Ocular Therapeutix

Equity Research

Quick Take: Company Update

May 15, 2015

Price: $21.96 (05/14/2015)

Price Target: $60.00

OUTPERFORM (1)

Ken Cacciatore
646.562.1305
ken.cacciatore@cowen.com

Tyler Van Buren, M.Sc.
646.562.1338
tyler.vanburen@cowen.com

Sal Rais, M.D.
646.562.1420
sal.rais@cowen.com

Key Data

Symbol	NASDAQ: OCUL
Market Cap (MM)	$470.8

Planned NDA Filing Reinforces Thesis For This Compelling Novel Platform

The Cowen Insight

OCUL will be filing the NDA for OTX-DP in pain in H2:15 & will conduct an additional Phase III study to broaden the label for inflammation. We are encouraged by the FDA discussions & the decision to file. Recall, our thesis has always been largely predicated on the success of OTX-TP for glaucoma, which reports Phase IIb data in Q4:15 and we believe will be successful. Add into today's strength.

A Clear Regulatory Pathway For OTX-DP Has Been Established

This morning Ocular announced that they will be filing the NDA for OTX-DP for post-surgical ocular pain in H2:2015. Recall that OTX-DP was evaluated for both post-operative pain and inflammation in two Phase III studies that were disclosed in March and April of this year, respectively. In the Phase IIIa study, OTX-DP was statistically significant for both the pain and inflammation endpoints, while in the Phase IIIb study, although it was once again statistically significant for pain, it missed on the inflammation endpoint, due to an unusually high placebo effect (which we describe once again below). While the miss on the OTX-DP Phase IIIb trial was disappointing, we believed at the time – and clearly continue to believe now – that there was an overreaction since it appeared that the miss was not technology related, and appeared only due to the patient inclusion/exclusion criteria that influenced the placebo arm for that specific study. Subsequent to that trial disclosure, Ocular met with the FDA in April 2015 to review the full post-operative ocular pain and inflammation data set for OTX-DP (both Phase III studies and the previous Phase II study) and received indication from the Agency of their willingness to review an NDA for the pain endpoint. For these reasons, Ocular plans to submit the NDA for the pain indication in H2:2015 and will also run an additional Phase III study for OTX-DP to broaden the label to include inflammation. This is clearly a very positive outcome, and very encouraging. The additional Phase III trial will now be modified based on the learning from the previous Phase III studies, highlighted by the exclusion of patients on high-dose NSAIDs, randomizing patients 1:1 into the OTX-DP and placebo arms (versus 2:1 in the previous Phase III studies, which limited the number of patients treated with placebo and allowed for greater variability), and greater study protocol specificity to limit the use of rescue steroid eye drops. A pooled analysis demonstrated that the Phase IIIa and IIIb studies were actually statistically significant for both pain and inflammation across the two trials – and with the modifications described above – we believe there is a high likelihood of success for the additional OTX-DP Phase III results. Ocular plans to enroll roughly 330 patients in the study (greater powering than the other Phase III studies which enrolled ~250 patients in each trial) and expects data in H2:2016. Hence, Ocular should receive approval of OTX-DP for pain in mid-2016, and soon afterward file an NDA supplement for the inflammation indication. This timeline is fairly consistent with the initial timing expected for OTX-DP before the data "miss" and we believe management has done an excellent job of navigating the regulatory discussion to minimize the approval delay for this product. Stated clearly, we continue to believe that the original share price reaction was simply overdone, and

that the concerns were trial/placebo specific, and completely unrelated to the viability of the program or the technology.

Regarding OTX-TP (discussed in greater detail below), we continue to believe that the well-established efficacy of travoprost, improvements in the Phase IIb trial design, and steady progress with plug retention rates in the subsequent generation products developed, provides us with confidence that OTX-TP will be successful in the ongoing Phase IIb study (enrollment should complete in Q3:2015 with data in Q4:2015), as well as in the Phase III trials that are set to follow. In fact, the most recent OTX-TP non-significant risk (NSR) study has demonstrated a 90-day plug retention rate as high as 92%, which only further bolsters our conviction, and is a very substantial improvement over previous generation plugs. We continue to believe that this program could potentially be transformative to the treatment paradigm.

Finally, Ocular's long-acting anti-VEGF hydrogel program continues to make steady progress. Initial proof-of-concept data was presented at both the Association for Research in Vision and Ophthalmology (ARVO) and the American Society of Cataract and Refractive Surgery (ASCRS) meetings. While certainly early-stage, the long-acting anti-VEGF has significant potential, and provides further evidence of the breadth of Ocular's platform technology. Lastly, Ocular also disclosed this morning that it is also evaluating the delivery of small molecule tyrosine kinase inhibitors (TKIs) with its hydrogel depot technology and believes this class of drugs is well suited for the technology platform given their high potency, multiple targeting capability, and low water solubility. The administration of TKIs to the back of the eye appears to lends itself to using Ocular's approach, which may have a superior clinical effect given the lack of peak and valleys observed and the ability to retain the drug in the appropriate retinal region. Additionally, there are a range of TKI molecules that can be used with this approach and many have patents expiring in the 2019/2020 timeframe. The bottom-line is that our consultants continue to reiterate that Ocular's innovative drug delivery technology has the potential to serve an unmet need of compliance in the markets that the company is targeting. For all of the reasons described above – including our continued conviction in the glaucoma program which we describe below – we believe this is a compelling entry point for OCUL shares and would be adding here.

Pooled Phase III Data For OTX-DP Clearly Demonstrates The Drug Is Active

At the recent American Society of Cataract and Refractive Surgery (ASCRS) meeting, Ocular presented a pooled analysis of the OTX-DP Phase IIIa and IIIb studies for post-operative pain and inflammation. As we discuss in greater detail below, the 33% placebo rate in the Phase IIIb appears to be an anomaly. This is compared to the 15% placebo rate in Phase IIIa and the 3% placebo rate in Phase II. Further, this value is 3x the 11% of patients that had absence of anterior chamber cells at day 15 when treated with placebo in the pivotal trials for Alcon's Durezol (one of the leading steroid eye drops for ocular post-operative pain and inflammation). And even despite the unusually high placebo rate in the Phase IIIb study, the pooled analysis clearly demonstrates that OTX-DP was still able to produce a statistically significant reduction in inflammatory cells versus placebo. Hence, while the company will need to run another Phase III study for OTX-DP using refined inclusion/exclusion enrollment criteria, we continue to believe that Ocular's platform technology is highly effective and differentiated.

	Phase 2		1st Phase 3		2nd Phase 3	
	OTX-DP	Placebo	OTX-DP	Placebo	OTX-DP	Placebo
Absence of AC Cells at Day 14	34.5%*	3.4%	33.7%*	14.6%	39.4%	33.1%
Absence of Pain at Day 8	79.3%*	31.0%	76.1%*	36.1%	77.5%*	58.8%

Pooled Phase 3 Results			
	OTX-DP	Placebo	P Value
Absence of AC Cells at Day 14	36.2%	22.7%	p=0.0025
Absence of Pain at Day 8	78.9%	50.9%	p<0.0001

Source: Ocular Therapeutix

Topline Data Is Disappointing, But Should Be An Isolated Event And Doesn't Lower Our Conviction In The Approach Or Other Clinical Programs

After reporting positive Phase IIIa data in early March 2015 for the ocular inflammation and pain program, Ocular reported disappointing topline data from the second OTX-DP Phase IIIb study, which missed one of the two co-primary endpoints (due to an abnormal placebo response), as we describe in detail below. Given the disappointing disclosure, we believe it is important to assess the trial results taking into consideration two key issues: (1) do the results have implications for the technology/company as a whole – meaning, is there a read-through from the results that would call into question the platform and approach as we analyze the other clinical programs; or (2), are the implications of the study results isolated to the specific indication – in this case the smaller, ocular inflammation and pain program. Importantly, our analysis following conversations with our consultants is that the disappointing outcome had more to do with trial design and an unexpectedly strong placebo performance rather than the effectiveness of the company's technology itself, as best demonstrated by the consistent efficacy results of the active arm in the two studies. This was further supported by the considerable difference in how the placebo arm performed across these two Phase III studies. Management noted that a disproportionate number of patients in the Phase IIIb placebo arm were: (1) using high doses of oral NSAIDs for other conditions (e.g., arthritis); and (2) receiving rescue anti-inflammatory topical eye drops, which potentially blunted the efficacy signal. In fact, using a post-hoc analysis of the absence and very minimal presence of inflammatory cells (between 0 and 0.5 on a scale of 0 to 4.0), the difference between the OTX-DP and placebo arms was highly statistically significant (66.3% in the treatment group and 42.5% in the placebo group, p=0.0004). However, the FDA uses the very stringent criteria of 0, or no inflammatory cells, but our consultants note that typically in practice having a score of 0.5 is considered a success and not clinically meaningful. Therefore, our consultants believe that including patients up to 0.5 on the 0-4.0 scale was relevant and shows that the drug is active, and that most clinicians would appear to be satisfied with this result. While we don't use this finding and consultant discussion as a means to argue that the study was successful – or that these data are sufficient for approval without another study – we do believe it reinforces the point that OTX-DP is active and the negative results were likely a trial-

design/placebo-driven outcome. Furthermore, and as indicated above, these results appear to have no read-through to the other programs in development, namely OTX-TP for glaucoma, which has Phase IIb data reading out in Q4:2015 and has always been the largest component of our valuation. Therefore, the recent OCUL share levels appears to be a severe overreaction, especially as our conviction in the platform technology remains firmly intact and unaffected by the study disclosure.

Detailed Data For The OTX-DP Phase IIIa and IIIb Studies

As for the specific Phase IIIb results (n=240), the trial had two primary endpoints exactly like the first which was reported in early March 2015: (1) the difference between OTX-DP and placebo for the absence of pain on day 8; and (2) the treatment difference between both groups for the absence of anterior chamber inflammatory cells on day 14. The trial hit on (1), but not (2). Regarding the pain endpoint, 77.5% of patients receiving OTX-DP reported an absence of pain on day 8 versus 58.8% with the vehicle control (p=0.0025). This pain relief was highly statistically significant as early as day 2. For the inflammatory endpoint, 39.4% of OTX-DP-treated patients showed an absence of inflammatory cells in the anterior chamber of the eye on day 14 versus 31.3% for vehicle control (p=0.2182). As we noted above, this placebo response was unusually high and likely caused the miss, especially when compared to the results from the first study below. There are a number of factors that could have affected the placebo arm in this case: (1) a significant number of patients were rescued during days 8-14 after the pain endpoint and before the inflammation endpoint. Hence, a signal for inflammation may not have emerged as patients were being rescued, which reduces the overall powering of the study; (2) Ocular did not exclude NSAID use and there was a higher rate of systemic anti-inflammatory use observed in the placebo arm, which could have affected the inflammation endpoint; and (3), there is a fair amount of subjectivity to the results as 3 placebo patients fell into the 0.5 category with respect to the presence of inflammatory cells (on a scale of 0-4.0) because the investigators observed a single cell, which could have been a pigment cell, or a false positive. Interestingly, the company did conduct a post-hoc analysis of the absence and very minimal presence of inflammatory cells (defined as 0 and 0.5 on the scale of 0-4.0) and the difference between the OTX-DP and vehicle placebo group was highly statistically significant (66.3% in the OTX-DP group and 42.5% in the placebo group, p=0.004). Importantly, our consultants believe this finding is clinically meaningful as a score of 0.5 is perfectly reasonable as opposed to the stringent 0 FDA criteria. Nonetheless, we acknowledge, that the stringent criteria is what will be necessary for FDA approval. However, we include this analysis to further support that the efficacy of the program appears intact, while the criteria/placebo response is likely the causative reason for the miss, which has implications for how we view the technology going forward.

Regarding the Phase IIIa OTX-DP study (n=247) reported in March 2015, it was a success as it met both primary efficacy endpoints by demonstrating a statistically significant reduction in pain and inflammatory cells in the anterior chamber of the eye. Specifically, 33.7% of patients treated with OTX-DP showed an absence of inflammatory cells in the anterior chamber of the study eye at day 14 versus 14.6% of patients that received placebo (p=0.0015). Additionally, 76.1% of patients treated with OTX-DP reported absence of eye pain in the eye on day 8 versus 36.1% of patients that received placebo (p<0.0001). Secondary efficacy endpoints for this first clinical trial have also now been evaluated and statistically significant differences were seen for the pain endpoint at days 2, 4, 14, and 30 and for the inflammatory endpoint at day 30. No statistically significant difference was observed for the absence of inflammatory cells at the other time points in this first trial. Lastly, statistically significant differences were seen for the absence of flare at days 8, 14, and 30, but not at days 2 or 4. Importantly, topline safety results for both clinical trials demonstrate that there were

no ocular or treatment-related serious adverse events and there were fewer adverse events in the treatment group than the placebo group.

Ocular Has Significantly Improved OTX-TP Retention Rates For Phase III

As indicated earlier, Ocular has been making steady progress with the retention rates for their OTX-TP program as they continue to attempt to maximize their plug technology. Specifically, the company has been running a series of non-significant risk (NSR) studies in parallel with the clinical studies to evaluate their improvements as they attempt optimize the design of their punctum plugs. Importantly, the most recent studies on their sixth generation plug, "NSR5", have demonstrated a significant improvement over previous generation plugs, reaching a 92% plug retention at 90 days. As demonstrated in the table below, this is a dramatic improvement and almost doubling as compared to the 48% retention rate at 90 days observed in the Phase IIa study. This means that Ocular will likely eventually be in a position to move into the OTX-TP Phase III studies with a plug that has demonstrated at least a compelling 92% retention rate at 90 days. And we would note that the company continues to optimize its plug designs and is conducting additional NSR studies on even later generation products. Stated more clearly, Ocular is consistently seeking to improve the technology and appears to have even further optimized the product. Interestingly, our clinician consultants have been consistent in their belief that OTX-TP will be commercially viable product ($500MM+) if it achieves retention rates of 80%+ at 60 days and 50% + at 90 days, which the previous generation NSR3 plug achieved. However, as noted above, Ocular has clearly made significant progress with additional plug iterations. In our previous conversations, our consultants have noted that if the OTX-TP plug is able to achieve retention rates of 80%+ at 90 days – which the NSR5 plug has and will hopefully be confirmed in Phase III – the product would have blockbuster potential. Finally, we would note that for the Phase IIb study that was initiated in November 2014, the NSR4 plug being used has a higher drug capacity, but has demonstrated retention rates that are only somewhat improved from the NSR2/3 plugs utilized in the Phase IIa. Hence, while we expect the efficacy results of the Phase IIb study to improve relative to the Phase IIa due to the increased drug capacity and improved trial design (which we describe below), we expect only a modest improvement of retention rates in the study. But more importantly, based on the steady progress clearly demonstrated in the table below (and described above), we expect to see a dramatic improvement in retention rates when the NSR5 (or an even further optimized generation plug) moves into the Phase III program in 2016. The bottom-line is that our already high conviction in the OCUL story continues to increase as management continues to move its technology to even more improved levels. For these reasons we believe that a compelling entry point has developed.

			Retention Rates								
Plug	Year	Study Type	Day 10	Day 15	Day 20	Day 30	Day 45	Day 60	Day 75	Day 90	Comments
NSR0	2012	Pilot Study 1	100%		88%	79%					- Conducted in Singapore
NSR1	2012	Pilot Study 2		97%		92%	78%	59%			- Conducted in South Africa
NSR2	2014	Phase IIa				97%	84%	77%	55%	48%	- South African study, TPb plug, Per S-1
NSR3	2014	NSR				100%		85%		54%	- Per S-1, early 2014 per Company
NSR4	2014	NSR								60%	- Per Company; mid-2014
	2015	Phase IIb									- Data to come in Q4
NSR5	2015	NSR						92%		92%	- Per 10-K and Company; early 2015
NSR6	2016	NSR									- Multiple NSR studies over next few months
		Phase III									- Optimal design from NSRs to go into Phase III

Source: Cowen and Company; Ocular Therapeutix

The OTX-TP Phase IIb Study Is Well-Positioned For Success

The ongoing OTX-TP Phase IIb study is on track to report topline data in early Q4:2015. This study has improved upon the design of the Phase IIa study, which was completed in May 2014. Recall that the Phase IIa study evaluated two plugs, OTX-TPa, which

was designed to release 3.5 µg/day of travoprost and last for 60 days and OTX-TPb, which was designed to release 2.8 µg/day of travoprost and last for 90 days. The Phase IIb study is using a plug that combines the positive aspects of both of these plugs by providing 3.5 µg of daily travoprost along with a duration of 90 days. Along with a higher capacity plug, the Phase IIb study also requires that patients visualize and verify that the punctum plug is in place every day and immediately report if the plug is missing so it can be replaced by the trial investigator. In contrast, during the Phase IIa study, patients were not required to regularly check on the plug, so in some instances, the plug could have been missing and not releasing drug for extended periods of time, which could have negatively impacted the efficacy results. Despite this potential for reduced efficacy, the data from the Phase IIa study was encouraging, as patients receiving the OTX-TPa plug achieved an intraocular pressure (IOP) at or below 21.1mmHg (-4.7mmHg from baseline) from day 15 and out to day 75 (which was surprising since the duration of the plug was only designed to last 60 days). This compared to timolol, which demonstrated an IOP at or below 21.3mmHg (-4.8mmHg) from day 15 onward. Unsurprisingly, the efficacy with the OTX-TPb plug was less due to the lower 2.8 µg/day release rate. Patients achieved an IOP at or below 23.4mmHg from day 15 onward from a baseline of 26.4mmHg. Overall, based on the improvements in the plug and the trial design, we are optimistic about the Q4:2015 data readout.

Recall, in November 2014 Ocular announced the enrollment of the first patient in a randomized, masked, active-controlled OTX-TP Phase IIb study comparing the product to timolol. The study will evaluate 80 patients across 10 clinical sites with topline results expected in early Q4:2015. The poor compliance for topical glaucoma eye drops is well understood by the physician community and the improvement in compliance seen with once-daily PGAs relative to treatments that require multiple daily drops suggests that a product that only requires administration every 2-3 months could have a profound impact on compliance. Despite our initial concerns about plug retention, our consultants noted that a treatment option that lasted anywhere between 60 and 90 days would be a "game changer" and that the 2-3 month duration of the product would fit well into the currently established glaucoma treatment protocol.

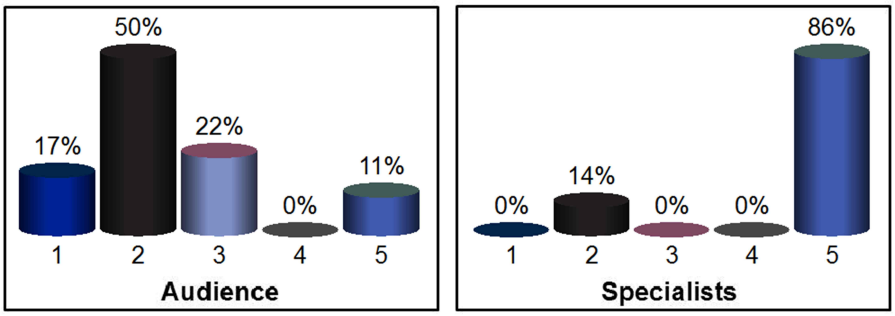
Compliance Remains A Major Barrier To Treatment Success In Glaucoma

Our clinician consultants have been steadfast in their enthusiasm for OTX-TP given its potential to provide: (1) lower side effects (current prostaglandin eye drops, which result in higher peak drug concentrations, have hyperemia rates of ~30-40%); and (2) improved compliance (greater than 50% of glaucoma patients are non-compliant with current eye drops after 6 months, even despite the considerable risk for eventual blindness). Travoprost and other prostaglandins are the mainstay of glaucoma treatment, and our clinicians believe that there is little molecule risk with OTX-TP and it will likely demonstrate non-inferiority to timolol. At the 2015 Cowen Health Care Conference, nearly all of our surveyed clinicians suggested that if OTX-TP is successfully developed, the percentage of glaucoma patients who would be candidates for therapy is 50%+. Our glaucoma panelists also noted that compliance is indeed a major issue and physicians want a sustained-release product. Importantly, it is well within the comfort zone of all ophthalmologists to place punctum plugs.

COWEN
AND COMPANY

19. Ocular Therapeutix' OTX-TP is a travoprost punctum plug that lasts for 2-3 months and aims to fix compliance related issues and improve upon side effects with current glaucoma treatments. Assuming successful development of OTX-TP, the percentage of glaucoma patients who would be candidates for therapy are:

1. <10%
2. 20%
3. 30%
4. 40%
5. 50%+



Source: Cowen and Company 35th Annual Health Care Conference

Several Opportunities For Value Creation Exist

Our base case valuation model for Ocular assumes approval for OTX-TP in 2017, and U.S. peak sales eventually reaching approximately $450MM, which is a conservative penetration of roughly 5% of total U.S. glaucoma prescriptions by 2020. We also assume modest ex-U.S. sales for OTX-TP with a peak sales value of ~$150MM. For OTX-DP, we assume a successful approval in post-operative pain and inflammation, with steady growth and total peak sales of $300MM across all potential indications. Finally, we assume Ocular moves forward with OTX-MP and the product is launched in 2018/2019. Our peak sales estimate for the product is slightly above $100MM. We would note, our valuation does not attribute any value to the long-duration anti-VEGF hydrogel, which has the greatest potential upside of any of Ocular's products. If the company successfully enters the $3B+ and growing wet AMD market, with a transformational duration product, our valuation could inflect to 2-3x our base case $60 per share valuation.

Numerous Milestones Remain In 2015

As a reminder, Ocular has several upcoming milestones in 2015: (1) OTX-DP has also been evaluated in Phase II studies for allergic conjunctivitis, and after discussions with the FDA, have decided to move the program forward with two Phase III studies utilizing the Conjunctival Allergen Challenge (CAC) model; the studies are expected to begin in H2:2015; (2) OTX-DP is also being evaluated for the treatment of inflammatory dry eye disease, with Phase II data expected in Q4:2015; (3) feasibility studies with biopharmaceutical partners for the long-acting anti-VEGF hydrogel depot are ongoing and should be complete in H1:2015 with potential for a licensing agreement soon thereafter. Ocular's independent assessment of their hydrogel technology with Avastin has also been progressing and two papers on the data generated to date are expected at the ARVO meeting in May 2015; (4) Finally, and most importantly, patient enrollment for the OTX-TP Phase IIb study in glaucoma is on track and data is expected in early Q4:2015.

The bottom-line is that all programs continue to progress as expected and the upcoming year contains a series of critical milestones. Our consultants continue to reiterate that Ocular's innovative drug delivery technology has the potential to serve a real unmet need of compliance in the markets that the company is targeting. As noted above, we would add heading into a catalyst-rich 2015 with significant potential for value creation.

Updates On The Other Clinical Programs

OTX-DP: In January 2015, Ocular announced the enrollment of the first patient in a Phase II study evaluating OTX-DP for the treatment of dry eye. The randomized, double-blinded, vehicle-controlled study will evaluate 40 patients (up to 80 eyes) exhibiting signs and symptoms of dry eye disease. Clinical endpoints will include corneal and conjunctival staining, tear osmolarity, tear film break-up time, presence of the plug, ease of product use and visualization, and resorption of the plug following treatment. Patients will be enrolled at two U.S. sites, and in order to establish a baseline level of disease, they will initially be administered a placebo vehicle plug for 30 days. Patients who respond to the placebo plug in treatment of their dry eye will be excluded from the study, while those who continue to exhibit symptoms during the initial 30 days will continue into the treatment phase. Patients will then be randomized to receive either OTX-DP or a placebo vehicle plug. Topline data from the Phase II dry eye study are expected in Q4:2015.

Regarding the OTX-DP indication for allergic conjunctivitis, Ocular announced topline data from a Phase II study of OTX-DP in November 2014. The randomized, blinded, placebo-controlled study evaluated 68 patients across two clinical sites. The primary endpoints for the study were ocular itching and conjunctival redness at 14 days using a modified Conjunctival Allergen Challenge (CAC) model. OTX-DP demonstrated a statistically significant reduction in ocular itching and conjunctival redness at all measured days (14, 28, and 42). Using a 5-point scale, a mean difference greater than 0.5 units was seen at day 14, but a mean difference of 1.0 units was not seen at any of the measured days. Our consultants note that for currently approved topical treatments (emphasis on topical) for allergic conjunctivitis, a difference of 1.0 units is generally observed, but is not an absolute requirement as products have been approved by the FDA without meeting this criteria. Additionally, the previous FDA guidance of a treatment difference of 1.0 units is specifically tailored towards topical eye drop treatments. Ocular is using a new, sustained-release approach with OTX-DP that does not achieve the same peaks seen with topical agents. As a result, the findings from the Phase II study are not surprising and we believe it's important to remember that OTX-DP is providing a similar treatment effect over 42 days, compared to the meager 8-16 hours experienced with eye drops. Our consultants agree that the findings support continued development for the allergic conjunctivitis indication and the company has already met with the FDA to discuss adjustments for the Phase III trials. The CAC model will once again be utilized, and importantly, given the established safety data from the post-operative pain and inflammation trials, the Phase III allergic conjunctivitis should only require approximately 75 patients. Thus, the company's decision to pursue the additional indication provides a compelling risk/reward opportunity. The Phase III trials are expected to begin in mid-2015.

Anti-VEGF Hydrogel: Finally, Ocular continues to make progress with its long-acting anti-VEGF hydrogel depot. Interestingly, at the recent ARVO meeting in Denver, data was presented on the Company's back-of-the-eye hydrogel depot technology. Initial studies used Avastin and other well-known anti-VEGF agents as model proteins that are commonly used to treat wet AMD and several other retinal diseases. In preclinical studies, data showed that these anti-VEGF hydrogel depots maintained their structure and bioactivity and also showed tolerability and drug release of clinically meaningful

concentrations and duration. This initial data demonstrates early viability of the program and could have transformative potential if the company is indeed able to extend treatment duration to 4-6 months. Ocular has multiple collaborations ongoing with several different pharmaceuticals companies applying this approach to their proprietary anti-VEGF agents and is also developing an Avastin-based program internally. It is worth noting that drug duration with the hydrogel technology is highly customizable and that the initial data for the Avastin hydrogel is likely not indicative of the maximum duration of the potential treatment. Ocular has already had pre-IND discussions with the FDA on the necessary requirements to initiate a Phase I clinical study of the Avastin hydrogel and it does appear that the program could move forward. Management noted that the FDA discussions have also been helpful in understanding the regulatory requirements if one of the partnered programs does move forward. Given the nature of the development timeline for a duration-based product, if the data is positive, the company would expect to begin clinical trials in 12-18 months.

Lastly, the company is also evaluating the delivery of small molecule tyrosine kinase inhibitors (TKIs) with its hydrogel depot technology and believes this class of drugs is well suited for the technology platform given their high potency, multiple targeting capability, and low water solubility. There are a range of TKI molecules that can be used with this approach and many are coming off patent in the 2019/2020 timeframe. In oncology patients, there have been observations of patients with concomitant AMD receiving clinical benefit due to systemic administration of TKIs, which are used in many cancer indications. However, delivery TKIs to the eye have been a challenge as several companies have previously failed. Oral administration is not safe, eye drops have historically caused corneal toxicity, and intravitreal injections have been unable to retain enough drug in the back of the eye. Therefore, the administration of TKIs to the back of the eye appears to lends itself to using a drug delivery technology and Ocular's approach may have a superior clinical effect given the lack of peak and valleys observed and the ability to retain the drug in the back of the eye.

Valuation Methodology And Risks

Valuation Methodology

Pharmaceuticals/Specialty

For our valuation methodology, we arrive at fair value utilizing a discounted cash flow (DCF) approach to derive our 12-month price target.

Investment Risks

Pharmaceuticals/Specialty

Risks include: (1) growing competitive dynamics in the specialty pharmaceuticals space; (2) the ability of management to execute on external growth by successfully acquiring new strategic, accretive products; (3) the ability to grow organically and keep the product pipeline robust; (4) potential regulatory delays, rejections, or failures of pipeline products; (5) economic sensitivity of any self-pay products or weakening consumer demand; (6) domestic or international pricing pressures for marketed products; and (7) failure to execute on new product launches.

Risks To The Price Target

Ocular Therapeutix' valuation is primarily based upon its clinical development programs and failure of its late-stage development programs could have a significant negative impact on its valuation.

Addendum

Stocks Mentioned In Important Disclosures

Ticker	Company Name
OCUL	Ocular Therapeutix

Analyst Certification

Each author of this research report hereby certifies that (i) the views expressed in the research report accurately reflect his or her personal views about any and all of the subject securities or issuers, and (ii) no part of his or her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report.

Important Disclosures

Cowen and Company, LLC and or its affiliates make a market in the stock of Ocular Therapeutix securities.

Ocular Therapeutix has been client(s) of Cowen and Company, LLC in the past 12 months.

Ocular Therapeutix is or was in the past 12 months a client of Cowen and Company, LLC; during the past 12 months, Cowen and Company, LLC provided IB services.

Cowen and Company, LLC and/or its affiliates received in the past 12 months compensation for investment banking services from Ocular Therapeutix.

Cowen and Company, LLC and/or its affiliates managed or co-managed a public offering of Ocular Therapeutix within the past twelve months.

Cowen and Company, LLC compensates research analysts for activities and services intended to benefit the firm's investor clients. Individual compensation determinations for research analysts, including the author(s) of this report, are based on a variety of factors, including the overall profitability of the firm and the total revenue derived from all sources, including revenues from investment banking. Cowen and Company, LLC does not compensate research analysts based on specific investment banking transactions.

Disclaimer

This research is for our clients only. Our research is disseminated primarily electronically and, in some cases, in printed form. Research distributed electronically is available simultaneously to all Cowen and Company, LLC clients. All published research can be obtained on the Firm's client website, https://cowenlibrary.bluematrix.com/client/library.jsp.

Further information on any of the above securities may be obtained from our offices. This report is published solely for information purposes, and is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any state where such an offer or solicitation would be illegal. Other than disclosures relating to Cowen and Company, LLC, the information herein is based on sources we believe to be reliable but is not guaranteed by us and does not purport to be a complete statement or summary of the available data. Any opinions expressed herein are statements of our judgment on this date and are subject to change without notice.

For important disclosures regarding the companies that are the subject of this research report, please contact Compliance Department, Cowen and Company, LLC, 599 Lexington Avenue, 20th Floor, New York, NY 10022. In addition, the same important disclosures, with the exception of the valuation methods and risks, are available on the Firm's disclosure website at https://cowen.bluematrix.com/sellside/Disclosures.action.

Price Targets: Cowen and Company, LLC assigns price targets on all covered companies unless noted otherwise. The price target for an issuer's stock represents the value that the analyst reasonably expects the stock to reach over a performance period of twelve months. The price targets in this report should be considered in the context of all prior published Cowen and Company, LLC research reports (including the disclosures in any such report or on the Firm's disclosure website), which may or may not include price targets, as well as developments relating to the issuer, its industry and the financial markets. For price target valuation methodology and risks associated with the achievement of any given price target, please see the analyst's research report publishing such targets.

Notice to UK Investors: This publication is produced by Cowen and Company, LLC which is regulated in the United States by FINRA. It is to be communicated only to persons of a kind described in Articles 19 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. It must not be further transmitted to any other person without our consent.

Cowen and Company, LLC. New York (646) 562-1000 **Boston** (617) 946-3700 **San Francisco** (415) 646-7200 **Chicago** (312) 577-2240 **Cleveland** (440) 331-3531 **Atlanta** (866) 544-7009 **London** (affiliate) 44-207-071-7500

COWEN AND COMPANY RATING DEFINITIONS

Cowen and Company Rating System effective May 25, 2013

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Rating System until May 25, 2013

Outperform (1): Stock expected to outperform the S&P 500

Neutral (2): Stock expected to perform in line with the S&P 500

Underperform (3): Stock expected to underperform the S&P 500

Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period

Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013

Buy – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

Sell – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

Hold – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

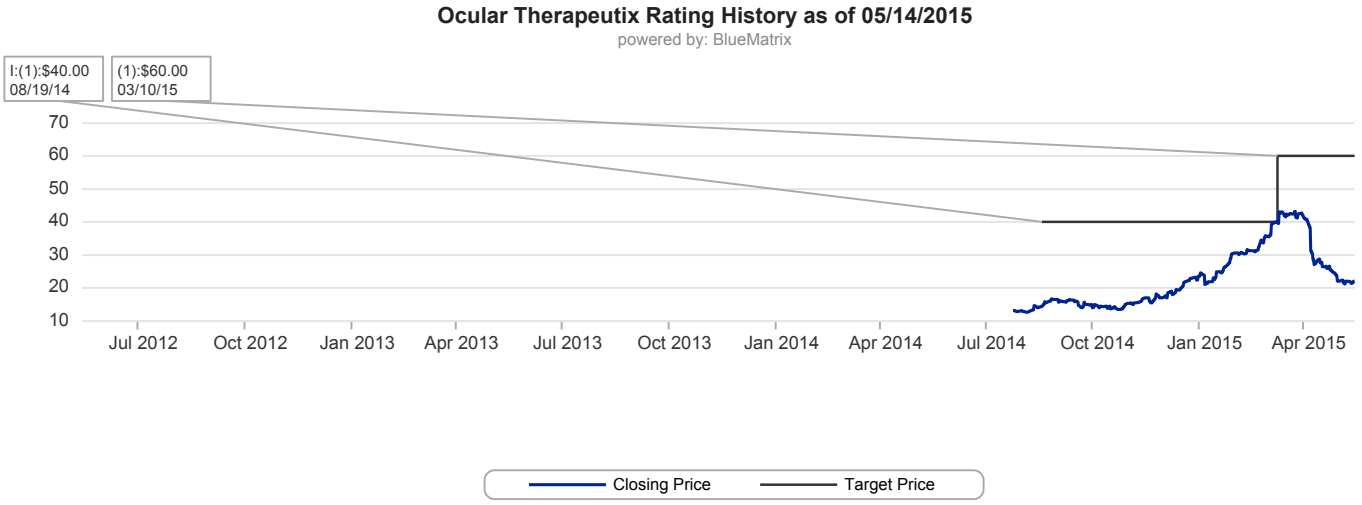
Cowen And Company Rating Definitions

Distribution of Ratings/Investment Banking Services (IB) as of 03/31/15

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	450	58.67%	103	22.89%
Hold (b)	302	39.37%	8	2.65%
Sell (c)	15	1.96%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA and NYSE regulations.



Legend for Price Chart:

I = Initiation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | UR = Price Target Under Review | T = Terminated Coverage | $xx = Price Target | NA = Not Available | S=Suspended

Points Of Contact

Reaching Cowen

Main U.S. Locations

New York
599 Lexington Avenue
New York, NY 10022
646.562.1000
800.221.5616

Boston
Two International Place
Boston, MA 02110
617.946.3700
800.343.7068

Cleveland
20006 Detroit Road
Suite 100
Rocky River, OH 44116
440.331.3531

San Francisco
555 California Street, 5th Floor
San Francisco, CA 94104
415.646.7200
800.858.9316

Atlanta
3399 Peachtree Road NE
Suite 417
Atlanta, GA 30326
866.544.7009

Chicago
181 West Madison Street
Suite 3135
Chicago, IL 60602
312.577.2240

International Locations

Cowen International Limited

London
1 Snowden Street - 11th Floor
London EC2A 2DQ
United Kingdom
44.20.7071.7500

Cowen and Company (Asia) Limited

Hong Kong
Suite 1401 Henley Building
No. 5 Queens Road Central
Central, Hong Kong
852 3752 2333