%*	*71.9%*	*96.0%*	*120.1%*	*104.4%*	*65.3%*	*56.1%*	*49.2%*	*43.8%*	*52.4%*	*23.6%*	*39.6%*	*48.9%*	*40.2%*	*30.2%*	*28.8%*
In-process R&D	-	1.500	*0.00*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses	3.470	11.778	3.340	3.6	3.8	4.0	14.9	4.7	4.9	5.1	5.3	19.8	23.6	34.0	50.4	69.5	91.0	118.2
Operating (loss)/profit	(3.470)	(11.778)	(3.340)	(3.6)	(3.8)	(4.0)	(14.9)	(4.7)	(4.9)	(5.1)	(5.3)	(19.8)	(23.6)	(9.2)	2	16	36	65
																	28%	
Interest income	0.006	0.021	0.003	0.0	0.020	0.023	0.0	0.0193	0.0172	0.0139	0.0106	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Interest expense	0.000		(0.024)	(0.0)	(0.0)	(0.0)	(0.1)											
Other Income	0.000	0.121	0.068	0.1	0.1	0.1	0.1	0.025	0.025	0.025	0.025	0.100	0.100	0.100	0.100	0.100	0.100	0.100
Total Other Income	0.006	0.142	0.047	0.0	0.0	0.0	0.2	0.044	0.042	0.039	0.036	0.136	0.2	0.1	0.1	0.1	0.1	0.2
	-														-	-	-	-
Net loss and comprehensive loss	(3.464)	(11.636)	(3.3)	(3.59)	(3.77)	(3.97)	(14.70)	(4.6)	(4.81)	(5.01)	(5.22)	(19.67)	(23.42)	(9.03)	2.29	15.70	35.87	64.82
Modifications of Series A convertible pref. stock	(0.276)	0.000	0.000	-	-	-	0.000	-	-	-	-	-	-	-				
Unaccreted dividends on convertible pref. stock	(0.902)	(2.035)	(0.773)	-	-	-	(0.773)	-	-	-	-	-	-	-				
Net income loss (gain) attributable to common stockholders, basic and diluted	(4.642)	(13.671)	(4.07)	(3.593)	(3.773)	(3.970)	(15.402)	(4.606)	(4.809)	(5.012)	(5.215)	(19.667)	(23.423)	(9.032)	2.293	15.702	35.871	64.820
Provision for income taxes	-	-	-				-	-	-	-	-	-	-	-	-	6	13	23
Effective tax rate	*NM*	*NM*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*36%*	*36%*	*36%*
Net Income (loss)	**($4.642)**	**($13.671)**	**($4.1)**	**($3.593)**	**($3.8)**	**($4.0)**	**($15.4)**	**($4.6)**	**($4.8)**	**($5.0)**	**($5.2)**	**($19.7)**	**($23.4)**	**($9.0)**	**$2.3**	**$10.0**	**$23.0**	**$41.5**
EPS	**($0.31)**	**($0.91)**	**($0.27)**	**($0.19)**	**($0.18)**	**($0.19)**	**($0.84)**	**($0.22)**	**($0.23)**	**($0.24)**	**($0.25)**	**($0.94)**	**($1.01)**	**($0.38)**	**$0.09**	**$0.40**	**$0.91**	**$1.64**
Weighted average shares outstanding (basic)	14,972	14,972	14,972	18,806	20,722	20,777	18,819	20,832	20,887	20,942	20,997	20,915	23,131	23,999	24,199	24,399	24,599	24,799
Weighted average shares outstanding (diluted)	14,972	14,972	14,972	19,136	21,217	21,272	19,149	21,327	21,382	21,437	21,492	21,410	23,626	24,494	24,694	24,894	25,094	25,294

Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 39
Aratana Therapeutics, Inc.
Revenue Model

	2012	2013	2014	2015	2016	2017	2018	2019	2020
AT-001	-	-	-	-	$9,174	$18,104	$25,106	$37,128	$56,867
AT-002	-	-	-	0	$11,052	$19,295	$32,417	$48,584	$70,468
AT-003	-	-	-	0	$4,092	$11,000	$19,800	$29,800	$40,186
EU Royalty Revenue					$1,970	$4,186	$7,769	$11,271	$15,359
Total Net Revenue	**$0**	**$0**	**$0**	**$0**	**$26,288**	**$52,585**	**$85,092**	**$126,783**	**$182,880**

Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 40
Aratana Therapeutics, Inc.
Balance Sheet
($ in millions, except EPS)

	FY:11A	FY:12A	Q1A	Q2E	Q3E	Q4E	FY:13E	Q1E	Q2E	Q3E	Q4E	FY:14E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E
Current assets																		
Total cash and cash equivalents	*$12.4*	*$20.4*	*$25.7*	$44.1	$37.6	$30.8	$30.8	$27.4	$22.3	$17.0	$11.5	$11.5	$25.2	$7.8	$4.3	$6.8	$19.4	$45.7
Restricted cash and cash equivalents	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inventories	-	-	NA	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	1.8	3	4	6	9
Accounts receivable	*0.0*	*0.7*	*0.0*	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	2.2	3	5	8	11
Prepaid expense and other	*0.0*	*0.0*	*1.3*	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.0	2.0	2	2	2	2
							NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*8.1%*	*3.8%*	*2.4%*	*1.6%*	*1.1%*
Total current assets	12.4	21.0	26.9	45.3	38.8	32.1	32.1	28.7	23.6	18.2	12.7	12.7	27.2	13.8	12.3	18.4	35.7	68
Property, plant and equipment, net	*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	0.0	0.0	0.0	0.0	0.0
Restricted cash	*0.1*	*0.1*	*0.1*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0
Patent Costs	-	-																
Intangible assets	-	-	-	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	0.0	0
Goodwill	-	-	-	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	0.0	0
Other assets	-	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	0.0	0.0	0
Total assets	12.6	21.2	27.1	45.5	39.0	32.3	32.3	**28.9**	**23.8**	**18.4**	**12.9**	**12.9**	**27.4**	**14.0**	**12.5**	**18.6**	**35.9**	**68**
Current liabilities																		
Accounts payable	*0.2*	*0.8*	*2.4*	0.9	1.0	1.0	1.0	1.2	1.3	1.3	1.4	1.4	1.3	2.0	2.8	3.8	5.0	6.5
Accrued expenses and other current liabilities	*0.4*	*1.4*	*1.0*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.0	6.0	6.0	6.0	6.0	6.0
Deferred revenue, current	*0.1*	*0.8*	*0.8*	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Warrant valuation	-	-	-	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	0.0	0.0
Long term debt (current portion)	-	-																
Other current	*0.0*	*0.6*	*0.6*	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total current liabilities	0.7	3.5	4.826	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8	4	7.9	8.6	9.4	10.4	11.6	13.1
Long term debt	-	0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Other long term liabilities		-	0.1	0.0	0.0	0.0	0.0	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0
Total liabilities	**0.7**	**3.6**	**9.9**	**8.3**	**8.3**	**8.4**	**8.4**	**8.5**	**8.6**	**8.7**	**8.7**	**8.7**	**12.9**	**13.5**	**14.4**	**15.4**	**16.5**	**18.0**
Preferred stock	*22.2*	*39.2*	*42.0*	34.5	31.7	28.9	28.9	30.0	29.5	29.2	28.8	28.8	22.6	17.5	12.9	2.3	(17.4)	(51.1)
Common stock + additional paid in capital	*0.3*	*0.7*	*0.8*	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	71.9	71.9	71.9	71.9	71.9	71.9
Deficit accumulated during development stage	*-10.6*	*-22.2*	*-25.5*	(29.1)	(32.9)	(36.8)	(36.8)	(41.4)	(46.3)	(51.3)	(56.5)	(56.5)	(79.9)	(89.0)	(86.7)	(71.0)	(35.1)	29.7
Shareholders' equity excluding preferred stock	(10.3)	(21.6)	(24.7)	2.8	(1.0)	(5.0)	(5.0)	(9.6)	(14.4)	(19.4)	(24.6)	(24.6)	(8.0)	(17.1)	(14.8)	0.9	36.8	101.6
Stockholders' equity (incl. preferred stock)	11.9	17.6	17.2	37.3	30.7	23.9	23.9	20.4	15.2	9.8	4.2	4.2	14.6	0.5	(1.8)	3.2	19.4	50.5
Total liabilities and stockholders' equity	**12.6**	**21.2**	**27.109**	**45.54**	**39.04**	**32.28**	**32.3**	**28.90**	**23.77**	**18.44**	**12.91**	**12.9**	**27.4**	**14.0**	**12.5**	**18.6**	**35.9**	**68.5**

Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 41
Aratana Therapeutics, Inc.
Cash Flow
($ in millions, except EPS)

	FY:11A	FY:12E	Q1A	Q2E	Q3E	Q4E	FY:13E	Q1E	Q2E	Q3E	Q4E	FY:14E	FY:15E	FY:16E	FY:17E	FY:18E	FY:19E	FY:20E
Net cash from operating activities																		
Net income (loss)	($3.5)	($11.6)	($3.293)	($3.593)	($3.773)	($3.970)	($14.6)	($4.606)	($4.809)	($5.037)	($5.215)	($19.667)	($23.4)	($9.0)	$2.3	$10.0	$23.0	$41.5
Adjustments																		
Depreciation and amortization expense	0.0	$0.0	0.0030	0.0104	0.0104	0.0104	0.034	0.010	0.010	0.010	0.010	0.041	0.041	0.041	0.041	0.041	0.041	0.041
Acquired in-process R&D	-	$1.5																
Stock-based compensation expense	0.0	$0.1	0.103	-	-	-	0.103	-	-	-	-	-	-	-	4.592	4.592	4.592	4.592
Non-cash interest expense	-	$0.0	0.003	0.003	0.003	0.003	0.012	0.003	0.003	0.003	0.003	0.012	0.012	0.012	0.012	0.012	0.012	0.012
(Gain) loss on disposal of property and equipment	-	$0.0	0.001	0.001	0.001	0.001	0.004	0.001	0.001	0.001	0.001	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Change in operating assets and liabilities																		
Accounts receivable	-	$0.0	-	-	-	-	-	-	-	-	-	-	-	(6.199)	(6.947)	(8.127)	(10.423)	(14.024)
Prepaid expenses	(0.0)	$0.0	(0.024)	(1.260)	(1.260)	(1.260)	(3.804)	-	-	-	-	-	(2.960)	-	-	-	-	-
Other assets	(0.0)	($0.0)	0.028															
Accounts payable	(0.1)	$0.5	0.713	(0.939)	(0.991)	(1.043)	(2.261)	1.245	(0.322)	(0.322)	(0.322)	0.280	0.151	(2.183)	(3.452)	(4.010)	(4.523)	(5.710)
Accrued expenses	0.4	$1.0	(0.654)	(0.604)	(0.604)	(0.604)	(2.466)	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	0.1	($0.1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred revenue	-	$0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net cash used in operating activities	**(3.141)**	**(7.816)**	**(3.120)**	**(6.382)**	**(6.614)**	**(6.863)**	**(23.008)**	**(3.3)**	**($5.1)**	**(5.3)**	**(5.5)**	**(19.3)**	**(26.2)**	**(17.4)**	**(3.5)**	**2.6**	**12.7**	**26.4**
Cash flows from investing activities																		
Purchase of property and equipment	(0.0)	($0.0)	(0.008)	(0.0)	(0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)
Purchase of marketable securities	(6.4)	($6.6)	(0.735)	-	-	-	(1)	-	-	-	-	-	-	-	-	-	-	-
Sale of marketable securities	-	$6.6	0.735	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Purchase of in-process R&D	-	($1.0)	-	(0.0)	(0.0)	(0.0)	(0)	-	-	-	-	-	-	-	-	-	-	-
Change in restricted cash	(0.1)	$0.0	-	0.1	0	0	0.4	-	-	-	-	-	-	-	-	-	-	-
Net cash used in (provided by) investing activities	**(6.5)**	**($1.0)**	**(0.008)**	**$0.1**	**0.1**	**0.1**	**0.3**	**(0.0)**	**(0.0)**	**(0.0)**	**(0.0)**	**(0.0)**	**(0.0)**	**(0.0)**	**(0.1)**	**(0.1)**	**(0.1)**	**(0.1)**
Cash flows from financing activities																		
Issuances of common stock from stock offerings	-	$0.4	0.092	31.1	-	-	31.2	-	-	-	-	-	40.0	-	-	-	-	-
Issuance of convertible preferred stock, total	7.5	$16.4	3.406	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-
Repayment/issuance of debt	-	$0.0	4.927	-	-	-	4.9	-	-	-	-	-	-	-	-	-	-	-
	-	$0.0					-											
Net cash provided by financing activities	**7.5**	**$16.8**	**8.425**	**$31.1**	**$0.0**	**$0.0**	**39.5**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**-**	**40.0**	**-**	**-**	**-**	**-**	**-**
Effect of exchange rates on cash	**-**	**$0.0**					**-**					**-**	**-**	**-**	**-**	**-**	**-**	**-**
Cash balance (beginning of period)	**8.2**	**$6.0**	**13.973**	**$19.270**	**$44.083**	**$37.578**	**14.0**	**30.8**	**$27.4**	**$22.3**	**$17.0**	**30.8**	**11.4**	**25.2**	**7.8**	**4.3**	**6.8**	**19.4**
Difference	(2.1)	$8.0	5.297	$24.813	($6.504)	($6.753)	16.8	(3.4)	($5.1)	(5.4)	(6)	(19.4)	13.8	(17.4)	(3.5)	2.5	12.6	26.3
Cash balance (end of period)	**6.0**	**$14.0**	**19.270**	**$44.083**	**$37.578**	**$30.825**	**30.8**	**27.4**	**$22.3**	**17.0**	**11.4**	**11.4**	**25.2**	**7.8**	**4.3**	**6.8**	**19.4**	**45.7**

Sources: Company reports and William Blair & Company, L.L.C. estimates

Additional information is available upon request.

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DJIA:	15,542.24
S&P 500:	1,685.94
NASDAQ:	3,600.08

The prices of the common stock of other public companies mentioned in this report follow:

Bayer AG	€84.61
CEVA, Inc. (Outperform)	$17.96
Eli Lilly and Company	$52.55
Merck & Company, Inc.	$48.54
Novartis AG	$72.71
PetMed Express, Inc.	$17.12
Pfizer, Inc.	$29.28

William Blair & Company, L.L.C. was a manager or co-manager of a public offering of equity securities within the prior 12 months.

William Blair & Company, L.L.C. is a market maker in the security of this company and may have a long or short position.

Current Ratings Distribution (as of 6/30/13)

Coverage Universe	Percent	Inv. Banking Relationships*	Percent
Outperform (Buy)	63%	Outperform (Buy)	9%
Market Perform (Hold)	33%	Market Perform (Hold)	1%
Underperform (Sell)	1%	Underperform (Sell)	0%

* Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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